CITY OF DELAND
REGULAR MEETING OF THE CITY COMMISSION
JANUARY 21, 2026 AT 7:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

AGENDA

CALL TO ORDER

INVOCATION-Pastor Wendell Raulerson, Greater Bethlehem Missionary Baptist Church

PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENTATIONS

1. Certificate of Participation—Presented by the City of DeLand's Art in Public Places Program.
2. Introduction of New Police Officers: Anthony Visconti IV and Irving Chanon.
3. Presentation re Employee Years of Service Awards.
4. Presentation re Quarterly Financial Report for the Period Ending September 30, 2025.

   Presentation of the Quarterly Financial Report (QFR) for the quarter ending September 30, 2025.

CONSENT AGENDA

1. Resolution re Surplus Equipment.

   It is recommended that the City Commission adopt the resolution declaring the equipment surplus and authorizing its disposal as set forth therein.

2. Resolution Approving FY 2025-2026 Budget Amendment.

   Presentation of a budget amendment for FY 2025/2026.

3. Resolution Approving the Letter of Authorization for Obtaining an FDOT Permit for Intersection Improvements at DeLand Tech Park (State Road 472 & Kirk Drive).

   Staff recommends that the City Commission approve the resolution and letter of authorization in order to obtain FDOT permit.

4. Consideration re Scope and Fee Proposal for the 2025 Water Master Plan Update.

Staff recommends the City Commission approve a task order to Freese & Nichols to update the Utilities Water Master Plan.

5. Consideration re Award of Bid, Sperling Sports Complex Parking Improvements to DDS Enterprises LLC.

   Staff recommends that the City Commission award the bid to DDS Enterprises LLC for Sperling Sports Complex Parking Improvement project in the amount of $305,558.93.

6. Consideration re Recommended Selection of Utility Rate Study Consulting Firm, GovRates, Inc.

   Staff recommends that the City Commission approve the recommended final ranking of Utility Rate Consulting firms and authorize staff to begin negotiations with the top ranked firm, GovRates, Inc.

7. Consideration re Amendment No.1 to the Ground Lease Agreement with renewal with the County of Volusia.

   Renewal of Volusia Sheriff's Office airport ground lease for hangar site.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

OLD BUSINESS

1. Second Reading of Ordinance No. 2026-03, Approving a Second Amendment to the DeLand Tech Park PD to Allow for One Additional Use, for Property, Located on the South Side of Cassadaga Road, West of Interstate 4.

   This is a request for a second amendment to the DeLand Tech Park PD.

2. Second Reading of Ordinance No. 2026-04, Amending Chapter 30, Section 30-3, and Adding Section 30-49A, Oil and Grease Management Program.

   It is recommended that the City Commission adopt the amended Chapter 30-47 (b) (3) ordinance on first reading.

NEW BUSINESS

1. First Reading of Ordinance Changing the Land Use for Approximately 1.49 Acres of Property, Located Northwest of the Intersection of East Rich Avenue and North Hill Avenue, from Low Density Residential to Medium Density Residential.

   This is a request to amend the future land use designation of the subject property from Low Density Residential (LDR) land use designation, to Medium-Density Residential (MDR) land use designation, on 1.49 acres of property.

2. First Reading of Ordinance Changing the Zoning for ±1.49 Acres of Property, Located at the Northwest of the Intersection of East Rich Avenue and North Hill Avenue, from R-1B (Single-Family Dwelling) to North Hill Villas Planned Development.

This is a request to rezone the subject property from R-1B, to the North Hill Villas PD, for 13 townhomes on 1.49 acres of property.

3. First Reading of an Ordinance Amending Chapter 7 - Building and Housing Codes of the Code of Ordinances.

   An update to Chapter 7 Building and Housing Codes of the City's Codes and Ordinances.

4. Resolution Approving Preliminary Plat, DeLand Tech Park, Located at 1445 Cassadaga Road.

   This is a request for approval of the preliminary plat for DeLand Tech Park site work and infrastructure.

CITY COMMISSION REPORTS

1. Report re Elected Officials Round Table.
2. Report re Volusia-Flagler TPO.
3. Report re River of Lakes Heritage Corridor.

CITY MANAGER REPORT

CITY ATTORNEY REPORT

CITY CLERK REPORT

CITY COMMISSION

ADJOURNMENT

The DeLand City Commission holds its regular meetings on the first and third Mondays of each month at 7:00 p.m. in the DeLand City Commission Chambers, 120 South Florida Avenue, DeLand. Notice of special meetings, workshops, changes in dates, times or locations are provided by separate Public Notices, which are posted at City Hall and on the City's web site.

The City of DeLand may take action on any matter during this meeting, including items that are not set forth within this agenda.

Public participation is encouraged on any matter on the agenda. If you desire to be recognized by the Mayor, please fill out a Speaker's Card and present it to the City Clerk.

Minutes of the DeLand City Commission meetings are not transcribed verbatim. If any person decides to appeal a decision made by the City Commission with respect to any matter considered at a public meeting or hearing, he/she will need a record of the proceedings including all testimony and evidence upon which the appeal is to be based. To that end, such person will want to ensure that a verbatim record of the proceedings is made by a court reporter, at the person's own expense.

In accordance with the American Disabilities Act, persons needing a special accommodation in order to participate in the proceedings should notify the City Clerk's Office at least 48 hours in advance of the meeting: 626-7132.

Assisted Listening System receivers are available for the hearing impaired, and can be obtained from the City Clerk.

If you wish to obtain information regarding the City Commission's Agenda, please call the City Clerk's Office: 626-7132.

We respectfully request that all pagers and cell phones be turned OFF during City Commission meetings.

Electronic Information! City Commission agendas and short form minutes are now available on the City's web page: www.deland.org.

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Kelila Gillislee

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Adriel Rodriguez

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Aidyn Castillo

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Jake Roblero

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Mia Santiago

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Roberto Ramirez

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Izaiah Beal

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Atticus Hinton

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Jazilyn Soria

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Jorge Briseno

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Fatima Garcia-Martinez

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CERTIFICATE

OF PARTICIPATION

PRESENTED TO

Blaineverlin Navarro Castillo

FROM EDITH I. STARKE ELEMENTARY SCHOOL WHOM PARTICIPATED IN THE CITY'S ART IN PUBLIC PLACES PROGRAM

Mayor Christopher M. Cloudman

Michael P. Pleus, City Manager

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Presentation re Employee Years of Service Awards.

DEPARTMENT: Human Resources

PREPARED BY: Jeremy Wiggins, HR Director

ATTACHMENTS:

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The City of DeLand is proud to recognize employees who have reached significant career milestones and their dedicated service to the City of DeLand and its citizens. It is because of their commitment to serving our community that DeLand continues to be a great place to live and work. For these employees, their years of service are accomplishment the City is proud to celebrate, and to extend its gratitude for their exceptional dedication.

10 Years of Service

Selena Robinette, Victims Advocate
Gary Cooper, Equipment Operator II

20 Years of Service

Deborah Glick, Development Services Manager

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:

None

RECOMMENDATION:

It is recommended the City Commission present the service awards.

BACKGROUND/DISCUSSION:

N/A

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Presentation re Quarterly Financial Report for the Period Ending September 30, 2025.

DEPARTMENT: Finance

PREPARED BY: Daniel Stauffer, Finance Director

ATTACHMENTS: Quarterly Financial Report 09-30-25

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

Attached is a copy of the City's Quarterly Financial Report for the quarter ended September 30, 2025. The Quarterly Financial Report is a supplemental report intended to provide information regarding the financial position of each fund and includes a review of balance sheets and schedules on revenues and expenditures.

The Quarterly Financial Report is an attempt to bring to you a concise and readable interim report, and is not a substitute for the Annual Comprehensive Financial Report issued at the end of each fiscal year after the independent audit of the City's financial records. This Quarterly Financial Report covers twelve months of the fiscal year, a representation of one hundred percent of the year. A brief presentation will be made regarding the financial position of each of the major funds of the City.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:

N/A

RECOMMENDATION:

Staff recommends the City Commission acknowledge acceptance of the Quarterly Financial Report as presented.

BACKGROUND/DISCUSSION:

General Fund — Revenues of the General Fund are $49,345,123 as of September 30, 2025, and represent 105% of revenues budgeted exclusive of those revenues considered non-revenues.

Property taxes are 101% realized due to the fact that the majority of property owners avail themselves of the discounts associated with paying their property taxes before the due date. Intergovernmental revenue includes state sales tax at 97% realized for the fiscal year, slightly under budgeted revenue. Operating grants include $84,656 for police grants and $12,094 of FEMA revenue collected for

Hurricane expenses spent in prior fiscal years. Fines and forfeits include parking ticket revenue, which is only 31% realized for the year. Miscellaneous revenue is 191% realized mainly due to unrealized gains on investments, disposition of fixed assets and code enforcement liens, which are significantly more than budget this quarter. Other significant revenues are within expected ranges.

General Fund expenditures are at 83% of budgeted funds as of September 30, 2025. Expenditures by category as a percent of appropriated funds are personnel 96%, operating 73%, grants and aid 52%, principal and interest 100%, contingencies 0%, and transfers to other funds 48%, and capital outlay 100% which includes Subscription Based Information Technology assets capitalized in the general fund.

Contingencies include planned savings of $200,000 for the Hurricane Reserve and $12,500 for the Sanborn Center Reserve.

Undesignated Fund Balance — The City will manage its fiscal resources to ensure funding for the operation of the City is not disrupted. A reserve equivalent to two months' operating needs shall be maintained in the General Fund. The funds available for this reserve are estimated to be $8,726,223, which represents a reserve surplus of $595,092 above the required two-month Undesignated Reserve of $8,131,132 on September 30, 2025.

Confiscated Trust Fund — Confiscated Trust Fund revenues are $22,249 or 742% of the budget, while expenditures are $83,234 or 80% of the budget as of September 30, 2025. Reserve funds were budgeted this fiscal year for red dot sights/holsters and a new K-9 for the police department.

Homeless Shelter Fund — Revenues of the Homeless Shelter Fund are $732,856 as of September 30, 2025, and represent 91% of revenues budgeted. Revenues include $714,956 or 100% of budgeted transfers from the General Fund. Expenditures are at $732,856 or 100% as of September 30, 2025.

Spring Hill Community Redevelopment Trust Fund — Revenues realized at September 30, 2025, are $1,185,180, which represents 115% of revenues budgeted. Revenues from all taxing agencies have been collected.

Spring Hill Community Redevelopment Trust Fund expenditures are $438,932 or 70% of budgeted operating funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are personnel 85%, operating 99%, grants and aid 8%, transfers to other funds 99%, services provided by general government 100%, capital outlay 0%, and contingencies 0%.

Governmental Impact Fees Trust Fund — Revenues realized at September 30, 2025, are $1,663,328, which represents 103% of revenues budgeted. The Governmental Impact Fees Trust Fund was established to budget and account for projects using revenue collected from Police, Fire, Parks and Recreation, and General Government Building Impact Fees paid for by new construction.

Governmental Impact Fees Trust Fund expenditures are $2,445,516 or 71% of budgeted funds as of September 30, 2025. 47% of budgeted expenditures include transfers to other funds for projects that are funded by more than impact fees.

Downtown Community Redevelopment Trust Fund — Revenues realized at September 30, 2025, are $1,050,408, which represents 106% of the budget. Revenues from all taxing agencies have been

collected. Charges for services are 53% of the budget due to waived lease payments totaling $30,000 approved for the Museum of Art this year.

Downtown Community Redevelopment Trust Fund expenditures are at 47% of budgeted funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are operating 74%, grants and aid 6%, services provided by general government 100%, contingencies 0%, transfers to other funds 100% and capital outlay 20%.

Grant & Special Revenues Fund — Revenues realized at September 30, 2025, are $1,438,172, which represents 46% of the total budget. The Grant & Special Revenues Fund was established to budget and account for all capital projects and expenditures relating to grants which fund non-payroll operating expenses. Charges for Services includes tree replacement revenue of $569,625 this fiscal year. ECHO revenue was over reported in FY 2024, which is offset by an overall negative revenue amount in FY 2025.

The Grant & Special Revenues Fund expenditures are at 35% of budgeted funds as of September 30, 2025. Expenditures in this fund are based on the timing of projects and may not align with standard benchmarks each quarter.

Debt Service Fund — Revenues for this fund consist of transfers from other funds used to pay debt payments for the current fiscal year. As of September 30, 2025, $1,993,936 has been transferred, which represents 83% of the budget. Likewise, expenditures are 83% as of September 30, 2025. Debt proceeds were budgeted in fiscal year 2025, which have not been realized to date and have been carried over to fiscal year 2026.

Capital Projects Fund — Revenues for this fund are $3,959,395 or 51% of budgeted funds. Revenue includes .4 mills of ad valorem tax revenue dedicated for capital expenses, debt proceeds, interest earnings, and transfers from other funds which are recognized when expenses are incurred for each project and may not align with standard benchmarks each quarter. Capital Projects Fund expenditures are $4,566,295 or 28% of budgeted funds as of September 30, 2025.

Water & Sewer Fund — Revenues realized at September 30, 2025, are $48,164,289, representing 41% of the budget this quarter. Capital grant revenue is 43% of the budget due to the timing of capital projects. Budgeted debt proceeds include State Revolving Loan funds for the construction of a new wastewater treatment plant. SRF Loan funds will be drawn down monthly as expenses are incurred on the project and total $26,728,817 this fiscal year. The total SRF debt to date is $45,001,015. Repayment of debt is scheduled for May 2027.

Water & Sewer Fund expenditures are $71,421,394 or 61% of budgeted funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are personnel 95%, operating 79%, principal & interest 100%, capital outlay 51%, services provided by the general government 100%, contingencies 0% and transfers to other funds 91%.

Water & Sewer Undesignated Reserves — The City will manage its fiscal resources to ensure funding for the operation of the City is not disrupted. A reserve equivalent to three months' operating needs shall be maintained in the Water & Sewer Fund. The funds available for this reserve are estimated to be $8,506,609, which represents a reserve surplus of $1,740,154 above the required three-month Undesignated Reserve of $6,766,455 on September 30, 2025.

Municipal Airport Fund — Revenues realized at September 30, 2025, are $5,876,021, which represents 59% of the total budget. As of September 30, 2025, 39% of Federal or State grant monies have been received due to the timing of grant-funded capital projects which may not always align with standard benchmarks each quarter.

Municipal Airport Fund expenditures are $4,588,163 or 46% of budgeted funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are personnel 95%, operating 61%, capital outlay 38%, services provided by the general government 100%, transfers to other funds 26%, and contingency 0%. Operating expenses include budgeted funds for the Airport Master Plan update which is 49% complete at the end of the fourth quarter and will be carried over to FY 2026 for completion.

Refuse Collection Fund — Revenues realized at September 30, 2025, are $6,105,063, which represents 100% of the budget. Refuse Collection Fund expenditures are at $6,102,707 or 100% of budgeted funds as of September 30, 2025. This includes the contractual payments made to our solid waste hauler and the services provided by the water & sewer fund for billing and collection expenses.

Stormwater Fund — Revenues realized at September 30, 2025, are $2,741,225, which represents 108% of budgeted revenues. In addition to billing stormwater fees monthly for property within the City limits to owners of property that have separate water/sewer accounts, an annual stormwater fee is billed at the end of each calendar year for property within the City limits to owners of property that is leased or developed parcels that do not have separate water/sewer accounts.

Stormwater Fund expenditures are $2,988,972 or 78% of budgeted funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are personnel 94%, operating 86%, services provided by the general government 100%, capital outlay 50%, and transfers to other funds 63%.

Permits & Inspections Fund — Revenues realized at September 30, 2025, are $2,277,686, which represents 94% of the budget. Permits & Inspections Fund expenditures are $4,346,715 or 77% of budgeted funds. Expenditures by category as a percentage of appropriated funds are personnel 88%, operating 39%, principal & interest 100%, services provided by the general government 100%, capital outlay 82%, and transfers to other funds 56%. Operating expenses include budgeted funds for demolitions which are only 7% expended at the end of the fourth quarter, which will be carried over to FY 2026.

Cash Management — The investments held by the City at September 30, 2025, have a book value of $34,897,900, a par value of $34,890,000 and a market value of $34,660,957. The blended rate of return as of September 30, 2025, was 2.71% with a weighted average maturity for the portfolio of 2.36. The Investment Policy sets a performance measurement for the City's portfolio with the objective of exceeding the average return on three-month US Treasury Bills or the average rate on federal funds, whichever is higher. The average return on three-month US Treasury Bills was 3.92%, while the average rate on federal funds was 4.22%. As of September 30, 2025, the City has an unrealized loss of ($236,943).

At September 30, 2025, 71% of the City's portfolio was in liquid assets (cash and commercial paper). The primary liquid investments include the Wells Fargo Pooled Cash account, a money market account at United Community Bank, and a money market account at US Bank.

The City of DeLand, Florida

QUARTERLY FINANCIAL REPORT

FOR THE PERIOD ENDING

September 30, 2025

MEMORANDUM

DATE: **01/21/2026**

TO: **HONORABLE MAYOR, CITY COMMISSIONERS AND CITY MANAGER**

FROM: **FINANCE DIRECTOR**

SUBJECT: **FINANCIAL REPORT, QUARTER ENDING SEPTEMBER 30, 2025**

The Financial Report for quarter ending September 30, 2025, for the City of DeLand is submitted herewith. The quarterly financial report is a supplemental report intended to provide information regarding the financial position of each fund and includes a review of balance sheets and schedules on revenues and expenditures.

The quarterly financial report is an attempt to bring to you a concise and readable interim report, and is not a substitute for the Annual Comprehensive Financial Report issued at the end of each fiscal year after the independent audit of the City's financial records. This quarterly report covers twelve months of the fiscal year, a representation of one hundred percent of the year.

To provide a more comparable and consistent presentation of fund balance reporting, the Governmental Accounting Standards Board Statement Number 54 – *Fund Balance Reporting and Government Fund Type Definitions* (Statement 54) has been implemented. Previously, fund balance for governmental funds was displayed in two broad components – Reserved and Unreserved. GASB 54 established five classifications comprising a hierarchy based primarily on the extent to which the government is bound to honor constraints for which monies can be spent. The classifications are: Non-spendable, Restricted, Committed, Assigned and Unassigned. This presentation only applies to Governmental Funds. The Proprietary Funds are presented in compliance with the GASB 34 balance sheet format: assets plus deferred outflows of resources equal liabilities plus deferred inflows of resources plus net investment in capital assets where net assets are displayed as Invested in Capital Assets – net of related liabilities, Restricted and Unrestricted.

Non-spendable Fund Balance includes amounts that cannot be spent because they are either not in a spendable form or contractually must be maintained intact. Inventories, prepaid amounts, property acquired for resale, and the principal of a permanent fund are all examples of this type of classification.

Restricted Fund Balance reflects amounts that have externally or legally imposed constraints on their use. This category naturally would include resources subject to externally imposed restrictions (creditors, grantors, contributors, laws/regulations of other governments, constitutional provisions). It also would normally, but not always, include resources resulting from enabling legislation (i.e., legislation authorizing the raising of resources for a specific purpose).

Committed Fund Balance consists of amounts that can only be used for specific purposes pursuant to constraints imposed by formal action of the City Commission, the highest level of decision making in the City. These committed amounts cannot be used for any other purpose unless the government removes or changes the specified use.

Assigned Fund Balance includes amounts that are constrained by the government's intent, but are neither restricted nor committed. The assignment conveys that the intended use of those amounts is for a specific purpose that is narrower than the general purposes of the governmental fund. Intent is not imposed by a formal commission action. Unassigned Fund Balance is the residual classification for the general fund. The General Fund should be the only fund that reports a positive unassigned fund balance, since expenditures associated with other funds are incurred for the specific activity for which the fund is reporting.

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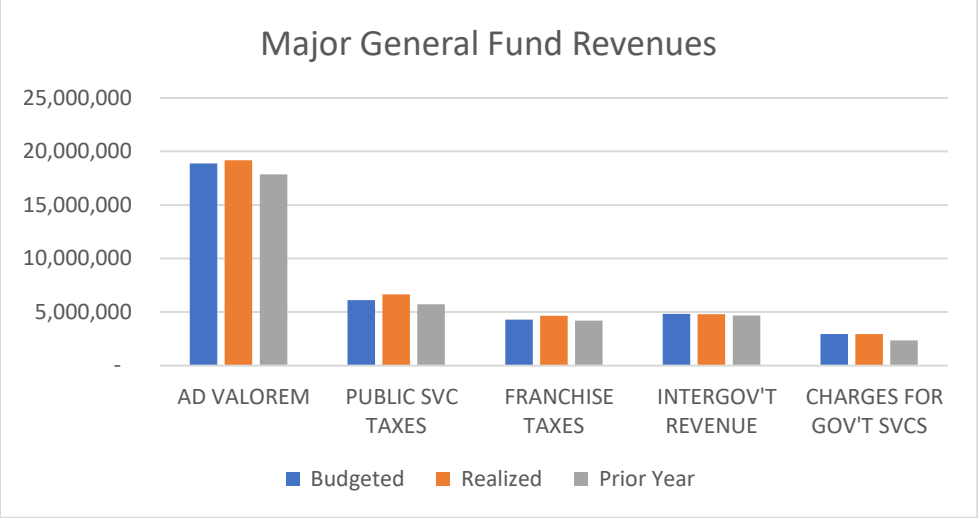
GENERAL FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Revenues of the General Fund are $49,345,123 as of September 30, 2025 and represent 105% of operating revenues budgeted this fiscal year. Charges for government services represent allocated administrative costs charged out to other funds for governmental services provided. Transfers from other funds consist of transfers from the GIFT Fund to repay Hurricane Reserves, transfers from the Airport Fund for the debt repayment, and transfers from other funds for their allocated share of governmental capital projects.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 001 - GENERAL FUND				
AD VALOREM	18,888,671	19,168,683	101.48	17,851,021
OTHER TAXES	1,448,334	1,443,582	99.67	1,311,901
PUBLIC SERVICE TAXES	6,131,992	6,669,338	108.76	5,722,272
COMMUNICATION SVC TAX	1,155,888	1,164,680	100.76	1,112,562
LOCAL BUSINESS TAXES	240,000	286,401	119.33	305,973
FRANCHISE TAXES	4,296,385	4,656,504	108.38	4,195,661
PERMITS. FEES, & SPECIAL ASSESSMENTS	50,420	74,331	147.42	56,417
OPERATING GRANTS	50,000	96,750	193.50	1,465,244
INTERGOVERNMENTAL REVENUE	4,842,222	4,812,090	99.38	4,670,694
PAYMENT IN LIEU OF TAXES	3,367,403	3,367,403	100.00	3,162,835
CHARGES FOR SERVICES	932,873	969,514	103.93	1,153,277
FINES & FORFEITS	130,000	94,518	72.71	141,092
MISCELLANEOUS REVENUES	523,627	1,000,560	191.08	1,396,215
INTEREST REVENUES	550,000	1,442,418	262.26	1,607,448
RENTAL INCOME	284,186	339,031	119.30	317,322
DEBT PROCEEDS	309,032	309,031	100.00	350,020
CHARGES FOR GOVT SERVICES	2,959,654	2,959,654	100.00	2,362,131
TRANSFERS FROM OTHER FUNDS	741,086	490,637	66.21	469,870
	46,901,773	49,345,123	105.21	47,651,956
USE OF RESERVES	10,482,041	-		-
TOTAL REVENUES	57,383,814	49,345,123	85.99	47,651,956

- Permits, fees and special assessments include fire permits which are 180% of budget at year end.
- Operating grants include VOCA, HIDTA, Bulletproof Vests, and FEMA grant revenue which exceeded budget this quarter.
- Intergovernmental revenue includes state sales tax which is 97% realized at the end of the fourth quarter.
- Fines and forfeits include parking ticket revenue which is 31% realized at the end of the fourth quarter.
- Transfers from other funds is 66% realized mainly due to contra revenues recorded for principal debt payments.



EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

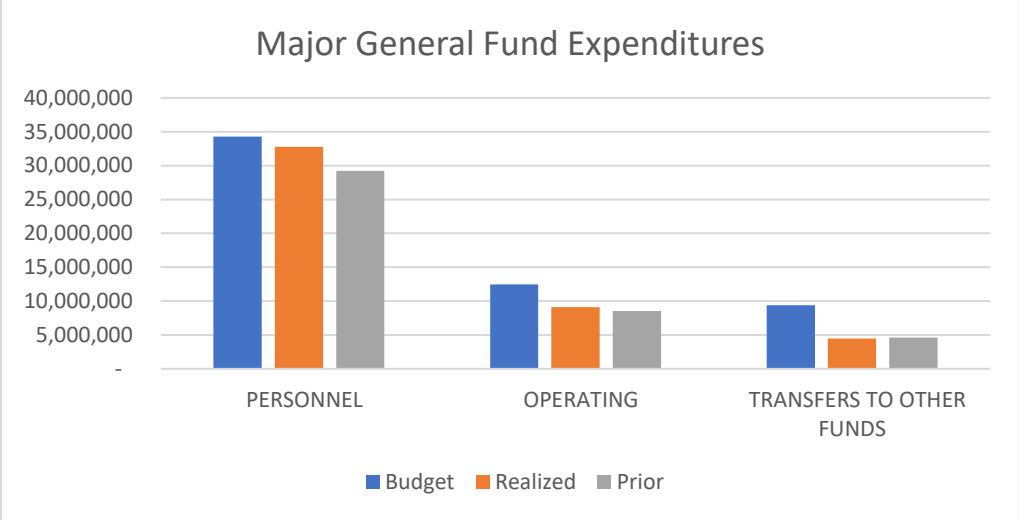
General Fund expenditures are $47,076,167 or 82% of budgeted funds as of September 30, 2025. Expenditures by category as a percent of appropriated funds are personnel 96%, operating 73%, capital outlay 100%, grants and aid 52%, principal & interest 100%, contingency 0%, transfers to other funds 48%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 001 - GENERAL FUND				
PERSONNEL	34,299,227	32,755,433	95.50	29,243,536
OPERATING	12,453,786	9,100,425	73.07	8,553,105
CAPITAL OUTLAY	405,698	405,697	100.00	581,382
GRANTS & AID	87,884	45,930	52.26	49,116
PRINCIPAL & INTEREST	270,211	270,205	100.00	167,427
CONTINGENCY	461,432	-	0.00	-
TRANSFERS TO OTHER FUNDS	9,405,576	4,498,477	47.83	4,617,878
TOTAL EXPENDITURES	57,383,814	47,076,167	82.04	43,212,444

- Operating expenses are 73% of budget primarily due to costs for building maintenance, equipment maintenance, professional services and travel & training with lower-than-expected expenditures at the end of the fourth quarter. In addition, hurricane and disaster relief expenses are significantly below budget due to debris removal costs that were lower than originally anticipated.

- Contingencies include funds for emergency purchases ($248,932) and planned savings for the Hurricane Reserve ($200,000) and Sanborn Center Reserves ($12,500).

- Budgeted transfers to other funds include transfers to Homelessness Fund ($715,395), transfers to the Governmental Impact Fee fund ($189,510), transfers to Grants & Special Revenue Fund ($966,146), transfers to the Debt Service Fund ($1,400,717), and transfers to the Capital Projects Fund ($6,133,808). Transfers are recorded when capital expenses are incurred which do not always follow normal benchmarks for any given quarter.



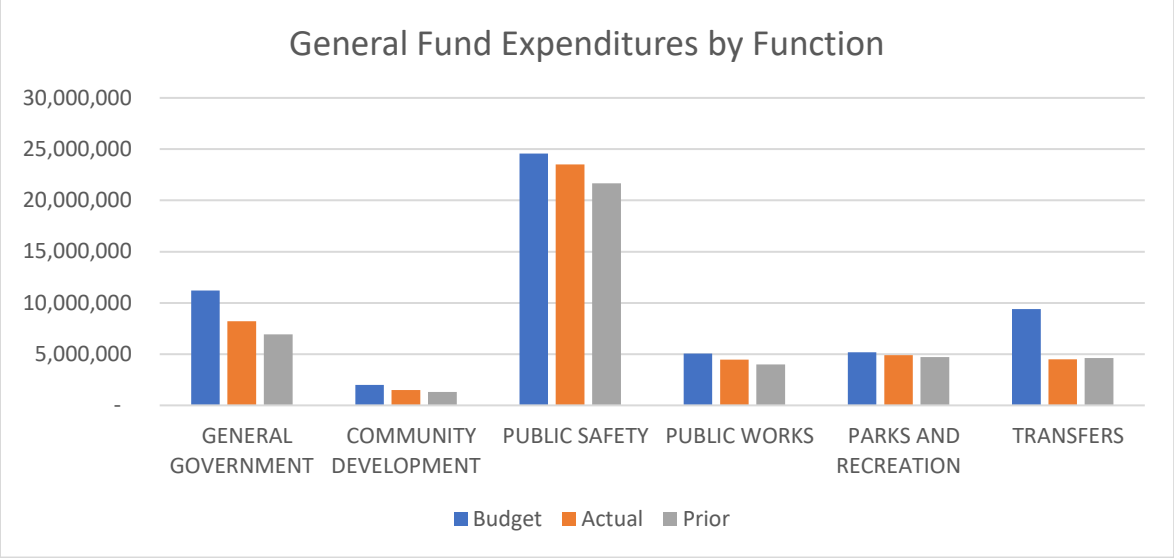
EXPENDITURES BY FUNCTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 001 - GENERAL FUND				
GENERAL GOVERNMENT	11,192,599	8,218,677	73.43	6,929,531
COMMUNITY DEVELOPMENT	1,983,567	1,507,159	75.98	1,312,904
PUBLIC SAFETY	24,557,637	23,497,620	95.68	21,657,160
PUBLIC WORKS	5,062,366	4,469,073	88.28	3,979,241
PARKS AND RECREATION	5,182,069	4,885,161	94.27	4,715,731
TRANSFERS	9,405,576	4,498,477	47.83	4,617,878
Fund 001 - GENERAL FUND: TOTAL EXPENDITURES	57,383,814	47,076,167	82.04	43,212,444

- General Government expenses are higher than the prior year primarily due to costs related to Hurricane Milton. The total budget for Hurricane Milton is $2,150,000 with actual costs of $958,382. For grant reporting purposes, all citywide hurricane-related expenditures are recorded in a single consolidated account within general government.

- Public Safety expenses exceed the prior year mainly as a result of increased salaries and personnel costs within the Police and Fire departments.

- Public Works expenses are higher than the prior year primarily due to increased salaries and personnel cost, as well as higher operating costs at the Public Works facility, which were previously shared with Utilities prior to the construction of the new Utilities Administration Building.

- Transfers are recorded when expenses are incurred and may not align with standard quarterly spending benchmarks.



GENERAL FUND CAPITAL PROJECTS

Capital projects other than Subscription Based Information Technology Assets (SBITA's) for the General Fund are recorded in the Grants & Special Revenues Fund and the Capital Projects Fund which are included in a separate section of this report.

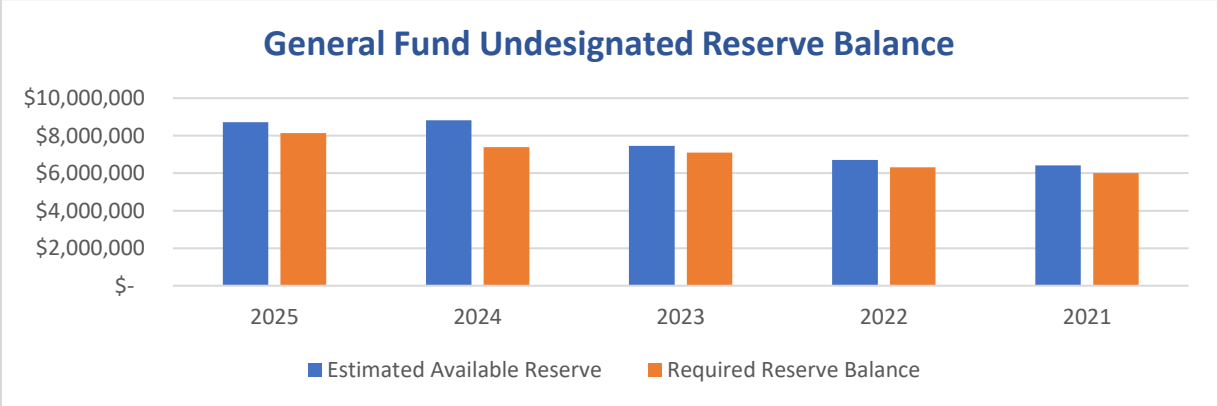
GENERAL FUND RESERVE ANALYSIS

According to City policy, the City will manage its fiscal resources to ensure funding for City operations is not disrupted. A reserve equivalent to two month's operating needs shall be maintained in the General Fund. The funds available for this reserve are estimated to be $8,726,223 which represents a reserve balance of $595,092 above the two-month required undesignated reserve of $8,131,132 at September 30, 2025.

General Fund

Fiscal Year 2025 Undesignated Reserve Analysis

	1st QTR	2nd QTR	3rd QTR	4th QTR
Estimated Available Reserve Funds	$ 8,820,441	$ 8,820,441	$ 8,726,223	$ 8,726,223
Required 2 Month Undesignated Reserve	7,809,190	7,804,226	7,789,605	8,131,132
Surplus/Deficit	$ 1,011,251	$ 1,016,215	$ 936,618	$ 595,092



CONFISCATED TRUST FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Confiscated Trust Fund revenues are $22,249 or 742% of operating budget, excluding use of reserves. Revenues are budgeted to cover expenses and not based on revenue projections.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Confiscated Trust Fund expenditures are at $83,234 or 80% of budget. Reserve funds were budgeted this fiscal year for red dot sights/holsters and a single purpose K-9 for the police department.

HOMELESS SHELTER FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

The Homeless Shelter Fund revenues are $732,856 or 91% of total revenues budgeted this fiscal year. Operating revenues are comprised of private donations totaling $17,900 and transfers from the General Fund totaling $714,956 or 100% of budgeted funds which will be used towards operations of the facility.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

The Homeless Shelter expenses are $732,856 or 91% of budgeted expenses this fiscal year. Expenses include payments to the West Volusia Neighborhood Center for operation of the shelter, payments to the First Step Shelter, and property insurance and building maintenance for the facility. The Homeless Shelter Fund has depleted all reserve funds and relies on donations and transfers from the General Fund to cover expenses this year.

SPRING HILL COMMUNITY REDEVELOPMENT FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Spring Hill Community Redevelopment Fund revenues realized at September 30, 2025 are $1,185,180 or 115% of budgeted revenues, excluding use of reserves. CRA revenues are comprised of ad valorem taxes, intergovernmental revenues from other taxing authorities, federal grants, miscellaneous revenues, and interest revenue.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 160 - SPRING HILL CRA FUND				
AD VALOREM	348,944	349,613	100.19	309,044
INTERGOVERNMENTAL REVENUE	656,259	717,655	109.36	593,892
MISCELLANEOUS REVENUES	1,200	1,789	149.09	2,623
INTEREST REVENUES	-	88,321	100.00	79,181
OPERATING GRANTS	27,802	27,802	100.00	24,710
	1,034,205	1,185,180	114.60	1,009,450
USE OF RESERVES	1,083,417	-		-
TOTAL REVENUES	2,117,622	1,185,180	55.97	1,009,450

- Ad Valorem and Intergovernmental revenues are 100% and 109% realized due to revenues from all taxing agencies billed and collected in the first quarter.

- Operating grants include $27,802 of budgeted CDBG funds to cover approximately 13% of budgeted personnel expenses.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Spring Hill Community Redevelopment Fund total expenditures are $438,932 or 21% of total budget. Operating expenses are 70% of operating budget, excluding contingency savings and capital. Expenditures by category as a percent of appropriated funds are personnel 85%, operating 99%, grants & aid 8%, transfers to other funds 99%, services provided by general government 100%, capital outlay 10%, and contingency 0%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 160 - SPRING HILL CRA FUND				
PERSONNEL	215,876	182,960	84.75	165,598
OPERATING	77,606	76,974	99.19	144,614
GRANTS & AID	110,000	8,505	7.73	4,313
TRANSFERS TO OTHER FUNDS	37,613	37,138	98.74	52,386
SERVICES PROVIDED BY GEN GOVT	17,476	17,476	100.00	-
	458,571	323,053	70.45	366,910
CAPITAL OUTLAY	1,144,194	115,879	10.13	303,769
CONTINGENCY	514,857	-		-
TOTAL EXPENDITURES	2,117,622	438,932	20.73	670,679

- Grants & Aid are only 8% of budget at the end of the fourth quarter.

- Capital Outlay is 10% of budget mainly due to the timing of capital projects which may not align with quarterly spending benchmarks.

SPRINGHILL CRA FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
CANDLELIGHT OAKS BASKETBALL COURT	75,000	18,275	-	56,725	75.63
CANDLELIGHT PARK IMPROVEMENTS	116,231	-	-	116,231	100.00
ADELLE STREETSCAPE REFURBISH	97,604	97,604	-	-	0.00
SIDEWALK INSTALLATION AND IMPROVEMENTS	49,000	-	-	49,000	100.00
ADA UPGRADES	13,000	-	-	13,000	100.00
CLARA STREETSCAPE	793,359	-	-	793,359	100.00
	1,144,194	115,879	-	1,028,315	89.87

GOVERNMENTAL IMPACT FEES TRUST FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Governmental Impact Fees Trust Fund revenues realized at September 30, 2025 are $1,663,328 or 103% of budgeted operating revenues, excluding use of reserves. The Governmental Impact Fees Trust Fund was established to budget and account for projects using revenue collected from Police, Fire, Parks and Recreation, and General Government Building Impact Fees paid by new customers. Revenues are budgeted to match expenses and do not reflect planned savings for the fiscal year.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 170 - GIFT FUND				
PERMITS. FEES, & SPECIAL ASSESSMENTS				
IMPACT FEES - POLICE RESIDENTIAL	87,831	287,505	327.34	576,522
IMPACT FEES - FIRE RESIDENTIAL	186,550	139,224	74.63	279,083
IMPACT FEES - POLICE COMMERCIAL	-	28,055	100.00	34,057
IMPACT FEES - FIRE COMMERCIAL	-	13,187	100.00	15,737
IMPACT FEES - RECREATION RESIDENTIAL	920,608	645,528	70.12	1,295,088
IMPACT FEES - GEN GOVT RESIDENTIAL	227,550	249,261	109.54	499,794
IMPACT FEES - GEN GOV'T COMMERCIAL	-	24,289	100.00	29,496
MISCELLANEOUS REVENUES	-	-	0.00	130
INTEREST REVENUES	-	247,598	100.00	239,889
DEBT PROCEEDS	-	28,682	100.00	-
TRANSFERS FROM OTHER FUNDS	189,510	-	0.00	-
	1,612,049	1,663,328	103.18	2,969,796
USE OF RESERVES	1,856,219	-		-
TOTAL REVENUES	3,468,268	1,663,328	47.96	2,969,796

- Fire Impact and Recreation Impact fees are 82% and 70% realized, which is less than expected at the end of the fourth quarter. All other impact fees exceeded expected budgets this year.

- Budgeted Use of Parks & Recreation Reserves is to fund the Alabama Greenway Trail ($293,762).

- Budgeted Use of PD Reserves is to fund equipment for a new position ($75,287), six new police vehicles ($438,000) and cameras for downtown ($30,900)

- Budgeted Use of General Gov't reserves is to fund AED upgrades around city ($49,319), six security cameras for downtown ($60,900), meridian barriers and bollards ($728,107), and DeLand Commons Infrastructure Improvements ($179,944)

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Governmental Impact Fees Trust Fund expenses as of September 30, 2025 are $2,445,516 or 71% of budgeted funds. 47% of budgeted expenditures are transfers to other funds to cover project expenses that are funded by more than impact fees.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 170 - GIFT FUND				
OPERATING	146,419	112,728	76.99	5,452
CAPITAL OUTLAY	1,702,790	1,032,426	60.63	39,203
TRANSFERS TO OTHER FUNDS	1,619,059	1,300,362	80.32	1,371,518
TOTAL EXPENDITURES	3,468,268	2,445,516	70.51	1,416,173

- Budgeted operating expenses include funding for an updated impact fee study ($66,200), citywide AED upgrades ($49,319) and cameras for downtown ($30,900)

- Budgeted transfers to the General Fund include $200,000 to repay Hurricane Reserves and $211,000 for early repayment of Revenue Notes 2004A&B. Budgeted transfers to the Grants & Special Revenue Fund include $292,246 for Alabama Greenway Trail. Budgeted transfers to the Debt Service Fund include $915,813 for debt funded impact projects such as Earl Brown Park, Sperling Sports Complex, Fire Station #81 and the Police Evidence Building.

- Capital Outlay is 61% of budget due to timing of capital projects which may not align with standard quarterly spending benchmarks. Detailed expenditures for capital projects are included below.

GOVERNMENTAL IMPACT FEES TRUST FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
MERIDIAN BARRIERS	608,967	608,966	-	1	0.00
BOLLARDS	308,650	-	308,650	-	0.00
DOWNTOWN CAMERAS (6)	60,900	59,582	-	1,318	2.16
NEW POLICE CAR FOR NEW OFFICER	75,287	-	-	75,287	100.00
VEHICLE FOR NEW OFFICER (1 OF 6)	77,921	60,419	14,801	2,701	3.47
VEHICLE FOR NEW OFFICER (2 OF 6)	77,921	60,419	14,801	2,701	3.47
VEHICLE FOR NEW OFFICER (3 OF 6)	77,921	60,419	14,801	2,701	3.47
VEHICLE FOR NEW OFFICER (4 OF 6)	77,921	60,419	14,801	2,701	3.47
VEHICLE FOR NEW OFFICER (5 OF 6)	77,921	60,419	14,801	2,701	3.47
VEHICLE FOR NEW OFFICER (6 OF 6)	77,921	60,419	14,801	2,701	3.47
DELAND COMMONS INFRASTRUCTURE IMPROVE	179,944	-	-	179,944	100.00
ECHO - ALABAMA GREENWAY TRAIL DESIGN	1,516	1,365	-	151	9.96
	1,702,790	1,032,426	427,456	242,908	14.27

DOWNTOWN COMMUNITY REDEVELOPMENT FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Downtown Community Redevelopment Fund revenues are at $1,050,408 or 106% of budgeted operating revenues, excluding use of reserves. CRA revenues are comprised of ad valorem taxes, charges for services, miscellaneous revenues, and interest revenues.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 180 - DOWNTOWN CRA FUND				
AD VALOREM	398,797	398,797	100.00	347,919
INTERGOVERNMENTAL REVENUE	401,410	401,411	100.00	333,526
CHARGES FOR SERVICES	58,105	31,074	53.48	60,601
MISCELLANEOUS REVENUES	101,618	113,908	112.09	28,972
INTEREST REVENUES	35,000	105,219	300.63	127,957
TRANSFERS FROM OTHER FUNDS	-	-	0.00	310,712
	994,930	1,050,408	105.58	1,209,688
USE OF RESERVES	585,912	-		-
TOTAL REVENUES	1,580,842	1,050,408	66.45	1,209,688

- Charges for services are 53% of budget, primarily due to $30,000 in waived lease payments approved for the Museum of Art this year.

- Miscellaneous revenues include $85,000 in donations for Christmas lighting and $12,000 donated for Pelham Square shuttle services.

- Budgeted use of reserves is to fund the construction of Voorhis Avenue Streetscape ($566,196), replacement doors at Fish Building ($16,509), and the new parking lot downtown ($3,207).

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Downtown Community Redevelopment Fund expenditures are $746,372 or 47% of total budget, while operating expenses, excluding capital and savings contingency, are 71% of budget this quarter. Expenses by category as a percent of appropriated funds are operating expenses 74%, grants and aid 6%, services provided by general government 100%, transfers to other funds 100%, capital outlay 20%, and contingency 0%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 180 - DOWNTOWN CRA FUND				
OPERATING	761,766	563,772	74.01	388,500
GRANTS & AID	67,500	4,362	6.46	-
TRANSFERS TO OTHER FUNDS	38,435	38,435	100.00	738,435
SERVICES PROVIDED BY GEN GOVT	17,476	17,476	100.00	-
	885,177	624,045	70.50	1,126,935
CAPITAL OUTLAY	598,337	122,327	20.44	978,898
CONTINGENCY	97,328	-		-
TOTAL EXPENDITURES	1,580,842	746,372	47.21	2,105,833

- Operating expenses are 74% of budget mainly due to DeLand SunRail Circulator Services which are 45% of budget at the end of the fourth quarter.
- Services provided by general government represents allocated expenses for management services provided by the general fund.
- Budgeted transfers include transfers to the debt service fund to cover loan payments for Downtown Parking Improvements ($38,435).
- Capital Outlay is 20% of budget due to timing of capital projects which may not align with standard quarterly spending benchmarks. Detailed expenditures for capital projects are included below.

DOWNTOWN COMMUNITY REDEVELOPMENT FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
REPLACE FRONT DOORS AT FISH BUILDING	16,509	15,103	-	1,406	8.51
PARKING LOT - 201 W. HOWRY AVE	5,307	5,306	-	1	0.03
VOOHRIS AVENUE STREETSCAPE	566,196	94,918	7,233	464,046	81.96
ART BENCH FOR DOWNTOWN	10,325	7,000	-	3,325	32.20
	598,337	122,327	7,233	468,778	78.35

GRANTS & SPECIAL REVENUES FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Grants and Special Revenues Fund revenues realized at September 30, 2025 total $1,438,172 or 46% of budgeted revenues this quarter. The Grants and Special Revenues Fund was established to budget and account for capital projects and expenditures related to grants and other restricted revenues that fund non-payroll operating expenses. Revenue recognition in this fund is dependent on timing of projects and may not align with standard quarterly benchmarks.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 190 - GRANT & SPECIAL REVENUE FUND				
OTHER TAXES	382,279	375,357	98.19	353,178
CHARGES FOR SERVICES	25,000	569,625	2,278.50	750,518
MISCELLANEOUS REVENUES	-	-	0.00	19,271
INTEREST REVENUES	7,439	57,680	775.37	137,026
TRANSFERS FROM OTHER FUNDS	1,258,392	435,907	34.64	133,132
CAPITAL GRANTS	449,116	(396)	(0.09)	1,663,908
DEBT PROCEEDS	500,000	-	0.00	-
	2,622,226	1,438,172	54.85	3,057,033
USE OF RESERVES	520,486	-		-
TOTAL REVENUES	3,142,712	1,438,172	45.76	3,057,033

- Charges for Services include Tree Replacement revenue of $569,625, which is significantly higher than budget.
- Transfers from Other Funds include transfers for parking services golf cart ($903), JAG grant services ($1,450), road materials and supplies ($725,833), ROW ADA improvements ($40,935), Trà Thomas Park ($149,327), Chisholm Marquee board ($47,698), and the Greenway Trail ($292,246).
- Federal grant revenues include JAG funds for parking enforcement golf cart and CDBG funds for ADA right of way improvements, Jackson Lane Park, Trà Thomas Park, and Chisholm Center marquee board. State grant revenues include funds for the Downtown Historic Resource Survey. Local grants include ECHO funds for the Greenway Trail which were over reported in FY 2024 which is offset as negative revenue in the current fiscal year.
- $500,000 is budgeted for a 2024 debt issue to pay for road resurfacing which was carried over to FY 2025.
- Use of Reserves is budgeted for road materials and supplies ($456,986) and tree revenue projects ($63,500).

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Grants and Special Revenue Fund expenditures are $1,084,609 or 35% of budgeted funds as of September 30, 2025. Operating expenses include road materials and supplies, tree department operating supplies, and consulting fees for the downtown historic resource survey. Expenditures in this fund are dependent on timing of projects and may not align with standard quarterly benchmarks.

GRANTS & SPECIAL REVENUES FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
CDBG 2023 - ROW ADA SIDEWALK IMPROV	705	705	-	-	0.00
CDBG 2024 - ROW ADA IMPROV	109,070	109,070	-	-	0.00
CDBG 2025 - ADA IMPROVEMENTS	89,220	-	-	89,220	100.00
SCAG ZTURN 48' REPLACE 133-MO-27	9,038	-	-	9,038	100.00
ELECTRIC F150 FOR NURSERY	48,462	-	-	48,462	100.00
CDBG 2025 - JACKSON LANE PARK PAVILION	102,642	-	29,913	72,729	70.86
ECHO - ALABAMA GREENWAY TRAIL	292,246	75,692	-	216,554	74.10
CDBG 2023 - CHISHOLM MARQUEE BOARD	49,656	34,882	-	14,774	29.75
	701,039	220,349	29,913	450,777	64..30

DEBT SERVICE FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Revenues for the Debt Service Fund consists of transfers from other funds, which are used to pay debt payments for the current fiscal year. As of September 30, 2025, $1,993,936 or 83% of budgeted funds were transferred from other funds to cover debt payments made by the end of the fourth quarter. Transfers occur as debt payments are due.

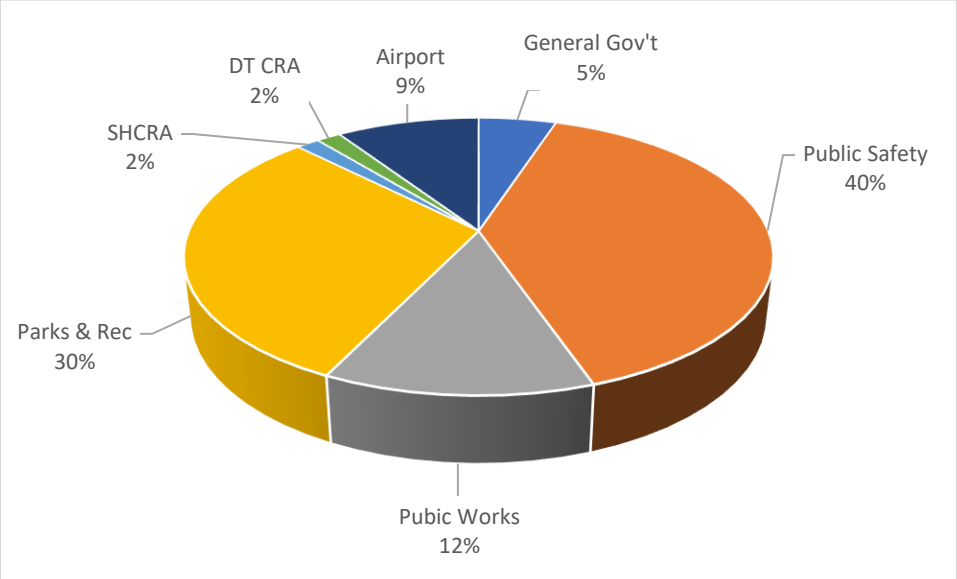
EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Debt Service expenditures total $1,993,936 or 83% of budgeted funds, and include payments for revenue notes totaling $1,954,339 and copier lease payments $39,597. Expenditures by department for governmental related debt payments include General Government ($56,359), Community Development ($65,693), Public Safety ($954,189), Public Works ($221,490), Parks and Recreation ($396,222), Airport ($225,164), Downtown CRA ($38,434), and Springhill CRA ($36,385).

Annual Debt Service Schedule – FY 2025

Governmental Funds Debt	FY 2025 From Amortization Schedules			
Debt Instrument	Principal Payments	Interest Payments	Total Payment Due	Principal Bal Due
2013A Note BB&T - EB Park	136,623	43,221	179,843	1,183,574
2013B Note BB&T - EB Park	51,720	16,362	68,082	448,058
2018A Revenue Note BB&T - Non-taxable	271,260	54,349	325,609	1,516,446
2018B Revenue Note BB&T - Taxable	69,405	29,156	98,561	667,847
2019 Revenue Note - Chase Bank	538,312	116,046	654,358	6,637,884
2020 Truist Bank Lease - Ladder Truck	195,884	8,343	204,227	400,034
2023 Revenue Note - Webster Bank	196,100	227,559	423,659	4,704,900
	1,459,304	495,034	1,954,339	15,558,743

Debt Service by Function – FY 2025



CAPITAL PROJECTS FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Revenues for the Capital Projects Fund total $3,959,395 or 51% of budgeted funds, excluding use of reserves and debt proceeds. Revenues include .4 mills of ad valorem taxes dedicated for capital expenses, interest earnings, debt proceeds and transfers from other funds which are recognized when expenses are incurred.

RVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 300 - CAPITAL PROJECTS FUND				
AD VALOREM	1,282,005	1,353,283	105.61	589,089
MISCELLANEOUS REVENUES	20,000	17,114	85.57	-
INTEREST REVENUES	-	102,575	100.00	115,544
TRANSFERS FROM OTHER FUNDS	6,404,981	2,485,746	38.81	3,556,244
	7,706,986	3,959,395	51.37	4,263,030
DEBT PROCEEDS	6,189,000	-		-
USE OF RESERVES	2,265,586	-		-
TOTAL REVENUES	16,161,572	3,959,395	24.50	4,263,030

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Capital fund expenditures total $4,566,295 or 28% of budgeted capital expenses. Expenses included operating capital of $35,221 and capital projects totaling $4,565,370 which is detailed in the section below.

CAPITAL PROJECTS FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
CLARA CONCEPT & W VOORHIS STREETSCAPE	7,128	6,962	-	166	2.33
CITY HALL MONUMENT SIGNS	23,192	-	19,974	3,218	13.88
UKG TIME AND ATTENDANCE MIGRATION	9,386	-	-	9,386	100.00
FORTIGATE ENTERPRISE BUNDLE SERVICE PACK	19,164	-	-	19,164	100.00
P&R CIVICREC SOFTWARE	4,718	916	-	3,802	80.59
NETWORK MONITORING AND PERFORMANCE MGMT	19,000	-	-	19,000	100.00
MICROSOFT OFFICE 2021 STANDARD UPGRADE	214,710	143,550	-	71,160	33.14
COPIER FOR PUBLIC SERVICES	14,154	-	-	14,154	100.00
FIJUTSU FI-7700 SCANNER FOR CLERK	12,000	-	-	12,000	100.00
CAMERA SYSTEM FOR LITTLE LEAGUE FIELDS	12,251	12,250	-	1	0.01
CAMERA SYSTEM FOR EBP SKATE & BB COURTS	5,251	5,250	-	1	0.02
CJIS REQUIRED PD SERVER SEPARATION	65,000	46,425	-	18,575	28.58
NEW WINDOWS SERVER - PHONE SERVER	20,300	19,497	-	803	3.96
CITY HALL PARKING LOT SECURITY CAMERAS	23,461	23,460	-	1	0.00
FORTIGATE 200G HARDWARE (2)	28,637	28,637	-	-	0.00
VEHICLE FOR CODE ENFORCEMENT MANAGER	33,000	-	-	33,000	100.00
VEHICLE FOR CODE ENFORCEMENT MANAGER	42,602	29,151	-	13,451	31.57
VEHICLE REPLACEMENT CODE OFFICER 1 OF 2	42,602	29,151	-	13,451	31.57
VEHICLE REPLACEMENT CODE OFFICER 2 OF 2	42,602	29,151	-	13,451	31.57
FIRE STATION 82/83 IMPROVEMENTS	10,666	6,338	-	4,328	40.57
FIRE STATION 83 ADDITION	1,292,132	429,628	676,693	185,811	14.38
ENGINE REPLACEMENT 2007 CONTENDER	783,776	-	-	783,776	100.00
LADDER APPARATUS 75' PIERCE ENFORCER	1,288,603	-	-	1,288,603	100.00
HEAVY RESCUE	27,701	27,700	-	1	0.00
ZOLL X SERIES ADV MONITOR DEFIB	55,630	52,048	-	3,582	6.44
MACH ALERT 81-82-83	75,515	37,758	37,758	-	0.00
EXTRICATION EQUIPMENT HURST E-DRAULIC 83	65,000	63,164	-	1,836	2.82
6 PORTABLE RADIOS XL185, 10 FIRE MICS	62,000	61,740	-	260	0.42

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
A/V UPGRADES AT FIRE DEPARTMENT	34,423	34,422	-	1	0.00
CRESTLINER JONBOAT	10,000	8,029	-	1,971	19.71
HEARING ACCOMMODATION UNIT	10,256	10,256	-	-	0.00
HEARING ACCOMODATION UNIT FS 82	6,170	6,169	-	1	.02
SALLY PORT DOOR	40,000	11,536	-	28,464	71.16
PD PERIMETER SECURITY FENCING AND WALL	179,800	-	21,172	158,628	88.22
BRONZE MEMORIAL MONUMENT	22,000	21,618	-	382	1.74
FIRE ALARM SYSTEM PANEL & EQUIP REPLACE	70,528	-	-	70,528	100.00
HVAC CONTROL SYSTEM AND CHILLERS	116,966	116,965	-	1	0.00
CID - CHEVY MALIBU OR SIMILAR SEDAN	57,733	45,001	-	12,732	22.05
DRONE	5,903	5,901	-	2	0.03
10-YEAR REFRESH OF UNINTERRUPTIBLE POWER	21,950	9,300	-	12,650	57.63
REPLACE FAULTY HVAC CHILLER WATER VALVES	29,473	-	-	29,473	100.00
REPLACE HVAC IN GYM	9,050	5,100	-	3,950	43.64
PATROL SERGEANT SUV 1 OF 2	70,196	67,723	-	2,473	3.52
PATROL SERGEANT SUV 2 OF 2	70,196	67,723	-	2,473	3.52
PATROL SUV 1 OF 6	77,288	73,741	-	3,547	4.59
PATROL SUV 2 OF 6	81,078	73,741	-	7,337	9.05
PATROL SUV 3 OF 6	81,078	73,741	-	7,337	9.05
PATROL SUV 4 OF 6	81,078	73,741	-	7,337	9.05
PATROL SUV 5 OF 6	81,078	73,741	-	7,337	9.05
PATROL SUV 6 OF 6	81,078	73,741	-	7,337	9.05
600KW DIESEL GENERATOR FOR POLICE	200,776	-	200,776	-	0.00
422 E BERESFORD LAND PURCHASE	8,738	1,838	6,900	1	0.01
5 NEW AC UNITS - PW REMODEL	40,500	40,500	-	-	0.00
CITY ENTRY FEATURE - DESIGN	79,223	31,389	47,834	1	0.00
BERESFORD EXT. MULTI USE PATH WITH VOLUS	120,000	181	-	119,819	99.85
ARLINGTON SIDEWALK - PLYMOUTH TO OAKDALE	50,000	-	-	50,000	100.00
REPAIR/REPLACE AMELIA AVE EXIT GATE	5,404	5,404	-	-	0.00
NEW BOXER 700DX MINI SKID STEER	47,130	45,868	-	1,262	2.68
REPLACE 132S-THERMO-1 PRE MELTER	59,175	56,800	-	2,375	4.01
REPLACE 132S-LAM-002 LAMINATOR	19,090	14,872	-	4,218	22.09
NEW GRINDLAZER	28,825	18,256	-	10,569	36.67
REPLACE 11320124- STERLING DUMP	268,743	-	-	268,743	100.00
NEW VEHICLE FOR CITY FORESTER	73,342	59,066	-	14,276	19.46
REPLACE 133142A-FOREMAN TRUCK	74,128	61,712	-	12,416	16.75
NEW F150 HYBRID	74,129	61,880	-	12,249	16.52
REPLACE 2015 ELECTRIC SCRUBBER	20,095	15,267	-	4,828	24.03
REPLACE 134-GAT-001 UTILITY VEHICLE-CRA	31,050	20,527	-	10,523	33.89
NEW FOUR POST LIFT WITH JACK	44,356	44,087	-	269	0.61
FUEL MASTER LIVE	41,131	15,399	19,967	5,765	14.02
TEXA-DIAGNOSTIC SCANNER	8,995	8,995	-	-	0.00
REPLACE ROOF MAIN ADMIN PARKS & REC DEPT	80,000	-	-	80,000	100.00
REPLACE ROOF ON CENTRAL PART - CHISHOLM	80,790	80,790	-	-	0.00
REPLACE ROOF ON MAIN HALL - CHISHOLM CEN	71,510	71,510	-	-	0.00
DEVELOP ADDITIONAL PARKING AT SPERLING	142,500	-	-	142,500	100.00
RECREATION FIELDS AT VICTORIA PARK	3,879,464	-	-	3,879,464	100.00
SPEC MARTIN IMPROVEMENTS	890,235	885,742	-	4,493	.50
ALUMINUM DOUBLE WALK GATES	6,179	6,178	-	1	0.01
PICKLEBALL/TENNIS COURTS - EARL BROWN	3,189,000	357,520	62,633	2,768,847	86.82
MODERNIZE ELEVATOR AT MELCHING FIELD	114,109	114,108	-	1	0.00
MODERNIZE ELEVATOR AT BILL DREGGORS	172,409	172,409	-	0	0.00
REPLACE WACKPACKER/ROLLER 143-WR-001	7,217	6,500	-	717	9.94
HVAC UNIT 1 OF 3 AT SPEC MARTIN	65,358	65,328	-	30	0.05
HVAC UNIT 2 OF 3 AT SPEC MARTIN	65,358	65,328	-	30	0.05
HVAC UNIT 3 OF 3 AT SPEC MARTIN	65,359	65,328	-	31	0.05
HOT WATER TANK - LOCKER ROOM - MELCHING	49,500	49,500	-	-	0.00
REPLACE BANQUET CHAIRS - SANBORN	73,794	-	-	73,794	100.00
REPLACE VEHICLE #19	30,000	29,151	-	849	2.83
REPLACE VEHICLE #44	61,223	56,965	-	4,258	6.95
REPLACE MOWER 143-MOW-018	10,724	10,724	-	0	0.00
REPLACE MOWER 143-MOW-010	10,724	10,724	-	0	0.00

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
REPLACE MOWER 143-MOW-009	10,256	10,256	-	0	0.00
REPLACE MOWER 143-MOW-011	10,256	10,256	-	0	0.00
NEW TANDEM AXLE CARGO TRAILER	9,200	9,200	-	-	0.00
NEW 10X24 FLATBED TANDEM TRAILER	8,000	8,000	-	-	0.00
NEW UTILITY VEHICLE	20,805	20,804	-	1	0.00
HAULER GAS OPERATED 1 OF 3	12,344	12,344	-	0	0.00
HAULER GAS OPERATED 2 OF 3	12,344	12,344	-	0	0.00
HAULER GAS OPERATED 3 OF 3	12,344	12,344	-	0	0.00
APGAR SPORTS COMPLEX SIGNS	153,220	-	153,220	-	0.00
REPLACE WIRELESS WITH FIBER - MELCHING	5,131	5,131	-	1	0.01
CONNECT SPEC MARTIN TO FIBER NETWORK	9,886	9,886	-	0	0.00
	16,161,572	4,565,370	1,246,926	10,349,276	64.04

WATER & SEWER FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Water & Sewer revenues are $48,164,289 or 41% of total budgeted revenues as of September 30, 2025. Operating revenues, excluding capital grants, debt proceeds and use of reserves, are 113% of budget this quarter. Revenue by category as a percent of budget realized is charges for services 109%, miscellaneous revenues 732%, interest revenues 215%, charges for government services 100%, capital grants 44%, and debt proceeds .25%.

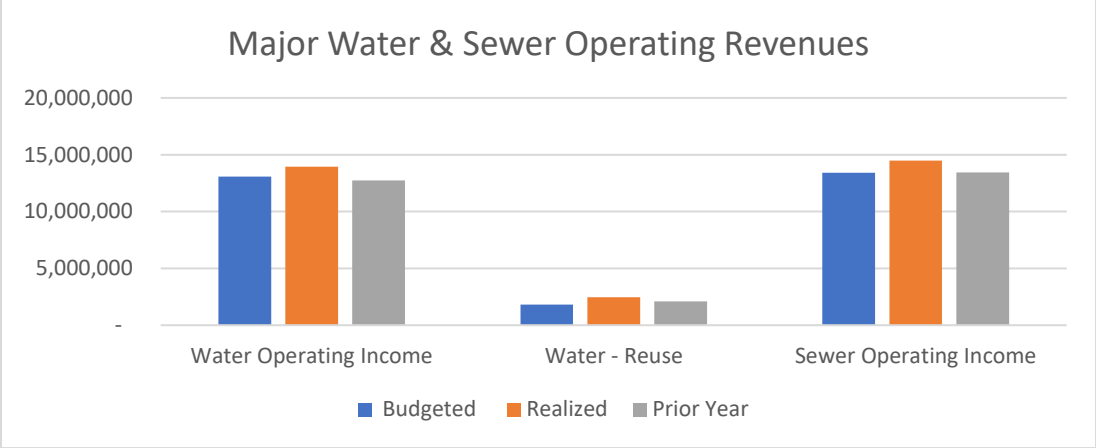
REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 401 - WATER & SEWER FUND				
CHARGES FOR SERVICES	30,211,221	32,866,740	108.78	30,789,099
MISCELLANEOUS REVENUES	128,000	936,430	731.59	1,392,239
INTEREST REVENUES	600,000	1,290,018	215.00	1,476,162
CHARGES FOR GOVT SERVICES	177,533	177,532	100.00	162,686
TRANSFERS FROM OTHER FUNDS	-	-	0.00	641,225
	31,116,754	35,270,720	113.35	34,461,411
CAPITAL GRANTS	29,421,738	12,789,588	43.47	17,863,949
DEBT PROCEEDS	42,364,268	103,981	.25	-
USE OF RESERVES	15,110,139	-		-
TOTAL REVENUES	118,012,899	48,164,289	40.81	52,325,360

- Miscellaneous revenues are 732% realized mainly due to realized and unrealized gains on investments which fluctuate with market value each quarter.

- Charges for government services include contributions from Refuse and Stormwater funds for administrative fees provided by those departments. Contributions are based on timing of invoice payments and may not align with standard quarterly benchmarks.

- Capital grants include funding from federal, state and local agencies for approved grant funded projects. Reimbursement is requested when expenses are incurred and may not align with standard quarterly benchmarks.

- Budgeted debt proceeds include SRF funding planned this fiscal year. Actual proceeds total $26,728,817 but have been reclassed as a liability on the balance sheet. The first semi-annual loan payment is due in May 2027.



As of September 30, 2025, there are 27,391 water customers and 18,642 sewer customers billed each month. As reclaim lines are installed, irrigation accounts will decrease while reclaim accounts increase. There was 1,418 irrigation meters one year ago compared to 1,399 this quarter.

Based on the last water rate study performed by Raftelis, water rates will increase 4.5% a year and wastewater rates will increase 4.0% a year through FY 2026. A new water rate study is included in the FY 2026 proposed budget.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Water and Sewer Fund expenditures are at $71,421,394 or 61% of total budget at the end of the fourth quarter. Expenditures by category as a percent of appropriated funds are personnel 95%, operating 79%, services provided by general government 100%, principal & interest 100%, capital outlay 51%, transfers 91%, and contingency 0%,.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 401 - WATER & SEWER FUND				
PERSONNEL	12,228,884	11,576,819	94.67	10,195,441
OPERATING	10,367,445	8,205,393	79.15	8,019,935
SERVICES PROVIDED BY GEN GOVT	4,365,437	4,365,455	100.00	3,920,556
PRINCIPAL & INTEREST	531,961	531,960	100.00	344,528
CAPITAL OUTLAY	89,149,002	45,732,810	51.30	54,825,907
TRANSFERS TO OTHER FUNDS	1,107,936	1,008,957	91.07	77,678
CONTINGENCY	262,234	-	0.00	-
TOTAL EXPENDITURES	118,012,899	71,421,394	60.52	77,384,045

- Operating expense is 79% of budgeted funds primarily due to professional services (42%), contractual services (55%), operating supplies (74%), meter supplies (85%), and chemicals (73%), which are significantly below budget at the end of the fourth quarter.

- Budgeted transfers to other funds include transfers to the debt service fund for printer leases ($7,680), transfers to the capital project fund for allocated costs of governmental capital projects ($103,792), transfers to the water trust fund for capital projects not fully funded by impact fees ($952,160), and transfers to the general fund for allocated costs of governmental subscription projects ($44,304). Transfers are recorded when expenses are incurred and may not align with standard quarterly benchmarks.

- Services provided by general government include the 10% PILOT transfer to the general fund ($3,283,060) and contributions to the general fund for shared administrative costs ($1,082,377).

EXPENDITURES BY DEPARTMENT	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
4201 - UTILITIES ADMIN	6,857,511	6,087,993	88.78	5,856,113
4202 - ENGINEERING	1,675,592	1,365,192	81.48	1,092,099
4203 - WATER PRODUCTION	1,974,875	1,717,467	86.97	1,534,622
4204 - WATER DISTRIBUTION	5,031,198	4,212,319	83.72	4,093,994
4205 - WASTEWATER TREATMENT	3,680,148	3,461,946	94.07	3,088,193
4206 - UTILITIES MAINTENANCE	2,771,595	2,496,018	90.06	2,326,481
4207 - UTILITIES DEBT	530,902	530,902	100.00	344,528
4208 - FACILITIES MAINTENANCE	1,214,724	1,166,214	96.01	1,031,599
4209 - CUSTOMER SERVICE	1,776,659	1,713,152	96.43	1,578,053
4210 - WASTEWATER COLLECTION	898,146	846,049	94.20	692,731
6666 - CAPITAL OUTLAY	89,149,002	45,732,810	51.03	54,797,715
9990 - CONTINGENCY	262,234	-	0.00	-
9998 - CONTRIBUTIONS	1,082,377	1,082,377	100.00	842,046
9999 - TRANSFERS	1,107,936	1,008,957	91.07	77,678
TOTAL EXPENDITURES - FUND 401	118,012,899	71,421,394	60.52	77,355,853

WATER & SEWER FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
UTILITIES ADMIN BUILDING CONSTRUCTION	1,196,234	586,008	-	610,226	51.01
UTILITY ADMIN BLDG FFE	290,044	-	-	290,044	100.00
PICKUP TRUCK 4X4	51,840	45,018	-	6,822	13.16
POWR-FLITE PHANTOM FLOOR SCRUBBER	6,420	6,420	-	(0)	0.00
MINI SPLIT AC UNITS	15,300	15,200	-	100	0.65
ESRI - ENVIRON SYS RESEARCH INSTITUTE	121,946	121,946	-	0	0.00
WTP #10 PROJECT A WELL SITE	90,940	25,220	65,720	-	0.00
WTP #10 PROJECT A WELL SITE	347,905	27,289	73,497	247,119	71.03
WTP#10 SUPPLY WELLS FG1-2	89,069	13,279	75,790	1	0.00
WTP#4 WELL#6 PUMP REPLACEMENT	47,030	47,030	-	-	0.00
WP#1 WELL #5 PUMP HOUSE FENCING	22,884	-	-	22,884	100.00
WATER PLANT #10 WELL FIELD & PLANT UPGRA	13,600,000	-	-	13,600,000	100.00
WTP#4 WELL#6 PUMP REPLACEMENT	69,307	69,307	-	-	0.00
#281 VEHICLE REPLACEMENT - FORD F250 3/4	85,000	68,410	-	16,590	19.52
WTP#2 HIGH SERVICE PUMP REPLACEMENT	276,120	233,400	-	42,720	15.47
WATER PLANT SECURITY CAMERA REPLACEMENTS	39,374	-	-	39,374	100.00
WATER PLANT #1 A/C REPLACEMENT	17,901	3,678	-	14,223	79.45
WATER PLANT #3 A/C REPLACEMENT	22,900	4,569	-	18,331	80.05
AMELIA AVE ROUNDABOUT UTILITY RELOCATION	28,295	-	-	28,295	100.00
COUNTRY PURE WATER MAIN EXTENSION	72,150	-	-	72,150	100.00
SR44/KEPLER ROUNDABOUT UTIL RELOCATION	73,916	-	-	73,916	100.00
DOWNTOWN WATER IMPROVEMENTS PHASE 1	238,911	166,516	50,470	21,926	9.18
SRF LEAD SERVICE LINE REPLACEMENT	1,788,398	604,722	38,271	1,145,405	64.05
#61 VEHICLE REPLACEMENT - FORD F250 3/4	75,400	68,414	-	6,986	9.27
#97 VEHICLE REPLACEMENT - FORD F250 3/4	76,238	68,408	-	7,830	10.27
20" HYDRAULIC PIPE CHAIN SAW	17,504	14,586	-	2,918	16.67
HYDRAULIC 6" DIESEL PUMP ON TRAILER (ONE	73,512	-	65,464	8,048	10.95
TRIMBLE GPS DEVICE 1 OF 2	16,000	13,256	-	2,744	17.15
TRIMBLE GPS DEVICE 2 OF 2	16,000	13,256	-	2,744	17.15
NEW VEHICLE SILVERADO PICKUP TRUCK	57,307	51,153	-	6,154	10.74
NEW PICKUP FLAT DUMP TRUCK	69,675	69,675	-	0	0.00
UTILITY CABLE & PIPE LOCATOR	10,756	8,444	-	2,312	21.49
PICKUP TRUCK REPLACE #89	76,535	67,146	-	9,389	12.27
REPLACE VEHICLE 278 WITH CHEVY 3500	109,887	109,887	-	0	0.00

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
1265 AQUARIUS AVE LAND PURCHASE	350,000	327,537	5,925	16,538	4.73
NASH WRF S. RECLAIM STATION CONST	229,436	142	-	229,294	99.94
NASH WRF ENG, PLANNING & CONSTRUCTION	82,297	35,089	41,997	5,211	6.33
SOUTH LAB DOOR REPLACEMENT	10,935	8,702	-	2,233	20.42
WMN CAPACITY EXPAN & AWT IMPR CONSTRUCT	61,360,095	39,655,726	19,921,976	1,782,393	2.90
RECLAIM WATER EXPANSION PHASE 6 DESIGN	118,251	117,120	-	1,131	.96
LAB/CONFERENCE ROOM A/C UNIT	7,500	-	-	7,500	100.00
SLUDGE PRESS #1 ONSITE REBUILD	18,781	-	-	18,781	100.00
D.O. SENSORS (1 OF 3)	10,230	2,589	7,640	0	0.00
DUMP TRUCK REPLACEMENT	206,568	206,567	-	1	0.00
AQUA DIAMOND FILTER CLOTH REPLACMENT	41,048	27,360	13,688	0	0.00
WWTP ADMINISTRATION BLDG ROOF A/C REPLAC	17,980	13,663	-	4,317	24.01
GENERATOR SWITCH HOUSE A/C UNIT REPLACEM	12,408	9,475	-	2,933	23.64
FIALYZER-FLEX 2 CHANNEL FLOW INJECTION A	77,546	69,879	-	7,667	9.89
REFURBISHED 1600 AMP MAIN BREAKER	3,210	-	-	3,210	100.00
BOD INCUBATOR	7,312	-	-	7,312	100.00
5800 REFRIGERATOR SAMPLER (1 OF 2)	12,385	8,520	-	3,865	31.21
5800 REFRIGERATOR SAMPLER (2 OF 2)	12,385	8,520	-	3,865	31.21
FULL SIZE PORTABLE SAMPLER	12,899	12,898	-	1	.01
GENERATOR MUFFLER REPLACEMENT	41,831	22,705	-	19,126	45.72
ELECTRIC VALVE ACUATOR REPLACEMENT	14,388	-	-	14,388	100.00
UPGRADE TO LACHAT SYSTEM	60,000	2,514	-	57,486	95.81
930 COMPACT IC FLEX	97,084	79,631	-	17,453	17.98
L/S #79 REHABILTATION PROJECT	2,342,290	1,051,568	520,863	769,859	32.87
L/S #1 REPLACEMENT & PANEL BOX	94,872	83,190	-	11,682	12.31
L/S #12 REPLACEMENT & PANEL BOX	72,854	72,853	-	1	0.00
L/S #20 REPLACEMENT & PANEL BOX	76,834	76,831	-	3	0.00
L/S #80 REPLACEMENT & PANEL BOX	74,283	74,282	-	1	0.00
L/S#79 STANDBY GENERATOR & TRANSFER SWIT	79,866	69,206	-	10,660	13.35
LS#6 GENERATOR TRANSFER SWITCH REPLACE	9,888	3,730	-	6,159	62.28
LS#1 REHABILITATION DESIGN & REPLACEMENT	1,795,314	191,950	28,468	1,574,896	87.72
LS#82 REPLACEMENT & PANEL BOX	91,714	11,525	76,506	3,683	4.02
LS#84 REPLACEMENT & PANEL BOX	92,919	7,945	77,751	7,223	7.77
LS#86 REPLACEMENT & PANEL BOX	91,714	11,118	76,506	4,090	4.46
LS#111 REPLACEMENT & PANEL BOX	290,487	272	104,010	186,205	64.10
PICKUP TRUCK REPLACE #280	79,548	67,159	-	12,389	15.57
CDBG - LS#16 GENERATOR (HILL/BERESFORD)	70,811	9,683	60,900	228	.32
L/S #63 PUMP REPLACEMENT	28,714	14,357	-	14,357	50.00
LAWN MOWER REPLACEMENT	10,452	-	-	10,452	100.00
ENCLOSE EXISTING POLE BARN	11,020	5,404	-	5,616	50.96
NEW TZ50 TOW BEHIND	73,862	60,170	-	13,692	18.54
NEW PRESSURE WASHER WITH TRAILER	13,498	11,204	-	2,294	17.00
REPLACE 2080111-F550 AERIAL BUCKET TRUCK	202,741	167,409	-	35,332	17.43
NEW PANEL SAW	900	-	-	900	100.00
REPLACE 208-TL-003-DROP DECK TRAILER	33,750	22,344	-	11,406	33.80
REPLACE BULB EATER (CRUSHER)	9,480	6,041	-	3,439	36.28
NEPTUNE AMI PILOT	213,664	5,150	208,513	1	0.00
EAST REGIONAL FORCE MAIN PART B DESIGN	400,000	105,564	136,582	157,854	39.46
DOWNTOWN LIFT STATION & FM DESIGN	279,353	50,152	229,200	1	0.00
SEWER LINE REHABILITATION 23/24	15,235	-	-	15,235	100.00
SEWER LINE REHABILITATION	250,000	245,818	-	4,182	1.67
24/25 MANHOLE REHABILITATION	100,000	95,360	-	4,640	4.64
WESTSIDE SEWER INTERCEPTOR 1 OF 4	36,668	-	-	36,668	100.00
WESTSIDE SEWER INTERCEPTOR 2 OF 4	36,668	-	-	36,668	100.00
WESTSIDE SEWER INTERCEPTOR 3 OF 4	36,668	-	-	36,668	100.00
WESTSIDE SEWER INTERCEPTOR 4 OF 4	36,668	-	-	36,668	100.00
#282 VEHICLE REPLACEMENT	85,000	68,398	-	16,602	19.53
TRIMBLE GPS DEVICE	16,000	13,256	-	2,744	17.15
	89,149,002	45,732,810	21,879,737	21,536,455	24.16

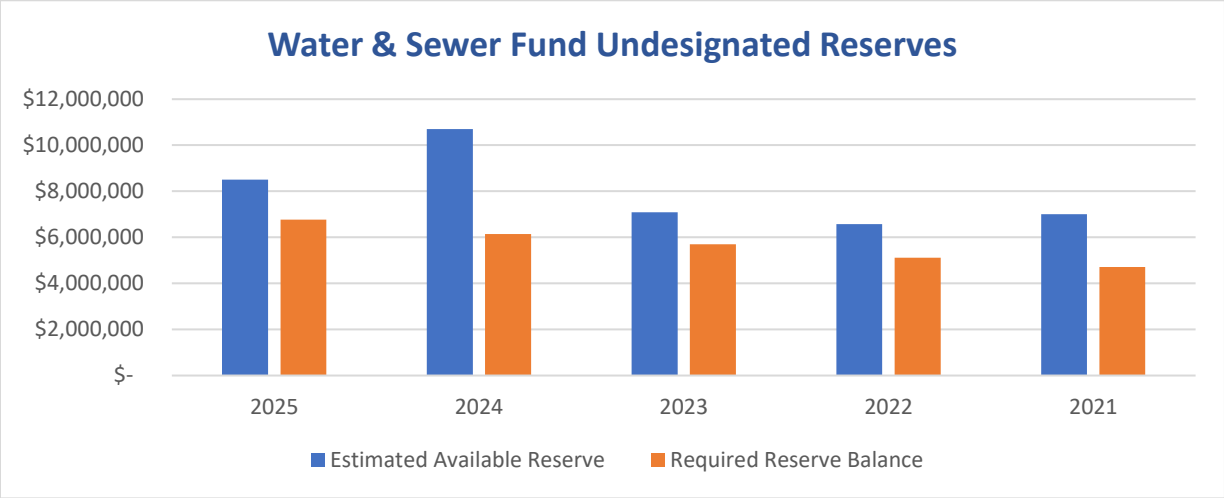
WATER & SEWER FUND RESERVE ANALYSIS

According to city policy, the city will manage its fiscal resources to ensure funding for city operations is not disrupted. A reserve equivalent to three months' operating needs shall be maintained in the Water & Sewer Fund. The funds available for this reserve are estimated to be $8,506,609 which represents a reserve balance of $1,740,154 above the three-month required Undesignated Reserve of $6,766,455 at September 30, 2025.

Water & Sewer Fund

Fiscal Year 2025 Undesignated Reserve Analysis

	1st QTR	2nd QTR	3rd QTR	4th QTR
Estimated Available Reserve Funds	$ 9,203,412	$ 8,953,227	$ 8,803,227	$ 8,506,609
Required 3 Month Undesignated Reserve	6,640,913	6,727,177	6,781,723	6,766,455
Surplus/Deficit	$ 2,562,499	$ 2,226,050	$ 2,021,505	$ 1,740,154



WATER TRUST FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Water Trust Fund revenues are $2,724,535 or 106% of budget, excluding use of reserves. Revenues include impact fees 93%, miscellaneous revenue 100%, interest revenue 652%, and transfers from other funds 100%.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Water Trust Fund expenditures are $2,256,728 or 32% of budget as of September 30, 2025. Expenses by category are operating 99% and capital outlay 30%. Operating expenses include funding for Yardly DeLand Crossing water connection fees.

WATER TRUST FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
NORTHFIELD WELLFIELD ACQUISTION	983,601	763,222	-	220,380	22.41
2024 WATER MAIN IMPROVEMENTS	1,380,344	1,037,828	64,249	278,268	20.16
DOWNTOWN WATER IMPROVEMENTS DESIGN	913,845	-	-	913,845	100.00
BLUE SPRING WATER MAIN EXTENSION	43,695	-	-	43,695	100.00
2025 WATER MAIN IMPROVEMENTS	2,630,967	257,245	109,845	2,263,877	86.05
2026 WATER MAIN IMPROVEMENTS DESIGN	366,600	77,495	250,208	38,897	10.61
2022 WATER MAIN IMPROVEMENTS	218,783	460	-	218,323	99.79
2022 DELEON SPRINGS WATER MAIN IMPROV	509,017	-	-	509,017	100.00
	7,046,852	2,136,249	424,302	4,486,301	63.66

WASTEWATER TRUST FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Wastewater Trust Fund revenues realized are $3,361,282 or 131% of budget, excluding use of reserves. Revenues include impact fees 129%, miscellaneous revenue 100%, interest revenue 366%, and capital grant revenue 100%. Capital grants include 34% funding from St. John's River Water Management District and 66% funding from Florida Department of Environmental Protection for the construction of the Reclaim Expansion Phase 5 project.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Waste Water Trust Fund expenditures are $6,558,889 or 68% of budget as of September 30, 2025. Expenses by category are operating 100% and capital outlay 67%. Operating expenses include funding for Yardly DeLand Crossing wastewater connection fees.

WASTEWATER TRUST FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
RECLAIM WATER EXPANSION PHASE #5 DESIGN	6,526	-	-	6,526	100.00
SJRWMD - RECLAIM WATER EXP CONST PHASE 5	1,634,541	1,597,398	37,143	1	0.00
EAST REGIONAL FORCE MAIN PART A1 & A2	7,428,836	4,554,531	2,858,787	15,518	.21
900 COMPACT IC FLEX WITH AUTOSAMPLER	99,125	-	-	99,125	100.00
NEW PICKUP TRUCK 4X4	72,307	51,187	-	21,120	29.21
LS#80 GENERATOR & TRANSFER SWITCH	62,376	49,738	-	12,638	20.26
	9,303,711	6,252,854	2,895,930	154,927	1.67

MUNICIPAL AIRPORT FUND

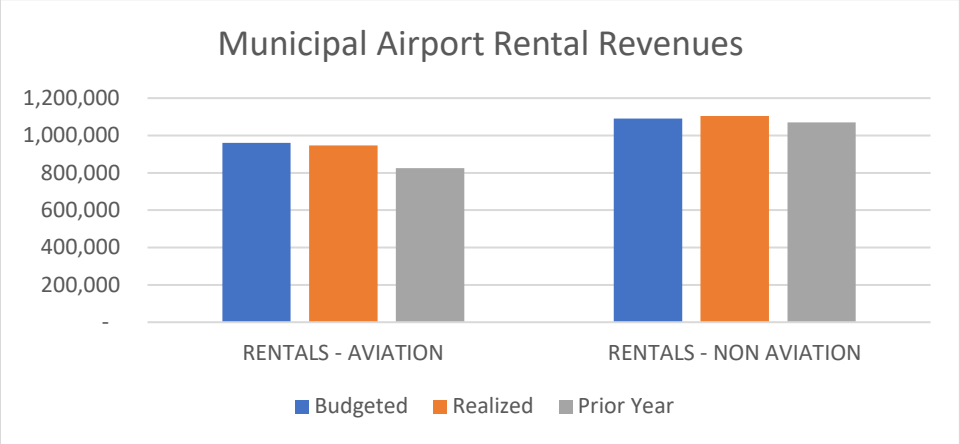
REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Municipal Airport revenues realized as of September 30, 2025 are $5,876,021 or 59% of total budget. Operating revenues, excluding use of reserves and capital grants, are 139% realized through the end of the fourth quarter. Revenues by category are miscellaneous revenues 176%, interest revenues 13,257%, rental income 62%, and capital grant revenue 39%.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 430 - AIRPORT FUND				
MISCELLANEOUS REVENUES	5,000	8,779	175.59	64,262
INTEREST REVENUES	12,000	1,590,885	13,257.37	1,579,577
RENTAL INCOME	2,050,594	1,268,484	61.86	1,506,205
	2,067,594	2,848,148	138.72	3,150,043
CAPITAL GRANTS	7,687,646	3,020,868	39.30	1,839,535
USE OF RESERVES	267,853	-		-
TOTAL REVENUES	10,023,093	5,876,021	58.62	4,985,022

- Rental income includes GASB87 reclassed revenue for interest income which is why interest earnings are high and rental income is low this quarter. Combining rental income with rental interest shows a total lease revenue of $2,824,021 or 138% of budgeted lease revenue this fiscal year.

- Capital grant revenues are 39% realized due to the timing of grant funded revenues. Grant revenues are collected when expenses are incurred and eligible for reimbursement which may not align with standard quarterly benchmarks.



EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Municipal Airport Fund expenditures are $4,588,163 or 46% of total budget as of September 30, 2025. Expenditures by category are personnel 95%, operating expenses 61%, transfers to other funds 26%, services provided by general government 100%, capital outlay 38%, and contingency 0%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 430 - AIRPORT FUND				
PERSONNEL	619,076	587,761	94.94	556,887
OPERATING	1,121,102	683,667	60.98	347,757
TRANSFERS TO OTHER FUNDS	243,597	63,087	25.90	76,169
SERVICES PROVIDED BY GEN GOVT	399,914	399,914	100.00	318,392
	2,383,689	1,734,429	72.76	1,299,205
CAPITAL OUTLAY	7,537,368	2,853,734	37.86	2,304,517
CONTINGENCY	102,036	-		-
TOTAL EXPENDITURES	10,023,093	4,588,163	45.78	3,603,722

- Operating expenses are at 61% of budget primarily due to professional services which include $623,368 budgeted for the master plan update which is 49% expended at the end of the fourth quarter.

- Budgeted transfers include transfers to the general fund for debt repayment debt ($225,833), transfers to the debt service fund for copier lease ($3,060) and transfers to the capital project fund for shared IT project costs ($14,704). Transfers are recorded when expenses are incurred and may not align with standard quarterly benchmarks.

- Capital Outlay is at 38% of budget due to timing of capital projects which occur over multiple budget years and may not follow normal benchmarks for any given period. Most capital projects are funded by grant revenues for the airport. Grant revenues are reimbursed to the City after expenses are incurred.

MUNICIPAL AIRPORT FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
FDOT - EAST HANGAR COMPLEX - PHASE 1B	183,570	26,000	157,570	-	0.00
FAA/FDOT - AIRFIELD MARKINGS	107,772	1,428	106,343	1	0.00
FAA/FDOT - WEST APRON CONSTRUCTION	2,502,780	2,483,727	-	19,053	.76
FAA/FDOT-CONSTRUCT MID SECTION TAXIWAY A	44,520	42,424	-	2,096	4.71
NEW DIRECTIONAL SIGNS	10,186	-	-	10,186	100.00
FAA/FDOT - W APRON REHAB CONST (NON-AIP)	94,819	17,783	-	77,036	81.25
FDOT - HANGAR ELECTRICAL IMPROV DESIGN	178,600	139,348	-	39,252	21.98
FDOT - SOUTH CENTRAL APRON REHAB	79,298	12,000	67,028	270	0.34
FDOT - DESIGN RUNWAY 5/23 REHAB	255,100	28,000	227,100	-	0.00
FDOT - T-HANGARS GUTTERS	81,968	-	-	81,968	100.00
FDOT - DESIGN TAXIWAY E LIGHTING	100,000	-	-	100,000	100.00
FDOT - LED LIGHTING AND SIGN UPGRADES	61,500	60,992	-	508	0.83
FAA/FDOT - CONST REHAB OF RUNWAY 5/23	3,500,000	-	-	3,500,000	100.00
FDOT - CONST T-HANGAR UPGRADES A, B & C	200,000	6,157	6,818	187,026	93.51
FDOT - AIRFIELD MARKINGS (NON-AIP)	40,199	-	-	40,199	100.00
NEW SCHULTE BATWING	6,183	-	-	6,183	100.00
JOHN DEERE ZERO TURN MOWER	25,000	-	-	25,000	100.00
JOHN DEERE Z994R 60-INCH ZERO TURN MOWER	24,050	24,000	-	50	0.21
FUEL MASTER	27,275	11,876	15,399	-	0.00
NEW EOC RADIO SET	14,548	-	14,548	0	0.00
	7,537,368	2,853,734	594,805	4,088,828	54.25

REFUSE COLLECTION FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Refuse Collection Fund revenues realized on September 30, 2025 are $6,105,063 or 100% of budgeted revenues. A 5-year solid waste and recycling contract was negotiated with GFL Corporation in FY 2023. A 3.0% CIP rate increase was approved by Resolution in July 2025 to be effective October 1, 2026.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Refuse Collection Fund expenditures are $6,102,707 or 100% of budgeted funds. Operating expenses are paid when invoices are received during the year and the timing of payments may not align with standard quarterly benchmarks.

STORMWATER FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Stormwater Fund revenues are $2,741,225 or 108% of budgeted revenues excluding use of reserves. An annual stormwater fee is billed each year for property within the City limits to owners of property that is leased or developed parcels that do not have separate water/sewer accounts. Stormwater fees are typically billed at the end of the calendar year. Beginning in FY 2022, stormwater rates will increase 4% annually through fiscal year 2026.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 450 - STORMWATER FUND				
CHARGES FOR SERVICES	2,441,500	2,566,493	105.12	2,382,376
MISCELLANEOUS REVENUES	-	39,670	100.00	133,043
INTEREST REVENUES	35,000	70,312	200.89	79,306
OPERATING GRANTS	64,750	64,750	100.00	227,098
	2,541,250	2,741,225	107.87	2,821,823
USE OF RESERVES	1,316,224	-		-
TOTAL REVENUES	3,857,474	2,741,225	71.06	2,821,823

- Operating grant revenues include FDEP funding for the Vulnerability Assessment/Adaptation Plan.
- Miscellaneous revenues include net gains on investments and gains and losses on the sale of investments.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Stormwater Fund expenditures are $2,988,972 or 78% of operating budget, excluding transfers and capital outlay, through the end of the fourth quarter. Expenses by category are personnel 94%, operating 86%, services provided by general government 100%, transfers to other funds 63%, and capital outlay 50%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 450 - STORMWATER FUND				
PERSONNEL	1,467,151	1,381,278	94.15	1,299,231
OPERATING	595,253	513,417	86.25	555,356
SERVICES PROVIDED BY GEN GOVT	386,306	386,306	100.00	327,271
	2,448,710	2,281,001	93.15	2,181,858
TRANSFERS TO OTHER FUNDS	81,455	51,341	63.03	14,996
CAPITAL OUTLAY	1,327,309	656,630	49.47	1,040,005
TOTAL EXPENDITURES	3,857,474	2,988,972	77.49	3,236,860

- Budgeted transfers to other funds include $79,559 of shared costs in the Capital Fund and $1,896 for the copier lease in the Debt Service fund. Transfers for capital are recorded when expenses are incurred which may not align with standard quarterly benchmarks.
- Services provided by general government represents allocated expenses for management services provided by the general fund.

STORMWATER FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
CITY HALL DRAINAGE PIPE 24"	222	-	-	222	100.00
HUBBARD AVE & HIGH ST DRAINAGE IMPROV	57,130	-	-	57,130	100.00
GEORGIA AVENUE DRAINAGE	71	71	-	0	.17
MISC CITYWIDE PIPE LINING REPLACEMENT	544,328	530,651	-	13,677	2.51
WISCONSIN AVE PIPELINE IMPROVEMENTS	281,250	-	-	281,250	100.00
DESIGN OF EARL BROWN POND IMPROVEMENTS	225,000	-	-	225,000	100.00
MISC SW IMPROVEMENTS - NEIGHBORHOOD	39,081	-	-	39,081	100.00
MISC SW IMPROVEMENTS - POND	25,000	12,350	-	12,650	50.60
MISC SW POND FENCE MAINTENANCE	28,250	27,611	-	639	2.26
NEW MANUAL INTAKE GATE-EARL BROWN	34,745	-	9,602	25,143	72.36
NEW TRIMBLE GPS	16,245	13,256	-	2,989	18.40
NEW FLAIL MOWING HEAD	27,437	24,141	-	3,296	12.01
SANDBAG MACHINE	48,550	48,550	-	-	0.00
	1,327,309	656,630	9,602	661,077	49.81

PERMITS & INSPECTIONS FUND

REVENUES DISCUSSION REGARDING BUDGET VARIATIONS

Permits & Inspections Fund revenue as of September 30, 2025 is $2,277,686 or 94% of budgeted revenues, excluding use of reserves. Revenues by category are permits, fees & special assessments 85%, charges for services 111%, miscellaneous revenues 1,313%, and interest revenue 194%.

REVENUES BY CATEGORY	2024-2025 AMENDED BUDGET	YTD QTR BALANCE 9/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 480 - PERMITS & INSPECTIONS FUND				
PERMITS. FEES, & SPECIAL ASSESSMENTS	2,005,000	1,701,415	84.86	3,404,594
CHARGES FOR SERVICES	330,000	367,763	111.44	605,750
MISCELLANEOUS REVENUES	5,000	65,624	1,312.48	128,101
INTEREST REVENUES	73,576	142,884	194.20	167,289
	2,413,576	2,277,686	94.37	4,305,733
USE OF RESERVES	2,565,743	-		-
DEBT PROCEEDS	677,017	-		-
TOTAL REVENUES	5,656,336	2,277,686	40.27	4,305,733

- Permits, fees and special assessments are 85% of budget due to rate decreases implemented during this fiscal year to comply with state statutes that regulate the fund balance allowed to carry from year to year.

- Charges for services are higher than budget mainly due to building and fire plan reviews which are significantly over budget at the end of the fourth quarter.

- Miscellaneous revenues are 1,313% realized mainly due to realized and unrealized gains on investments. Investments are recorded at market value and fluctuate with changes in market conditions.

- Debt proceeds for Subscription Based Internet Technology Assets (SBITA's) are reclassed to a liability on the balance sheet at the end of the fiscal year.

EXPENDITURES DISCUSSION REGARDING BUDGET VARIATIONS

Permits & Inspections Fund expenditures are $4,346,715 or 77% of budgeted funds as of September 30, 2025. Expenditures by category as a percentage of appropriated funds are personnel 88%, operating expenses 39%, principal & interest 100%, transfers to other funds 56%, services provided by general government 100%, and capital outlay 82%.

EXPENDITURES BY CATEGORY	2024-25 AMENDED BUDGET	YTD QTR BALANCE 09/30/2025	% BDGT USED	YTD QTR BALANCE 09/30/2024
Fund 480 - PERMITS & INSPECTIONS FUND				
PERSONNEL	2,185,723	1,926,602	88.14	1,902,349
OPERATING	1,316,406	514,009	39.05	802,096
PRINCIPAL & INTEREST	13,754	13,753	99.99	8,421
TRANSFERS TO OTHER FUNDS	135,896	75,546	55.59	58,600
SERVICES PROVIDED BY GEN GOVT	975,900	975,900	100.00	794,217
	4,627,679	3,505,809	75.76	3,565,683
CAPITAL OUTLAY	1,028,657	840,906	81.75	446,348
TOTAL EXPENDITURES	5,656,336	4,346,715	76.85	4,012,032

- Operating expenses are 39% of budgeted funds primarily due to professional services which include $397,135 budgeted for demolitions and $129,000 budgeted for Accela enhancements which were 7% expended at the end of the fourth quarter.

- Budgeted transfers to other funds include $131,840 of shared costs in the Capital Fund and $4,056 for the copier lease in the Debt Service fund. Transfers for capital are made when expenses are incurred and may not align with standard quarterly benchmarks.

- Capital Outlay is at 82% of budget due to timing of capital projects below.

PERMITS & INSPECTIONS FUND CAPITAL PROJECTS

PROJECT DESCRIPTION	2024-25 AMENDED BUDGET	YTD QTR BALANCE 06/30/2025	ENCUMBERED YEAR-TO-DATE	UNENCUMBERED BALANCE	% BDGT REMAIN
ACCELA CIVIC PLATFORM ENHANCEMENTS	125,751	-	-	125,751	100.00
AGENCY COUNTER	30,000	-	-	30,000	100.00
TRUCK FOR FIRE PREVENTION	32,000	-	29,832	2,168	6.77
ACCELA CIVIC PLATFORM RENEWAL 2025	840,906	840,906	-	0	0.00
	1,028,657	840,906	29,832	157,919	15.35

HEALTH INSURANCE COST CONTAINMENT FUND

The Health Insurance Cost Containment Fund (HICC) was created to account for the operation of a health center in an attempt to defray the rising costs of health insurance. The center provides free health care to all employees and dependents who are currently insured through the City's health plan. The HICC Fund results in reduced costs compared to regular health provider services and benefits employees by minimizing the annual increase in health insurance.

Total revenue as of September 30, 2025 is $690,498 or 93% of budgeted revenues excluding use of reserves. The majority of revenue reflected in this fund represents transfers made from all other funds and totals $681,964 or 93% of budget at the end of the fourth quarter.

Expended funds are $742,719 or 92% of budget at the end of the fourth quarter. Expenditures by category as a percentage of appropriated funds are operating expenses 90%, principal & interest 100% and services provided by general government 100%.

WORKERS' COMPENSATION SELF-INSURANCE FUND

Worker's Comp Revenue as of September 30, 2025 totals $1,132,954 or 103% of budgeted revenues, excluding use of reserves. Premium revenues reflected in the Workers' Compensation Self-Insurance Fund represent transfers made from all other funds and totals $913,302 or 100% at the end of the fourth quarter. Miscellaneous revenue from excess recovery checks is $111,637 and interest income is $108,014.

Expended funds are $1,014,574 or 85% of budget at the end of the fourth quarter. Expenditures by category as a percentage of appropriated funds are operating 84% and services provided by general government 100%.

The City received an updated actuarial report in July 2025 which increased the necessary reserve amount to $1,853,000 to maintain a confidence level of 90% with a $100,000 deductible, as determined by the City's actuary, Cornerstone Actuarial Solutions. As of September 30, 2025, the fund had a recorded liability of $1,341,452 for claims incurred but not reported, and a liability for reported losses of $511,548.

CASH MANAGEMENT

The primary objectives of the City's investment activities are defined in the Investment Policy adopted by the City Commission. Those objectives are safety of principal, diversification to avoid incurring unreasonable risks and maintaining a portfolio sufficiently liquid to enable the City to meet all operating requirements, which may be reasonably anticipated.

The City's cash balance is $82,959,654 which is 71% of the total cash and investment portfolio. September's annualized yield on pooled cash sweep balances is 4.16%. The investments held by the City as of this reporting period have a par value of $34,890,000 a book value of $34,897,900 and a market value of $34,660,957. The blended rate of return at the end of this reporting period was 2.71% with a weighted average maturity for the portfolio of 2.36. The Investment Policy sets a performance measurement for the City's portfolio with the objective of exceeding the average return on three-month US Treasury Bills or the average rate on federal funds, whichever is higher. The average three-month Treasury bill rate was 3.92% and the average rate on federal funds was 4.22%.

The City's investment portfolio is managed by Morgan Stanley. The primary liquid investments of the City are the Wells Fargo pooled cash account, money market account at United Community Bank, and a money market account at US Bank.

Governmental Accounting Standards Board (GASB) Statement No. 31 Accounting and Financial Reporting for Certain Investments and for External Investment Pools establish the accounting and financial reporting standards for governmental investments. Investments should be reported at fair value in the balance sheet and changes in the fair value of investments should be reported in the operating statement. As of September 30, 2025, the City has an unrealized loss of ($236,943). An unrealized loss is defined as the decrease in fair value of investments under the book value. The investment policy requires investments be structured within portfolio percentage limitations. Below are those limitations, along with comparisons of investments held in the City's portfolio at September 30, 2025:

	Policy Limitations	Investment Percentages	Market Value of Investments
Us Treasuries & Agencies	70 - 80%	0%	-
Step Up / Callable Notes & Bonds	60 - 70%	29%	34,660,957
Single Index Variable Rate	20 - 30%	0%	
Banker's Acceptances	15 - 25%	0%	-
Commercial Paper	15 - 25%	0%	-
CD's, CDARS and Other Time Deposits	60 - 70%	71%	82,959,654
Mutual Funds	20 - 30%	0%	-
Local Government Surplus Fund (SBA)	65 - 75%	0%	-
		100%	**$ 117,620,611**

A list of the city ‘s investment portfolio as of September 30, 2025 is included in this report.

CONCLUSION

The attached Financial Report is a presentation of the City's financial position and results of operation through September 30, 2025. Revenues for all funds are within an acceptable range for this reporting period except for those where concern was specifically expressed in this report. Expenditures for all funds are in line with what we would anticipate for this reporting period except for those where concern was specifically expressed in this report.

Please contact Daniel Stauffer, Finance Director, at 386-626-7079 or staufferd@deland.org should you have any questions or comments regarding this memorandum or the enclosed financial report.

Cash & Investments Portfolio Summary
September 2025

Investment	Type	Callable Date		Maturity Date	Current Yield to Maturity	Face Value	Book Value	Market Value	Unrealized Gain/Loss	Interest Receivable
General Investments:										
Pooled Interest Bearing Checking Account				Next Day	4.65%	70,369,238	70,369,238	70,369,238	-	-
Money Market - United Community Bank				Next Day	4.34%	6,219,705	6,219,705	6,219,705	-	-
Money Market - US Bank				Next Day	4.34%	6,370,710	6,370,710	6,370,710	-	-
Total General Investments						**82,959,654**	**82,959,654**	**82,959,654**	**-**	**-**
Short Term Operating Investments:										
FHLMC	Call	02/28/26	3134HBK34	08/28/30	4.197%	3,000,000	3,000,000	3,002,430	2,430	11,391.78
FHLMC	Call	02/06/26	3134HA5G4	02/06/30	5.012%	3,500,000	3,505,250	3,498,565	(6,685)	26,422.60
FNMA	Call	11/25/25	3135GA4V0	11/25/25	0.628%	2,000,000	2,000,000	1,989,520	(10,480)	4,383.56
FNMA	Call	10/27/25	3136G45P4	10/27/25	0.551%	2,000,000	2,000,000	1,994,820	(5,180)	4,701.37
FNMA	Call	02/10/26	3136GAAJ8	02/10/28	4.628%	2,000,000	2,000,000	1,998,560	(1,440)	12,924.66
FNMA	Call	03/02/26	3133EMSK9	03/02/26	0.851%	2,000,000	1,999,500	1,975,060	(24,440)	1,288.77
FFCB	Call	02/04/26	3133EMPU0	02/04/26	0.506%	2,000,000	2,000,000	1,976,460	(23,540)	1,561.64
FFCB	Call	11/17/25	3133ENDV9	11/17/25	1.034%	500,000	498,000	498,025	25	1,918.90
FFCB	Call	02/20/26	3133ETUP0	05/20/30	4.497%	3,000,000	3,000,000	2,995,080	(4,920)	15,130.68
FFCB	Call	03/26/26	3133ETAW7	03/26/30	4.636%	2,200,000	2,204,400	2,206,842	2,442	1,121.10
FHLB	Call	10/29/25	3130ALZA5	04/29/26	2.010%	2,000,000	2,000,000	1,989,880	(10,120)	16,876.71
FHLB	Call	10/29/25	3130AKC95	10/29/25	0.552%	2,000,000	2,000,000	1,994,440	(5,560)	4,641.10
FHLB	Call	03/17/26	3130ANRU6	09/17/26	1.046%	1,000,000	1,000,000	974,950	(25,050)	363.29
Total Short Term Operating Investments					2.759%	**27,200,000**	**27,207,150**	**27,094,632**	**(112,518)**	**94,287.81**
Long Term Operating Reserve Investments:										
FHLMC	Call	02/06/26	3134HA5G4	02/06/30	5.012%	500,000	500,750	499,795.00	(955.00)	16,196.71
FNMA	Call	03/03/26	3136GAR35	09/03/30	4.279%	2,000,000	2,000,000	1,991,280.00	(8,720.00)	6,302.47
FFCB	Call	03/11/26	3133EL7D0	09/11/26	0.761%	2,000,000	2,000,000	1,945,700.00	(54,300.00)	770.41
FFCB	Call	12/30/25	3133ETMX2	06/30/28	4.284%	1,190,000	1,190,000	1,194,510.10	4,510.10	12,897.64
FHLB	Call	10/19/25	3130AKC46	10/19/26	0.744%	2,000,000	2,000,000	1,935,040.00	(64,960.00)	6,470.14
Total Long Term Operating Reserve Investments					2.519%	**7,690,000**	**7,690,750**	**7,566,325**	**(124,425)**	**42,637.37**
			Total Investments including cash & paper			**117,849,654**	**117,857,554**	**117,620,611**	**(236,943)**	**131,865.45**
			Total L/T & S/T Investments Only			**34,890,000**	**34,897,900**	**34,660,957**	**(236,943)**	**136,925**
			Total Value - Morgan Stanley Assets					**41,163,533**		

Average Call/Maturity:	0.29
Blended Investment Portfolio Rate of Return	2.71%
3 Mnth T Bill	3.92%
Fed Funds	4.22%

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GOVERNMENTAL FUND TYPES

GENERAL FUND

The General Fund serves as the primary reporting vehicle for current government operations. The General Fund, by definition, accounts for all current financial resources not required by law or administrative action to be accounted for in another fund.

Fund 001 GENERAL FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
102.000	CASH ON HAND	9,125.00	9,125.00
104.000	EQUITY IN POOLED CASH	21,379,118.46	23,813,831.59
105.000	TAXES RECEIVABLE	0.00	0.00
107.000	DELINQUENT TAXES RECEIVABLE	64,121.79	64,121.79
115.100	ACCOUNTS RECEIVABLE	1,020,375.65	1,263,531.77
117.000	ALLOWANCE FOR UNCOLLECTIBLE AR	(27,079.15)	(32,845.54)
121.000	ASSESSMENTS RECEIVABLE	24,987.41	27,006.40
131.000	DUE FROM OTHER FUNDS	0.00	0.00
132.000	ADVANCES TO OTHER FUNDS	1,516,528.74	1,344,335.79
133.000	DUE FROM OTHER GOVERNMENTS	1,796,021.67	1,266,141.39
135.000	INTEREST & DIVIDENDS REC	42,820.07	60,732.65
141.000	INVENTORIES	58,528.17	64,686.39
142.000	INVENTORIES - FOR SALE	614.74	614.74
151.900	INVESTMENTS - NON-CURRENT	8,577,737.92	8,415,506.53
155.000	PREPAID ITEMS	86,446.17	62,182.79
156.900	OTHER ASSETS - NONCURRENT	1,556,702.08	1,468,271.42
101.000	CASH IN BANK	2,842,493.94	3,491,622.34
Total Assets		**38,948,542.66**	**41,318,865.05**
*** Liabilities ***			
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
201.000	VOUCHERS PAYABLE	0.00	0.00
202.000	ACCOUNTS PAYABLE	643,862.23	776,806.34
205.000	CONTRACTS PAYABLE	39,377.38	0.00
207.000	DUE TO OTHER FUNDS	0.00	0.00
208.000	DUE TO OTHER GOVERNMENTS	986.45	945.36
216.000	ACCRUED SALARIES & WAGES	572,428.91	746,723.39
220.000	DEPOSITS	175,515.26	151,444.02
223.000	DEFERRED REVENUE	269,251.84	253,313.87
229.000	OTHER CURRENT LIABILITIES	0.00	0.00
290.000	DEFERRED INFLOW	1,524,417.48	1,397,972.97
Total Liabilities		**3,225,839.55**	**3,327,205.95**
*** Fund Balance ***			
251.000	PRIOR PERIOD ADJUSTMENT	0.00	0.00
280.000	FUND BALANCE - NONSPENDABLE	1,694,402.42	1,694,402.42
281.000	FUND BALANCE - RESTRICTED	1,172,663.78	1,215,760.78
282.000	FUND BALANCE - COMMITTED	3,628,530.05	3,628,530.05
283.000	FUND BALANCE - ASSIGNED	20,406,663.75	20,737,992.00
284.000	FUND BALANCE - UNASSIGNED	4,380,931.65	8,446,017.86
Total Fund Balance		**31,283,191.65**	**35,722,703.11**
Beginning Fund Balance		**31,283,191.65**	**35,722,703.11**
Net of Revenues VS Expenditures		**4,439,511.46**	**2,268,955.99**
Ending Fund Balance		**35,722,703.11**	**37,991,659.10**
Total Liabilities And Fund Balance		**38,948,542.66**	**41,318,865.05**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

ACCOUNT DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
AD VALOREM	18,888,671.00	18,888,671.00	19,168,683.18	101.48	(280,012.18)	17,851,021.11
OTHER TAXES	1,052,044.00	1,448,334.00	1,443,581.67	99.67	4,752.33	1,311,901.32
PUBLIC SERVICE TAXES	6,131,992.00	6,131,992.00	6,669,337.79	108.76	(537,345.79)	5,722,272.14
COMMUNICATION SVC TAX	1,155,888.00	1,155,888.00	1,164,679.93	100.76	(8,791.93)	1,112,562.11
LOCAL BUSINESS TAXES	240,000.00	240,000.00	286,401.49	119.33	(46,401.49)	305,972.60
FRANCHISE TAXES	4,296,385.00	4,296,385.00	4,656,503.55	108.38	(360,118.55)	4,195,660.68
PERMITS. FEES, & SPECIAL ASSESSMENTS	50,420.00	50,420.00	74,330.76	147.42	(23,910.76)	56,417.33
OPERATING GRANTS	50,000.00	50,000.00	96,749.63	193.50	(46,749.63)	1,465,243.58
INTERGOVERNMENTAL REVENUE	4,842,222.00	4,842,222.00	4,812,090.39	99.38	30,131.61	4,670,693.92
PAYMENT IN LIEU OF TAXES	3,098,039.00	3,367,403.00	3,367,403.00	100.00	0.00	3,162,835.34
CHARGES FOR SERVICES	918,013.00	932,873.00	969,513.96	103.93	(36,640.96)	1,153,276.98
FINES & FORFEITS	130,000.00	130,000.00	94,517.57	72.71	35,482.43	141,092.13
MISCELLANEOUS REVENUES	495,127.00	523,627.00	1,000,559.96	191.08	(476,932.96)	1,396,214.77
INTEREST REVENUES	550,000.00	550,000.00	1,442,417.62	262.26	(892,417.62)	1,607,448.40
RENTAL INCOME	284,186.00	284,186.00	339,030.64	119.30	(54,844.64)	317,322.28
USE OF RESERVES	2,452,838.00	10,482,041.00	0.00	0.00	10,482,041.00	0.00
DEBT PROCEEDS	0.00	309,032.00	309,030.91	100.00	1.09	350,019.82
0000	44,635,825.00	53,683,074.00	45,894,832.05	85.49	7,788,241.95	44,819,954.51
CHARGES FOR GOVT SERVICES	2,959,654.00	2,959,654.00	2,959,654.00	100.00	0.00	2,362,131.00
9998 - CONTRIBUTIONS	2,959,654.00	2,959,654.00	2,959,654.00	100.00	0.00	2,362,131.00
TRANSFERS FROM OTHER FUNDS	636,162.00	741,086.00	490,637.03	66.21	250,448.97	469,870.08
9999 - TRANSFERS	636,162.00	741,086.00	490,637.03	66.21	250,448.97	469,870.08
TOTAL REVENUES	48,231,641.00	57,383,814.00	49,345,123.08	85.99	8,038,690.92	47,651,955.59
PERSONNEL	88,795.00	88,795.00	86,227.14	97.11	2,567.86	69,301.00
OPERATING	87,057.00	95,557.00	75,738.29	79.26	19,818.71	66,011.41
0100 - CITY COMMISSION	175,852.00	184,352.00	161,965.43	87.86	22,386.57	135,312.41
PERSONNEL	376,479.00	376,479.00	372,108.57	98.84	4,370.43	351,287.42
OPERATING	20,691.00	20,691.00	12,935.05	62.52	7,755.95	17,377.80
0101 - CITY MANAGER	397,170.00	397,170.00	385,043.62	96.95	12,126.38	368,665.22
PERSONNEL	390,291.00	415,291.00	410,301.29	98.80	4,989.71	373,555.27
OPERATING	77,089.00	77,089.00	38,308.69	49.69	38,780.31	63,520.11
0102 - CITY CLERK	467,380.00	492,380.00	448,609.98	91.11	43,770.02	437,075.38
PERSONNEL	989,739.00	989,739.00	976,462.61	98.66	13,276.39	929,555.94
OPERATING	104,749.00	129,225.00	83,665.47	64.74	45,559.53	93,387.01
0103 - FINANCE	1,094,488.00	1,118,964.00	1,060,128.08	94.74	58,835.92	1,022,942.95
PERSONNEL	98,588.00	98,588.00	95,316.01	96.68	3,271.99	89,802.86
OPERATING	408,950.00	506,334.00	294,297.27	58.12	212,036.73	305,281.81
0104 - LEGAL	507,538.00	604,922.00	389,613.28	64.41	215,308.72	395,084.67
PERSONNEL	826,285.00	1,027,785.00	1,007,410.41	98.02	20,374.59	780,531.65
OPERATING	1,013,023.00	3,175,314.00	1,760,368.06	55.44	1,414,945.94	965,792.33
0106 - ADMINISTRATIVE SERVICES	1,839,308.00	4,203,099.00	2,767,778.47	65.85	1,435,320.53	1,746,323.98

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

ACCOUNT DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
PERSONNEL	886,060.00	886,060.00	839,249.62	94.72	46,810.38	742,867.94
OPERATING	1,931,630.00	1,892,526.00	1,273,953.42	67.31	618,572.58	1,476,703.34
CAPITAL OUTLAY	0.00	210,713.00	210,712.36	100.00	0.64	0.00
0110 - INFORMATION TECHNOLOGY	2,817,690.00	2,989,299.00	2,323,915.40	77.74	665,383.60	2,219,571.28
PERSONNEL	560,081.00	560,081.00	552,763.85	98.69	7,317.15	497,722.07
OPERATING	180,900.00	180,900.00	128,859.30	71.23	52,040.70	106,832.74
0115 - HUMAN RESOURCES	740,981.00	740,981.00	681,623.15	91.99	59,357.85	604,554.81
PERSONNEL	326,202.00	326,202.00	319,899.97	98.07	6,302.03	308,458.29
OPERATING	93,631.00	142,601.00	91,900.88	64.45	50,700.12	70,726.22
GRANTS & AID	50,000.00	87,884.00	45,930.00	52.26	41,954.00	49,115.50
1117 - COMMUNITY DEVELOPMENT	469,833.00	556,687.00	457,730.85	82.22	98,956.15	428,300.01
PERSONNEL	945,989.00	943,126.00	821,008.09	87.05	122,117.91	735,658.73
OPERATING	407,915.00	387,020.00	139,270.91	35.99	247,749.09	84,471.82
1118 - PLANNING	1,353,904.00	1,330,146.00	960,279.00	72.19	369,867.00	820,130.55
PERSONNEL	61,843.00	61,843.00	61,083.76	98.77	759.24	58,053.96
OPERATING	34,891.00	34,891.00	28,065.36	80.44	6,825.64	6,419.00
1119 - LICENCES & ENFORCEMENT	96,734.00	96,734.00	89,149.12	92.16	7,584.88	64,472.96
PERSONNEL	8,440,677.00	8,886,125.00	8,847,728.52	99.57	38,396.48	7,915,349.97
OPERATING	824,303.00	996,354.00	951,890.87	95.54	44,463.13	876,228.70
CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	147,879.42
PRINCIPAL & INTEREST	0.00	27,402.00	27,401.00	100.00	1.00	0.00
1222 - FIRE	9,264,980.00	9,909,881.00	9,827,020.39	99.16	82,860.61	8,939,458.09
PERSONNEL	687,421.00	687,421.00	646,777.05	94.09	40,643.95	570,036.66
OPERATING	67,467.00	67,467.00	48,479.42	71.86	18,987.58	30,682.96
1223 - FIRE PREVENTION	754,888.00	754,888.00	695,256.47	92.10	59,631.53	600,719.62
PERSONNEL	11,616,588.00	11,857,430.00	11,198,853.00	94.45	658,577.00	10,038,521.25
OPERATING	1,695,256.00	1,625,649.00	1,409,703.44	86.72	215,945.56	1,404,701.52
CAPITAL OUTLAY	0.00	98,197.00	98,196.85	100.00	0.15	433,502.70
PRINCIPAL & INTEREST	0.00	226,808.00	226,803.89	100.00	4.11	167,427.19
1226 - POLICE	13,311,844.00	13,808,084.00	12,933,557.18	93.67	874,526.82	12,044,152.66
PERSONNEL	65,089.00	65,089.00	36,025.68	55.35	29,063.32	58,013.98
OPERATING	19,695.00	19,695.00	5,760.15	29.25	13,934.85	14,815.20
1228 - PARKING SERVICES	84,784.00	84,784.00	41,785.83	49.29	42,998.17	72,829.18
PERSONNEL	418,968.00	418,968.00	415,430.65	99.16	3,537.35	412,054.22
OPERATING	160,514.00	275,989.00	197,455.61	71.54	78,533.39	92,237.73
1301 - PUBLIC WORKS ADMIN	579,482.00	694,957.00	612,886.26	88.19	82,070.74	504,291.95
PERSONNEL	965,073.00	965,073.00	907,865.41	94.07	57,207.59	785,981.48
OPERATING	943,899.00	963,690.00	905,269.50	93.94	58,420.50	861,420.40
1302 - STREETS	1,908,972.00	1,928,763.00	1,813,134.91	94.01	115,628.09	1,647,401.88

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

ACCOUNT DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
PERSONNEL	698,207.00	698,207.00	612,963.17	87.79	85,243.83	507,144.60
OPERATING	149,659.00	149,659.00	103,465.11	69.13	46,193.89	130,564.28
1303 - TREES	847,866.00	847,866.00	716,428.28	84.50	131,437.72	637,708.88
PERSONNEL	840,163.00	840,163.00	682,077.93	81.18	158,085.07	590,409.59
OPERATING	137,863.00	141,963.00	117,091.03	82.48	24,871.97	137,272.66
1304 - URBAN BEAUTIFICATION	978,026.00	982,126.00	799,168.96	81.37	182,957.04	727,682.25
PERSONNEL	544,821.00	544,821.00	470,339.03	86.33	74,481.97	400,052.25
OPERATING	72,828.00	63,833.00	57,115.75	89.48	6,717.25	62,103.51
1306 - VEHICLE MAINTENANCE	617,649.00	608,654.00	527,454.78	86.66	81,199.22	462,155.76
PERSONNEL	381,852.00	418,549.00	413,612.10	98.82	4,936.90	369,548.65
OPERATING	86,348.00	67,697.00	55,192.31	81.53	12,504.69	37,255.99
CAPITAL OUTLAY	0.00	96,788.00	96,787.44	100.00	0.56	0.00
PRINCIPAL & INTEREST	0.00	16,001.00	16,000.00	99.99	1.00	0.00
1401 - PARKS & REC ADMIN	468,200.00	599,035.00	581,591.85	97.09	17,443.15	406,804.64
PERSONNEL	422,247.00	385,550.00	348,629.41	90.42	36,920.59	311,438.99
OPERATING	131,450.00	116,621.00	101,523.71	87.05	15,097.29	132,528.22
1402 - RECREATION	553,697.00	502,171.00	450,153.12	89.64	52,017.88	443,967.21
PERSONNEL	2,030,027.00	2,030,027.00	1,945,383.72	95.83	84,643.28	1,698,322.82
OPERATING	508,092.00	540,385.00	523,586.90	96.89	16,798.10	599,911.44
1403 - PARKS	2,538,119.00	2,570,412.00	2,468,970.62	96.05	101,441.38	2,298,234.26
OPERATING	16,698.00	16,698.00	10,923.56	65.42	5,774.44	11,352.18
1404 - INTERMODAL TRANSPORTATION	16,698.00	16,698.00	10,923.56	65.42	5,774.44	11,352.18
OPERATING	43,942.00	44,492.00	43,895.85	98.66	596.15	42,476.93
1405 - TRAILER PARK	43,942.00	44,492.00	43,895.85	98.66	596.15	42,476.93
OPERATING	13,898.00	14,598.00	13,576.29	93.00	1,021.71	50,880.77
1406 - DELAND HOUSE	13,898.00	14,598.00	13,576.29	93.00	1,021.71	50,880.77
PERSONNEL	368,069.00	368,069.00	341,929.26	92.90	26,139.74	352,865.14
OPERATING	137,049.00	137,049.00	134,238.67	97.95	2,810.33	148,208.31
1407 - SANBORN ACTIVITY CENTER	505,118.00	505,118.00	476,167.93	94.27	28,950.07	501,073.45
OPERATING	171,631.00	184,021.00	176,349.68	95.83	7,671.32	177,157.15
1408 - STADIUM	171,631.00	184,021.00	176,349.68	95.83	7,671.32	177,157.15
OPERATING	52,000.00	37,750.00	16,077.29	42.59	21,672.71	143,035.35
1409 - SPECIAL EVENTS	52,000.00	37,750.00	16,077.29	42.59	21,672.71	143,035.35
PERSONNEL	359,746.00	359,746.00	345,987.19	96.18	13,758.81	297,001.43
OPERATING	151,691.00	149,091.00	118,550.42	79.52	30,540.58	131,192.15
1410 - CHISHOLM CENTER	511,437.00	508,837.00	464,537.61	91.29	44,299.39	428,193.58

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

ACCOUNT DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
OPERATING	97,067.00	98,667.00	84,661.44	85.81	14,005.56	77,409.12
1411 - SPERLING SPORTS COMPLEX	97,067.00	98,667.00	84,661.44	85.81	14,005.56	77,409.12
OPERATING	80,875.00	100,270.00	98,255.41	97.99	2,014.59	135,146.84
1412 - CONRAD/MELCHING	80,875.00	100,270.00	98,255.41	97.99	2,014.59	135,146.84
CONTINGENCY	1,134,477.00	461,432.00	0.00	0.00	461,432.00	0.00
9990 - CONTINGENCY	1,134,477.00	461,432.00	0.00	0.00	461,432.00	0.00
TRANSFERS TO OTHER FUNDS	3,735,113.00	9,405,576.00	4,498,477.00	47.83	4,907,099.00	4,617,878.16
9999 - TRANSFERS	3,735,113.00	9,405,576.00	4,498,477.00	47.83	4,907,099.00	4,617,878.16
TOTAL EXPENDITURES	48,231,641.00	57,383,814.00	47,076,167.09	82.04	10,307,646.91	43,212,444.13
TOTAL REVENUES - FUND 001	48,231,641.00	57,383,814.00	49,345,123.08	85.99	8,038,690.92	47,651,955.59
TOTAL EXPENDITURES - FUND 001	48,231,641.00	57,383,814.00	47,076,167.09	82.04	10,307,646.91	43,212,444.13
NET OF REVENUES & EXPENDITURES	0.00	0.00	2,268,955.99	100.00	(2,268,955.99)	4,439,511.46

GOVERNMENTAL FUND TYPES

SPECIAL REVENUE FUNDS

A special revenue fund is used when legal requirements restrict specific resources to be expended for specified purposes, with the exception of trust, capital projects or debt service. The confiscated Fund accounts for the receipts and disbursements of forfeited funds for law enforcement purposes. The Spring Hill Community Redevelopment Fund accounts for the revenues and expenditures of the Spring Hill Tax Increment District. The Downtown Community Redevelopment Fund accounts for the revenues and expenditures of the Downtown Tax Increment District. The Governmental Impact Fees Trust Fund accounts for projects using revenue collected from Police, Fire, Parks & Recreation and General Government Building Impact Fees paid by new construction. The Grant & Other Special Revenues Fund accounts for all capital projects and expenditures relating to grants which fund non-payroll operating expenses.

Fund 109 CONFISCATED FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	154,866.18	93,881.63
135.000	INTEREST & DIVIDENDS REC	0.00	0.00
156.900	OTHER ASSETS - NONCURRENT	0.00	0.00
Total Assets		**154,866.18**	**93,881.63**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	0.00	0.00
Total Liabilities		**0.00**	**0.00**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	48,000.49	154,866.18
Total Fund Balance		**48,000.49**	**154,866.18**
Beginning Fund Balance		**48,000.49**	**154,866.18**
Net of Revenues VS Expenditures		**106,865.69**	**(60,984.55)**
Ending Fund Balance		**154,866.18**	**93,881.63**
Total Liabilities And Fund Balance		**154,866.18**	**93,881.63**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 109 - CONFISCATED FUND							
FINES & FORFEITS		3,000.00	3,000.00	17,952.43	598.41	(14,952.43)	103,971.62
INTEREST REVENUES		0.00	0.00	4,296.72	100.00	(4,296.72)	2,894.07
USE OF RESERVES		0.00	100,946.00	0.00	0.00	100,946.00	0.00
TOTAL REVENUES		3,000.00	103,946.00	22,249.15	21.40	81,696.85	106,865.69
CAPITAL OUTLAY		0.00	9,500.00	9,500.00	100.00	0.00	0.00
OPERATING		3,000.00	94,446.00	73,733.70	78.07	20,712.30	0.00
TOTAL EXPENDITURES		3,000.00	103,946.00	83,233.70	80.07	20,712.30	0.00
Fund 109 - CONFISCATED FUND:							
TOTAL REVENUES		3,000.00	103,946.00	22,249.15	21.40	81,696.85	106,865.69
TOTAL EXPENDITURES		3,000.00	103,946.00	83,233.70	80.07	20,712.30	0.00
NET OF REVENUES & EXPENDITURES		0.00	0.00	(60,984.55)	100.00	60,984.55	106,865.69

Fund 120 HOMELESSNESS FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	1,075.48	1,100.31
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
Total Assets		**1,075.48**	**1,100.31**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	1,004.56	1,029.39
Total Liabilities		**1,004.56**	**1,029.39**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	0.02	70.92
Total Fund Balance		**0.02**	**70.92**
Beginning Fund Balance		**0.02**	**70.92**
Net of Revenues VS Expenditures		**70.90**	**0.00**
Ending Fund Balance		**70.92**	**70.92**
Total Liabilities And Fund Balance		**1,075.48**	**1,100.31**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 120 - HOMELESSNESS FUND							
MISCELLANEOUS REVENUES		109,185.00	89,185.00	17,900.00	20.07	71,285.00	74,700.00
TRANSFERS FROM OTHER FUNDS		694,195.00	715,395.00	714,955.70	99.94	439.30	626,858.00
TOTAL REVENUES		803,380.00	804,580.00	732,855.70	91.09	71,724.30	701,558.00
OPERATING		803,380.00	804,580.00	732,855.70	91.09	71,724.30	701,487.10
TOTAL EXPENDITURES		803,380.00	804,580.00	732,855.70	91.09	71,724.30	701,487.10
Fund 120 - HOMELESSNESS FUND:							
TOTAL REVENUES		803,380.00	804,580.00	732,855.70	91.09	71,724.30	701,558.00
TOTAL EXPENDITURES		803,380.00	804,580.00	732,855.70	91.09	71,724.30	701,487.10
NET OF REVENUES & EXPENDITURES		0.00	0.00	0.00	0.00	0.00	70.90

Fund 160 SPRING HILL CRA FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	1,734,754.76	2,145,760.05
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	0.00	0.00
151.900	INVESTMENTS - NON-CURRENT	0.00	0.00
155.000	PREPAID ITEMS	0.00	0.00
Total Assets		**1,734,754.76**	**2,145,760.05**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	262,706.82	1,860.87
205.000	CONTRACTS PAYABLE	75,343.29	0.00
208.000	DUE TO OTHER GOVERNMENTS	0.00	0.00
216.000	ACCRUED SALARIES & WAGES	4,583.27	5,529.78
236.900	ADVANCES FROM OTHER FUNDS	0.00	0.00
Total Liabilities		**342,633.38**	**7,390.65**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	1,053,350.76	1,392,121.38
Total Fund Balance		**1,053,350.76**	**1,392,121.38**
Beginning Fund Balance		**1,053,350.76**	**1,392,121.38**
Net of Revenues VS Expenditures		**338,770.62**	**746,248.02**
Ending Fund Balance		**1,392,121.38**	**2,138,369.40**
Total Liabilities And Fund Balance		**1,734,754.76**	**2,145,760.05**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 160 - SPRING HILL CRA FUND							
INTEREST REVENUES		0.00	0.00	88,321.18	100.00	(88,321.18)	79,180.68
USE OF RESERVES		0.00	1,083,417.00	0.00	0.00	1,083,417.00	0.00
MISCELLANEOUS REVENUES		1,200.00	1,200.00	1,789.04	149.09	(589.04)	2,623.35
AD VALOREM		348,944.00	348,944.00	349,613.00	100.19	(669.00)	309,044.00
CAPITAL GRANTS		27,802.00	27,802.00	27,802.00	100.00	0.00	24,710.00
INTERGOVERNMENTAL REVENUE		656,259.00	656,259.00	717,654.94	109.36	(61,395.94)	593,891.90
TOTAL REVENUES		1,034,205.00	2,117,622.00	1,185,180.16	55.97	932,441.84	1,009,449.93
CAPITAL OUTLAY		0.00	1,144,194.00	115,879.00	10.13	1,028,315.00	303,769.42
OPERATING		49,446.00	77,606.00	76,973.75	99.19	632.25	144,613.88
PERSONNEL		215,876.00	215,876.00	182,960.43	84.75	32,915.57	165,597.86
GRANTS & AID		110,000.00	110,000.00	8,505.30	7.73	101,494.70	4,312.50
CONTINGENCY		603,896.00	514,857.00	0.00	0.00	514,857.00	0.00
SERVICES PROVIDED BY GEN GOVT		17,476.00	17,476.00	17,476.00	100.00	0.00	0.00
TRANSFERS TO OTHER FUNDS		37,511.00	37,613.00	37,137.66	98.74	475.34	52,385.65
TOTAL EXPENDITURES		1,034,205.00	2,117,622.00	438,932.14	20.73	1,678,689.86	670,679.31
Fund 160 - SPRING HILL CRA FUND:							
TOTAL REVENUES		1,034,205.00	2,117,622.00	1,185,180.16	55.97	932,441.84	1,009,449.93
TOTAL EXPENDITURES		1,034,205.00	2,117,622.00	438,932.14	20.73	1,678,689.86	670,679.31
NET OF REVENUES & EXPENDITURES		0.00	0.00	746,248.02	100.00	(746,248.02)	338,770.62

Fund 170 GIFT FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	5,620,291.69	5,194,878.82
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
131.000	DUE FROM OTHER FUNDS	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	0.00	0.00
155.000	PREPAID ITEMS	0.00	0.00
Total Assets		**5,620,291.69**	**5,194,878.82**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	585.00	357,359.90
207.000	DUE TO OTHER FUNDS	0.00	0.00
Total Liabilities		**585.00**	**357,359.90**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	4,066,084.03	5,619,706.69
Total Fund Balance		**4,066,084.03**	**5,619,706.69**
Beginning Fund Balance		**4,066,084.03**	**5,619,706.69**
Net of Revenues VS Expenditures		**1,553,622.66**	**(782,187.77)**
Ending Fund Balance		**5,619,706.69**	**4,837,518.92**
Total Liabilities And Fund Balance		**5,620,291.69**	**5,194,878.82**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 170 - GIFT FUND							
INTEREST REVENUES		0.00	0.00	247,598.24	100.00	(247,598.24)	239,888.89
USE OF RESERVES		0.00	1,856,219.00	0.00	0.00	1,856,219.00	0.00
MISCELLANEOUS REVENUES		0.00	0.00	0.00	0.00	0.00	130.00
TRANSFERS FROM OTHER FUNDS		0.00	189,510.00	0.00	0.00	189,510.00	0.00
PERMITS. FEES, & SPECIAL ASSESSMENTS		1,381,813.00	1,422,539.00	1,387,047.79	97.51	35,491.21	2,729,776.85
DEBT PROCEEDS		0.00	0.00	28,682.34	100.00	(28,682.34)	0.00
TOTAL REVENUES		1,381,813.00	3,468,268.00	1,663,328.37	47.96	1,804,939.63	2,969,795.74
CAPITAL OUTLAY		0.00	1,702,790.00	1,032,426.37	60.63	670,363.63	39,203.26
OPERATING		55,000.00	146,419.00	112,727.86	76.99	33,691.14	5,452.20
TRANSFERS TO OTHER FUNDS		1,326,813.00	1,619,059.00	1,300,361.91	80.32	318,697.09	1,371,517.62
TOTAL EXPENDITURES		1,381,813.00	3,468,268.00	2,445,516.14	70.51	1,022,751.86	1,416,173.08
Fund 170 - GIFT FUND:							
TOTAL REVENUES		1,381,813.00	3,468,268.00	1,663,328.37	47.96	1,804,939.63	2,969,795.74
TOTAL EXPENDITURES		1,381,813.00	3,468,268.00	2,445,516.14	70.51	1,022,751.86	1,416,173.08
NET OF REVENUES & EXPENDITURES		0.00	0.00	(782,187.77)	100.00	782,187.77	1,553,622.66

Fund 180 DOWNTOWN CRA FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	1,683,384.09	1,777,646.20
115.100	ACCOUNTS RECEIVABLE	877.80	773.25
133.000	DUE FROM OTHER GOVERNMENTS	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	2,373.58	2,246.38
151.900	INVESTMENTS - NON-CURRENT	0.00	0.00
156.900	OTHER ASSETS - NONCURRENT	717,052.57	676,544.60
101.000	CASH IN BANK	0.00	0.00
Total Assets		**2,403,688.04**	**2,457,210.43**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	169,273.01	16,473.25
205.000	CONTRACTS PAYABLE	39,913.43	0.00
208.000	DUE TO OTHER GOVERNMENTS	0.00	0.00
216.000	ACCRUED SALARIES & WAGES	0.00	0.00
220.000	DEPOSITS	0.00	0.00
223.000	DEFERRED REVENUE	0.00	0.00
290.000	DEFERRED INFLOW	649,077.77	591,277.01
Total Liabilities		**858,264.21**	**607,750.26**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	2,441,569.00	1,545,423.83
Total Fund Balance		**2,441,569.00**	**1,545,423.83**
Beginning Fund Balance		**2,441,569.00**	**1,545,423.83**
Net of Revenues VS Expenditures		**(896,145.17)**	**304,036.34**
Ending Fund Balance		**1,545,423.83**	**1,849,460.17**
Total Liabilities And Fund Balance		**2,403,688.04**	**2,457,210.43**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 180 - DOWNTOWN CRA FUND							
INTEREST REVENUES		0.00	35,000.00	105,218.75	300.63	(70,218.75)	127,957.48
USE OF RESERVES		0.00	585,912.00	0.00	0.00	585,912.00	0.00
MISCELLANEOUS REVENUES		14,618.00	101,618.00	113,907.82	112.09	(12,289.82)	28,972.23
TRANSFERS FROM OTHER FUNDS		0.00	0.00	0.00	0.00	0.00	310,712.17
AD VALOREM		398,797.00	398,797.00	398,797.00	100.00	0.00	347,919.00
INTERGOVERNMENTAL REVENUE		365,914.00	401,410.00	401,410.78	100.00	(0.78)	333,525.52
CHARGES FOR SERVICES		58,105.00	58,105.00	41,576.20	71.55	16,528.80	69,499.06
RENTAL INCOME		0.00	0.00	(10,502.60)	100.00	10,502.60	(8,897.64)
TOTAL REVENUES		837,434.00	1,580,842.00	1,050,407.95	66.45	530,434.05	1,209,687.82
CAPITAL OUTLAY		0.00	598,337.00	122,326.74	20.44	476,010.26	978,897.71
OPERATING		571,888.00	761,766.00	563,772.36	74.01	197,993.64	388,500.32
GRANTS & AID		67,500.00	67,500.00	4,361.70	6.46	63,138.30	0.00
CONTINGENCY		142,135.00	97,328.00	0.00	0.00	97,328.00	0.00
SERVICES PROVIDED BY GEN GOVT		17,476.00	17,476.00	17,476.00	100.00	0.00	0.00
TRANSFERS TO OTHER FUNDS		38,435.00	38,435.00	38,434.81	100.00	0.19	738,434.96
TOTAL EXPENDITURES		837,434.00	1,580,842.00	746,371.61	47.21	834,470.39	2,105,832.99
Fund 180 - DOWNTOWN CRA FUND:							
TOTAL REVENUES		837,434.00	1,580,842.00	1,050,407.95	66.45	530,434.05	1,209,687.82
TOTAL EXPENDITURES		837,434.00	1,580,842.00	746,371.61	47.21	834,470.39	2,105,832.99
NET OF REVENUES & EXPENDITURES		0.00	0.00	304,036.34	100.00	(304,036.34)	(896,145.17)

Fund 190 GRANT & SPECIAL REVENUE FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	1,015,233.76	1,519,595.11
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
128.900	NOTES RECEIVABLE - NON-CURRENT	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	1,221,954.45	984,870.94
101.000	CASH IN BANK	0.00	0.00
Total Assets		**2,237,188.21**	**2,504,466.05**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	239,108.08	343,022.01
205.000	CONTRACTS PAYABLE	122,807.07	0.00
207.000	DUE TO OTHER FUNDS	0.00	0.00
223.000	DEFERRED REVENUE	67,392.86	0.00
Total Liabilities		**429,308.01**	**343,022.01**
*** Fund Balance ***			
251.000	PRIOR PERIOD ADJUSTMENT	0.00	0.00
281.000	FUND BALANCE - RESTRICTED	1,813,005.07	110,990.57
282.000	FUND BALANCE - COMMITTED	1,109,318.03	1,696,889.63
Total Fund Balance		**2,922,323.10**	**1,807,880.20**
Beginning Fund Balance		**2,922,323.10**	**1,807,880.20**
Net of Revenues VS Expenditures		**(1,114,442.90)**	**353,563.84**
Ending Fund Balance		**1,807,880.20**	**2,161,444.04**
Total Liabilities And Fund Balance		**2,237,188.21**	**2,504,466.05**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 190 - GRANT & SPECIAL REVENUE FUND							
INTEREST REVENUES		0.00	7,439.00	57,679.52	775.37	(50,240.52)	137,026.44
USE OF RESERVES		6,000.00	520,486.00	0.00	0.00	520,486.00	0.00
MISCELLANEOUS REVENUES		0.00	0.00	0.00	0.00	0.00	19,271.22
TRANSFERS FROM OTHER FUNDS		0.00	1,258,392.00	435,907.10	34.64	822,484.90	133,131.96
CAPITAL GRANTS		89,220.00	449,116.00	(395.81)	(0.09)	449,511.81	1,663,907.62
DEBT PROCEEDS		0.00	500,000.00	0.00	0.00	500,000.00	0.00
CHARGES FOR SERVICES		25,000.00	25,000.00	569,625.00	2,278.50	(544,625.00)	750,517.50
OTHER TAXES		382,279.00	382,279.00	375,356.66	98.19	6,922.34	353,178.48
TOTAL REVENUES		502,499.00	3,142,712.00	1,438,172.47	45.76	1,704,539.53	3,057,033.22
CAPITAL OUTLAY		89,220.00	997,350.00	434,782.30	43.59	562,567.70	2,621,416.51
OPERATING		413,279.00	2,145,362.00	649,826.33	30.29	1,495,535.67	1,550,059.61
TOTAL EXPENDITURES		502,499.00	3,142,712.00	1,084,608.63	34.51	2,058,103.37	4,171,476.12
Fund 190 - GRANT & SPECIAL REVENUE FUND:							
TOTAL REVENUES		502,499.00	3,142,712.00	1,438,172.47	45.76	1,704,539.53	3,057,033.22
TOTAL EXPENDITURES		502,499.00	3,142,712.00	1,084,608.63	34.51	2,058,103.37	4,171,476.12
NET OF REVENUES & EXPENDITURES		0.00	0.00	353,563.84	100.00	(353,563.84)	(1,114,442.90)

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GOVERNMENTAL FUND TYPES

DEBT SERVICE FUND

A debt service fund is used to account for the accumulation of financial resources to be used the payment of general long-term debt principal and interest. The Debt Service Fund accounts for the revenues and expenditures for all Governmental Fund payments on long-term debt and is funded through transfers from other funds.

Fund 200 DEBT SERVICE FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	3,299.78	3,299.78
	Total Assets	**3,299.78**	**3,299.78**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	3,299.78	3,299.78
	Total Liabilities	**3,299.78**	**3,299.78**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	0.00	0.00
	Total Fund Balance	**0.00**	**0.00**
	Beginning Fund Balance	**0.00**	**0.00**
	Net of Revenues VS Expenditures	**0.00**	**0.00**
	Ending Fund Balance	**0.00**	**0.00**
	Total Liabilities And Fund Balance	**3,299.78**	**3,299.78**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 200 - DEBT SERVICE FUND							
TRANSFERS FROM OTHER FUNDS		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
TOTAL REVENUES		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
PRINCIPAL & INTEREST		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
TOTAL EXPENDITURES		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
Fund 200 - DEBT SERVICE FUND:							
TOTAL REVENUES		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
TOTAL EXPENDITURES		2,445,075.00	2,408,043.00	1,993,936.11	82.80	414,106.89	1,910,843.24
NET OF REVENUES & EXPENDITURES		0.00	0.00	0.00	0.00	0.00	0.00

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GOVERNMENTAL FUND TYPES

CAPITAL PROJECTS FUNDS

A capital projects fund is used to account for financial resources to be used for the acquisition or construction of major capital facilities other than those financed by proprietary funds or trust funds. The Capital Projects Fund accounts for the revenues and expenditures for all General Fund capital projects.

Fund 300 CAPITAL PROJECTS FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	2,646,403.76	2,086,724.11
131.000	DUE FROM OTHER FUNDS	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	0.00	0.00
101.000	CASH IN BANK	0.00	0.00
Total Assets		**2,646,403.76**	**2,086,724.11**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	282,804.28	314,846.17
205.000	CONTRACTS PAYABLE	0.00	15,178.98
207.000	DUE TO OTHER FUNDS	0.00	0.00
Total Liabilities		**282,804.28**	**330,025.15**
*** Fund Balance ***			
281.000	FUND BALANCE - RESTRICTED	1,823,517.61	2,363,599.48
283.000	FUND BALANCE - ASSIGNED	0.00	0.00
Total Fund Balance		**1,823,517.61**	**2,363,599.48**
Beginning Fund Balance		**1,823,517.61**	**2,363,599.48**
Net of Revenues VS Expenditures		**540,081.87**	**(606,900.52)**
Ending Fund Balance		**2,363,599.48**	**1,756,698.96**
Total Liabilities And Fund Balance		**2,646,403.76**	**2,086,724.11**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 300 - CAPITAL PROJECTS FUND							
INTEREST REVENUES		0.00	0.00	102,574.73	100.00	(102,574.73)	115,543.56
USE OF RESERVES		0.00	2,265,586.00	0.00	0.00	2,265,586.00	0.00
MISCELLANEOUS REVENUES		0.00	20,000.00	17,114.21	85.57	2,885.79	2,154.00
TRANSFERS FROM OTHER FUNDS		1,877,993.00	6,404,981.00	2,485,746.47	38.81	3,919,234.53	3,556,244.02
AD VALOREM		1,282,005.00	1,282,005.00	1,353,959.52	105.61	(71,954.52)	589,088.51
DEBT PROCEEDS		3,189,000.00	6,189,000.00	0.00	0.00	6,189,000.00	0.00
TOTAL REVENUES		6,348,998.00	16,161,572.00	3,959,394.93	24.50	12,202,177.07	4,263,030.09
CAPITAL OUTLAY		6,348,998.00	16,100,377.00	4,531,073.98	28.14	11,569,303.02	3,722,948.22
OPERATING		0.00	61,195.00	35,221.47	57.56	25,973.53	0.00
TOTAL EXPENDITURES		6,348,998.00	16,161,572.00	4,566,295.45	28.25	11,595,276.55	3,722,948.22
Fund 300 - CAPITAL PROJECTS FUND:							
TOTAL REVENUES		6,348,998.00	16,161,572.00	3,959,394.93	24.50	12,202,177.07	4,263,030.09
TOTAL EXPENDITURES		6,348,998.00	16,161,572.00	4,566,295.45	28.25	11,595,276.55	3,722,948.22
NET OF REVENUES & EXPENDITURES		0.00	0.00	(606,900.52)	100.00	606,900.52	540,081.87

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PROPRIETARY FUND TYPES

ENTERPRISE FUNDS

Enterprise funds are used to account for operations that are financed and operated in a manner similar to private business enterprises, where the intent is that the costs of providing goods or services to the general public on a continuing basis should be financed or recovered through user charges. Currently there are five enterprise funds which consist of the Water & Sewer Revenue Fund, Municipal Airport Fund, Refuse Collection Fund, Stormwater Revenue Fund and Permits & Inspections Fund.

Fund 401 WATER & SEWER FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
102.000	CASH ON HAND	3,300.00	3,300.00
104.000	EQUITY IN POOLED CASH	20,137,602.18	19,808,944.84
115.100	ACCOUNTS RECEIVABLE	3,305,058.61	3,896,714.99
117.000	ALLOWANCE FOR UNCOLLECTIBLE AR	(771,505.79)	(820,559.12)
121.000	ASSESSMENTS RECEIVABLE	331,500.54	307,005.78
128.900	NOTES RECEIVABLE - NON-CURRENT	0.00	0.00
131.000	DUE FROM OTHER FUNDS	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	8,193,996.78	8,575,008.28
135.000	INTEREST & DIVIDENDS REC	27,417.63	72,291.85
151.900	INVESTMENTS - NON-CURRENT	19,910,061.61	18,701,091.10
155.000	PREPAID ITEMS	18,506.58	70,588.65
161.900	LAND	2,148,064.53	2,148,064.53
162.900	BUILDINGS	10,585,889.57	10,585,889.57
163.900	ACCUM DEPREC - BUILDINGS	(8,125,164.40)	(8,125,164.40)
164.900	INFRASTRUCTURE	137,328,661.12	137,328,952.40
165.900	ACCUM DEPREC - INFRASTRUCTURE	(42,749,759.87)	(42,749,759.87)
166.900	EQUIPMENT & FURNITURE	21,582,920.29	21,582,920.29
167.900	ACCUM DEPREC - EQUIPMENT	(14,278,486.30)	(14,278,486.30)
168.950	ACCUM DEPREC - CAPITAL LEASES	0.00	108,396.42
169.900	CONSTRUCTION WORK IN PROGRESS	67,187,134.68	67,187,134.68
190.000	DEFERRED OUTFLOW	1,190,171.00	1,190,171.00
101.000	CASH IN BANK	3,579,137.93	5,689,034.73
Total Assets		**229,604,506.69**	**231,281,539.42**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	5,700,990.77	3,031,159.35
203.900	NOTES & LOANS PAYABLE - LT	17,601,050.73	44,894,953.63
205.000	CONTRACTS PAYABLE	2,414,453.73	2,390,328.04
207.000	DUE TO OTHER FUNDS	0.00	0.00
215.000	ACCRUED INTEREST PAYABLE	0.00	702.93
216.000	ACCRUED SALARIES & WAGES	1,102,486.99	1,246,471.84
220.000	DEPOSITS	0.00	0.00
223.000	DEFERRED REVENUE	0.00	0.00
225.900	CAPITAL LEASES - LONG TERM	0.00	80,101.66
229.000	OTHER CURRENT LIABILITIES	779,558.00	779,558.00
238.000	PENSION LIABILITIES	3,387,980.00	3,387,980.00
290.000	DEFERRED INFLOW	39,019.00	39,019.00
Total Liabilities		**31,025,539.22**	**55,850,274.45**
*** Fund Balance ***			
273.000	DEBT USED TO ACQUIRE FA	(26,856,431.98)	(26,856,431.98)
274.000	NET ASSETS, INVEST IN CAPITAL	173,679,259.62	173,679,259.62
275.000	NET ASSETS, RESTRICTED	0.00	0.00
276.000	NET ASSETS, UNRESTRICTED	26,786,203.47	51,749,307.11
Total Fund Balance		**173,609,031.11**	**198,572,134.75**
Beginning Fund Balance		**167,584,234.97**	**198,572,134.75**
Net of Revenues VS Expenditures		**24,963,103.64**	**(23,148,708.91)**
Fund Balance Adjustments		**6,024,796.14**	**0.00**
Ending Fund Balance		**198,572,134.75**	**175,423,425.84**
Total Liabilities And Fund Balance		**229,604,506.69**	**231,281,539.42**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 401 - WATER & SEWER FUND							
CAPITAL GRANTS		6,068,323.00	29,421,738.00	12,789,588.29	43.47	16,632,149.71	17,863,948.53
CHARGES FOR SERVICES		29,954,115.00	30,211,221.00	32,866,739.52	108.79	(2,655,518.52)	30,789,098.96
INTEREST REVENUES		600,000.00	600,000.00	1,290,017.90	215.00	(690,017.90)	1,476,161.97
MISCELLANEOUS REVENUES		128,000.00	128,000.00	936,430.01	731.59	(808,430.01)	1,392,239.31
USE OF RESERVES		7,466,165.00	15,110,139.00	0.00	0.00	15,110,139.00	0.00
DEBT PROCEEDS		0.00	42,364,268.00	103,980.93	0.25	42,260,287.07	0.00
0000		44,216,603.00	117,835,366.00	47,986,756.65	40.72	69,848,609.35	51,521,448.77
CHARGES FOR GOVT SERVICES		165,735.00	177,533.00	177,532.49	100.00	0.51	162,685.90
9998 - CONTRIBUTIONS		165,735.00	177,533.00	177,532.49	100.00	0.51	162,685.90
TRANSFERS FROM OTHER FUNDS		0.00	0.00	0.00	0.00	0.00	641,225.25
9999 - TRANSFERS		0.00	0.00	0.00	0.00	0.00	641,225.25
TOTAL REVENUES		44,382,338.00	118,012,899.00	48,164,289.14	40.81	69,848,609.86	52,325,359.92
PERSONNEL		1,152,778.00	1,152,778.00	1,124,848.80	97.58	27,929.20	976,456.63
OPERATING		2,336,766.00	2,420,614.00	1,679,007.73	69.36	741,606.27	1,801,146.47
SERVICES PROVIDED BY GEN GOVT		3,013,714.00	3,283,060.00	3,283,078.00	100.00	(18.00)	3,078,510.34
CAPITAL OUTLAY		51,840.00	1,681,784.00	774,591.89	46.06	907,192.11	13,766,651.64
PRINCIPAL & INTEREST		0.00	1,059.00	1,058.61	99.96	0.39	0.00
4201 - UTILITIES ADMIN		6,555,098.00	8,539,295.00	6,862,585.03	80.36	1,676,709.97	19,622,765.08
PERSONNEL		1,409,544.00	1,409,544.00	1,299,313.80	92.18	110,230.20	1,029,244.34
OPERATING		71,177.00	266,048.00	65,878.10	24.76	200,169.90	62,855.10
CAPITAL OUTLAY		0.00	0.00	0.00	0.00	0.00	30,617.00
4202 - ENGINEERING		1,480,721.00	1,675,592.00	1,365,191.90	81.48	310,400.10	1,122,716.44
PERSONNEL		700,466.00	700,466.00	702,082.31	100.23	(1,616.31)	610,016.65
OPERATING		1,230,166.00	1,274,409.00	1,015,384.69	79.67	259,024.31	924,605.78
CAPITAL OUTLAY		13,645,800.00	14,708,430.00	492,181.54	3.35	14,216,248.46	532,210.82
4203 - WATER PRODUCTION		15,576,432.00	16,683,305.00	2,209,648.54	13.24	14,473,656.46	2,066,833.25
PERSONNEL		2,362,465.00	2,362,465.00	2,168,152.50	91.78	194,312.50	1,933,735.07
OPERATING		2,439,661.00	2,668,733.00	2,044,166.23	76.60	624,566.77	2,160,259.26
CAPITAL OUTLAY		396,799.00	2,800,484.00	1,255,461.71	44.83	1,545,022.29	1,359,028.45
4204 - WATER DISTRIBUTION		5,198,925.00	7,831,682.00	5,467,780.44	69.82	2,363,901.56	5,453,022.78
PERSONNEL		1,412,257.00	1,412,257.00	1,377,162.00	97.51	35,095.00	1,323,397.95
OPERATING		1,952,259.00	2,267,891.00	2,084,783.58	91.93	183,107.42	1,764,795.54
CAPITAL OUTLAY		444,049.00	62,804,569.00	40,608,636.61	64.66	22,195,932.39	37,910,190.09
4205 - WASTEWATER TREATMENT		3,808,565.00	66,484,717.00	44,070,582.19	66.29	22,414,134.81	40,998,383.58
PERSONNEL		2,027,961.00	2,027,961.00	1,847,611.50	91.11	180,349.50	1,698,658.79
OPERATING		617,048.00	743,634.00	648,406.43	87.19	95,227.57	627,822.55
CAPITAL OUTLAY		2,547,336.00	5,302,560.00	1,745,668.53	32.92	3,556,891.47	479,892.25
4206 - UTILITIES MAINTENANCE		5,192,345.00	8,074,155.00	4,241,686.46	52.53	3,832,468.54	2,806,373.59
PRINCIPAL & INTEREST		0.00	530,902.00	530,901.81	100.00	0.19	344,527.57

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES, AND CHANGES IN FUND BALANCES
COMPARISON WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 401 - WATER & SEWER FUND							
4207 - UTILITIES DEBT		0.00	530,902.00	530,901.81	100.00	0.19	344,527.57
PERSONNEL		1,139,039.00	1,139,039.00	1,102,070.21	96.75	36,968.79	960,768.94
OPERATING		70,688.00	75,685.00	64,143.63	84.75	11,541.37	70,829.57
CAPITAL OUTLAY		265,366.00	345,251.00	272,571.52	78.95	72,679.48	146,633.58
4208 - FACILITIES MAINTENANCE		1,475,093.00	1,559,975.00	1,438,785.36	92.23	121,189.64	1,178,232.09
PERSONNEL		1,353,052.00	1,353,052.00	1,290,263.87	95.36	62,788.13	1,144,220.48
OPERATING		398,709.00	423,607.00	422,887.80	99.83	719.20	433,832.36
CAPITAL OUTLAY		0.00	213,664.00	5,149.60	2.41	208,514.40	99,048.49
4209 - CUSTOMER SERVICE		1,751,761.00	1,990,323.00	1,718,301.27	86.33	272,021.73	1,677,101.33
PERSONNEL		671,322.00	671,322.00	665,314.44	99.11	6,007.56	518,941.89
OPERATING		225,324.00	226,824.00	180,734.67	79.68	46,089.33	173,788.74
CAPITAL OUTLAY		512,672.00	1,292,260.00	578,548.36	44.77	713,711.64	501,634.27
4210 - WASTEWATER COLLECTION		1,409,318.00	2,190,406.00	1,424,597.47	65.04	765,808.53	1,194,364.90
CONTINGENCY		400,000.00	262,234.00	0.00	0.00	262,234.00	0.00
9990 - CONTINGENCY		400,000.00	262,234.00	0.00	0.00	262,234.00	0.00
SERVICES PROVIDED BY GEN GOVT		1,082,377.00	1,082,377.00	1,082,377.00	100.00	0.00	842,046.00
9998 - CONTRIBUTIONS		1,082,377.00	1,082,377.00	1,082,377.00	100.00	0.00	842,046.00
TRANSFERS TO OTHER FUNDS		451,703.00	1,107,936.00	1,008,957.00	91.07	98,979.00	77,678.00
9999 - TRANSFERS		451,703.00	1,107,936.00	1,008,957.00	91.07	98,979.00	77,678.00
TOTAL EXPENDITURES		44,382,338.00	118,012,899.00	71,421,394.47	60.52	46,591,504.53	77,384,044.61
Fund 401 - WATER & SEWER FUND:							
TOTAL REVENUES		44,382,338.00	118,012,899.00	48,164,289.14	40.81	69,848,609.86	52,325,359.92
TOTAL EXPENDITURES		44,382,338.00	118,012,899.00	71,421,394.47	60.52	46,591,504.53	77,384,044.61
NET OF REVENUES & EXPENDITURES		0.00	0.00	(23,257,105.33)	100.00	23,257,105.33	(25,058,684.69)

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Fund 403 WATER TRUST FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	3,612,087.83	3,394,242.14
115.100	ACCOUNTS RECEIVABLE	212.21	11,064.25
133.000	DUE FROM OTHER GOVERNMENTS	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	256.81	6,066.75
151.900	INVESTMENTS - NON-CURRENT	3,317,182.93	2,939,691.59
161.900	LAND	0.00	0.00
162.900	BUILDINGS	0.00	0.00
163.900	ACCUM DEPREC - BUILDINGS	0.00	0.00
164.900	INFRASTRUCTURE	0.00	0.00
165.900	ACCUM DEPREC - INFRASTRUCTURE	0.00	0.00
166.900	EQUIPMENT & FURNITURE	0.00	0.00
167.900	ACCUM DEPREC - EQUIPMENT	0.00	0.00
169.900	CONSTRUCTION WORK IN PROGRESS	0.00	0.00
101.000	CASH IN BANK	276,328.06	794,697.68
Total Assets		**7,206,067.84**	**7,145,762.41**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	787,242.19	298,711.88
205.000	CONTRACTS PAYABLE	64,790.42	25,208.25
Total Liabilities		**852,032.61**	**323,920.13**
*** Fund Balance ***			
274.000	NET ASSETS, INVEST IN CAPITAL	(1,593,010.90)	(1,593,010.90)
275.000	NET ASSETS, RESTRICTED	5,076,828.92	7,947,046.13
276.000	NET ASSETS, UNRESTRICTED	0.00	0.00
Total Fund Balance		**3,483,818.02**	**6,354,035.23**
Beginning Fund Balance		**7,292,721.54**	**6,354,035.23**
Net of Revenues VS Expenditures		**2,870,217.21**	**467,807.05**
Fund Balance Adjustments		**(3,808,903.52)**	**0.00**
Ending Fund Balance		**6,354,035.23**	**6,821,842.28**
Total Liabilities And Fund Balance		**7,206,067.84**	**7,145,762.41**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 403 - WATER TRUST FUND							
	INTEREST REVENUES	0.00	29,600.00	192,872.91	651.60	(163,272.91)	241,468.27
	USE OF RESERVES	700,000.00	4,585,599.00	0.00	0.00	4,585,599.00	0.00
	MISCELLANEOUS REVENUES	0.00	0.00	87,999.59	100.00	(87,999.59)	187,055.15
	TRANSFERS FROM OTHER FUNDS	366,600.00	952,160.00	952,160.00	100.00	0.00	0.00
	PERMITS. FEES, & SPECIAL ASSESSMENTS	1,600,000.00	1,600,000.00	1,491,502.15	93.22	108,497.85	2,917,511.77
	TOTAL REVENUES	2,666,600.00	7,167,359.00	2,724,534.65	38.01	4,442,824.35	3,346,035.19
	CAPITAL OUTLAY	2,666,600.00	7,046,852.00	2,136,248.76	30.31	4,910,603.24	3,808,903.52
	OPERATING	0.00	120,507.00	120,478.84	99.98	28.16	72,925.73
	TRANSFERS TO OTHER FUNDS	0.00	0.00	0.00	0.00	0.00	402,892.25
	TOTAL EXPENDITURES	2,666,600.00	7,167,359.00	2,256,727.60	31.49	4,910,631.40	4,284,721.50
Fund 403 - WATER TRUST FUND:							
TOTAL REVENUES		2,666,600.00	7,167,359.00	2,724,534.65	38.01	4,442,824.35	3,346,035.19
TOTAL EXPENDITURES		2,666,600.00	7,167,359.00	2,256,727.60	31.49	4,910,631.40	4,284,721.50
NET OF REVENUES & EXPENDITURES		0.00	0.00	467,807.05	100.00	(467,807.05)	(938,686.31)

Fund 404 WASTEWATER TRUST FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	6,887,747.45	4,470,466.69
115.100	ACCOUNTS RECEIVABLE	81.90	81.90
133.000	DUE FROM OTHER GOVERNMENTS	74,374.23	265,016.93
135.000	INTEREST & DIVIDENDS REC	6,904.64	10,508.14
151.900	INVESTMENTS - NON-CURRENT	2,057,416.88	1,823,285.35
161.900	LAND	0.00	0.00
162.900	BUILDINGS	0.00	0.00
163.900	ACCUM DEPREC - BUILDINGS	0.00	0.00
164.900	INFRASTRUCTURE	0.00	0.00
165.900	ACCUM DEPREC - INFRASTRUCTURE	0.00	0.00
166.900	EQUIPMENT & FURNITURE	0.00	0.00
167.900	ACCUM DEPREC - EQUIPMENT	0.00	0.00
169.900	CONSTRUCTION WORK IN PROGRESS	0.00	0.00
101.000	CASH IN BANK	171,387.00	492,388.03
Total Assets		**9,197,912.10**	**7,061,747.04**
*** Liabilities ***			
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
202.000	ACCOUNTS PAYABLE	196,399.70	972,440.89
205.000	CONTRACTS PAYABLE	0.00	285,400.67
223.000	DEFERRED REVENUE	0.00	0.00
Total Liabilities		**196,399.70**	**1,257,841.56**
*** Fund Balance ***			
274.000	NET ASSETS, INVEST IN CAPITAL	1,593,010.90	1,593,010.90
275.000	NET ASSETS, RESTRICTED	2,301,192.12	7,408,501.50
276.000	NET ASSETS, UNRESTRICTED	0.00	0.00
Total Fund Balance		**3,894,203.02**	**9,001,512.40**
Beginning Fund Balance		**6,110,095.64**	**9,001,512.40**
Net of Revenues VS Expenditures		**5,107,309.38**	**(3,197,606.92)**
Fund Balance Adjustments		**(2,215,892.62)**	**0.00**
Ending Fund Balance		**9,001,512.40**	**5,803,905.48**
Total Liabilities And Fund Balance		**9,197,912.10**	**7,061,747.04**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 404 - WASTEWATER TRUST FUND							
	INTEREST REVENUES	0.00	85,624.00	313,285.41	365.89	(227,661.41)	270,852.29
	USE OF RESERVES	0.00	7,048,295.00	0.00	0.00	7,048,295.00	0.00
	MISCELLANEOUS REVENUES	0.00	0.00	54,580.00	100.00	(54,580.00)	116,017.24
	CAPITAL GRANTS	0.00	675,790.00	675,790.45	100.00	(0.45)	1,585,091.98
	PERMITS. FEES, & SPECIAL ASSESSMENTS	1,800,000.00	1,800,000.00	2,317,626.55	128.76	(517,626.55)	3,558,647.37
	TOTAL REVENUES	1,800,000.00	9,609,709.00	3,361,282.41	34.98	6,248,426.59	5,530,608.88
	CAPITAL OUTLAY	233,808.00	9,303,711.00	6,252,853.63	67.21	3,050,857.37	2,215,892.62
	OPERATING	0.00	305,998.00	306,035.70	100.01	(37.70)	184,966.50
	CONTINGENCY	1,566,192.00	0.00	0.00	0.00	0.00	0.00
	TRANSFERS TO OTHER FUNDS	0.00	0.00	0.00	0.00	0.00	238,333.00
	TOTAL EXPENDITURES	1,800,000.00	9,609,709.00	6,558,889.33	68.25	3,050,819.67	2,639,192.12
Fund 404 - WASTEWATER TRUST FUND:							
TOTAL REVENUES		1,800,000.00	9,609,709.00	3,361,282.41	34.98	6,248,426.59	5,530,608.88
TOTAL EXPENDITURES		1,800,000.00	9,609,709.00	6,558,889.33	68.25	3,050,819.67	2,639,192.12
NET OF REVENUES & EXPENDITURES		0.00	0.00	(3,197,606.92)	100.00	3,197,606.92	2,891,416.76

Fund 430 AIRPORT FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
102.000	CASH ON HAND	0.00	0.00
104.000	EQUITY IN POOLED CASH	959,910.12	1,382,786.32
115.100	ACCOUNTS RECEIVABLE	15,379.88	31,804.20
117.000	ALLOWANCE FOR UNCOLLECTIBLE AR	(7,863.86)	(20,858.75)
128.900	NOTES RECEIVABLE - NON-CURRENT	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	534,067.97	183,086.24
135.000	INTEREST & DIVIDENDS REC	1,160,146.93	1,315,461.89
141.000	INVENTORIES	789.53	1,173.18
151.900	INVESTMENTS - NON-CURRENT	0.00	0.00
155.000	PREPAID ITEMS	0.00	0.00
156.900	OTHER ASSETS - NONCURRENT	38,306,149.02	37,613,952.98
161.900	LAND	3,935,210.59	3,935,210.59
162.900	BUILDINGS	10,480,839.96	10,480,839.96
163.900	ACCUM DEPREC - BUILDINGS	(2,417,996.68)	(2,417,996.68)
164.900	INFRASTRUCTURE	39,544,191.33	39,544,191.33
165.900	ACCUM DEPREC - INFRASTRUCTURE	(13,944,281.47)	(13,944,281.47)
166.900	EQUIPMENT & FURNITURE	700,357.65	700,357.65
167.900	ACCUM DEPREC - EQUIPMENT	(598,840.22)	(598,840.22)
169.900	CONSTRUCTION WORK IN PROGRESS	565,052.26	565,052.26
101.000	CASH IN BANK	0.00	0.00
Total Assets		**79,233,113.01**	**78,771,939.48**
*** Liabilities ***			
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
201.000	VOUCHERS PAYABLE	0.00	0.00
202.000	ACCOUNTS PAYABLE	361,315.10	104,380.33
203.900	NOTES & LOANS PAYABLE - LT	0.00	0.00
205.000	CONTRACTS PAYABLE	44,048.02	32,142.82
207.000	DUE TO OTHER FUNDS	0.00	0.00
208.000	DUE TO OTHER GOVERNMENTS	31.24	17.85
215.000	ACCRUED INTEREST PAYABLE	0.00	0.00
216.000	ACCRUED SALARIES & WAGES	79,881.15	74,642.63
220.000	DEPOSITS	114,952.63	121,246.66
223.000	DEFERRED REVENUE	0.00	0.00
225.900	CAPITAL LEASES - LONG TERM	0.00	0.00
236.900	ADVANCES FROM OTHER FUNDS	1,516,528.74	1,344,335.79
290.000	DEFERRED INFLOW	35,979,192.41	34,670,152.11
Total Liabilities		**38,095,949.29**	**36,346,918.19**
*** Fund Balance ***			
273.000	DEBT USED TO ACQUIRE FA	(1,880,263.67)	(1,880,263.67)
274.000	NET ASSETS, INVEST IN CAPITAL	38,264,533.42	38,264,533.42
275.000	NET ASSETS, RESTRICTED	18,555.14	18,555.14
276.000	NET ASSETS, UNRESTRICTED	2,138,572.12	4,734,338.83
Total Fund Balance		**38,541,397.01**	**41,137,163.72**
Beginning Fund Balance		**38,541,397.01**	**41,137,163.72**
Net of Revenues VS Expenditures		**2,595,766.71**	**1,287,857.57**
Ending Fund Balance		**41,137,163.72**	**42,425,021.29**
Total Liabilities And Fund Balance		**79,233,113.01**	**78,771,939.48**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 430 - AIRPORT FUND							
INTEREST REVENUES		12,000.00	12,000.00	1,590,884.71	3,257.37	(1,578,884.71)	1,579,577.05
USE OF RESERVES		0.00	267,853.00	0.00	0.00	267,853.00	0.00
MISCELLANEOUS REVENUES		5,000.00	5,000.00	8,779.40	175.59	(3,779.40)	64,261.67
CAPITAL GRANTS		3,933,000.00	7,687,646.00	3,020,867.69	39.30	4,666,778.31	1,839,535.19
CHARGES FOR SERVICES		0.00	0.00	(12,994.89)	100.00	12,994.89	(4,556.39)
RENTAL INCOME		2,050,594.00	2,050,594.00	1,268,484.06	61.86	782,109.94	1,506,204.76
TOTAL REVENUES		6,000,594.00	10,023,093.00	5,876,020.97	58.62	4,147,072.03	4,985,022.28
CAPITAL OUTLAY		4,087,653.00	7,537,368.00	2,853,734.38	37.86	4,683,633.62	2,304,517.22
OPERATING		473,137.00	1,121,102.00	683,667.35	60.98	437,434.65	347,757.20
PERSONNEL		619,076.00	619,076.00	587,760.51	94.94	31,315.49	556,886.71
CONTINGENCY		179,508.00	102,036.00	0.00	0.00	102,036.00	0.00
SERVICES PROVIDED BY GEN GOVT		399,914.00	399,914.00	399,914.00	100.00	0.00	318,392.00
TRANSFERS TO OTHER FUNDS		241,306.00	243,597.00	63,087.16	25.90	180,509.84	76,169.08
TOTAL EXPENDITURES		6,000,594.00	10,023,093.00	4,588,163.40	45.78	5,434,929.60	3,603,722.21
Fund 430 - AIRPORT FUND:							
TOTAL REVENUES		6,000,594.00	10,023,093.00	5,876,020.97	58.62	4,147,072.03	4,985,022.28
TOTAL EXPENDITURES		6,000,594.00	10,023,093.00	4,588,163.40	45.78	5,434,929.60	3,603,722.21
NET OF REVENUES & EXPENDITURES		0.00	0.00	1,287,857.57	100.00	(1,287,857.57)	1,381,300.07

Fund 440 REFUSE COLLECTION FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	281,148.75	284,605.24
115.100	ACCOUNTS RECEIVABLE	529,079.07	585,766.04
117.000	ALLOWANCE FOR UNCOLLECTIBLE AR	(38,423.56)	(50,849.70)
121.000	ASSESSMENTS RECEIVABLE	58,648.21	61,772.25
135.000	INTEREST & DIVIDENDS REC	0.00	0.00
151.900	INVESTMENTS - NON-CURRENT	0.00	0.00
Total Assets		**830,452.47**	**881,293.83**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	790,062.19	838,548.19
207.000	DUE TO OTHER FUNDS	0.00	0.00
220.000	DEPOSITS	0.00	0.00
Total Liabilities		**790,062.19**	**838,548.19**
*** Fund Balance ***			
276.000	NET ASSETS, UNRESTRICTED	23,673.43	40,390.28
Total Fund Balance		**23,673.43**	**40,390.28**
Beginning Fund Balance		**23,673.43**	**40,390.28**
Net of Revenues VS Expenditures		**16,716.85**	**2,355.36**
Ending Fund Balance		**40,390.28**	**42,745.64**
Total Liabilities And Fund Balance		**830,452.47**	**881,293.83**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 440 - REFUSE COLLECTION FUND							
	INTEREST REVENUES	0.00	0.00	11,147.36	100.00	(11,147.36)	18,524.11
	MISCELLANEOUS REVENUES	0.00	0.00	91.95	100.00	(91.95)	150.64
	CHARGES FOR SERVICES	5,640,000.00	6,102,708.00	6,093,823.30	99.85	8,884.70	5,559,415.98
	TOTAL REVENUES	5,640,000.00	6,102,708.00	6,105,062.61	100.04	(2,354.61)	5,578,090.73
	OPERATING	5,490,265.00	5,941,175.00	5,941,174.76	100.00	0.24	5,414,687.98
	SERVICES PROVIDED BY GEN GOVT	149,735.00	161,533.00	161,532.49	100.00	0.51	146,685.90
	TOTAL EXPENDITURES	5,640,000.00	6,102,708.00	6,102,707.25	100.00	0.75	5,561,373.88
Fund 440 - REFUSE COLLECTION FUND:							
TOTAL REVENUES		5,640,000.00	6,102,708.00	6,105,062.61	100.04	(2,354.61)	5,578,090.73
TOTAL EXPENDITURES		5,640,000.00	6,102,708.00	6,102,707.25	100.00	0.75	5,561,373.88
NET OF REVENUES & EXPENDITURES		0.00	0.00	2,355.36	100.00	(2,355.36)	16,716.85

Fund 450 STORMWATER FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	745,815.31	554,071.45
115.100	ACCOUNTS RECEIVABLE	241,419.09	281,446.29
117.000	ALLOWANCE FOR UNCOLLECTIBLE AR	(105,097.32)	(111,976.55)
121.000	ASSESSMENTS RECEIVABLE	163,739.06	185,344.05
128.900	NOTES RECEIVABLE - NON-CURRENT	0.00	0.00
132.000	ADVANCES TO OTHER FUNDS	0.00	0.00
133.000	DUE FROM OTHER GOVERNMENTS	120,250.00	0.00
135.000	INTEREST & DIVIDENDS REC	2,186.37	4,349.15
151.900	INVESTMENTS - NON-CURRENT	1,293,874.06	1,146,632.77
155.000	PREPAID ITEMS	0.00	0.00
161.900	LAND	1,076,393.39	1,076,393.39
162.900	BUILDINGS	316,191.74	316,191.74
163.900	ACCUM DEPREC - BUILDINGS	(46,529.10)	(46,529.10)
164.900	INFRASTRUCTURE	5,531,787.96	5,531,787.96
165.900	ACCUM DEPREC - INFRASTRUCTURE	(1,260,086.15)	(1,260,086.15)
166.900	EQUIPMENT & FURNITURE	3,218,308.12	3,218,308.12
167.900	ACCUM DEPREC - EQUIPMENT	(1,909,485.53)	(1,909,485.53)
169.900	CONSTRUCTION WORK IN PROGRESS	792,896.23	792,896.23
190.000	DEFERRED OUTFLOW	142,662.00	142,662.00
101.000	CASH IN BANK	67,595.57	268,140.32
Total Assets		**10,391,920.80**	**10,190,146.14**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	147,003.36	188,200.89
203.900	NOTES & LOANS PAYABLE - LT	0.00	0.00
205.000	CONTRACTS PAYABLE	15,085.60	0.00
207.000	DUE TO OTHER FUNDS	0.00	0.00
215.000	ACCRUED INTEREST PAYABLE	0.00	0.00
216.000	ACCRUED SALARIES & WAGES	91,649.36	111,509.20
220.000	DEPOSITS	0.00	0.00
223.000	DEFERRED REVENUE	0.00	0.00
225.900	CAPITAL LEASES - LONG TERM	0.00	0.00
229.000	OTHER CURRENT LIABILITIES	114,016.00	114,016.00
236.900	ADVANCES FROM OTHER FUNDS	0.00	0.00
238.000	PENSION LIABILITIES	383,383.00	383,383.00
290.000	DEFERRED INFLOW	5,707.00	5,707.00
Total Liabilities		**756,844.32**	**802,816.09**
*** Fund Balance ***			
273.000	DEBT USED TO ACQUIRE FA	(108,338.36)	(108,338.36)
274.000	NET ASSETS, INVEST IN CAPITAL	7,719,476.66	7,719,476.66
276.000	NET ASSETS, UNRESTRICTED	1,784,795.85	2,023,938.18
Total Fund Balance		**9,395,934.15**	**9,635,076.48**
Beginning Fund Balance		**9,395,934.15**	**9,635,076.48**
Net of Revenues VS Expenditures		**239,142.33**	**(247,746.43)**
Ending Fund Balance		**9,635,076.48**	**9,387,330.05**
Total Liabilities And Fund Balance		**10,391,920.80**	**10,190,146.14**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 450 - STORMWATER FUND							
INTEREST REVENUES		35,000.00	35,000.00	70,311.99	200.89	(35,311.99)	79,306.06
USE OF RESERVES		932,037.00	1,316,224.00	0.00	0.00	1,316,224.00	0.00
MISCELLANEOUS REVENUES		0.00	0.00	39,670.43	100.00	(39,670.43)	133,043.13
CAPITAL GRANTS		0.00	64,750.00	64,750.00	100.00	0.00	120,250.00
CHARGES FOR SERVICES		2,441,500.00	2,441,500.00	2,566,492.77	105.12	(124,992.77)	2,382,375.51
OPERATING GRANTS		0.00	0.00	0.00	0.00	0.00	106,848.03
TOTAL REVENUES		3,408,537.00	3,857,474.00	2,741,225.19	71.06	1,116,248.81	2,821,822.73
CAPITAL OUTLAY		1,079,932.00	1,327,309.00	656,629.69	49.47	670,679.31	1,040,005.44
OPERATING		395,934.00	595,253.00	513,416.77	86.25	81,836.23	555,356.29
PERSONNEL		1,467,151.00	1,467,151.00	1,381,278.29	94.15	85,872.71	1,299,230.82
SERVICES PROVIDED BY GEN GOVT		386,306.00	386,306.00	386,306.00	100.00	0.00	327,271.00
TRANSFERS TO OTHER FUNDS		79,214.00	81,455.00	51,340.87	63.03	30,114.13	14,996.00
TOTAL EXPENDITURES		3,408,537.00	3,857,474.00	2,988,971.62	77.49	868,502.38	3,236,859.55
Fund 450 - STORMWATER FUND:							
TOTAL REVENUES		3,408,537.00	3,857,474.00	2,741,225.19	71.06	1,116,248.81	2,821,822.73
TOTAL EXPENDITURES		3,408,537.00	3,857,474.00	2,988,971.62	77.49	868,502.38	3,236,859.55
NET OF REVENUES & EXPENDITURES		0.00	0.00	(247,746.43)	100.00	247,746.43	(415,036.82)

Fund 480 PERMITS & INSPECTIONS FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
102.000	CASH ON HAND	100.00	100.00
104.000	EQUITY IN POOLED CASH	2,783,482.94	1,161,403.47
133.000	DUE FROM OTHER GOVERNMENTS	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	2,678.36	6,198.95
151.900	INVESTMENTS - NON-CURRENT	2,010,082.89	1,781,337.92
155.000	PREPAID ITEMS	0.00	1,435.50
164.900	INFRASTRUCTURE	1,168,350.63	1,168,350.63
165.900	ACCUM DEPREC - INFRASTRUCTURE	(839,071.90)	(839,071.90)
166.900	EQUIPMENT & FURNITURE	484,178.06	484,178.06
167.900	ACCUM DEPREC - EQUIPMENT	(270,964.42)	(270,964.42)
168.950	ACCUM DEPREC - CAPITAL LEASES	246,444.98	846,356.89
169.900	CONSTRUCTION WORK IN PROGRESS	65,231.06	65,231.06
190.000	DEFERRED OUTFLOW	35,253.00	35,253.00
101.000	CASH IN BANK	613,037.94	941,475.77
Total Assets		**6,298,803.54**	**5,381,284.93**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	48,644.37	22,187.13
205.000	CONTRACTS PAYABLE	14,557.95	21,774.27
208.000	DUE TO OTHER GOVERNMENTS	25,191.22	5,836.59
215.000	ACCRUED INTEREST PAYABLE	3,690.81	10,832.72
216.000	ACCRUED SALARIES & WAGES	158,792.80	167,877.46
225.900	CAPITAL LEASES - LONG TERM	143,909.69	717,876.95
229.000	OTHER CURRENT LIABILITIES	113,953.00	113,953.00
290.000	DEFERRED INFLOW	5,704.00	5,704.00
Total Liabilities		**514,443.84**	**1,066,042.12**
*** Fund Balance ***			
273.000	DEBT USED TO ACQUIRE FA	(145,574.69)	(145,574.69)
274.000	NET ASSETS, INVEST IN CAPITAL	854,168.41	854,168.41
275.000	NET ASSETS, RESTRICTED	66,833.98	66,833.98
276.000	NET ASSETS, UNRESTRICTED	4,546,989.49	5,008,932.00
Total Fund Balance		**5,322,417.19**	**5,784,359.70**
Beginning Fund Balance		**5,322,417.19**	**5,784,359.70**
Net of Revenues VS Expenditures		**461,942.51**	**(1,469,116.89)**
Ending Fund Balance		**5,784,359.70**	**4,315,242.81**
Total Liabilities And Fund Balance		**6,298,803.54**	**5,381,284.93**

REVENUE AND EXPENDITURE REPORT FOR CITY OF DELAND

PERIOD ENDING 09/30/2025

*NOTE: Available Balance / Pct Budget Used does not reflect amounts encumbered.

SCH OF REVENUE, EXPENDITURES AND CHANGES IN FUND BALANCES

COMPARED WITH BUDGET AND FY 2024 ACTUAL

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 480 - PERMITS & INSPECTIONS FUND							
	INTEREST REVENUES	25,000.00	73,576.00	142,884.00	194.20	(69,308.00)	167,288.85
	USE OF RESERVES	1,935,067.00	2,565,743.00	0.00	0.00	2,565,743.00	0.00
	MISCELLANEOUS REVENUES	5,000.00	5,000.00	65,624.13	1,312.48	(60,624.13)	128,100.95
	PERMITS. FEES, & SPECIAL ASSESSMENTS	2,005,000.00	2,005,000.00	1,701,415.02	84.86	303,584.98	3,404,594.02
	DEBT PROCEEDS	0.00	677,017.00	0.00	0.00	677,017.00	0.00
	CHARGES FOR SERVICES	330,000.00	330,000.00	367,763.07	111.44	(37,763.07)	605,749.60
	TOTAL REVENUES	4,300,067.00	5,656,336.00	2,277,686.22	40.27	3,378,649.78	4,305,733.42
	CAPITAL OUTLAY	32,000.00	1,028,657.00	840,905.58	81.75	187,751.42	446,348.27
	OPERATING	1,008,212.00	1,316,406.00	514,008.65	39.05	802,397.35	802,095.88
	PERSONNEL	2,174,025.00	2,185,723.00	1,926,601.66	88.14	259,121.34	1,902,348.92
	SERVICES PROVIDED BY GEN GOVT	975,900.00	975,900.00	975,900.00	100.00	0.00	794,217.00
	TRANSFERS TO OTHER FUNDS	109,930.00	135,896.00	75,546.00	55.59	60,350.00	58,600.00
	PRINCIPAL & INTEREST	0.00	13,754.00	13,753.13	99.99	0.87	8,421.47
	TOTAL EXPENDITURES	4,300,067.00	5,656,336.00	4,346,715.02	76.85	1,309,620.98	4,012,031.54
Fund 480 - PERMITS & INSPECTIONS FUND:							
TOTAL REVENUES		4,300,067.00	5,656,336.00	2,277,686.22	40.27	3,378,649.78	4,305,733.42
TOTAL EXPENDITURES		4,300,067.00	5,656,336.00	4,346,715.02	76.85	1,309,620.98	4,012,031.54
NET OF REVENUES & EXPENDITURES		0.00	0.00	(2,069,028.80)	100.00	2,069,028.80	293,701.88

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PROPRIETARY FUND TYPES

INTERNAL SERVICE FUNDS

Internal service funds are used to account for the financing of goods or services provided by one department or agency to other departments or agencies of the governmental unit, or to other governmental units, on a cost reimbursement basis. Currently there are two internal service funds which consists of the Health Insurance Cost Containment Fund and the Workers' Compensation Self-Insurance Fund.

Fund 500 HEALTH INSUR COST CONTAINMENT

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	262,433.58	174,461.40
115.100	ACCOUNTS RECEIVABLE	61,007.46	0.00
135.000	INTEREST & DIVIDENDS REC	0.00	0.00
156.900	OTHER ASSETS - NONCURRENT	0.00	5,000.00
166.900	EQUIPMENT & FURNITURE	9,542.00	9,542.00
167.900	ACCUM DEPREC - EQUIPMENT	(9,542.00)	(9,542.00)
168.950	ACCUM DEPREC - CAPITAL LEASES	7,529.38	378,072.89
Total Assets		**330,970.42**	**557,534.29**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	140,718.06	43,807.61
215.000	ACCRUED INTEREST PAYABLE	20.99	1,214.92
225.900	CAPITAL LEASES - LONG TERM	9,158.96	383,660.52
Total Liabilities		**149,898.01**	**428,683.05**
*** Fund Balance ***			
273.000	DEBT USED TO ACQUIRE FA	(9,158.96)	(9,158.96)
274.000	NET ASSETS, INVEST IN CAPITAL	7,529.38	7,529.38
284.000	FUND BALANCE - UNASSIGNED	181,442.57	182,701.99
Total Fund Balance		**179,812.99**	**181,072.41**
Beginning Fund Balance		**179,812.99**	**181,072.41**
Net of Revenues VS Expenditures		**1,259.42**	**(52,221.17)**
Ending Fund Balance		**181,072.41**	**128,851.24**
Total Liabilities And Fund Balance		**330,970.42**	**557,534.29**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 500 - HEALTH INSUR COST CONTAINMENT							
	INTEREST REVENUES	0.00	4,000.00	8,534.04	213.35	(4,534.04)	10,786.72
	USE OF RESERVES	0.00	65,000.00	0.00	0.00	65,000.00	0.00
	CHARGES FOR GOVT SERVICES	734,705.00	734,705.00	681,963.66	92.82	52,741.34	655,971.27
	TOTAL REVENUES	734,705.00	803,705.00	690,497.70	85.91	113,207.30	666,757.99
	OPERATING	702,500.00	771,500.00	695,298.34	90.12	76,201.66	632,110.57
	SERVICES PROVIDED BY GEN GOVT	32,205.00	32,205.00	32,205.00	100.00	0.00	32,205.00
	PRINCIPAL & INTEREST	0.00	0.00	15,215.53	100.00	(15,215.53)	1,183.00
	TOTAL EXPENDITURES	734,705.00	803,705.00	742,718.87	92.41	60,986.13	665,498.57
Fund 500 - HEALTH INSUR COST CONTAINMENT:							
TOTAL REVENUES		734,705.00	803,705.00	690,497.70	85.91	113,207.30	666,757.99
TOTAL EXPENDITURES		734,705.00	803,705.00	742,718.87	92.41	60,986.13	665,498.57
NET OF REVENUES & EXPENDITURES		0.00	0.00	(52,221.17)	100.00	52,221.17	1,259.42

Fund 510 WORK COMP SELF INS FUND

GL Number	Description	PERIOD ENDED 09/30/2024	PERIOD ENDED 09/30/2025
*** Assets ***			
104.000	EQUITY IN POOLED CASH	1,480,933.44	1,725,608.51
115.100	ACCOUNTS RECEIVABLE	0.00	0.00
135.000	INTEREST & DIVIDENDS REC	1,637.38	3,789.65
151.900	INVESTMENTS - NON-CURRENT	1,228,837.20	1,088,997.03
155.000	PREPAID ITEMS	0.00	0.00
101.000	CASH IN BANK	756,680.34	969,091.91
Total Assets		**3,468,088.36**	**3,787,487.10**
*** Liabilities ***			
202.000	ACCOUNTS PAYABLE	113,578.44	133,597.17
205.000	CONTRACTS PAYABLE	0.00	0.00
229.000	OTHER CURRENT LIABILITIES	1,672,000.00	1,853,000.00
Total Liabilities		**1,785,578.44**	**1,986,597.17**
*** Fund Balance ***			
282.000	FUND BALANCE - COMMITTED	300,000.00	300,000.00
284.000	FUND BALANCE - UNASSIGNED	1,392,151.66	1,382,509.92
Total Fund Balance		**1,692,151.66**	**1,682,509.92**
Beginning Fund Balance		**1,692,151.66**	**1,682,509.92**
Net of Revenues VS Expenditures		**(9,641.74)**	**118,380.01**
Ending Fund Balance		**1,682,509.92**	**1,800,889.93**
Total Liabilities And Fund Balance		**3,468,088.36**	**3,787,487.10**

GL NUMBER	DESCRIPTION	2024-25 ORIGINAL BUDGET	2024-25 AMENDED BUDGET	YTD BALANCE 09/30/2025	% BDGT USED	AVAILABLE BALANCE	YTD BALANCE 09/30/2024
Fund 510 - WORK COMP SELF INS FUND							
	INTEREST REVENUES	0.00	108,000.00	108,014.14	100.01	(14.14)	118,382.44
	USE OF RESERVES	0.00	98,400.00	0.00	0.00	98,400.00	0.00
	MISCELLANEOUS REVENUES	0.00	79,000.00	111,637.31	141.31	(32,637.31)	142,902.07
	CHARGES FOR GOVT SERVICES	913,300.00	913,300.00	913,302.13	100.00	(2.13)	519,008.11
	TOTAL REVENUES	913,300.00	1,198,700.00	1,132,953.58	94.52	65,746.42	780,292.62
	OPERATING	849,300.00	1,134,700.00	950,573.57	83.77	184,126.43	725,934.36
	SERVICES PROVIDED BY GEN GOVT	64,000.00	64,000.00	64,000.00	100.00	0.00	64,000.00
	TOTAL EXPENDITURES	913,300.00	1,198,700.00	1,014,573.57	84.64	184,126.43	789,934.36
Fund 510 - WORK COMP SELF INS FUND:							
TOTAL REVENUES		913,300.00	1,198,700.00	1,132,953.58	94.52	65,746.42	780,292.62
TOTAL EXPENDITURES		913,300.00	1,198,700.00	1,014,573.57	84.64	184,126.43	789,934.36
NET OF REVENUES & EXPENDITURES		0.00	0.00	118,380.01	100.00	(118,380.01)	(9,641.74)
TOTAL REVENUES - ALL FUNDS		38,820,207.00	74,206,669.00	36,954,788.17	49.80	37,251,880.83	43,242,627.57
TOTAL EXPENDITURES - ALL FUNDS		38,820,207.00	74,206,669.00	40,691,216.14	54.83	33,515,452.86	39,492,773.79
NET OF REVENUES & EXPENDITURES		0.00	0.00	(3,736,427.97)	100.00	3,736,427.97	3,749,853.78

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CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Resolution re Surplus Equipment.

DEPARTMENT: City Clerk

PREPARED BY: Julia Hewitt, Interim City Clerk

ATTACHMENTS: Resolution, Exhibit A, Department Head Memo-PD, Department Head Memo-PD, Department Head Memo-PD, Department Head Memo-Utilities, Department Head Memo-Utilities, Department Head Memo IT

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:
The proposed Resolution declares certain equipment as surplus and authorizes the City Manager to dispose of same. Staff has indicated that the property is either obsolete and the continued use of it is uneconomical or inefficient; that it serves no useful function; and/or that it is irreparable.

Staff reached out to the Boys & Girls Club, Florida Department of Children and Families, Tabernacle of Praise, Church of God and The House Next Door. The following stated they would like various pieces of equipment.

Tabernacle of Praise, Church of God, located at **330 South Thompson Street, DeLand, Florida 32720**, a registered non-profit organization, is seeking donations of computer equipment.

The organization has requested **ten (10) All-In-One (AIO) desktop computers** and **twelve (12) laptop computers**. Staff recommends approving the donation of the following equipment currently deemed surplus:

All-In-One Computers (10):
CPSBGT3
8NJYBM2
CG71JV2
61GBXG2
BR7CRN3
C77GQJ3
967GQJ3
777GQJ3
C9CTM83
HRMVH63

Laptops (12):
5TZ86S2
7ZZ86S2
5YJ96S2
DX7F6S2
BNFF6S2
3L596S2
DZ109H2
C5RT3Z2

BJZ2R52
81Z2R52
FZY2R52
1J07QH2

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The proceeds from the sale of surplus equipment are included as revenue in the budget.

RECOMMENDATION:

It is recommended that the City Commission adopt the resolution declaring the equipment surplus and authorizing its disposal as set forth therein.

BACKGROUND/DISCUSSION:

N/A

RESOLUTION 2026 –

A RESOLUTION BY THE CITY OF DELAND; FLORIDA, DECLARING CERTAIN PROPERTY SURPLUS; AUTHORIZING DISPOSAL OF THE PROPERTY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the disposal of tangible surplus property is authorized by Section 274.06, Florida Statutes; and

WHEREAS, the City Commission hereby finds that the below property is either: obsolete and the continued use of it is uneconomical or inefficient; that it serves no useful function; and/or that it is irreparable; and

WHEREAS, the City Commission hereby finds that it is in the best interests of the City to dispose of said surplus property;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF DELAND, FLORIDA:

Section 1. The following described property is hereby declared surplus, and the City Manager is hereby authorized to dispose of the surplus property in a manner provided by law and to remove the surplus property from the City's fixed assets:

POLICE	VEHICLE #	MAKE/MODEL	VIN/SERIAL NO.	DEPT/ASSET NO.
CITY WORKS ID				
1226-5410	1226-98	2012 Toyota Camry Hybrid	4T1BD1FK8CU006939	
1226-5594	126-22A	2015 Ford Interceptor SUV	1FAHP2MK0FG142568	
1226-4659	126-84A	2018 Ford Interceptor SUV	1FM5K8AT3JGB92915	
1226-5446	126-48	2013 Interceptor Sedan	1FAHP2M84DG115004	
1226-6852	1226-92A	2018 Ford Interceptor SUV	1FM5K8AT6JGB92908	

UTILITIES	VEHICLE #	MAKE/MODEL	VIN/SERIAL NO.	DEPT/ASSET NO.
CITY WORKS ID				
4206-5528	2008 Ford Ranger 4x2 Pickup #269		1FTYR14U78PA65183	
4206-5529	2014 Ford F-250 4x2 Utility Body #280		1FTBF2A66EEB42840	
4203-4285	Water Plant #2 Transfer Pump #1	Aurora 411	97-08843-1	
4203-4286	Water Plant #2 Transfer Motor #1	US Motors	7051r-1	H0627/Z08Z137137075R1
4203-4287	Water Plant #2 Transfer Pump #2	Aurora 411	97-08843-2	
4203-4288	Water Plant #2 Transfer Motor #2	US Motors	7051r-1	H0627/Z08Z137137075R2
4203-4289	Water Plant #2 Transfer Pump #3	Aurora 411	97-08843-3	
4203-4290	Water Plant #2 Transfer Motor #3	US Motors	7051r-1	H0627/Z08Z137137075R3
4205-1861	Effluent Pump #1 Fairbanks	15H7000	B410/201Y305R082R1	
4205-1862	Effluent Pump #2 Fairbanks	15H7000	B410/201Y305R082R4	
4205-1863	Effluent Pump #3 Fairbanks	15H7000	B410/201Y305R082R5	
4205-N/A	Effluent Pump #4 Layne	2100	D0499050496-001R-01	
4205-4851	HVAC System Electrical Bld.	Marvair	VACA60ACD000N-A2	
4205-4852	HVAC System Electrical Bld	Marvair	FC-F136748-900-1	
4205-N/A	HVAC Admin Roof Unit #3	Weather King		
4205-6159	Auto Sampler Teledyne	5800	6058000005, 223J00055	
4206-N/A	L/S #63 Pump ABS	Submersible	0042210	

INFORMATION SERVICES- [SEE ATTACHED EXHIBIT A]

- The following non-profit organization, Tabernacle of Praise, Church of God**,** located at 330 South Thompson Street, DeLand, Florida 32720**,** has requested the donation of ten (10) All-In-One computers, serial numbers CPSBGT3, 8NJYBM2, CG71JV2, 61GBXG2, BR7CRN3, C77GQJ3, 967GQJ3, 777GQJ3, C9CTM83, and HRMVH63, as well as twelve (12) laptop computers, serial numbers 5TZ86S2, 7ZZ86S2, 5YJ96S2, DX7F6S2, BNFF6S2, 3L596S2, DZ109H2, C5RT3Z2, BJZ2R52, 81Z2R52, FZY2R52, and 1J07QH2.

Section 2. This Resolution shall become effective immediately upon its adoption.

PASSED AND ADOPTED this 21st day of January, 2026.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk-Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Exibit A		
All in One		
Man	**Model**	**SN**
DELL	Optiplex 7480	HRVXH63
DELL	Optiplex 7480	HT0XH63
DELL	Optiplex 7480	HS31J63
DELL	Optiplex 7480	HT41J63
DELL	Optiplex 7480	HSYYH63
DELL	Optiplex 7480	HT38673
DELL	Optiplex 7480	F366H03
DELL	Optiplex 7480	HRXYH63
DELL	Optiplex 7480	HSY0J63
DELL	Optiplex 7480	HSZ0J63
DELL	Optiplex 7480	33RPGT3
DELL	Optiplex 7480	HS2XH63
DELL	Optiplex 7480	HRYZH63
DELL	Optiplex 7480	HT31J63
DELL	Optiplex 7480	HRX7673
DELL	Optiplex 7480	HT48673
DELL	Optiplex 7480	HSY7673
DELL	Optiplex 7480	HT49673
DELL	Optiplex 7480	HRCWH63
DELL	Optiplex 7480	HS18673
DELL	Optiplex 7480	HRW0J63
DELL	Optiplex 7480	HRWZH63
DELL	Optiplex 7480	HT0B673
DELL	Optiplex 7480	HS3B673
DELL	Optiplex 7480	HS9ZH63
DELL	Optiplex 7480	HT3XH63
DELL	Optiplex 7480	HS2ZH63
DELL	Optiplex 7480	HRZ8673
DELL	Optiplex 7480	HT0WH63
DELL	Optiplex 7480	HT39673
DELL	Optiplex 7480	HRXXH63
DELL	Optiplex 7480	HRJXH63
DELL	Optiplex 7480	HRWYH63
DELL	Optiplex 7480	HSRVH63
DELL	Optiplex 7480	HSQYH63
DELL	Optiplex 7480	HSD9673
DELL	Optiplex 7480	HSZYH63
DELL	Optiplex 7480	HRW8673
DELL	Optiplex 7480	HS21J63
DELL	Optiplex 7480	HT5ZH63
DELL	Optiplex 7480	HRZ0J63

DELL	Optiplex 7480	HSZWH63
DELL	Optiplex 7480	HSZ9673
DELL	Optiplex 7480	HRCZH63
DELL	Optiplex 7480	HSY8673
DELL	Optiplex 7480	HRLZH63
DELL	Optiplex 7470	F344H03
DELL	Optiplex 7470	F32YG03
DELL	Optiplex 7470	F330H03
DELL	Optiplex 7780	D67GQJ3
DELL	Optiplex 7780	H9YZ673
DELL	Optiplex 7780	J67GQJ3
DELL	Optiplex 5400	CPSBGT3
DELL	Optiplex 7450	8NJYBM2
DELL	Optiplex 7450	CG71JV2
DELL	Optiplex 7440	61GBXG2
DELL	Optiplex 7780	BR7CRN3
DELL	Optiplex 7780	C77GQJ3
DELL	Optiplex 7780	967GQJ3
DELL	Optiplex 7780	777GQJ3
DELL	Optiplex 7080	C9CTM83
DELL	Optiplex 7480	HRMVH63

Exibit A		
Tower		
Man	**Model**	**SN**
DELL	Precision 3630	71S8DS2
DELL	Precision 3630	H9R6G73
DELL	Precision 3630	H9R3773
DELL	Precision 3630	H9R1773
DELL	Precision 3630	H9R0G73
DELL	Precision 3630	H9R2773
DELL	Precision 3630	H9R2G73
DELL	Precision 3630	H9R0773
DELL	Precision 3630	H9R4G73
DELL	Precision 3630	H9R4773
DELL	Precision 3630	H9R7773
DELL	Precision 3630	H9R3G73
DELL	Precision 3630	H9R8773
DELL	Precision 3630	H9R1G73
DELL	Precision 3650	BGMHWM3
DELL	Precision 3650	BF8X4K3
DELL	Optiplex 7070	J0T0G73
DELL	Optiplex 7070	J0T1773
DELL	Optiplex 7070	J0T1G73
DELL	Optiplex 7090	9KMC5K3
DELL	Optiplex 780	7QN1FN1

Exibit A		
Laptop		
Man	**Model**	**SN**
DELL	Latitude 5491	5tz86s2
DELL	Latitude 5491	7zz86s2
DELL	Latitude 5491	5yj96s2
DELL	Latitude 5491	dx7f6s2
DELL	Latitude 5491	bnff6s2
DELL	Latitude 5491	3l596s2
DELL	Latitude 5480	dz109h2
DELL	Latitude 5501	c5rt3z2
DELL	Latitude 5450	bjz2r52
DELL	Latitude 5450	81z2r52
DELL	Latitude 5450	fzy2r52
DELL	Latitude 5580	1J07QH2

Exibit A		
Monitor		
Man	**Model**	**SN**
DELL		8qbcgh3
DELL		7chlwr2
DELL		4ct19p2
PLANAR	UR8651-MX	159170012
PLANAR	UR8651-MX	165170096
DELL		CN0F71704760651OATPQ

Exibit A		
MIFI		
Man	**Model**	**SN**
NETGEAR	MR6110	6V432AW2A957C
NETGEAR	MR6110	6V432AWJA96CF
NETGEAR	MR6110	6V432AW1AA0CC
NETGEAR	MR6110	6V432AWBA8B69
NETGEAR	MR6110	6V432AWAA968F
NETGEAR	MR6110	6V432AW7AA050
NETGEAR	MR6110	6V432AW0A9A17
NETGEAR	MR6110	6V432AWRA9556
NETGEAR	MR6110	6V432AW5A6D73
NETGEAR	MR6110	6V432AW5A9FAB
NETGEAR	MR6110	6V432AWBA6DB1
NETGEAR	MR6110	6V432AWXA6ECF
NETGEAR	MR6110	6V432AW1A7064
NETGEAR	MR6110	6V432AW5A6E0E
NETGEAR	MR6110	6V432AWUAA09C
NETGEAR	MR6110	6V432AWPA70DC
NETGEAR	MR6110	6V432AW6AA017
NETGEAR	MR6110	6V432AWNA9562
NETGEAR	MR6110	6V432AWFA70E2
NETGEAR	MR6110	6V432AWBA6CB4
NETGEAR	MR6110	6V432AWJA9704
NETGEAR	MR6110	6V432AWWA970F
NETGEAR	MR6110	6V432AWHA6CC8
NETGEAR	MR6110	6V432AWSA9573
NETGEAR	MR6110	6V432AWFA6E5E
NETGEAR	MR6110	6V432AWPA6EBA
NETGEAR	MR6110	6V432AW4A9F8E
NETGEAR	MR6110	6V432AWBA6F73
NETGEAR	MR6110	6V432AW0A6D52
NETGEAR	MR6110	6V432AWXA6CFF
NETGEAR	MR6110	6V432AW7A96D2
NETGEAR	MR6110	6V432AWKAA0B0
NETGEAR	MR6110	6V432AW9A6D4D
NETGEAR	MR6110	6V432AWMA6F8B
NETGEAR	MR6110	6V432AW3A9FA9
NETGEAR	MR6110	6V432AW4AA007
NETGEAR	MR6110	6V432AWYA8BED
NETGEAR	MR6110	6V432AW4A704B
NETGEAR	MR6110	6V432AWGA6CF1
NETGEAR	MR6110	6V432AWUA9559
NETGEAR	MR6110	6V432AWDA96D8

NETGEAR	MR6110	6V432AWBA6E68
NETGEAR	MR6110	6V432AW9A9FCB
NETGEAR	MR6110	6V432AWVA6E21
NETGEAR	MR6110	6V432AWYA9F97
NETGEAR	MR6110	6V432AWAA6CA5
NETGEAR	MR6110	6V432AW5A9FC7
NETGEAR	MR6110	6V432AWFA6EC0
NETGEAR	MR6110	6V432AWGA6E7B
NETGEAR	MR6110	6V432AWAA6E
NETGEAR	MR6110	6V432AW5A96C2
NETGEAR	MR6110	6V432AWRA96FF
NETGEAR	MR6110	6V432AWBA9FCD
NETGEAR	MR6110	6V432AWDA6DB3
NETGEAR	MR6110	6V432AW7AA042
NETGEAR	MR6110	6V432AWHA9711
NETGEAR	MR6110	6V432AW7A96C4
NETGEAR	MR6110	6V432AW2A9DE6
NETGEAR	MR6110	6V432AWSA6EF4
Inseego	M3100	18EE8634C016
Inseego	M3100	18EE8637E3CF
Inseego	M3100	18EE8634AA62
Inseego	M3100	18EE8634A7B9
Inseego	M3100	18EE8634C01C
Inseego	M3100	18EE8634BC32
Inseego	M3100	18EE8634B6E3
Inseego	M3100	18EE8634BF2C
Inseego	M3100	18EE8634C262
Inseego	M3100	18EE8634C025
Inseego	M3100	18EE8634BD79
Inseego	M3100	18EE8634A79B
Inseego	M3100	18EE8634C259
Inseego	M3100	18EE8634A9E4
Inseego	M3100	18EE8637E56D
Inseego	M3100	18EE8634B82A
Inseego	M3100	18EE8634BA10
Inseego	M3100	18EE8635D45E
Inseego	M3100	18EE8634A7C5
Inseego	M3100	18EE8635D443
Inseego	M3100	18EE8634B95F
Inseego	M3100	18EE8634C256
Inseego	M3100	18EE8634B8C6
Inseego	M3100	18EE8634C1BD
Inseego	M3100	18EE8634C046
Inseego	M3100	18EE8634C03D

Inseego	M3100	18EE8634BD6A
Inseego	M3100	18EE8634BD55
Inseego	M3100	18EE8634A9E1
Inseego	M3100	18EE8635D416
Inseego	M3100	18EE8634A78F
Inseego	M3100	18EE86397AC4
Inseego	M3100	18EE8634B860
Inseego	M3100	18EE8639174C
Inseego	M3100	18EE8634AD17
Inseego	M3100	18EE8634B86F
Inseego	M3100	18EE8634AAB0
Inseego	M3100	18EE8634BC8C
Inseego	M3100	18EE8634B611
Inseego	M3100	18EE8637E4DD
Inseego	M3100	18EE8634BD58
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Orbic	R500L5	N/A
Inseego	8800L	18EE86B074AC
Inseego	8800L	18EE86BD03DA
Inseego	8800L	2880A278404C
Inseego	8800L	18EE860AC760
Inseego	8800L	18EE860A89D0
Inseego	8800L	18EE86AD431A
Inseego	8800L	18EE86AD4318
Inseego	8800L	18EE860A8FDE
Inseego	8800L	18EE86B0DA7E
Inseego	8800L	18EE860A8D8E
Inseego	8800L	18EE86B0DB02
Inseego	8800L	18EE860A742A
AT&T	RG2102	N/A
AT&T	RG2102	N/A
AT&T	RG2102	N/A

Exibit A		
Ruckus		
Man	**Model**	**SN**
Ruckus	R610	182149000233
Ruckus	R610	182149000221
Ruckus	R610	191949004092
Ruckus	R610	191949004134
Ruckus	R610	191949004118
Ruckus	R610	182149000243
Ruckus	R610	182149000111
Ruckus	R610	311849003809
Ruckus	R610	311849003853
Ruckus	R610	311849003833
Ruckus	R610	311849003754
Ruckus	R610	311849003766
Ruckus	R610	311849003814
Ruckus	R610	981849000402
Ruckus	R610	191949004174
Ruckus	R610	311849003829
Ruckus	R610	221849003428
Ruckus	R610	191949003992
Ruckus	R610	191949004173
Ruckus	R610	191949004177
Ruckus	R610	321849004179
Ruckus	R610	221849003421
Ruckus	R610	321849004202
Ruckus	R610	321849004199
Ruckus	R610	981849000674
Ruckus	R610	981849000671
Ruckus	R610	191949004175
Ruckus	R610	191949004150
Ruckus	R610	182149000227
Ruckus	R610	191949004153
Ruckus	R610	182149000214
Ruckus	R610	182149000240
Ruckus	R610	182149000239
Ruckus	R610	182149000216
Ruckus	R610	981849000608
Ruckus	R610	221849003419
Ruckus	R610	221849003133
Ruckus	R610	191949004157
Ruckus	R610	191949004138
Ruckus	R610	191949004127

Exibit A		
MISC		
Man	**Model**	**SN**
NEC	DT900	A18987B9800096
NEC	DT900	A18987B9800152
Clock		c468w1021
Server		G6HKYV1

DeLand Police Department

Jason D. Umberger
Chief of Police

TO: Julia Hewitt, Deputy City Clerk

FROM: Jason D. Umberger, Chief of Police

SUBJECT: Surplus of Vehicle

DATE: October 15, 2025

Listed below is City equipment we are requesting to surplus.

Vehicle	Dept.	Asset #	Make/Model	VIN Number
1226-98	1226	5410	Camry Hybrid	4T1BD1FK8CU006939

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DeLand Police Department

Jason D. Umberger
Chief of Police

TO: Julia Hewitt, Deputy City Clerk

FROM: Jason D. Umberger, Chief of Police

SUBJECT: Surplus of Vehicle

DATE: September 10, 2025

Listed below is City equipment we are requesting to surplus as we have received the replacement.

Vehicle	Dept.	Asset #	Make/Model	VIN Number
126-22A	1226	5594	Ford Interceptor Sedan	1FAHP2MK0FG142568
126-84A	1226	4659	Ford Interceptor SUV	1FM5K8AT3JGB92915
126-48	1226	5446	Interceptor Sedan	1FAHP2M84DG115004

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DeLand Police Department

Jason D. Umberger
Chief of Police

TO: Julia Hewitt, Deputy City Clerk

FROM: Jason D. Umberger, Chief of Police

SUBJECT: Surplus of Vehicle

DATE: December 31, 2025

Listed below is City equipment we are requesting to surplus.

Vehicle	Dept.	Asset #	Make/Model	VIN Number
1226-92A	1226	6852	Ford Interceptor SUV	1FM5K8AT6JGB92908

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MEMORANDUM

Date: November 13, 2025

To: Julie Hennessy, City Clerk

From: Jim Ailes, Utilities Director

Re: Surplus Equipment

Listed below is equipment that I need to surplus on the next City Commission Agenda on December 1, if at all possible. These trucks have been turned over for surplus disposal at the Public Works Fleet garage.

Dept.	Asset #	Description	Make	Model	Serial #
4206	5528	2008 4x2 Pickup (#269)	Ford	Ranger	1FTYR14U78PA65183
4206	5529	2014 4x2 Utility Body(#280)	Ford	F-250	1FTBF2A66EEB42840

Cc. Julia Hewitt, Deputy City Clerk
Kieu Moses, Risk/ Safety / Events Manager
Nick Segel, Budget Manager
Stepfanie Cooper-Whites, Administrative Coordinator

MEMORANDUM

Date: November 17, 2025

To: Julie Hennessy, City Clerk

From: Jim Ailes, Utilities Director

Re: Surplus Equipment

Listed below is equipment that I need to surplus on the next City Commission Agenda on December 17th, if at all possible.

Dept.	Asset #	Description	Make	Model	Serial #
4203	4285	Water Plant #2 Transfer Pump #1	Aurora	411	97-08843-1
4203	4286	Water Plant #2 Transfer Motor #1	US Motors	7051r-1	H0627/Z08Z137137075R1
4203	4287	Water Plant #2 Transfer Pump #2	Aurora	411	97-08843-2
4203	4288	Water Plant #2 Transfer Motor #2	US Motors	7051r-1	H0627/Z08Z137137075R2
4203	4289	Water Plant #2 Transfer Pump #3	Aurora	411	97-08843-3
4203	4290	Water Plant #2 Transfer Motor #3	US Motors	7051r-1	H0627/Z08Z137137075R3
4205	1861	Effluent Pump #1	Fairbanks	15H7000	B410/201Y305R082R1
4205	1862	Effluent Pump #2	Fairbanks	15H7000	B410/201Y305R082R4
4205	1863	Effluent Pump #3	Fairbanks	15H7000	B410/201Y305R082R5
4205		Effluent Pump #4	Layne	2100	D0499050496-001R-01
4205	4851	HVAC System Electrical Bld.	Marvair		VACA60ACD000N-A2
4205	4852	HVAC System Electrical Bld	Marvair		FC-F136748-900-1
4205		HVAC Admin Roof Unit #3	Weather King		
4205	6159	Auto Sampler	Teledyne	5800	6058000005, 223J00055
4206		L/S #63 Pump	ABS	Submersible	0042210

CC.

Nick Segel, Budget Manager
Julia Hewitt, Deputy City Clerk

Information Services
Memorandum

January 12, 2026

TO: **Julie Hennessy, City Clerk**

FROM: **Alberto Cirelli, IT Director**

SUBJECT: **Surplus Equipment**

Please have the attached list of equipment declared surplus with disposal at the City Manager's discretion. The equipment has been upgraded in accordance with our IT equipment rotation program.

We reached out to the Boys & Girls Club, Florida Department of Children and Families, Thompson Street Tabernacle of Praise and The House Next Door.

We have been advised that Thompson Street Tabernacle of Praise, a non-profit organization, is looking for donations. They are looking to receive 10 AIO computers, as well as 12 Laptops. We are recommending the following serial numbers be donated to them: AIO Computers: CPSBGT3 8NJYBM2, CG71JV2, 61GBXG2, BR7CRN3, C77GQJ3, 967GQJ3, 777GQJ3, C9CTM83, HRMVH63 as well as the laptops: 5tz86s2, 7zz86s2, 5yj96s2, dx7f6s2, bnff6s2, 3l596s2, dz109h2, c5rt3z2, bjz2r52, 81z2r52, fzy2r52, 1J07QH2.

Their contact information is:

Thompson Street Tabernacle of Praise
Pastor Henry James
332 Thompson Street
DeLand FL 32720
Topclc14@gmail.com
386-279-6445

Thank you,

Alberto Cirelli

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Resolution Approving FY 2025-2026 Budget Amendment.

DEPARTMENT: Finance

PREPARED BY: Daniel Stauffer, Finance Director

ATTACHMENTS: Resolution, FY25-26 Budget Amendment Detail

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The budget amendments proposed are detailed in the attached summary and recommended after review of actual expenditures to date. The amendments proposed are primarily revisions to reflect anticipated actual revenues and expenditures.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:
The Resolution amends the budget to reflect recommended changes with the impact on each fund itemized in the attached summary.

Operating contingency balances after these amendments are as follows:

General Fund	$303,610
Water & Sewer Fund	$299,044
Airport Fund	$2,395
Stormwater Fund	$0
Permits & Inspections Fund	$0

RECOMMENDATION:

Staff recommends the City Commission adopt the Resolution amending the FY 25/26 budget as presented.

BACKGROUND/DISCUSSION:

The significant budget amendments in the General Fund are the allocation of Fire salaries ($259,169) and Police salaries ($165,603) from reserve contingencies due to the approved union contracts. Pension contributions for general employees ($590,132), Fire ($2,755,518), Fire Prevention ($187,384) and Police ($2,028,979) were split out from Retirement Contributions to their own Pension Contribution line items. There was also an increase in the cost of City insurance ($20,000).

The significant budget amendment in the Homeless Shelter Fund is for insurance ($1,232).

The significant budget amendment in the Governmental Impact Fees Trust Fund is for the purchase of new GETAC laptops ($15,650) and parking improvements at Sperling Sports Complex ($128,013).

The significant budget amendment in the Grants and Special Revenue Fund is for a drone replacement ($30,450) that is partially covered by a grant ($25,000).

The significant budget amendments in the Capital Fund are Generator Replacement at Fire Station 82 ($62,666), new Hydraulic In-Ground Cylinder at Conrad Elevator ($80,766), and A/C Replacement at Spec Martin ($59,000).

The significant budget amendment in the Water & Sewer Fund is the land acquisition at 401 E. New Hampshire ($250,000). Pension contributions ($386,136) were split out from Retirement Contributions to their own Pension Contribution line item.

The significant budget amendment in the Airport Fund is the purchase of a new EOC Radio Set ($14,548). Pension contributions ($36,428) were split out from Retirement Contributions to their own Pension Contribution line item.

The significant budget amendment in the Stormwater Fund is funding for the purchase at 315 E. Taylor Road ($16,500). Pension contributions ($14,571) were split out from Retirement Contributions to their own Pension Contribution line item.

The significant budget amendment in the Permits and Inspections Fund is funding for Office Renovations ($11,500). Pension contributions ($14,571) were split out from Retirement Contributions to their own Pension Contribution line item.

RESOLUTION NO. 2026 -

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE BUDGET FOR THE GENERAL FUND, HOMELESS SHELTER FUND, GOVERNMENTAL IMPACT FEES TRUST FUND, GRANT AND SPECIAL REVENUE FUND, DEBT SERVICE FUND, CAPITAL FUND, WATER AND SEWER FUND, WASTEWATER TRUST FUND, AIRPORT FUND, STORMWATER FUND AND PERMITS AND INSPECTIONS FUND FOR THE FISCAL YEAR 2025-2026; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, it is necessary to amend the budget for the City of DeLand for fiscal year 2025-2026; and

WHEREAS, the City Commission is vested by the Charter of the City of DeLand with the authority to amend the budget.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The budget of the City of DeLand for fiscal year 2025-2026 is amended in the following manner:

GENERAL FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**56,697,232**	**1,031,061**	**736,776**	**56,991,517**
	Charges for Services				
001-0000-347-400	SPECIAL EVENTS	0	3,000	0	3,000
	Other Sources				
001-0000-380-000	USE OF RESERVES	3,086,127	209,407	0	3,295,534
001-0000-380-200	FUNDS C/O FROM PRIOR YEAR	3,072,176	818,654	0	3,890,830
001-0000-380-203	FUNDS C/O - ARPA FUNDS	1,236,776	0	736,776	500,000
EXPENDITURES		**56,697,232**	**6,556,081**	**6,261,796**	**56,991,517**
	Admin Services				
001-0106-545-100	INSURANCE	629,959	20,000	0	649,959
001-0106-422-100	RETIREMENT CONTRIBUTIONS	626,405	0	590,132	36,273
001-0106-422-200	PENSION CONTRIBUTION	0	590,132	0	590,132
	Information Technology				
001-0110-546-400	EQUIPMENT MAINTENANCE	1,224,437	0	5,189	1,219,248
	Fire				
001-1222-412-100	REGULAR SALARIES & WAGES	3,527,047	259,169	0	3,786,216
001-1222-422-100	RETIREMENT CONTRIBUTIONS	2,761,866	0	2,755,518	6,348
001-1222-422-200	PENSION CONTRIBUTION	0	2,755,518	0	2,755,518
001-1222-552-200	OPERATING CAPITAL	139,500	101,637	0	241,137
	Police				
001-1226-412-100	REGULAR SALARIES & WAGES	6,746,796	165,603	0	6,912,399
001-1226-422-100	RETIREMENT CONTRIBUTIONS	2,108,917	0	2,028,979	79,938
001-1226-422-200	PENSION CONTRIBUTION	0	2,028,979	0	2,028,979
	Parks and Rec Admin				
001-1401-552-000	HARDWARE/SOFTWARE	47,017	5,969	0	52,986
001-1401-552-200	OPERATING CAPITAL	0	14,900	0	14,900
	Sanborn Center				
001-1407-552-200	OPERATING CAPITAL	14,660	52,492	9,047	58,105

GENERAL FUND (Continued)

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
EXPENDITURES		**56,697,232**	**6,556,081**	**6,261,796**	**56,991,517**
	Stadium				
001-1408-552-100	OPERATING SUPPLIES	33,025	0	5,969	27,056
001-1408-552-160	OPERATING SUPPLIES-CONCESSION	0	3,000	0	3,000
	Conrad/Melching				
001-1412-552-200	OPERATING CAPITAL	3,600	48,450	0	52,050
	Contingency				
001-9990-999-100	CONTINGENCY	350,000	12,287	51,637	310,650
001-9990-999-200	RESERVE CONTINGENCY	449,772	0	424,772	25,000
	Transfers				
001-9999-991-190	TRANSFER TO GRANTS & SPEC REV	725,833	87,328	0	813,161
001-9999-991-200	TRANSFER TO DEBT SERVICE FUND	1,321,634	0	12,287	1,309,347
001-9999-991-300	TRANSFER TO CAPITAL PROJECT FUND	6,669,863	218,193	185,842	6,702,214

HOMELESS SHELTER FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**817,643**	**0**	**0**	**817,643**
EXPENDITURES		**817,643**	**1,232**	**1,232**	**817,643**
120-1120-545-100	INSURANCE	9,184	1,232	0	10,416
120-1120-546-100	BUILDING MAINTENANCE	13,675	0	1,232	12,443

GOVERNMENTAL IMPACT FEE TRUST (GIFT) FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**1,952,707**	**372,505**	**0**	**2,325,212**
	Impact Fees				
170-0000-324-610	IMPACT FEES - RECREATION RESIDENTIAL	853,598	12,288	0	865,886
170-0000-380-110	USE OF RESERVES - POLICE	0	15,650	0	15,650
170-0000-380-140	USE OF RESERVES - P&R	0	344,567	0	344,567
EXPENDITURES		**1,952,707**	**372,505**	**0**	**2,325,212**
	Police				
170-1226-552-200	OPERATING CAPITAL	30,900	15,650	0	46,550
	Transfers				
170-9999-991-190	TRANSFER TO GRANTS & SPEC REV	0	216,554	0	216,554
170-9999-991-200	TRANSFER TO DEBT SERVICE FUND	865,353	12,288	0	877,641
170-9999-991-300	TRANSFER TO CAPITAL PROJECT FUND	60,000	128,013	0	188,013

GRANT & SPECIAL REVENUE FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**2,733,908**	**30,450**	**0**	**2,764,358**
	Other Sources				
190-0000-331-280-PD2610	DRONE REPLACEMENT	0	25,000	0	25,000
190-9999-381-001	TRANSFER FROM GENERAL FUND	807,711	5,450	0	813,161

GRANT & SPECIAL REVENUE FUND (Continued)

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
EXPENDITURES		**2,733,908**	**369,149**	**338,699**	**2,764,358**
	Police				
190-1226-664-000-PD2610	DRONE REPLACEMENT	0	30,450	0	30,450
	Streets				
190-1302-553-100	ROAD MATERIALS & SUPPLIES	1,869,880	0	338,699	1,531,181
190-1302-663-000-PW2614	SR44 & KEPLER INTERSECTION IMPROVEMENTS	0	338,699	0	338,699

DEBT SERVICE FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**2,263,199**	**12,288**	**12,287**	**2,263,200**
	Transfers				
200-9999-381-001	TRANSFER FROM GENERAL FUND	1,321,634	0	12,287	1,309,347
200-9999-381-170	TRANSFER FROM GIFT FUND	865,353	12,288	0	877,641
EXPENDITURES		**2,263,199**	**12,288**	**12,287**	**2,263,200**
	Debt Service				
200-1222-771-100	PRINCIPAL	756,133	0	5,010	751,123
200-1222-772-200	INTEREST EXPENSE	148,997	0	7,277	141,720
200-1403-771-100	PRINCIPAL	398,176	5,010	0	403,186
200-1403-772-200	INTEREST EXPENSE	266,282	7,278	0	273,560

CAPITAL FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**13,416,364**	**218,193**	**185,842**	**13,448,715**
	Other Sources				
300-9999-381-001	TRANSFER FROM GENERAL FUND	6,669,863	218,193	185,842	6,702,214
EXPENDITURES		**13,416,364**	**218,207**	**185,856**	**13,448,715**
	Information Technology				
300-0110-663-000-IT2603	MIGRATE TO EXCHANGE SERVER SUBSCRIPTION	30,000	1,244	0	31,244
300-0110-664-000-IT2607	SCSI PROTOCOL/SERVER STORAGE HARDWARE	44,931	3,945	0	48,876
	Fire				
300-1222-664-000-FR2606	REPLACEMENT OF 2016 BUNKER GEAR	70,000	0	70,000	0
300-1222-664-000-FR2610	GENERATOR REPLACEMENT AT FS82	0	62,666	0	62,666
	Parks and Recreation				
300-1403-662-000-PR2605	RENOVATE STUCCO AT CONRAD	42,870	0	42,870	0
300-1403-662-000-PR2606	TERMITE TENTING ADMIN BLDG & LEMON ROOM	40,000	0	20,480	19,520
300-1403-662-000-PR2607	PAINT EXTERIOR - SANBORN CENTER	52,492	0	52,492	0
300-1403-663-000-PR2608	PANIC BARS - CONRAD	20,640	0	14	20,626
300-1403-663-000-PR2609	PANIC BARS - SPEC MARTIN	20,640	14	0	20,654
300-1403-664-000-PR2619	NEW HYDRAULIC IN-GROUND CYLINDER CONRAD	0	80,766	0	80,766
300-1403-664-000-PR2620	A/C REPLACEMENT AT SPEC MARTIN	0	59,000	0	59,000
300-1403-664-000-PR2621	NEW DISHWASHER AT SANBORN	0	9,047	0	9,047
300-1403-664-110-IT2612	CONNECT SPEC TO FIBER NETWORK	0	1,525	0	1,525

WATER & SEWER FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**80,317,877**	**266,500**	**0**	**80,584,377**
401-0000-380-000	USE OF RESERVES	3,637,310	266,500	0	3,903,810
EXPENDITURES		**80,317,877**	**828,197**	**561,697**	**80,584,377**
	Utilities Administration				
401-4201-422-100	RETIREMENT CONTRIBUTIONS	442,059	0	386,136	55,923
401-4201-422-200	PENSION CONTRIBUTION	0	386,136	0	386,136
401-4201-545-100	INSURANCE	612,670	40,000	0	652,670
401-4201-661-000-UT2640	401 E NEW HAMPSHIRE LAND PURCHASE	0	250,000	0	250,000
401-4201-664-000-UT2602	INSPECTION GOLF CART	15,521	0	10,888	4,633
	Water Production				
401-4203-531-100	PROFESSIONAL SERVICES	60,500	106,700	0	167,200
401-4203-661-000-UT2639	POTENTIAL WATER PLANT SITE ACQUISITION	0	16,500	0	16,500
401-4203-663-000-UT2603	ASR POTABLE WELL ABANDONMENT	106,700	0	106,700	0
	Water Distribution				
401-4204-546-400	EQUIPMENT MAINTENANCE	38,500	10,888	0	49,388
	Wastewater Treatment				
401-4205-552-100	OPERATING SUPPLIES	121,620	0	565	121,055
401-4205-552-200	OPERATING CAPITAL	26,479	565	0	27,044
401-4205-664-000-UT2419	D.O. SENSORS (1 OF 3)	7,641	0	6,452	1,189
401-4205-664-000-UT2449	D.O. SENSORS (2 OF 3)	0	3,226	0	3,226
401-4205-664-000-UT2450	D.O. SENSORS (3 OF 3)	0	3,226	0	3,226
	Utilities Maintenance				
401-4206-664-000-UT2555	LAWN MOWER REPLACEMENT	0	10,452	0	10,452
	Facilities Maintenance				
401-4208-664-000-FM2502	REPLACE 2080111-F550 AERIAL BUCKET TRUCK	0	504	0	504
	Contingency				
401-9990-999-100	CONTINGENCY	350,000	0	50,956	299,044

WASTEWATER TRUST FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**9,858,024**	**1,600**	**0**	**9,859,624**
404-0000-361-100	INTEREST EARNINGS	0	1,600	0	1,600
EXPENDITURES		**9,858,024**	**1,600**	**0**	**9,859,624**
404-4240-663-000-WW2301	SJRWMD/FDEP - RECLAIM EXP CONST PH 5	37,143	1,600	0	38,743

AIRPORT FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**8,709,485**	**0**	**0**	**8,709,485**
EXPENDITURES		**8,709,485**	**57,794**	**57,794**	**8,709,485**
430-4300-422-100	RETIREMENT CONTRIBUTIONS	64,270	0	36,428	27,842
430-4300-422-200	PENSION CONTRIBUTION	0	36,428	0	36,428
430-4300-663-000-AP2402	FDOT - HANGAR ELECTRICAL IMPROV DESIGN	33,096	0	6,818	26,278
430-4300-663-000-AP2502	FDOT - CONST T-HANGAR UPGRADES A, B & C	0	6,818	0	6,818
430-4300-664-000-AP2506	NEW EOC RADIO SET	0	14,548	0	14,548
430-9990-999-100	CONTINGENCY	16,943	0	14,548	2,395

STORMWATER FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**3,966,499**	**16,500**	**0**	**3,982,999**
450-0000-380-000	USE OF RESERVES	555,170	16,500	0	571,670
EXPENDITURES		**3,966,499**	**48,144**	**31,644**	**3,982,999**
450-4500-422-100	RETIREMENT CONTRIBUTIONS	88,147	0	14,571	73,576
450-4500-422-200	PENSION CONTRIBUTION	0	14,571	0	14,571
450-4500-546-400	EQUIPMENT MAINTENANCE	74,800	10,888	0	85,688
450-4500-552-100	OPERATING SUPPLIES	73,035	6,185	0	79,220
450-4500-661-000-SW2610	315 E. TAYLOR ROAD PURCHASE	0	16,500	0	16,500
450-4500-663-000-SW2601	MISC CITYWIDE PIPE LINING REPLACEMMENT	300,000	0	6,185	293,815
450-4500-663-000-SW2604	MISC SW IMPROVEMENTS (POND)	25,000	0	10,888	14,112

PERMITS AND INSPECTIONS FUND

Account Number	Account Description	Current Budget	Increase	Decrease	Revised Budget
REVENUES		**5,200,010**	**11,500**	**0**	**5,211,510**
480-0000-380-000	USE OF RESERVES	2,403,434	11,500	0	2,414,934
EXPENDITURES		**5,200,010**	**26,071**	**14,571**	**5,211,510**
480-4800-422-100	RETIREMENT CONTRIBUTIONS	147,119	0	14,571	132,548
480-4800-422-200	PENSION CONTRIBUTION	0	14,571	0	14,571
480-4800-552-200	OPERATING CAPITAL	13,665	11,500	0	25,165

Section 2. In all other respects the Budget of the City of DeLand, Florida for fiscal year 2025-2026 is hereby ratified and confirmed as adopted by Resolutions 2025-73 and 2025-93.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of January, 2026.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk-Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

FY 24-25 Budget Amendment Details

	Account Description	Increase	Decrease	Description
GENERAL FUND				
REVENUES		***1,031,061***	***736,776***	
001-0000-347-400	SPECIAL EVENTS	3,000		increase funding for Under Armour game concessions
001-0000-380-000	USE OF RESERVES	209,407		increase funding for Replacement Generator at Fire Station 82 ($62,666), A/C Replacement at Spec Martin ($59,000), Connect Spec to Fiber Network ($1,525), Hydraulic In-Ground Cylinder ($80,766), and new drone ($5,450)
001-0000-380-200	FUNDS C/O FROM PRIOR YEAR	818,654		increase funding for Engine Replacement 2007 Contender (1% PILOT Reserves) ($736,776) and Tra Thomas Park Improvement ($81,878)
001-0000-380-203	FUNDS C/O - ARPA FUNDS		736,776	decrease funding for Engine Replacement 2007 Contender (ARPA Reserves)
EXPENDITURES		***6,556,081***	***6,261,796***	
001-0106-531-100	PROFESSIONAL SERVICES	5,040		increase appropriation for grant services
001-0106-545-100	INSURANCE	20,000		increase appropriation for insurance
001-0106-422-100	RETIREMENT CONTRIBUTIONS		590,132	decrease appropriation for retirement contributions (moving to pension line)
001-0106-422-200	PENSION CONTRIBUTION	590,132		increase appropriation for pension contributions (moved from retirement line)
001-0110-546-400	EQUIPMENT MAINTENANCE		5,189	decrease appropriation for IT Equipment Maintenance
001-1222-412-100	REGULAR SALARIES & WAGES	259,169		increase appropriation for fire salaries due to union contract
001-1222-422-100	RETIREMENT CONTRIBUTIONS		2,755,518	decrease appropriation for retirement contributions (moving to pension line)
001-1222-422-200	PENSION CONTRIBUTION	2,755,518		increase appropriation for pension contributions (moved from retirement line)
001-1222-552-200	OPERATING CAPITAL	70,000		increase appropriation for replacement bunker gear (moved from capital)
001-1222-552-200	OPERATING CAPITAL	31,637		increase appropriation for radio upgrades
001-1223-422-100	RETIREMENT CONTRIBUTIONS		187,384	decrease appropriation for retirement contributions (moving to pension line)
001-1223-422-200	PENSION CONTRIBUTION	187,384		increase appropriation for pension contributions (moved from retirement line)
001-1226-412-100	REGULAR SALARIES & WAGES	165,603		increase appropriation for police salaries due to union contract
001-1226-422-100	RETIREMENT CONTRIBUTIONS		2,028,979	decrease appropriation for retirement contributions (moving to pension line)
001-1226-422-200	PENSION CONTRIBUTION	2,028,979		increase appropriation for pension contributions (moved from retirement line)
001-1401-552-000	HARDWARE/SOFTWARE	5,969		increase appropriation for PTP Link Spec Martin/Event Wifi
001-1401-552-200	OPERATING CAPITAL	14,900		increase appropriation for Termite Tenting Admin Building (moved from capital)
001-1407-552-200	OPERATING CAPITAL	52,492		increase appropriation for Sanborn Center Painting (moved from capital)
001-1407-552-200	OPERATING CAPITAL		9,047	decrease appropriation for Sanborn Center Dishwasher (moved to capital)
001-1408-552-100	OPERATING SUPPLIES		5,969	decrease appropriation for Operating Supplies
001-1408-552-160	OPERATING SUPPLIES-CONCESSION	3,000		increase appropriation for Under Armour game concessions
001-1412-552-200	OPERATING CAPITAL	48,450		increase appropriation for Stucco at Conrad (moved from capital)
001-9990-999-100	CONTINGENCY	12,287		increase appropriation for insurance ($20,000) and radio upgrades ($31,637)
001-9990-999-100	CONTINGENCY		56,677	decrease appropriation for grant services ($5,040), insurance ($20,000) and radio upgrades ($31,637)
001-9990-999-200	RESERVE CONTINGENCY		424,772	decrease appropriation for fire and police salaries due to union contracts
001-9999-991-190	TRANSFER TO GRANTS & SPEC REV	87,328		increase appropriation for new drone ($5,450) and Tra Thomas Park Improvements ($81,878)
001-9999-991-200	TRANSFER TO DEBT SERVICE FUND		12,287	decrease appropriation for debt payments
001-9999-991-300	TRANSFER TO CAPITAL PROJECT FUND	218,193		increase appropriation for Microsoft Exchange Server ($1,244), Server Storage Hardware ($3,945), Generator Replacement at Fire Station 82 ($62,666), A/C replacement at Spec Martin ($59,000), new Dishwasher at Sanborn Center ($9,047), connect to Spec to Fiber Network ($1,525) and Hydraulic In-Ground Cylinder at Conrad Elevator ($80,766)
001-9999-991-300	TRANSFER TO CAPITAL PROJECT FUND		185,842	decrease appropriation for replacement bunker gear ($70,000), Sanborn Center Painting ($52,492), Termite Tenting Admin Building ($14,900), and Stucco at Conrad ($48,450)
HOMELESS SHELTER FUND				
REVENUES		***0***	***0***	
EXPENDITURES		***1,232***	***1,232***	
120-1120-545-100	INSURANCE	1,232		increase funding for insurance
120-1120-546-100	BUILDING MAINTENANCE		1,232	decrease funding for building maintenance

FY 24-25 Budget Amendment Details

	Account Description	Increase	Decrease	Description
GOVERNMENTAL IMPACT FEES TRUST FUND				
REVENUES		***372,505***	***0***	
170-0000-324-610	IMPACT FEES - RECREATION RESIDENTIAL	12,288		increase funding for debt payments
170-0000-380-110	USE OF RESERVES - POLICE	15,650		increase funding for GETAC Laptops
170-0000-380-140	USE OF RESERVES - P&R	344,567		increase funding for Sperling Sports Complex Parking Improvements ($128,013) and Alabama Greenway Trail
EXPENDITURES		***372,505***	***0***	
170-1226-552-200	OPERATING CAPITAL	15,650		increase appropriation for GETAC Laptops
170-9999-991-190	TRANSFER TO GRANTS & SPEC REV	216,554		increase appropriation for Alabama Greenway Trail transfer
170-9999-991-200	TRANSFER TO DEBT SERVICE FUND	12,288		increase appropriation for debt payments
170-9999-991-300	TRANSFER TO CAPITAL PROJECT FUND	128,013		increase appropriation for Sperling Sports Complex Parking Improvements
GRANTS & SPECIAL REVENUE FUND				
REVENUES		***30,450***	***0***	
190-0000-331-280-PD2610	DRONE REPLACEMENT	25,000		increase funding for new Drone
190-9999-381-001	TRANSFER FROM GENERAL FUND	5,450		increase funding for new Drone
EXPENDITURES		***369,149***	***338,699***	
190-1226-664-000-PD2610	DRONE REPLACEMENT	30,450		increase appropriation for new Drone
190-1302-553-100	ROAD MATERIALS & SUPPLIES		338,699	decrease appropriation for Road Materials and Supplies
190-1302-663-000-PW2614	SR44 & KEPLER INTERSECTION IMPROVEMENTS	338,699		increase appropriation for SR 44 at Kepler Rd Intersection Improvements
DEBT SERVICE FUND				
REVENUES		***12,288***	***12,287***	
200-9999-381-001	TRANSFER FROM GENERAL FUND		12,287	increase funding for Fire Station 83 improvements debt payments
200-9999-381-170	TRANSFER FROM GIFT FUND	12,288		decrease funding for Pickleball Courts debt payments
EXPENDITURES		***12,288***	***12,287***	
200-1222-771-100	PRINCIPAL		5,010	decrease appropriation for Fire Station 83 improvements debt payments
200-1222-772-200	INTEREST EXPENSE		7,277	decrease appropriation for Fire Station 83 improvements debt payments
200-1403-771-100	PRINCIPAL	5,010		increase appropriation for Pickleball Courts debt payments
200-1403-772-200	INTEREST EXPENSE	7,278		increase appropriation for Pickleball Courts debt payments

FY 24-25 Budget Amendment Details

	Account Description	Increase	Decrease	Description
CAPITAL PROJECT FUND				
REVENUES		***346,206***	***185,842***	
300-9999-381-001	TRANSFER FROM GENERAL FUND		185,842	decrease funding for replacement bunker gear ($70,000), Sanborn Center Painting ($52,492), Termite Tenting Admin Building ($20,480), and Stucco at Conrad ($42,870)
300-9999-381-001	TRANSFER FROM GENERAL FUND	218,193		increase funding for Microsoft Exchange Server ($1,244), Server Storage Hardware ($3,945), Generator Replacement at Fire Station 82 ($62,666), A/C replacement at Spec Martin ($59,000), new Dishwasher at Sanborn Center ($9,047), connect to Spec to Fiber Network ($1,525) and Hydraulic In-Ground Cylinder at Conrad Elevator ($80,766)
300-9999-381-170	TRANSFER FROM GIFT FUND	128,013		increase funding for Sperling Sports Complex Parking Improvements
EXPENDITURES		***346,220***	***185,856***	
300-0110-663-000-IT2603	MIGRATE TO EXCHANGE SERVER SUBSCRIPTION	1,244		increase appropriation for Exchange Server Subscription
300-0110-664-000-IT2607	SCSI PROTOCOL/SERVER STORAGE HARDWARE	3,945		increase appropriation for Server Storage Hardware
300-1222-664-000-FR2606	REPLACEMENT OF 2016 BUNKER GEAR		70,000	decrease appropriation for replacement bunker gear (moved to operating)
300-1222-664-000-FR2610	GENERATOR REPLACEMENT AT FS82	62,666		increase appropriation for Generator Replacement at Fire Station 82
300-1403-662-000-PR2605	RENOVATE STUCCO AT CONRAD		42,870	decrease appropriation for Stucco at Conrad (moved to operating)
300-1403-662-000-PR2606	TERMITE TENTING ADMIN BLDG & LEMON ROOM		20,480	decrease appropriation for Termite Tenting at Admin Building (moved to operating)
300-1403-662-000-PR2607	PAINT EXTERIOR - SANBORN CENTER		52,492	decrease appropriation for Sanborn Center Painting (moved to operating)
300-1403-663-000-PR2604	PARKING IMPROVEMENTS - SPERLING	128,013		increase appropriation for Sperling Sports Complex Parking Improvements
300-1403-663-000-PR2608	PANIC BARS - CONRAD		14	decrease appropriation for Panic Bars at Conrad
300-1403-663-000-PR2609	PANIC BARS - SPEC MARTIN	14		increase appropriation for Panic Bars at Spec Martin
300-1403-664-000-PR2619	NEW HYDRAULIC IN-GROUND CYLINDER CONRAD	80,766		increase appropriation for Hydraulic In-Ground Cylinder at Conrad Elevator
300-1403-664-000-PR2620	A/C REPLACEMENT AT SPEC MARTIN	59,000		increase appropriation for A/C replacement at Spec Martin
300-1403-664-000-PR2621	NEW DISHWASHER AT SANBORN	9,047		increase appropriation for dishwasher at Sanborn (moved from operating)
300-1403-664-110-IT2612	CONNECT SPEC TO FIBER NETWORK	1,525		increase appropriation for connect Spec to Fiber Network
WATER & SEWER FUND				
REVENUES		***266,500***	***0***	
401-0000-380-000	USE OF RESERVES	266,500		increase funding for land acquisition at 401 E New Hampshire Ave ($250,000) and Land on Amelia Ave ($16,500)
EXPENDITURES		***828,197***	***561,697***	
401-4201-422-100	RETIREMENT CONTRIBUTIONS		386,136	decrease appropriation for retirement contributions (moving to pension line)
401-4201-422-200	PENSION CONTRIBUTION	386,136		increase appropriation for pension contributions (moved from retirement line)
401-4201-545-100	INSURANCE	40,000		increase appropriation for insurance
401-4201-661-000-UT2640	401 E NEW HAMPSHIRE LAND PURCHASE	250,000		increase appropriation for land acquisition at 401 E New Hampshire Ave
401-4201-664-000-UT2602	INSPECTION GOLF CART		10,888	decrease appropriation for Inspection Golf Cart
401-4203-531-100	PROFESSIONAL SERVICES	106,700		increase appropriation for ASR Well Abandonment
401-4203-661-000-UT2639	POTENTIAL WATER PLANT SITE ACQUISITION	16,500		increase appropriation for Potential Water Plant Site Acquisition
401-4203-663-000-UT2603	ASR POTABLE WELL ABANDONMENT		106,700	decrease appropriation for ASR Well Abandonment
401-4204-546-400	EQUIPMENT MAINTENANCE	10,888		increase appropriation for emergency repair at New Hampshire and Aquarius
401-4205-552-100	OPERATING SUPPLIES		565	decrease appropriation for Operating Supplies
401-4205-552-200	OPERATING CAPITAL	565		increase appropriation for WW Video Expansion
401-4205-664-000-UT2419	D.O. SENSORS (1 OF 3)		6,452	decrease appropriation for D.O. Sensor
401-4205-664-000-UT2449	D.O. SENSORS (2 OF 3)	3,226		increase appropriation for D.O. Sensor
401-4205-664-000-UT2450	D.O. SENSORS (3 OF 3)	3,226		increase appropriation for D.O. Sensor
401-4206-664-000-UT2555	LAWN MOWER REPLACEMENT	10,452		increase appropriation for new Lawn Mower
401-4208-664-000-FM2502	REPLACE 2080111-F550 AERIAL BUCKET TRUCK	504		increase appropriation for new Bucket Truck
401-9990-999-100	CONTINGENCY		50,956	decrease appropriation for insurance ($40,000), new Lawn Mower ($10,452), and new Bucket Truck ($504)

	Account Description	Increase	Decrease	Description
WASTEWATER TRUST FUND		***1,600***	***0***	
REVENUES				
404-0000-361-100	INTEREST EARNINGS	1,600		increase funding for River Booster Pump Station
EXPENDITURES		***1,600***	***0***	
404-4240-663-000-WW2301	SJRWMD/FDEP - RECLAIM EXP CONST PH 5	1,600		increase appropriation for River Booster Pump Station
AIRPORT FUND				
REVENUES		***0***	***0***	
EXPENDITURES		***57,794***	***57,794***	
430-4300-422-100	RETIREMENT CONTRIBUTIONS		36,428	decrease appropriation for retirement contributions (moving to pension line)
430-4300-422-200	PENSION CONTRIBUTION	36,428		increase appropriation for pension contributions (moved from retirement line)
430-4300-663-000-AP2402	FDOT - HANGAR ELECTRICAL IMPROV DESIGN		6,818	decrease appropriation for Hangar Electrical Improv Deisgn
430-4300-663-000-AP2502	FDOT - CONST T-HANGAR UPGRADES A, B & C	6,818		increase appropriation for T-Hangar Upgrades A, B & C
430-4300-664-000-AP2506	NEW EOC RADIO SET	14,548		increase appropriation for new EOC Radio Set
430-9990-999-100	CONTINGENCY		14,548	decrease appropriation for EOC Radio Set
STORMWATER FUND				
REVENUES		***16,500***	***0***	
450-0000-380-000	USE OF RESERVES	16,500		increase funding for 315 E Taylor Road Purchase
EXPENDITURES		***48,144***	***31,644***	
450-4500-546-400	EQUIPMENT MAINTENANCE	10,888		increase appropriation for emergency repair at New Hampshire and Aquarius
450-4500-422-100	RETIREMENT CONTRIBUTIONS		14,571	decrease appropriation for retirement contributions (moving to pension line)
450-4500-422-200	PENSION CONTRIBUTION	14,571		increase appropriation for pension contributions (moved from retirement line)
450-4500-552-100	OPERATING SUPPLIES	6,185		increase appropriation for Airport Grouting
450-4500-661-000-SW2610	315 E. TAYLOR ROAD PURCHASE	16,500		increase appropriation for 315 E Taylor Road Purchase
450-4500-663-000-SW2601	MISC CITYWIDE PIPE LINING REPLACEMMENT		6,185	decrease appropriation for miscellaneous Storwmater Pipe Lining Replacement
450-4500-663-000-SW2604	MISC SW IMPROVEMENTS (POND)		10,888	decrease appropriation for miscellaneous Storwmater Pond Improvements
PERMITS AND INSPECTIONS FUND				
REVENUES		***11,500***	***0***	
480-0000-380-000	USE OF RESERVES	11,500		increase funding for P&I Office Renovations
EXPENDITURES		***26,071***	***14,571***	
480-4800-422-100	RETIREMENT CONTRIBUTIONS		14,571	decrease appropriation for retirement contributions (moving to pension line)
480-4800-422-200	PENSION CONTRIBUTION	14,571		increase appropriation for pension contributions (moved from retirement line)
480-4800-552-200	OPERATING CAPITAL	11,500		increase appropriation for P&I Office Renovations

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Resolution Approving the Letter of Authorization for Obtaining an FDOT Permit for Intersection Improvements at DeLand Tech Park (State Road 472 & Kirk Drive).

DEPARTMENT: Engineering

PREPARED BY: Ray Bahrami, City Engineer

ATTACHMENTS: Resolution, Letter of Authorization Form

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

DeLand Tech Park Engineering Consultant, Kimley-Horn, is planning to obtain permit from Florida Department of Transportation (FDOT) for the intersection improvements to SR 472 and Kirk Drive. Kirk Drive will be owned and maintained by the City of DeLand once constructed. In order to apply for permit, FDOT will require a Letter of Authorization and Resolution from the City of DeLand for signature authority.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

N/A

FISCAL IMPACT:

None

RECOMMENDATION:

Staff recommends that the City Commission approve the resolution and letter of authorization in order to obtain FDOT permit.

BACKGROUND/DISCUSSION:

N/A

RESOLUTION NO. 2026 -

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, AUTHORIZING THE MAYOR OF THE CITY OF DELAND TO EXECUTE ALL PERMIT APPLICATIONS AND OTHER DOCUMENTS REQUIRED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION RELATED TO THE INTERSECTION IMPROVEMENTS AT STATE ROAD 472 AND THE PROPOSED KIRK DRIVE PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the owner/developer of the property which is subject to the DeLand Tech Park Planned Development Agreement with the City of DeLand, which property is located generally at the northwest corner of State Road 472 and Interstate 4, has applied to the Florida Department of Transportation (FDOT) for a use permit and other required approvals in order to connect the proposed city road identified as Kirk Drive to State Road 472 and create a signalized intersection at that location; and

WHEREAS, the Kirk Drive roadway and associated right-of-way will be dedicated to the City of DeLand after construction thereof and acceptance by the City of DeLand; and

WHEREAS, the FDOT requires the City, as the entity that will ultimately hold the road in trust for the public and otherwise have jurisdiction over the road, to execute certain permit applications as the "owner" of the road and further requires a resolution to be adopted by the DeLand City Commission authorizing the permit application(s) (the "Permits") and designating the City official with authorization to sign on behalf of the City; and

WHEREAS, the City Commission desires to designate the Mayor of the City of DeLand to execute the Permits and further to authorize such execution without the need for any further approvals by the City Commission; and

WHEREAS, the City of DeLand has complied with all requirements and procedures of Florida law in processing and adopting this Resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF DELAND THAT:

Section 1. Recitals.

The above recitals are hereby adopted as findings and incorporated into the text of this Resolution as legislative and administrative findings of the City Commission of the City of DeLand.

Section 2. **Authorization.**

The City Commission of the City of DeLand hereby authorizes the Mayor of the City of DeLand to execute and deliver to the State of Florida Department of Transportation the Permit application and all other authorizations and other forms required to be executed by the City of DeLand related to the Permit. No further authorization of the City Commission is required in order for the Mayor to execute other documents required by the FDOT related to the Kirk Drive intersection.

Section 3. Conflicts.

All resolutions or parts of resolutions in conflict with this Resolution are hereby repealed.

Section 4. Severability.

If any section, sentence, phrase, word, or portion of this Resolution is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word, or portion of this Resolution not otherwise determined to be invalid, unlawful or unconstitutional.

Section 5. Effective Date.

This Resolution shall become effective immediately upon adoption.

PASSED AND DULY ADOPTED this __ day of January, 2026.

_____
Christopher M. Cloudman
Mayor - Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Florida Department of Transportation

Letter of Authorization

The City of DeLand, Florida, as the governmental entity to which Kirk Drive will be dedicated and which will hold the said right-of-way in trust for the public, hereby authorizes

_____

to act as the City's agent to obtain permits required from the Florida Department of Transportation specifically related to said right-of-way.

City of DeLand, Florida

By:_____
Christopher M. Cloudman, Mayor/Commissioner

WITNESSES:

Signed_____

Printed Name_____
Address_____
_____

Signed_____

Printed Name_____
Address_____
_____

Sworn to and subscribed before me, this __ day of January, 2026.

_____
Notary Public, State of Florida
My Commission Expires

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Consideration re Scope and Fee Proposal for the 2025 Water Master Plan Update.

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: FNI Proposal - Water Master Plan - 11-07-2025

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The Utility Department has a capital program that includes a list of projects intended to increase capacity of its distribution system based on previously assumed "average" rates of growth. The most recent update to this list, or the Water Master Plan, was in 2014. As previously planned projects are completed and new ones scheduled and budgeted, updated planning needs to occur to keep up with the growth and aging infrastructure. Staff contacted Freese & Nichols to assist with this project, and their task order for this effort is attached to this RCA. This project will update the existing CIP and provide staff with a clear path toward serving anticipated future needs.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

Facilities & Infrastructure

FISCAL IMPACT:

The proposed fee for the Water Master Plan update is $309,156.00. This number is roughly $9,000 over the budgeted amount. However, staff negotiated this figure down and believes this price is fair for the work that will be performed. Funds are available in the Utility Enterprise account to pay for this project.

RECOMMENDATION:

Staff recommends the City Commission approve a task authorization to Freese & Nichols to update the Utilities Water Master Plan.

BACKGROUND/DISCUSSION:

N/A

FREESE AND NICHOLS
Innovative approaches
Practical results
Outstanding service
100 East Pine Street, Suite 110 + Orlando, Florida 32801 + 407-236-0297
www.freese.com

January 8, 2026

Whitney Zittle
City of DeLand
1102 S Amelia Ave
DeLand, FL 32724

RE: SCOPE AND FEE PROPOSAL FOR WATER MASTER PLAN

Dear Ms. Zittle:

Freese and Nichols is pleased to provide the attached proposed scope and fee, dated January 8, 2026, for a Water Master Plan for the City of DeLand.

We are ready to initiate work upon execution of a task authorization. If you have any questions, please do not hesitate to call us at (832) 456-4732 or contact via e-mail at kendall.ryan@freese.com. Thank you for considering Freese and Nichols; we are looking forward to working with you on this important project.

Sincerely,

Kendall J. Ryan

Kendall J. Ryan, PE
Associate/Group Manager
Freese and Nichols, Inc.

AGREEMENT FOR CONSULTING SERVICES FOR THE CITY OF DELAND

City of DeLand, FL
120 South Florida Avenue
Deland, FL 32720

Client Contract: **Agreement for Consulting Services (Utilities) dated January 24, 2025**

Date: **01/08/2026**

Project Name:	Water Master Plan
Description of Services:	See attached Scope of Services dated January 8, 2026
Deliverables:	Water System CIP and Master Plan Report
Compensation Type:	Lump Sum Fee
Amount Authorized:	$309,156.00

The services described above shall proceed upon execution of this Task Authorization. All other provisions, terms, and conditions of the Agreement for Consulting Services (Utilities) for the City of DeLand which are not expressly amended shall remain in full force and effect.

To the extent that the Client may issue a formal purchase order in connection with, in addition to, or in lieu of signing this Task Authorization, the terms and conditions contained on the purchase order, if any, shall be null, void, and unenforceable, and the Client shall be deemed to have accepted this Task Authorization.

ATTEST:

By: Kendall J. Ryan

Name: Kendall Ryan

Title: Project Manager - Associate

FREESE AND NICHOLS, INC.

By:

Name: Tony Pevec

Title: Vice President - Principal

ATTEST:

By:

Julie A. Hennessy, MMC

Title: City Clerk - Auditor

CITY OF DELAND, FL

By:

Christopher M. Cloudman

Title: Commissioner - Mayor

Date:

CITY OF DELAND
WATER MASTER PLAN
SCOPE OF SERVICES

This scope of services is entered into pursuant to the terms of the Agreement for Consulting Services (Utilities) dated January 24, 2025, by and between the City of DeLand, Florida (the "City") and Freese and Nichols, Inc. (FNI).

PROJECT UNDERSTANDING

The City requested a scope and fee proposal from FNI to perform a Water Master Plan for the City of DeLand. The Water Master Plan will provide phased, prioritized direction on capital investment in the City's water distribution system. The resulting capital improvement plan (CIP) will address existing and future capacity and rehabilitation-based infrastructure needs in the water system, providing the City with a roadmap to serving anticipated growth in water demands. The Water Master Plan will include the Tasks shown in the following **Table 1**.

Table 1: Water Master Plan Tasks

Task	Description	
1	PROJECT KICKOFF & ADMINISTRATION	*p. 1*
2	UPDATE & CALIBRATION OF WATER DISTRIBUTION SYSTEM HYDRAULIC MODEL	*p. 2*
3	POPULATION & WATER DEMAND PROJECTIONS & WATER SUPPLY ANALYSIS	*p. 3*
4	EXISTING & FUTURE SYSTEM CAPACITY ANALYSES	*p. 5*
5	WATER LINE RISK-BASED ASSESSMENT	*p. 6*
6	DEVELOP CONDITION-BASED FACILITY REHAB RECOMMENDATIONS	*p. 7*
7	INCORPORATE PFAS RECOMMENDATIONS & UPDATED WATER PLANT 10 FACILITY PLAN	*p. 7*
8	WATER CIP & MASTER PLAN REPORT	*p. 8*

BASIC SERVICES

FNI shall render the following professional services to the City in connection with the development of the project, described as: Water Master Plan.

TASK 1 | PROJECT KICKOFF & ADMINISTRATION

1.1. Project Kickoff Meeting

FNI will conduct a project kickoff meeting with the City to review project scope, goals, project team members and schedule. This meeting will be in-person with a virtual option. FNI will provide the City with a data request memorandum listing data and information received to date and identifying additional data needs for the Water Master Plan. The kickoff meeting will include discussion of the following:

- Methodology and approach for the Water Master Plan
- Project schedule and project coordination plan
- Information and data needs from the City

1.2. Initial Data Collection and Review

FNI will coordinate with and compile information from the City, including GIS/CAD files, as-built drawings, utility meter billing data, historical water production data, SCADA and other operational data, facility information including pump curves, recently completed distribution system improvements, plans for near-term water system improvements, and information on known or anticipated residential, commercial, or industrial developments.

1.3. Monthly Project Workshops and Status Updates

FNI will conduct up to ten (10) in-person monthly project workshops with City staff. Throughout the project, monthly status updates will be submitted that summarize progress and document upcoming tasks. The monthly status updates will outline any upcoming key decisions which will require input from or discussion with the City.

TASK 2 | UPDATE & CALIBRATION OF WATER DISTRIBUTION SYSTEM HYDRAULIC MODEL

2.1. Conduct Temporary Field Pressure Testing

FNI will work with the City to identify locations for field testing based on model calibration needs and areas of concern from the City. Up to twelve (12) Telog pressure testing recorders will be furnished by FNI. FNI will prepare procedures for field testing showing proposed locations for testing, duration of testing, and assistance needed from the City's utility department. The City will install and remove the pressure recorders on the designated fire hydrants. Testing will consist of recording pressure readings for a two-week time period. An FNI engineer will be present with City operations staff for the installation of the pressure recorders. FNI will review and document pressure data from the temporary field pressure testing. FNI will develop dashboards summarizing pressure statistics for each site. A Microsoft Power BI file of the field recorded pressure data will be created and provided to City staff.

2.2. Software Selection Workshop

FNI will conduct a software selection workshop with the City to demonstrate the capabilities of different industry standard modeling software packages showing pros, cons, and costs for each software for the City to review and identify a software package. The purchase of software for any internal City use is not included in this contract.

2.3. Develop Updated Water Distribution System Model

FNI will develop a hydraulic model of the City's water distribution system using updated geographic information system (GIS) data and as-built drawings provided by the City. The model will be developed in the software chosen by the City at the model section workshop (**Task 2.2**). The model will include all distribution system pipelines, excluding water service lines to fire hydrants and buildings. Water system facilities (distribution system pump stations, ground storage tanks, and elevated storage tanks) will be incorporated into the model based on as-built drawings or other information provided by the City.

2.4. Allocate Water Demands

FNI will utilize data from the City's billing system database to geocode metered water consumption

based on meter address. FNI will utilize the geocoded meter data to spatially allocate existing water demands throughout the hydraulic model. The demand data will consist of metered usage fields for each customer account and customer type.

2.5. Develop Diurnal Demand Curves

FNI will utilize the field collected pressure testing data (**Task 2.1**) and any available SCADA data to develop diurnal demand curves representing the existing 24-hour usage patterns within the City's water distribution system.

2.6. Conduct Extended Period Simulation (EPS) Model Calibration

FNI will utilize the hydraulic model to conduct a 24-hour EPS model calibration representing a variation in water demand conditions and water system operational schemes. The calibration shall consist of adjusting c-factors, diurnal curves, demand distribution, and/or pump characteristics until modeling results closely match the field pressure measurements and pump/tank operation. FNI will develop a dashboard with comparison graphs and mapping to document model calibration results.

Task 2 Assumptions:

- The hydraulic model will not include the raw water lines from the City's supply wells.
- The City meter billing data contains address information which is joinable to parcel data or GIS-based water meter locations for geocoding, and distinguishes water-only customers from sewer customers. Additionally, the City's meter billing data has classification information (i.e. residential, commercial, industrial).
- This task does not include field pump testing, survey, or field data collection. FNI may request City staff to verify water line connectivity to support the model development process.

TASK 3 | POPULATION & WATER DEMAND PROJECTIONS & WATER SUPPLY ANALYSIS

3.1. Develop Growth Projections

FNI will meet with the City's planning staff to discuss population and land use assumptions, projected developments and growth rates, and potential redevelopment areas. FNI understands the City has recently completed growth projections through 2045, including GIS mapping of projected population per acre throughout the City, for the renewal of DeLand's consumptive use permit (CUP). These projections will be used as the basis for the growth projections for the Water Master Plan. FNI will work with the City to identify and distribute development projections geographically within the 5-Year, 10-Year, and 20-Year planning periods.

3.2. Develop Water Demand Projections

FNI will analyze historical water production and usage information and compare with historical population data to develop historical water demands per capita. This information will be reviewed to develop future water demand planning criteria. FNI will also review the information collected during the data collection, field pressure testing, and model calibration tasks to develop future maximum day to average day and peak hour to maximum day peaking factors for the water system. The planning criteria

will be multiplied by the projections from **Task 3.1** to develop future water demand projections for 5-Year, 10-Year, and 20-Year planning periods.

3.3. Conduct Water Supply Analysis and Wellhead Condition Assessment

The FNI team (including Connect Consulting, Inc.; CCI) will prepare a water supply analysis that includes the following:

- General narrative of the City's water supply with discussion of water quality and long-term supply considerations from the Floridan aquifer.
- Consumptive Use Permit details associated with permitted Public Water Supply (PWS) wells, withdrawal allocation, compliance monitoring, and recent modifications.
- Summary of existing water supply facilities including number of wells, well capacities, and water quality.
- Description of wellfield development/expansion projects including Tomoka Woods, the Fairgrounds, and two (2) PWS wells for Water Treatment Plant (WTP) Nos. 2 and 3.
- Wellhead Condition Assessment:
    - Condition assessment of wellheads and above ground portions of the discharge piping at each PWS well (19 total)
    - This task will include an overall condition assessment of the pipeline and associated components relative to current Florida Department of Environmental Protection (FDEP) standards for wellhead construction and equipment as described in Rules 62-532.500 and 62-555.320, Florida Administrative Code.
    - Wellhead assessment will include inspection of various wellhead components that may include wellhead sanitary seal, wellhead elevation, well vent, air relief valve, check valve, flowmeter, pressure gauge and transmitters, bypass flushing port, sampling tap, and isolation valves.
    - Findings will be documented.

3.4. Assess Water Demands vs. Water Supply

The FNI team will compare the latest water demand projections to DeLand's CUP and planned water supply wells. Recommendations will be developed for future additional water supply infrastructure in terms of timing and the quantity of supply. Any recommended infrastructure will be incorporated into the capacity-based CIP as part of **Task 5**.

Task 3 Assumptions:

- The City will provide access to the well sites for CCI staff to conduct the condition assessment.
- This task does not include any wellfield testing, well operational or performance data collection, or field water quality analysis.
- The condition assessment in this task is limited to wellheads and above ground portions of discharge piping at each well. Condition assessment of electrical systems and above ground water distribution and storage infrastructure would be included (if Authorized) in **Special Services Task B**.

TASK 4 | EXISTING & FUTURE SYSTEM CAPACITY ANALYSES

4.1. Planning Criteria Evaluation

FNI will evaluate and recommend water system desired level of service planning criteria. Water system criteria will consider pipeline velocity and headloss gradient, available fire flow, minimum and maximum pressures, and tank drain/fill rates.

4.2. Existing Water Distribution System Analysis

FNI will utilize the calibrated water model to perform 24-hour extended period simulation (EPS) modeling of the existing water distribution network to identify existing capacity and deficiencies within the water system.

Minimum Pressures: Minimum modeled pressures under existing maximum day conditions will be documented through color-coded mapping.

Fire Flows: FNI will utilize the water system model to conduct fire flow analysis under existing maximum day demands to identify areas with less than adequate fire flow capacity. Fire flow analysis will be documented using mapping of available fire flows.

4.3. Future Water Distribution System Analyses

FNI will create future model scenarios for the 5-year, 10-year, and 20-Year planning periods in which the projected water demands from **Task 3** will be distributed geospatially in the distribution system hydraulic model. The future model scenarios will be utilized to assess the impact of future growth on the water distribution system.

4.4. Evaluate Pumping and Storage Capacity

FNI will evaluate the water system for compliance with Florida Administrative Code (FAC) regulations. FNI will analyze pumping capacity, elevated storage capacity, and total storage capacity for existing conditions as well as projected future conditions. FNI will develop capacity recommendations for pumping and storage and provide existing vs. recommended capacity charts.

4.5. Develop Distribution System Capacity CIP Alternatives

FNI will utilize the distribution system hydraulic model to develop and analyze alternatives to select sizing of water system piping, elevated and ground storage, and pumping facilities needed to serve 20-year demands. FNI will develop interim model runs for the 5-year and 10-year planning periods to identify phasing of water system improvements, where applicable. Identified system improvements will include water supply, pumping, conveyance, and storage capacity needs.

Task 4 Assumptions:

- This scope does not include hydraulic modeling or capacity assessment of the City's wells or raw water line infrastructure.
- This scope does not include water age or source trace analyses.

TASK 5 | WATER LINE RISK-BASED ASSESSMENT

5.1. Develop Draft Condition and Criticality Scoring Parameters for Water Lines

FNI will work with the City to develop a draft condition and criticality scoring program for water system pipelines. This task will utilize the age, material, and other information already available in the City's GIS dataset.

Potential pipeline condition parameters include:

- Pipe age
- Pipe material
- Maintenance history
- Main break history
- Soil conditions

Potential pipeline criticality parameters include:

- Redundancy
- Number of customers served
- Fire flow
- Ease of access for repairs
- High impact customers (hospitals, schools, business district, etc.)

5.2. Apply Condition and Criticality Scoring System to Water Lines

Based on available data, FNI will apply the condition and criticality scoring system to the distribution pipeline network. Each identified line segment will receive a condition, criticality, and overall risk score and an overall prioritized ranking of pipelines will be prepared. FNI will develop large scale color-coded mapping of the results of the condition, criticality, and risk scoring analysis. The water line risk scores will be coordinated with the capacity-based water line analyses to inform prioritization of water line replacement and expansion CIP projects.

5.3. Develop Water Line Renewal Recommendations

FNI will work with the City to develop a strategy to utilize the results of the risk-based assessment (RBA) to develop a prioritized water line renewal plan and CIP. Potential considerations include funding constraints, the area defined in the downtown utility fair share ordinance, geographic distribution of water line renewal projects throughout the water system, and ratio of pipeline renewal expenditures compared to new pipelines to service additional customers.

Task 5 Assumptions:

- This scope does not include gap analyses of GIS data, data collection, or performing updates to fill in missing GIS data.

TASK 6 | DEVELOP CONDITION-BASED FACILITY REHAB RECOMMENDATIONS

6.1. Develop Condition-Based Rehabilitation Recommendations

FNI will utilize tank inspection reports and input from DeLand utilities staff to develop high-level condition-based rehabilitation recommendations for selected water distribution facilities. The prioritization and phasing of improvements will be coordinated with the results of the capacity-based analyses to inform the timing and packaging of CIP recommendations. FNI understands the City has recently rehabbed certain water plants. This recent rehab information will be documented in the Water Master Plan Report (**Task 8**). Planning level rehabilitation/replacement opinion of probable construction costs OPCCs will be calculated in current year dollars and summarized based on the prioritization.

Task 6 Assumptions:

- The City will provide all relevant facility inspection reports and historical rehab information for water distribution facilities.
- No field condition assessments of water distribution or storage infrastructure are included in this scope.
- Condition assessment of wellheads and above ground portions of the discharge piping at each PWS well (19 total) is included in **Task 3**.

TASK 7 | INCORPORATE PFAS RECOMMENDATIONS & UPDATED WATER PLANT 10 FACILITY PLAN

FNI understands that the City is concurrently developing two studies regarding recommendations for PFAS compliance and the update of the Fairground Wellfield and Water Treatment Plant Facility Plan. Both studies are being developed by others. This Task 7 includes coordination with DeLand utilities staff and the City's respective consultants in order to incorporate the findings and recommendations of both studies into the Water Master Plan.

7.1. Coordination Meetings

FNI will hold coordination meetings with City of DeLand staff and the City's consultants developing PFAS recommendations and the updated Water Plant 10 Facility Plan. The following number of meetings is included:

- Up to two virtual (2) meetings with City of DeLand staff and representatives from McKim & Creed to discuss the findings and recommendations of the PFAS Compliance study
- Up to two virtual (2) meetings with City of DeLand staff and representatives from Mead & Hunt to discuss the findings and recommendations of the updated Water Plant 10 Facility Plan.

7.2. Incorporate Findings and Recommendations into Water Master Plan

FNI will include a summary of the findings and recommendations provided by McKim & Creed and Mead & Hunt in the Water Master Plan Document (**Task 8**).

Task 7 Assumptions:

- This scope does not include revisions or updates to the provided information or preparation of opinions of probable construction costs (OPCCs) for the PFAS compliance recommendations or the updated Water Plant 10 Facility Plan. FNI will utilize OPCCs developed by McKim & Creed and Mead & Hunt, respectively.

TASK 8 | WATER CIP & MASTER PLAN REPORT

8.1. Develop Draft Capital Improvements Plan

FNI will develop a CIP for the water distribution system that includes capacity and rehabilitation-based infrastructure needs. Infrastructure capacity needs will be based on the hydraulic analyses in **Task 4**. Water line renewal projects will be developed as described in **Task 5**. High-level rehabilitation recommendations for water distribution facilities will be developed as described in **Task 6**.

Planning level opinions of probable construction costs (OPCCs) for each proposed project will be developed in current year dollars, including engineering and contingencies. Large-scale system-wide maps will be produced showing proposed projects and recommended in-service dates. FNI will also prepare a one-page summary for each project, including a description, planning level OPCC, proposed in-service date, and project purpose.

8.2. Develop Draft Water Master Plan Report

FNI will prepare a draft water master plan report summarizing population and water demand projections, distribution system model update and calibration, existing and future system analyses, and CIP development with planning level costs. FNI will deliver one (1) electronic PDF file of the draft report to the City. City comments will be solicited and addressed.

8.3. Provide Shapefiles of Recommended CIP Projects

FNI will provide the City with shapefiles for each of the proposed CIP projects.

8.4. Prepare Final Water Master Plan Report

FNI will incorporate the City's comments and prepare the final water master plan report. FNI will deliver one (1) electronic PDF file of the final water master plan report to the City.

Summary of Meetings

- Project Kickoff Meeting
- Monthly Project Workshops (up to 10)

Summary of Deliverables

THROUGHOUT PROJECT (ALL TASKS)

- Monthly project workshops including meeting materials such as PowerPoints and mapping
- Meeting minutes for all monthly workshops

TASK 5 | CAPACITY-BASED WATER CIP & MASTER PLAN REPORT

- Draft and Final Water Distribution System CIP with Planning-Level OPCCs
- Draft and Final Water Master Plan Report

SCHEDULE:

FNI is authorized to commence work on the project upon execution of a Task Order and agrees to complete the services in accordance with the following schedule:

- Draft CIP with Planning-Level OPCCs: 330 days after NTP
- Draft Water Master Plan Report: 360 days after NTP
- Final Water Master Plan Report: 15 days after receiving City comments

If FNI's services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in City or regulatory reviews, delays on the flow of information to be provided to FNI, governmental approvals, etc.

COMPENSATION:

For performance of the Basic Services described in this Scope of Services, the City will compensate FNI in the lump sum amount of **$309,156** as shown in **Table 2**.

Table 2: Compensation

Task	Description	Lump Sum Fee
1	PROJECT KICKOFF & ADMINISTRATION	$14,758
2	UPDATE & CALIBRATION OF WATER DISTRIBUTION SYSTEM HYDRAULIC MODEL	$69,673
3	POPULATION & WATER DEMAND PROJECTIONS & WATER SUPPLY ANALYSIS	$55,781
4	EXISTING & FUTURE SYSTEM CAPACITY ANALYSES	$39,692
5	WATER LINE RISK-BASED ASSESSMENT	$29,905
6	DEVELOP CONDITION-BASED FACILITY REHAB RECOMMENDATIONS	$20,227
7	INCORPORATE PFAS RECOMMENDATIONS & UPDATED WATER PLANT 10 FACILITY PLAN	$9,310
8	WATER CIP & MASTER PLAN REPORT	$69,810
	Total Lump Sum Fee	**$309,156**

ADDITIONAL SERVICES: Any services performed by FNI that are not included in the services described above are considered Additional Services. Additional Services will only be performed if requested and authorized by the City as set forth in the Continuing Professional Service Agreement.

FNI may render the following additional services to the City in connection with the project, described as:

1. Field survey
2. Field pump testing
3. Hydraulic modeling of water age and source trace analysis
4. Field condition assessment of water distribution and storage facilities
5. Additional coordination meetings with McKim & Creed and/or Mead & Hunt
6. Revisions or updates to the provided information related to PFAS recommendations and/or the updated Water Plant 10 Facility Plan.
7. Identification of potential funding sources for CIP projects
8. Preparation of funding applications
9. Vulnerability assessments, community engagement, or benefit-cost analyses
10. Hydraulic model training
11. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications.
12. Preparing data and reports for assistance to City in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
13. Assisting City in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, shall be furnished by FNI on a fee basis negotiated by the respective parties outside of and in addition to this Agreement.
14. Providing basic or additional services on an accelerated time schedule.
15. Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.
16. Providing public outreach support services including the development of supporting materials, presentations, and assisting with public meetings.

CITY OF DELAND WATER MASTER PLAN
1/8/2026
Detailed Cost Breakdown

Project Fee Summary		
Basic Services	$	309,156
Special Services	$	-
Additional Services	$	-
Total Project	$	309,156

Task Description	Labor											Total Hours	Total Labor Effort	Miles	Pressure Data Logger (each)	Total Expense Effort	Subconsultants		Total
	Tony Pevec	Kendall Ryan	Amy Byland	Allison Cole	Melissa Brunger	Silas Jordan	Charles Cullen	Deven Brown	Juan Vilca	Bob Dudik	Kim Cruz						CCI (Hydrogeo)	Total Sub Effort	Total Effort
	PIC/QA	PM	Tech Lead	EI	QC	GIS	CIP Support	CIP Support	CIP Support	Electircal	Corp. Support								
	$303	$303	$228	$174	$303	$146	$303	$174	$303	$228	$188								
													$ -			$ -		$ -	$ -
TASK 1 - PROJECT KICKOFF AND ADMINISTRATION													$ -			$ -		$ -	$ -
1.1 Project Kickoff Meeting		2		2								4	$ 992	67		$ 49		$ -	$ 1,041
1.2 Initial Data Collection and Review		1	2	10	1							14	$ 2,914			$ -		$ -	$ 2,914
1.3 Monthly Project Workshops and Status Updates (up to 10)		20		20							2	42	$ 10,313	677		$ 491		$ -	$ 10,803
													$ -			$ -		$ -	$ -
TASK 2 - UPDATE & CALIBRATION OF WATER DISTRIBUTION SYSTEM HYDRAULIC MODEL													$ -			$ -		$ -	$ -
2.1 Condcut Temporary Field Pressure Testing		6		20		6						32	$ 6,421		12	$ 6,000		$ -	$ 12,421
2.2 Software Selection Workshop		2	2	8								12	$ 2,552			$ -		$ -	$ 2,552
2.3 Develop Updated Water Distribution System Model		6	18	80	8							112	$ 23,157			$ -		$ -	$ 23,157
2.4 Allocate Water Demands			2	16	2	12						32	$ 5,822			$ -		$ -	$ 5,822
2.5 Develop Diurnal Demand Curves				12								12	$ 2,172			$ -		$ -	$ 2,172
2.6 Conduct Extended Period Simulation (EPS) Model Calibration		4	20	90	4							118	$ 23,550			$ -		$ -	$ 23,550
													$ -			$ -		$ -	$ -
TASK 3 - POPULATION AND WATER DEMAND PROJECTIONS & WATER SUPPLY ANALYSIS													$ -			$ -		$ -	$ -
3.1 Develop Residential and Non-Residential Projections		2	2	14	2	6						26	$ 5,179			$ -		$ -	$ 5,179
3.2 Develop Water Demand Projections		2	2	28	2							34	$ 6,802			$ -		$ -	$ 6,802
3.3 Conduct Water Supply Analysis		4	2	12	2	4	4					28	$ 6,404			$ -	29,600	$ 32,560	$ 38,964
3.4 Assess Water Demands vs. Water Supply		8	1	8			2					19	$ 4,836			$ -		$ -	$ 4,836
													$ -			$ -		$ -	$ -
TASK 4 - EXISTING & FUTURE SYSTEM CAPACITY ANALYSES													$ -			$ -		$ -	$ -
4.1 Design Criteria Evaluation		4	2	8	1							15	$ 3,498			$ -		$ -	$ 3,498
4.2 Existing Water Distribution System Analysis				24		12						36	$ 6,165			$ -		$ -	$ 6,165
4.3. Future Water Distribution System Analyses				40		16						56	$ 9,668			$ -		$ -	$ 9,668
4.4 Evaluate Pumping and Storage Capacity		8	8	24	1							41	$ 9,076			$ -		$ -	$ 9,076
4.5 Develop Distribution System Capacity CIP Alternatives	1	8	12	24	4							49	$ 11,285			$ -		$ -	$ 11,285
													$ -			$ -		$ -	$ -
TASK 5 | WATER LINE RISK-BASED ASSESSMENT													$ -			$ -		$ -	$ -
5.1 Develop Draft Condition and Criticality Scoring Parameters for Water Lines		4	4	32	2	4						46	$ 9,237			$ -		$ -	$ 9,237
5.2 Apply Condition and Criticality Scoring System to Water Lines		2	2	32	1	24						61	$ 10,854			$ -		$ -	$ 10,854
5.3 Develop Water Line Renewal Recommendations		6	2	16	2	8	4	8				46	$ 9,813			$ -		$ -	$ 9,813
													$ -			$ -		$ -	$ -
TASK 6 | DEVELOP CONDITION-BASED FACILITY REHAB RECOMMENDATIONS													$ -			$ -		$ -	$ -
6.1 Develop Condition-Based Rehabilitation Recommendations	1	16	8	32	4	6	4	12	2	4		89	$ 20,227			$ -		$ -	$ 20,227
													$ -			$ -		$ -	$ -
TASK 7 - INCORPORATE PFAS RECOMMENDATIONS AND UPDATED WATER PLANT 10 FACILITY PLAN													$ -			$ -		$ -	$ -
7.1 Coordination Meetings		4		4			4					12	$ 3,245			$ -		$ -	$ 3,245
7.2 Incorporate Findings and Recommendations into Water Master Plan		8	2	10	2		2					24	$ 6,065			$ -		$ -	$ 6,065
													$ -			$ -		$ -	$ -
TASK 8 - WATER CIP AND MASTER PLAN REPORT													$ -			$ -		$ -	$ -
8.1 Develop Draft Capital Improvements Plan (CIP)		12	24	40	8	16	4	8	4			116	$ 25,630			$ -		$ -	$ 25,630
8.2 Develop Draft Water Master Plan Report	1	28	10	72	8	20						139	$ 30,097			$ -		$ -	$ 30,097
8.3 Provide Shapefiles of Recommended CIP Projects		1		8		4						13	$ 2,370			$ -		$ -	$ 2,370
8.4 Prepare Final Water Master Plan Report	1	16	8	16	4	2						47	$ 11,714			$ -		$ -	$ 11,714
													$ -			$ -		$ -	$ -
	4	**174**	**133**	**702**	**58**	**140**	**24**	**28**	**6**	**4**	**2**	**1,275**		**744**	**12**		**$ 29,600**		
	$ 1,260	**$ 54,831**	**$ 31,537**	**$ 127,034**	**$ 18,277**	**$ 21,258**	**$ 7,563**	**$ 5,067**	**$ 1,891**	**$ 948**	**$ 391**		**$ 270,057**	**$ 539**	**$ 6,000**	**$ 6,539**	**$ 32,560**	**$ 32,560**	**$ 309,156**

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Consideration re Award of Bid, Sperling Sports Complex Parking Improvements to DDS Enterprises LLC.

DEPARTMENT: Engineering

PREPARED BY: Ray Bahrami, City Engineer

ATTACHMENTS: Bid Tabulation (dds)

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

This project includes permeable ground reinforcement grid system with performance sod installation, addition of two paved handicapped parking spaces, installation of concrete bumper guards at grass parking spaces and new chain-link fence. This project was bid in accordance with the City's purchasing procedures including advertisement in the local newspaper and on the internet-based Demand Star system. On December 16, 2025, seven bids were received for this project as summarized on the attached bid tabulation. GPH Services bid was deemed non-responsive. DDS Enterprises LLC of Pierson, Florida, was the lowest and the most responsible bidder in the amount of $305,558.93.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

N/A

FISCAL IMPACT:

$177,546.00 has been included in P&R Department current fiscal year budget. The rest in the amount of $128,012.93 will be covered by Parks and Recreation Impact Fees, which is included in the budget amendment presented for City Commission approval separately.

RECOMMENDATION:

Staff recommends that the City Commission award the bid to DDS Enterprises LLC for Sperling Sports Complex Parking Improvement project in the amount of $305,558.93.

BACKGROUND/DISCUSSION:

DDS Enterprises LLC was the contractor working on City of DeLand Littleton Circle Drainage & ADA Repairs project last year. The City Staff were very happy with DDS's quality of work. DDS also finished the project on time and within budget.

120 S. Florida Ave.
DeLand, FL 32720
Phone: 386-626-7000
Fax: 386-626-7140

BID TABULATION SHEET

Bid Title: Sperling Sports Complex Parking Improvements
Bid No: B-26-03
OPENING DATE & TIME: December 16, 2025 @ 3:00 P.M.
POSTING DATE: January 6, 2026 **POSTED BY: Corey McMillen**

Vendor	City, State	Bid Price
DDS Enterprises LLC	**Pierson, FL**	**$305,558.93**
JBI Contractors LLC	New Smyrna Beach, FL	$374,300.75
MVB & Associates, Inc.	Saint Cloud, FL	$387,736.65
Garcia Civil Contractors LLC	Orlando, FL	$402,123.10
Paul Culver Construction, Inc.	Daytona Beach, FL	$417,320.40
Cathcart Construction Company	Winter Springs, FL	$681,109.32

***Note: GPH Services was deemed non-responsive.**

Tabulation represents the lowest-responsive bidder and the recommended awardee of the City of DeLand. *Bid tabulations are posted to DemandStar at www.demandstar.com & VendorLink at www.vendorlink.com.*

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Consideration re Recommended Selection of Utility Rate Study Consulting Firm, GovRates, Inc.

DEPARTMENT: Admin Services

PREPARED BY: Michael Grebosz, Asst. City Manager

ATTACHMENTS: GovRates RFP, Contract RFP2602, Evaluation Sheets RFP2602, Consolidated Scoresheet RFP2602

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

Staff initiated a selection process for consulting services in order to provide a contract with a firm to perform utility rate study services. Staff issued a Request for Proposal which is attached to this RCA. Submittals were received from six firms as listed on the attached tabulation.

A selection committee consisting of Brandi Weaver, Jim Ailes, Dan Stauffer and Michael Grebosz ranked the submittals in accordance with the evaluation criteria issued with the City's request for proposal.

The Selection Committee recommends GovRates, Inc. as the top firm. Since GovRates, Inc. was ranked first by the Selection Committee vote, no consultant interview would be necessary. Staff is also requesting that City Commission authorize the execution by the Mayor of the attached contract if the Consultant accepts the terms set forth therein.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government, Preparing for the future (Sustainability).

SUSTAINABILITY:

Natural resource protection and optimization.

FISCAL IMPACT:

The FY 25/26 Budget of the Water & Sewer Fund includes $60,000 for the utility rate study. GovRates, Inc.'s proposal included a not to exceed cost of $29,800.

RECOMMENDATION:

Staff recommends that the City Commission approve the recommended final ranking of Utlity Rate Study Consulting firms and authorize the Mayor to execute the contract with the top ranked firm, assuming that the consultant agrees to the terms of the contract.

BACKGROUND/DISCUSSION:

N/A

For the City of DeLand, Florida

RESPONSE TO REQUEST FOR PROPOSALS

RFP-26-02

UTILITY RATE STUDY

November 25, 2025

MSRB –REGISTERED MUNICIPAL ADVISOR

GovRates, Inc.
Utility, Financial, Rate, and Management Consultants for Governments
www.govrates.com

Contact: Bryan Mantz, President
bmantz@govrates.com
Phone and Fax: (833) GOV-PLAN

Tab 1:
LETTER OF INTRODUCTION AND EXECUTIVE SUMMARY

November 25, 2025

City of DeLand
Finance Department, 2nd Floor
Purchasing Coordinator
120 South Florida Avenue
DeLand, FL 32720

Subject: Response to Request for Proposals RFP-26-02 for Utility Rate Study

GovRates, Inc. ("GovRates") is pleased to offer the services of our exceptionally qualified and experienced team (the "Project Team") to the City of DeLand (the "City") in response to the City's Request for Proposals RFP-26-02 (the "RFP") for a Utility Rate Study. Our experience, utility industry leadership, and lower prices ensure that we can provide the best value to the City. We have significant Volusia County experience, as we serve as the current utility rate consultant for the City of Deltona and the City of Edgewater.

GovRates is a utility, financial, rate, and management consulting firm that primarily serves governments. Our professionals have provided consulting services in many states as well as in the U.S. Virgin Islands and Canada. Many utilities have recognized the value and expertise we provide. For example, the City of Seward, Alaska has not updated their utility rates since 1993 and has trusted us with performing an extensive customer classification analysis and rate study. We recently performed utility rate work for the City of Flint, Michigan, which has had substantial water issues. GovRates has established a reputation for providing exceptional value and high-quality deliverables to our clients. We have tremendous experience in performing comprehensive rate studies for utilities of all sizes in Florida.

GovRates has the highest level of utility industry leadership. A nationally recognized utility rate expert, the proposed project manager has been heavily involved in the development of several manuals of practice referenced by the utility industry for guidance on the development of rates, fees, and charges, including the American Water Works Association (AWWA) M1 manual of practice and the Water Environment Federation (WEF) MOP 27 manual. He has also authored two (2) papers on user rates and impact fees that won national Management and Leadership Division Best Paper Awards from the AWWA. The proposed project manager served as the Chair of the AWWA's national Finance, Accounting, and Management Controls Committee. He is a Founding Chair of the Publications arm of the AWWA's national Rates and Charges Committee that manages rate and financial publications for the AWWA outside of manual development. An article co-written by the proposed project manager entitled "Utility Best Management Practices: Strong Adopted Financial Management Policies" was the cover story of the April 2022 *Journal AWWA*.

The rate study services may involve the evaluation of alternative financing options for capital projects and an analysis of existing debt service commitments. GovRates is registered with both the

Securities and Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor. All GovRates project managers have passed the Series 50 Exam and, as such, meet the legal requirements for providing any debt financing support to the City. The proposed project manager is also a Series 54-qualified Municipal Advisor Principal and, therefore, can legally manage, direct, or supervise municipal advisory activities of a municipal advisor firm and its associated persons.

The Project Team has always completed projects on time and within budget. We are located in the Orlando area (very close to the City) and, as such, can easily attend onsite meetings with the City staff and City Commission. However, we also have state-of-the-art communication equipment that allows for high-quality virtual meetings.

If selected, we would provide the required services with a goal of exceeding the City's expectations. During these challenging times, it is very important for the City to select a rate consultant with tremendous rate adoption expertise such as what our team provides. Over the past several years, we have successfully managed to completion many rate studies throughout the United States.

The remainder of this response contains additional information on how the City could benefit from selecting our Project Team. The proposed project manager's contact information is below – he is authorized to provide technical clarification regarding the proposal.

Yours in government service,
GovRates



Jenny Mantz
Chief Executive Officer

Project Manager Contact Information:

Bryan A. Mantz
President
1988 Varick Way
Casselberry, FL 32707-2409
bmantz@govrates.com
Office Phone and Fax: (833) GOV-PLAN; (833) 468-7526
Mobile: (407) 921-9733

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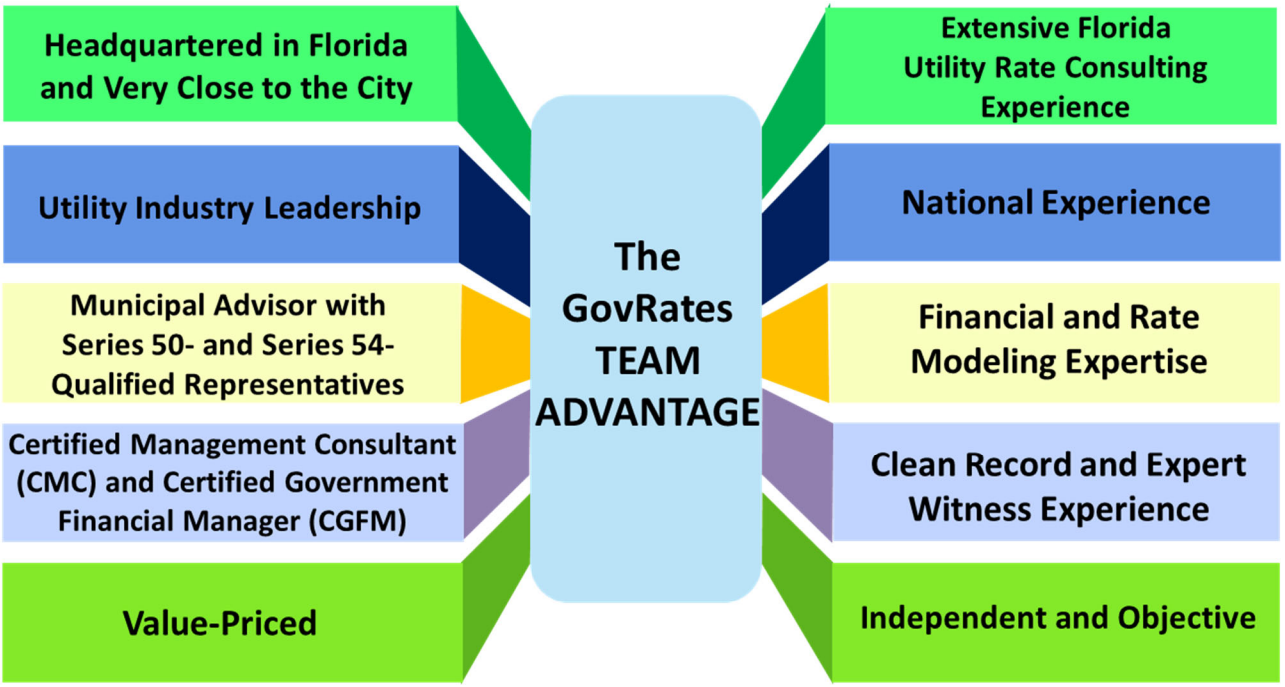
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QUALIFICATIONS AND EXPERIENCE



TAB 3:
QUALIFICATIONS AND EXPERIENCE

Overview of GovRates

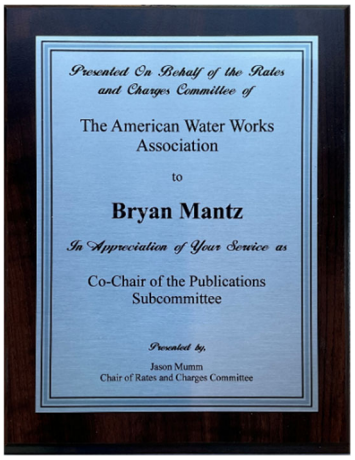
GovRates, Inc. ("GovRates") was founded in 2017 and has been in business for almost nine years. The company is a well-established, profitable, and exceptionally qualified utility, financial, rate, and management consulting firm that primarily serves governments. Our project team members have provided consulting services in several states, the U.S. Virgin Islands, and Canada. Many local governments have recognized the value and expertise we provide. For example, the City of Seward, Alaska, has not updated its utility rates since 1993 and has trusted us with performing an extensive customer classification analysis and rate study. We recently performed utility rate work for the City of Flint, Michigan, which has had substantial water issues. We have significant Volusia County experience, as we serve as the current utility rate consultant for the City of Deltona and the City of Edgewater.

GovRates has established a reputation for providing exceptional value and high-quality deliverables to our clients. The company is financially stable and has the necessary depth of resources to exceed the City's expectations in performing the utility rate study. Our professionals include two principal-owners and rate consultants / analysts available on a subcontractual basis as needed.

Benefits to the City of Selecting the GovRates Project Team

There are many benefits to the City of selecting our Project Team, including:

Utility Industry Leadership



We have the highest level of utility industry leadership, and our leadership provides assurance that we are well-versed in the latest industry trends, new ideas, and innovations. We are active members of national and State committees of the American Water Works Association (AWWA) and Water Environment Federation (WEF). The proposed project manager served as the Chair of the AWWA national Finance, Accounting, and Management Controls Committee. He is also a Founding Chair of the Publications arm of the AWWA national Rates and Charges Committee, and helps manage AWWA rate and financial publications outside of manual development. He has been involved in the development of two manuals of practice that are continually referenced by the utility industry for guidance on the development of rates:

- AWWA's *Manual of Practice 1 (M1): Principles of Water Rates, Fees, and Charges*.
- WEF's Manual of Practice 27 (*MOP 27): Financing and Charges for Wastewater Systems*.

He is also a primary author of the new manual on impact fees that is being developed by the AWWA.



Two papers authored by the proposed project manager won the national AWWA Management and Leadership Division Best Paper Award. These papers are entitled "Utility Rates and the Political Environment" and "Utility Impact Fees: Practices and Challenges." He continues to write articles on issues at the forefront of the utility industry. His article entitled "Automatic Rate, Fee, and Charge Increases for Water Utilities" was featured in the March 2021 *Journal AWWA*, and his article entitled "Utility Best Management Practices: Strong Adopted Financial Management Policies" was the cover story of the April 2022 *Journal AWWA*. (The cover referenced this article as "Navigating Utility Decisions With Adopted Financial Management Policies.")

A summary of our utility industry leadership is shown in the table on the following page. Pictures of Project Team member publications are on the page following the utility industry leadership graphic.

UTILITY INDUSTRY LEADERSHIP

- **Helping to Shape Utility Industry Standards with Involvement in National Committees**
  - AWWA National Rates and Charges Committee
    - Co-Chair of Publications Subcommittee
  - AWWA National Finance, Accounting, and Management Controls Committee
    - Chair
  - AWWA National Strategic Management Practices Committee
  - WEF National Utility Management Committee
- **Establishing Utility Practice Guidelines Through Contributions to Manuals of Practice**
  - AWWA M1: Principles of Water Rates, Fees, and Charges
  - AWWA M5: Water Utility Management
  - AWWA M29: Water Utility Capital Financing
  - AWWA M52: Water Conservation Programs
  - AWWA M54: Developing Rates for Small Systems
  - WEF MOP 27: Financing and Charges for Wastewater Systems
- **Communicating Solutions for Issues at the Forefront of the Utility Industry via Articles/Papers**
  - Utility Rates and the Political Environment
    - AWWA National Award Winner
  - Utility Impact Fees: Practices and Challenges
    - AWWA National Award Winner
  - Optimal Debt Management Practices for Local Government Enterprises
  - Utility Transfers to the General Fund: What is Reasonable, Fair, and Legal?
  - Developing a Management Dashboard for Local Government Enterprise Funds
  - Automatic Rate, Fee, and Charge Increases for Water Utilities
  - Utility Best Management Practices: Strong Adopted Financial Management Policies
- **Promoting Utility Best Management Practices Through Presentations at National and State Conferences**
  - Preparing for Rate Studies and Bond Financings: Is Your Utility Ready?
  - Utility Infrastructure Financing
  - Financial Planning for Enterprise Funds: Tips and Strategies
  - Managing Utility Growth: A Financial Perspective
  - Revenue Enhancement Opportunities for Enterprise Funds
  - Development of Business Plans for Local Government Enterprises

Sample Project Team Publications (Articles and Manuals of Practice):



Winner of National 2013 AWWA Management & Leadership Division Best Paper Award

Read the Expanded Summary

Utility impact fees: Practices and challenges

BRYAN A. MANTZ[1] AND HENRY L. THOMAS[1]

[1]Public Resources Management Group, Maitland, Fla.

Impact fees and other growth-related fees have become an important part of the comprehensive financing plans of many utilities. This article explores required and recommended impact fee practices in terms of current laws and accepted standards in the areas of water, wastewater, and reclaimed water impact fee design, accounting, implementation, and use, including techniques for improving the accuracy of impact fee calculations. Strategies are presented that demonstrate the reasonableness of these fees, as is a recommendation that all utilities establish a formal procedure for applicants to submit alternative impact fee calculations. Utility managers should consider the topics discussed in this article to develop—and to have regulators approve—a comprehensive impact fee policy that shows a commitment and intent by a utility to fully comply with all impact fee laws, rules, regulations, and accepted practices.

KEYWORDS: *capacity charges, growth, impact fees, legal, policy, rates*

Impact fees became prominent in Florida during the late 1970s because of the need to fund infrastructure as a result of rapid population growth and new development without burdening existing residents. Since that time, impact fees have become a widely accepted method of funding growth-related capital infrastructure in the United States, and state statutes and local government ordinances have been created to authorize and govern the use of such fees. Elected officials recognize that the usual alternative to imposing or raising impact fees (and other growth-related fees) paid for by new growth is to fund growth-related infrastructure through increased property taxes and user rates paid by the electorate. "Growth should pay for growth" is a common public policy.

However, despite their acceptance by the public, impact fees have also generated controversy and disputes, and their history is filled with lawsuits from which an extensive body of case law has been developed. Because impact fees are perceived to add to the cost of new development, developers, homebuilder associations, and other representatives of the development and construction community often review the components of such fees to ensure that the fees are legal and equitable.

Impact fee laws, regulations, and administrative codes vary among states, but common requirements are that impact fees should: be based on the need for new or enhanced capital facilities to serve new growth, approximate the value of the benefit received by a given unit of new growth, be calculated by an established formula that fairly determines the amount of the fee, and only be used for funding the capital facilities that benefit those who pay the fees. These nexus requirements have been reinforced by the US Supreme Court through landmark decisions on private property rights, especially in the cases of *Nollan v. California Coastal Commission* in 1987 (Nollan, 1987) and *Dolan v. City of Tigard* in 1994 (Dolan, 1994). The precedence established by the rulings in these two cases has helped establish the standard for "rational nexus" incorporated in many state statutes and case law.

This article explores required and recommended impact fee practices in terms of the most up-to-date laws and accepted standards in the areas of water, wastewater, and reclaimed water impact fee design, accounting, implementation, and use, including techniques for improving the accuracy of impact fee calculations. Strategies are presented for demonstrating the reasonableness of the fees as well as a recommendation that all utilities establish a formal procedure for applicants to submit alternative impact fee calculations if the applicants can demonstrate that their impact to the utility system would be less than what is calculated under the utility's adopted impact fee methodology. Utility managers should consider the topics discussed in this article to develop—and have regulators (i.e., elected or appointed officials, board and utility customer members, and rate regulators) approve—a comprehensive impact fee policy that shows a commitment and intent by the utility to be in full compliance with all impact fee laws, rules, regulations, and accepted practices. Some states have adopted statutes or laws pertaining to the practices covered in this article, whereas other states may enact legislative requirements in the future. Examples of state and local government impact fee legislation that is cited in this article are shown in Table 1.

REQUIRED AND RECOMMENDED WATER, WASTEWATER, AND RECLAIMED WATER IMPACT FEE DESIGN PRACTICES

Water, wastewater, and reclaimed water impact fees are also called system development fees or charges, capacity or capacity reservation fees or charges, capital recovery or expansion fees, facility fees, mitigation fees, or connection fees or charges. The fees are most commonly charged on a per equivalent residential connection (ERC) basis. An ERC—sometimes known as an equivalent residential unit, residential equivalent unit, equivalent dwelling unit, equivalent living unit, or capacity unit—is representative of the average water, wastewater, or reclaimed water capacity required to serve a typical individually metered single-family residential customer. This class of users is usually the largest group of customers

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Winner of National 2012 AWWA Management & Leadership Division Best Paper Award

Utility rates and the political environment

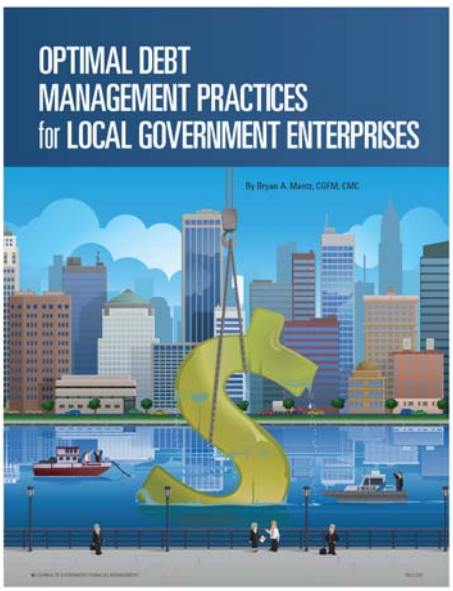
A public utility is a nonprofit enterprise that brings together time, effort, and capital to provide an essential benefit to the public at a reasonable, sustainable cost with the highest level of service. Reasonable cost refers to the rates charged for the high level of service that includes uninterrupted service, compliance with regulations, consideration of environmental effects, and overall financial position and credit strength with the objective of satisfying customers. One of the goals of the rate implementation process is to have regulators (i.e., publicly elected or appointed officials, board and utility customer members, and rate regulators) think of the utility as a business instead of a government program. To accomplish this, regulators need to have a general understanding of a utility system's facilities and purpose, regulations affecting facility construction and cost, rates and financial parameters, and compliance requirements associated with bonds, loans, and service agreements as well as the overall needs of the stakeholders. A critical component of a successful rate implementation plan is to link the business concept to the need for rate adjustments.

UNDERSTANDING THE RATE IMPLEMENTATION PROCESS

Although there is no "one size fits all" approach to the rate implementation process, there are several steps utility management should consider. Though many of these steps may be common sense approaches, they often are not recognized or performed. These steps are described here.

Adopting business principles. Business principles provide a framework for service requirements and serve as a basis for long-term business decisions for the utility; such principles should be approved or agreed on by the regulators. Over time, compliance with the business principles will have an effect on utility management rate recommendations. Examples of business principles may include the following,

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Read the Expanded Summary

Utility transfers to the general fund: What is reasonable, fair, and legal?

BRYAN A. MANTZ[1]

[1]Public Resources Management Group, Maitland, Fla.

Utility transfers to the local government's general fund can represent a substantial financial obligation for a publicly owned utility and are often disputed. This article addresses what a reasonable, fair, and legal in relation to such transfers and provides recommendations for local governments. Local government officials should recognize that funding nonutility-related operating or capital costs with utility revenues is not considered a utility best management practice by credit-rating agencies; routinely calculate—and maintain written documentation for—allocations that equitably represent the cost of general fund services provided to the utility, be able to provide written evidence justifying the fairness of the amount or percentage of a transfer representing a rate of return on the utility's investment, provided the transfer is legal and allowable by debt covenants, promote government transparency by separating transfer components in utility budgets, and adopt financial policies that allow easy calculation and projection of transfer amounts.

KEYWORDS: *cost allocation, general fund, general fund transfers, legal requirements regarding utility rates, property tax equivalent, rate of return, utility rates*

Utility transfers to the local government's general fund can be controversial and are often challenged. Because these transfers can represent a substantial portion of a publicly owned utility's revenue requirements, utility managers sometimes experience "rate shock" when informed of significant increases in the utility's general fund transfers or the initiation of such transfers. Contemplating the inclusion of such transfers in next year's operating budget, utility managers often ask, "Are these transfers reasonable?" or "What is a fair amount to pay to the general fund?" or "How can we afford this?"

If a deficit in the general fund's budget occurs during periods of economic recession and the fund's cash reserves have been depleted, governing bodies may initiate or increase utility transfers to the fund as an alternative to raising property tax millage rate (a tax rate of $1 per $1,000 of property value). The magnitude of such transfers can negatively affect the utility's financial position and planning. If the transfers were not incorporated in a rate adjustment plan that has already been adopted, the utility may have to request that its governing body adopt additional rate increases above those already approved.

Fitch Ratings, a major credit-rating agency, has stated that a utility best management practice—a practice that may contribute to higher credit ratings—is for the utility to have limited exposure to the financial operations of the general government so that utility revenues can be relied on to operate and improve the utility. When a utility is required to transfer money to the general fund, policies should specifically limit their scope and escalation (Fitch, 2008).

This article is intended to offer guidance on issues related to transfers from a publicly owned utility to the general fund. It is not intended to provide a legal opinion on any utility's existing transfer policy. There may be perspectives or arguments not covered in this article that would withstand legal scrutiny in a court of law. Although most transfer policies currently in effect have been reviewed by the local government's legal counsel, transfers can easily be challenged, especially by customers who do not benefit (or think they do not benefit) from the activities or services being funded by the transfers. Moreover, the legal landscape regarding transfers to the general fund continues to evolve. To minimize disputes and potential litigation, local governments are advised to proactively implement or adjust their transfer policies to emphasize fairness and reasonableness and to ensure that these policies are defensible.

Seven topics related to utility transfers to the general fund are addressed in this article. General descriptions are provided for:

- Types of general fund transfers,
- Legal requirements governing utility rates,
- Determining rates that are fair and reasonable and quantifying a fair rate of return,
- Utility loan agreements or debt covenants associated with issuing revenue bonds,
- Methods for equitably allocating the cost of general fund services provided to the utility,
- Implementing a new policy on transfers, and
- Applicable sunshine laws.

The author offers five recommendations for local governments that have implemented or are considering implementing utility transfers to the general fund. Local government officials are advised to

- recognize that funding nonutility-related operating or capital costs with utility revenues is not considered a utility best management practice by credit-rating agencies,

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By: Bryan A. Mantz, CGFM, CMC

Management dashboards are now commonly incorporated within financial models to communicate financial position, run financial scenarios, and illustrate how performance tracks with certain operational and financial metrics. If developed and used properly, a management dashboard can be an effective and impressive tool for helping to achieve support or buy-in of a government's financial plan.

A "management dashboard" is a consolidated set of tables and graphs, typically printable on a single page, within a financial model that provides the big picture overview or a financial snapshot of the detailed analysis. Often, the dashboard shows financial performance compared against certain financial targets.

Figure 1 shows a sample management dashboard for a utility rate case. The financial model may have an input area on the dashboard, or on an adjacent tab, to quickly change major assumptions such that the effect on projected financial position can be seen instantly on a graphical basis. Some government managers and financial consultants now use dashboards to run 'what-if' scenarios in real time for elected officials at public meetings. This article explores key elements of developing an effective management dashboard for local government enterprise funds.

Enterprise funds are used to report operations financed and operated like private businesses, where the intent is to recover expenditures completely or partially from income collected through user rates.

Many of the tips in this article could also be applied to other (general) government presentations involving a dashboard. As Microsoft Excel is commonly used to develop management dashboards, the article assumes the use of this software.

Figure 1. Sample Management Dashboard

Tip #1: Know your audience.

It is important, when designing a management dashboard, to know your audience. Are you communicating with a finance director, government administrator, elected officials, or the general public? Different audiences have differing levels of understanding regarding government finance issues. There may be a tendency to cram so much information onto a dashboard that important points are lost in the mix. However, the viewer or reader should



Acknowledgments

The AWWA Management Division Board of Trustees gratefully acknowledges the contributions made by members (past and present) of the Rates and Charges Committee, particularly the Editorial Committee, and others who drafted, edited, and provided the significant and critical commentary essential to developing this manual. The Editorial Committee dedicated countless hours in the final stages of preparation of this edition to ensure the overall technical quality, consistency, and accuracy of the manual.

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Acknowledgments

The AWWA Management and Leadership Division gratefully acknowledges the contributions made by those volunteers who drafted, edited, and provided the significant and critical commentary essential to updating M29. The Editorial Review Board members dedicated countless hours in the final stages of preparation of this edition to ensure the overall technical quality, consistency, and accuracy of the manual.

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Lacy Schwenk, City of Winnipeg, Finance Division, Winnipeg, Man., Canada
John Wright, Raftelis Financial Consultants, Centennial, Colo.



Prepared by the Financing and Charges for Wastewater Systems Task Force of the Water Environment Federation

Jon Davis, *Chair*	Prabha Kumar
	Saumya Kurup-Green
Andrea Boehling	Ting Lu, Ph.D., P.E.
Thierry A. Boveri, CGFM	Bryan A. Mantz, CMC, CGFM
Ann Bui	John Mastracchio
Eric Callocchia	Hannah McLean
Rocky Craley	Robert J. Ori
Jeff Dykstra	Sudhir Pardiwala, P.E.
Jennifer Fitts	Brian Porter
Ryan Graf	Justin Rasor
Christine Anderson Gray, ENV SP	Joseph Ridge
	Eric Rothstein, C.P.A.
Matthew Gregg, P.E.	Philip Sapone
Matt Gsellmeier	Brian Shell, P.E.
Loveenia Gulati	Nicholas T. Smith, CGFM
Jack Habzda	Marc Walch
Michael Hines, P.E.	Anna White
Jennifer Ivey, P.E.	John Wright
Brian W. Jewett	William B. Zieburtz, Jr.
Theresa Jurotich, P.E.	

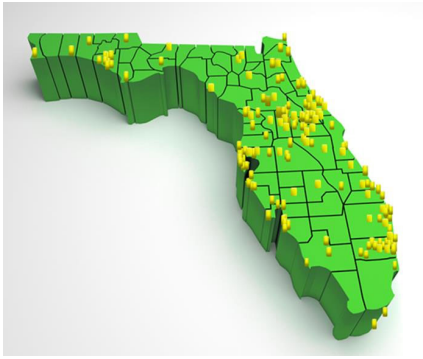
Under the Direction of the Utility Management Subcommittee of the Technical Practice Committee

Water Environment Federation
601 Wythe Street
Alexandria, VA 22314-1994 USA
http://www.wef.org

Florida and National Experience

Our expertise developed through working successfully with hundreds of utilities throughout the United States (coast to coast) would help to ensure project success and public acceptance of study recommendations. We work all over the United States and continue to have wide exposure to different ideas and practices of utilities. We have significant Volusia County experience, as we serve as the current utility rate consultant for the City of Deltona and the City of Edgewater.

The following Florida local government entities and utilities have been served by the Project Team professionals:



FLORIDA UTILITY EXPERIENCE OF PROJECT TEAM

A map of local government entities (represented by yellow markers) served by Project Team professionals within the State of Florida is shown in the graphic to the left.

FLORIDA CITIES, TOWNS, AND VILLAGES SERVED BY PROJECT TEAM PROFESSIONALS:

City of Bartow	Bonita Springs Utilities, Inc.	City of Bunnell
City of Callaway	City of Cape Coral	City of Casselberry
Town of Cedar Grove	City of Crystal River	Town of Davie
City of Daytona Beach	City of Deltona	Destin Water Users
City of Edgewater	Emerald Coast Utilities Authority (Pensacola)	City of Eustis
City of Fernandina Beach	Town of Fort Myers Beach	Fort Pierce Utilities Authority
City of Fort Walton Beach	City of Fruitland Park	City of Haines City
City of Hallandale Beach	City of Inverness	City of Jacksonville Beah
JEA (Jacksonville)	City of Lake Mary	City of Lake Worth Beach
City of Largo	City of Leesburg	Town of Longboat Key
City of Longwood	City of Maitland	City of Marco Island
City of Margate	City of Marianna	City of Melbourne
City of Mexico Beach	City of Miami Beach	City of Miramar
City of Mount Dora	Town of Montverde	New Smyrna Beach Utilities Commission
City of North Port	City of Oakland Park	City of Ocala
City of Oldsmar	City of Orange City	City of Oviedo
Town of Palatka	Town of Palm Beach	City of Palm Coast
Town of Panama City	City of Panama City Beach	City of Parker
Town of Pembroke Park	City of Plant City	City of Plantation
City of Plant City	Town of Palatka	Town of Palm Beach

City of Palm Coast	City of Panama City	City of Panama City Beach
City of Parker	Town of Pembroke Park	City of Plant City
City of Plantation	City of Port St. Lucie	City of Riviera Beach
City of St. Cloud	City of St. Pete Beach	City of St. Petersburg
City of Sanford	City of Sanibel	City of Sarasota
South Martin Regional Utilities (Town of Jupiter Island)	City of Springfield	City of Sunrise
City of Tarpon Springs	City of Titusville	City of Treasure Island
City of Umatilla	City of Wauchula	Village of Wellington
City of West Melbourne	City of West Palm Beach	City of Westlake
City of Winter Garden	City of Winter Springs	

FLORIDA COUNTIES SERVED BY PROJECT TEAM PROFESSIONALS:

Brevard County	Broward County	Charlotte County
Citrus County	Collier County	Flagler County
Hernando County	Hillsborough County	Lee County
Manatee County	Martin County	Okaloosa County
Okeechobee County (Okeechobee Utility Authority)	Orange County	Pasco County
Polk County	Putnam County	Sarasota County
Seminole County	Volusia County	Walton County (Regional Utilities)

OTHER FLORIDA UTILITIES SERVED BY PROJECT TEAM PROFESSIONALS:

East Central Regional Water Reclamation Facility (ECRWRF)	Englewood Water District	Florida Governmental Utility Authority (FGUA)
Florida Keys Aqueduct Authority (FKAA)	Gasparilla Island Water Association	Heron's Glen Utilities
Holley-Navarre Water System, Inc.	Immokalee Water and Sewer District	Key Largo
Riverwood Community Development District	St. Lucie West Services District	Seminole Improvement District
Tindall Hammock Irrigation and Soil Conservation District	The Villages	West Villages Improvement District

Registered Municipal Advisor with Series 50-Qualified Representatives and Series 54-Qualified Principals

Our Municipal Advisor registration and demonstrated competency (Series 50-Qualified Representatives and Series 54-Qualified Principals) provide assurance that we are fully qualified and meet all legal requirements to provide debt financing support to the City. The Securities and Exchange Commission and Municipal Securities Rulemaking Board have ruled that municipal advisor registration is required for a rate consultant to:

- Evaluate financing options available to the City and provide advice / recommendations on the structure, timing, and terms of such options.
- Provide advice on whether certain rates and revenues would support debt service and meet coverage requirements on a financing option available to the City.
- Perform cash flow modeling in support of City financing options.
- Provide financing advice / recommendations to the City's independent registered financial advisor if the need arises (i.e., indirect advice).
- Complete the financial sections of a State Revolving Fund loan application.
- Serve as the financial feasibility consultant for a bond issue of the City

Financial Modeling Expertise

Clients have called our financial models "worth the price of admission." Our financial modeling expertise ensures that the financial models developed for any project would be useful tools for the City's internal use following project completion. Our financial models are:

- Non-proprietary.
- Logical, user-friendly, and well-organized.
- Customized for each enterprise's business attributes.
- Structured to enable scenario, sensitivity, and risk assessment analysis.

Our models are detailed but also have a single tab that can be extracted for high-level scenario analysis.

Clean Record and Expert Witness Experience

Our clean record and expert witness experience provide assurance to the City that we have the technical expertise and credibility to develop defensible rates, charges, and other financial recommendations that are in full compliance with Florida law. During his entire career as a rate consultant, the proposed project manager has never been involved in litigation over projects he has managed or work he has performed.

Headquartered in Florida and Very Close to the City

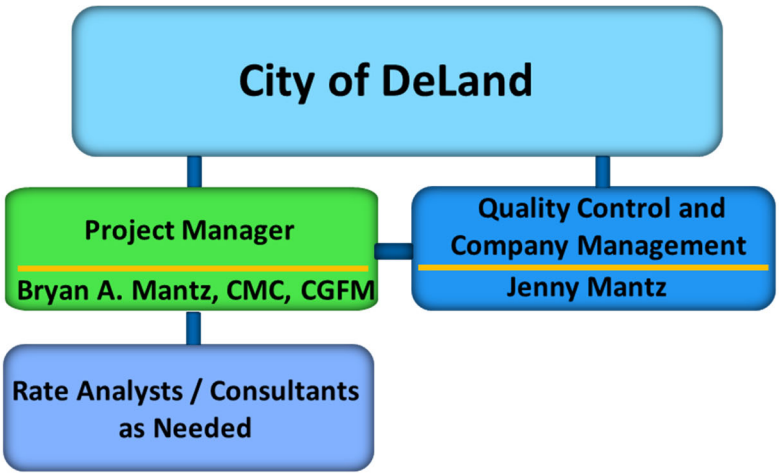
Our office in the Orlando area is very close to the City, enabling us to easily attend onsite meetings and provide outstanding customer service.

Best Value

Our lower hourly billing rates and not-to-exceed budgets can provide the City with confidence that it is receiving the very best value for rate and financial work. **The Project Team has always completed projects on time and within budget.**

Project Team

The organizational chart on the right summarizes the key Project Team professionals. Descriptions of the Project Team members follow:



Bryan A. Mantz, CMC, CGFM – Project Manager

On behalf of the Project Team, Bryan Mantz, CMC, CGFM would serve as the Project Manager for this engagement. He would be the primary contact between the Project Team and the City and would be responsible for ensuring that the project is performed as efficiently as possible, that all project deadlines are met, that all scope of services requirements are fulfilled, and that the District's expectations are exceeded.

- 30 years of financial and accounting experience; has successfully completed hundreds of rate and financial projects for local government and utilities throughout the United States.
- Certified Management Consultant (CMC) and Certified Government Financial Manager (CGFM). The prestigious CMC certification is recognized by the insurance industry as reducing risk. A CMC has demonstrated a history of results and excellent performance based on client testimonials, references, and repeat business.
- Series 50-qualified Municipal Advisor Representative and, as such, can legally provide debt financing recommendations and debt financing support for the City. Series 54-qualified Municipal Advisor Principal and, therefore, can legally manage, direct, or supervise municipal advisory activities of a municipal advisor firm and its associated persons.
- A nationally recognized utility rate expert, Mr. Mantz has been involved in the development of

several manuals of practice, including two (2) that are continually referenced by the utility industry for guidance on the development of rates, fees, and charges:

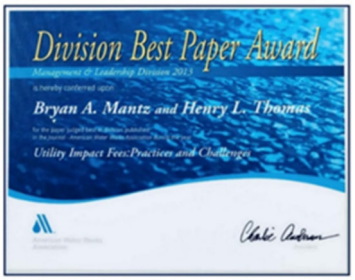
- The American Water Works Association's (AWWA's) *Manual of Practice 1 (M1): Principles of Water Rates, Fees, and Charges*.
- The Water Environment Federation's (WEF's) *Manual of Practice 27 (MOP 27): Financing and Charges for Wastewater Systems*.

Mr. Mantz is also a primary author of the new manual on impact fees that is being developed by the AWWA.

- Has authored two (2) papers on utility rates and impact fees that won national Management and Leadership Division Best Paper Awards from the AWWA. These papers were entitled "Utility Rates and the Political Environment" and "Utility Impact Fees: Practices and Challenges."



- Has served as Chair of the AWWA's national Finance, Accounting, and Management Controls Committee.
- Founding Chair of the Publications arm of the national AWWA's Rates and Charges Committee that helps manage rate and financial publications outside of manual development.
- Has completed the AWWA's Utility Risk and Resilience Certificate Program.



- MBA with Honors, Concentration in Finance, from Rollins College. (Attended via Merit Scholarship.) Bachelor of Science in Economics from the Wharton School of the University of Pennsylvania. Bachelor of Applied Science in Management and Technology from the School of Engineering and Applied Science of the University of Pennsylvania. Graduated from the Management and Technology Program of the University of Pennsylvania, the most competitive and selective program offered by this Ivy League school.

Mr. Mantz, as the proposed project manager, has had a tremendous success rate at securing the adoption and public acceptance of rate and financial recommendations.

Jenny Mantz – CEO of GovRates – Quality Assurance / Quality Control

- Series 50-qualified Municipal Advisor Representative and, as such, can legally provide debt financing recommendations and debt financing support for the City.

- Series 54-qualified Municipal Advisor Principal and, therefore, can legally manage, direct, or supervise municipal advisory activities of a municipal advisor firm and its associated persons.
- Over 15 years of financial and accounting experience.
- Has provided consulting services for funding assistance, grant management, performance benchmarking, financial audits, user rates, and impact fees / system development charges.
- Member of American Water Works Association and Water Environment Federation.

Project Role: Additional quality assurance and quality control on project deliverables.

Resumes and Additional Documentation

Resumes for the Project Team members are on the following pages. We have also included in this response:

- A copy of our Certificate of Current MSRB Registration as a Municipal Advisor.
- A printout from the MSRB website indicating that Project Team members are both Series 50-Qualified Municipal Advisor Representatives and Series 54-Qualified Municipal Advisor Principals.
- Copies of the Certified Management Consultant and Certified Government Financial Manager certificates of the proposed project manager.

PROFESSIONAL CERTIFICATIONS:

- CMC – Certified Management Consultant, No. 12237146
- CGFM – Certified Government Financial Manager, No. 15636
- Series 50-Qualified Municipal Advisor Representative
- Series 54-Qualified Municipal Advisor Principal

EDUCATION:

- MBA with Honors, Finance, Rollins College, 1999
  - Awarded Merit Scholarship
- B.S., Economics, University of Pennsylvania, Wharton School of Business, 1996
- B.A.S., Management and Technology, University of Pennsylvania, School of Engineering and Applied Science, 1996

PROFESSIONAL AFFILIATIONS:

- American Water Works Association (AWWA)
  - Former Chair of National Finance, Accounting, and Management Controls Committee
  - Founding Chair of Publications Arm of National Rates and Charges Committee
- Association of Government Accountants (AGA)
- Institute of Management Consultants USA (IMC-USA)

PROFESSIONAL HONORS:

- Two-Time National Best Paper Award: AWWA Management and Leadership Division

www.govrates.com

BRYAN A. MANTZ, CMC, CGFM

PRESIDENT

Profile

Mr. Mantz serves as the President of GovRates, a utility, financial, rate, and management consulting firm that primarily serves governments. He has 30 years of financial and accounting experience, most of which have been spent as a rate and financial consultant to local governments. He has successfully completed thousands of rate and financial projects for local government entities throughout the United States.

As a certified management consultant (CMC), Mr. Mantz has a long history of delivering results and excellent performance based on client testimonials, references, and repeat business. He is also a certified government financial manager (CGFM), a Series 50-qualified Municipal Advisor Representative, and a Series 54-qualified Municipal Advisor Principal. He can legally provide debt financing support to local governments and has served as a financial feasibility consultant for billions of dollars of local government bond and loan financings.

Mr. Mantz is actively involved with the American Water Works Association (AWWA). He is the former Chair of AWWA's national Finance, Accounting, and Management Controls Committee and is the Founding Chair of the publications arm of the AWWA's national Rates and Charges Committee.

A recognized expert in rate and financial issues, Mr. Mantz has been published in the *Journal AWWA*, the *Journal of Government Financial Management*, and *Government Finance Review*, and his publications have been translated into other languages and used in university settings. He is the recipient of two national AWWA Management and Leadership Division Best Paper Awards

Mr. Mantz is a coauthor or contributing author of several utility manuals of practice that are continually referenced by the utility industry for guidance on the development of rates, fees, and charges. He is frequently invited to be a speaker at national and state conferences.

CMC CERTIFIED MANAGEMENT CONSULTANT

CGFM CERTIFIED GOVERNMENT FINANCIAL MANAGER

MSRB-REGISTERED MUNICIPAL ADVISOR

PROFESSIONAL CERTIFICATIONS:

- Series 50-Qualified Municipal Advisor Representative
- Series 54-Qualified Municipal Advisor Principal

EDUCATION:

- M.D., Central South University, China, 1995
  – Graduated at Top of Class

TECHNICAL SPECIALTIES:

- Business, Strategic, and Economic Planning
- Performance Indicators and Benchmarks
- Operational Improvement
- Regulatory Compliance
- Financial and Business Model Development
- Business / Data Analytics and Best Management Practices
- Market Assessment
- Risk Management
- Multimedia Communication
- Client Relations
- Quality Assurance and Quality Control

PROFESSIONAL

- American Water Works Association (AWWA)
- Water Environment Federation (WEF)

www.govrates.com

JENNY MANTZ, M.D.

CHIEF EXECUTIVE OFFICER

Profile

Dr. Mantz serves as the Chief Executive Officer of GovRates, a utility, financial, rate, and management consulting firm that primarily serves governments. She is a Series 50-qualified Municipal Advisor Representative and, as such, can legally provide advice and recommendations on the structure, timing, and terms of various financing options available to local governments. Dr. Mantz is also a Series 54-qualified municipal advisor principal and, therefore, can legally manage, direct, or supervise municipal advisory activities of a municipal advisor firm and its associated persons.

She has 15 years of financial and accounting experience. Her project work in management consulting and financial analysis includes cost benefit analyses, performance benchmarking, financial compliance review, risk management strategies, evaluation / feasibility analysis of alternatives, cost-of-service, cash flow modeling, reserve analysis, system development charges / impact fees, miscellaneous service fees, and rate design. Her emphasis on tailored approaches to clients' unique institutional needs and collaboration with our strategic partners / specialists helps bring valuable insight and creative solutions to project challenges.

Dr. Mantz has worked with public entities coast-to-coast. She shares the values of our clients and is committed in efficiency and excellence in delivering our company services.

As the CEO and primary shareholder of GovRates, Dr. Mantz is in charge of all the company's operations.

MSRB-REGISTERED MUNICIPAL ADVISOR

MSRB
Municipal Securities Rulemaking Board

Certificate of Current MSRB Registration

The Municipal Securities Rulemaking Board (MSRB) certifies that the organization listed below is registered with the MSRB as of January 14, 2025 10:02:26 PM ET.

Registrant's Name:	GovRates, Inc.	**Type of Registration Maintained with the MSRB:**	Municipal Advisor
MSRB ID:	K1193	**Date Registered with the MSRB:**	March 27, 2017

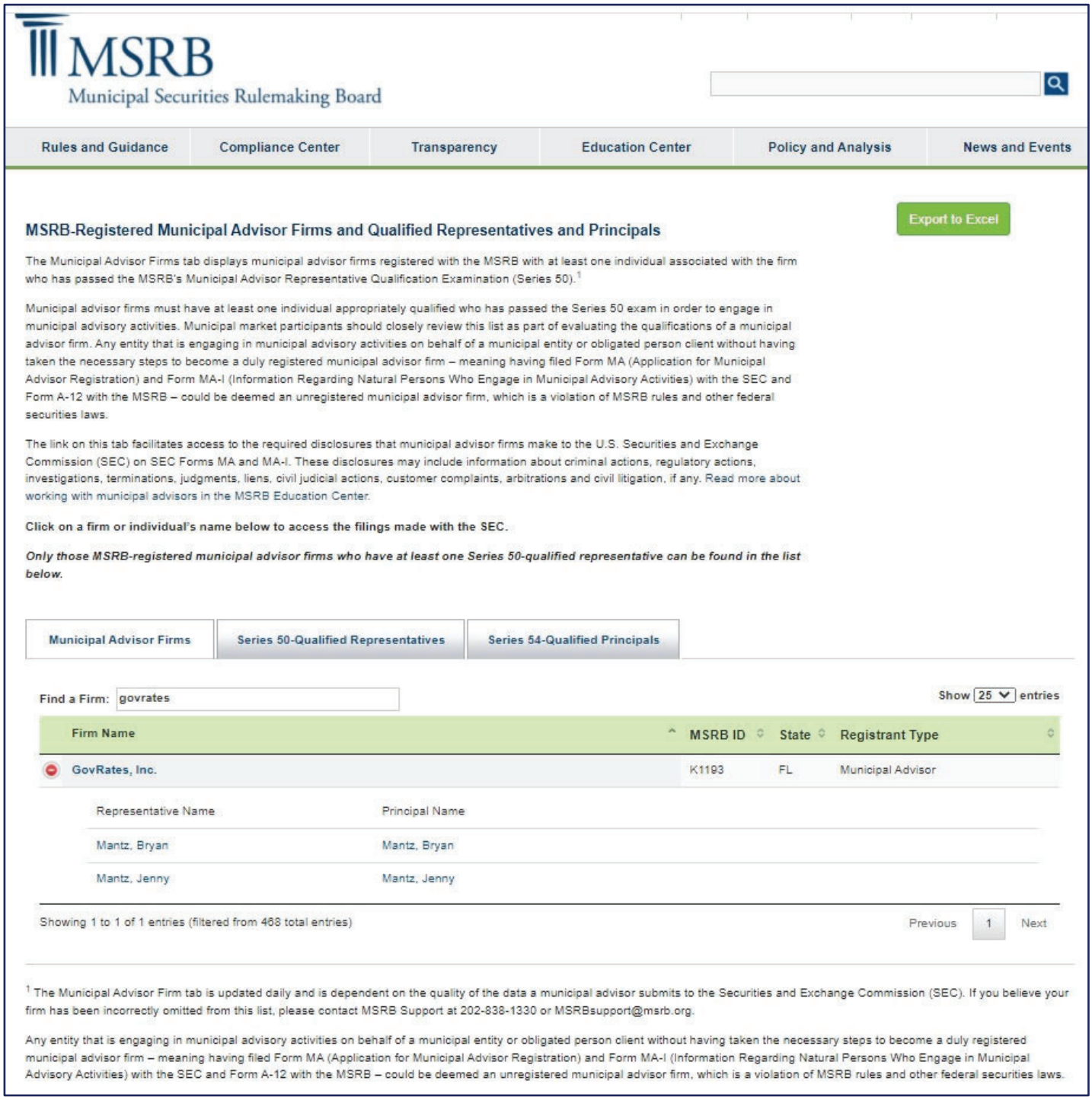
This certificate may be confirmed by contacting the MSRB at 202-838-1330 or by email to MSRBsupport@msrb.org

Stephanie Braddell, Product Operations Manager

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1300 I Street NW, Suite 1000 | Washington, DC 20005 | 202-838-1500 | MSRB.org | EMMA.MSRB.org

Printout from MSRB website (www.msrb.org) indicating that both Dr. Jenny Mantz and Mr. Bryan Mantz are both Series 50-qualified Municipal Advisor Representatives and Series 54-qualified Municipal Advisor Principals.



MSRB
Municipal Securities Rulemaking Board

Rules and Guidance | Compliance Center | Transparency | Education Center | Policy and Analysis | News and Events

Export to Excel

MSRB-Registered Municipal Advisor Firms and Qualified Representatives and Principals

The Municipal Advisor Firms tab displays municipal advisor firms registered with the MSRB with at least one individual associated with the firm who has passed the MSRB's Municipal Advisor Representative Qualification Examination (Series 50).[1]

Municipal advisor firms must have at least one individual appropriately qualified who has passed the Series 50 exam in order to engage in municipal advisory activities. Municipal market participants should closely review this list as part of evaluating the qualifications of a municipal advisor firm. Any entity that is engaging in municipal advisory activities on behalf of a municipal entity or obligated person client without having taken the necessary steps to become a duly registered municipal advisor firm – meaning having filed Form MA (Application for Municipal Advisor Registration) and Form MA-I (Information Regarding Natural Persons Who Engage in Municipal Advisory Activities) with the SEC and Form A-12 with the MSRB – could be deemed an unregistered municipal advisor firm, which is a violation of MSRB rules and other federal securities laws.

The link on this tab facilitates access to the required disclosures that municipal advisor firms make to the U.S. Securities and Exchange Commission (SEC) on SEC Forms MA and MA-I. These disclosures may include information about criminal actions, regulatory actions, investigations, terminations, judgments, liens, civil judicial actions, customer complaints, arbitrations and civil litigation, if any. Read more about working with municipal advisors in the MSRB Education Center.

Click on a firm or individual's name below to access the filings made with the SEC.

Only those MSRB-registered municipal advisor firms who have at least one Series 50-qualified representative can be found in the list below.

Municipal Advisor Firms | Series 50-Qualified Representatives | Series 54-Qualified Principals

Find a Firm: govrates

Show 25 entries

Firm Name	MSRB ID	State	Registrant Type
GovRates, Inc.	K1193	FL	Municipal Advisor

Representative Name	Principal Name
Mantz, Bryan	Mantz, Bryan
Mantz, Jenny	Mantz, Jenny

Showing 1 to 1 of 1 entries (filtered from 468 total entries)

Previous 1 Next

[1] The Municipal Advisor Firm tab is updated daily and is dependent on the quality of the data a municipal advisor submits to the Securities and Exchange Commission (SEC). If you believe your firm has been incorrectly omitted from this list, please contact MSRB Support at 202-838-1330 or MSRBsupport@msrb.org.

Any entity that is engaging in municipal advisory activities on behalf of a municipal entity or obligated person client without having taken the necessary steps to become a duly registered municipal advisor firm – meaning having filed Form MA (Application for Municipal Advisor Registration) and Form MA-I (Information Regarding Natural Persons Who Engage in Municipal Advisory Activities) with the SEC and Form A-12 with the MSRB – could be deemed an unregistered municipal advisor firm, which is a violation of MSRB rules and other federal securities laws.

imcusa
Institute of Management Consultants

CMC

The INTERNATIONAL COUNCIL OF MANAGEMENT CONSULTING INSTITUTES

Certified Management Consultant® (CMC®)

Presented to

Bryan Mantz

has met the requirements of the International Council of Management Consulting Institutes (ICMCI) CMC® Certification Scheme in the Field of Management Consulting and IMC USA's CMC Competency Framework-Certification Scheme as of June 30, 2019.

Certificate Number: 12237146 • Initial Award: March 03, 2012 • Expires: June 30, 2027

Angela Dingle CMC®
Chair, IMC USA

Gregory Lunde CMC®
Chair, Certification Committee IMC USA

This Certificate is the property of IMC USA. CMC® is a registered certification mark for IMC USA in the U.S. Patent and Trademark Office.
2455 East Sunrise Boulevard, Suite 816 • Fort Lauderdale, FL 33304 • 800-793-4992 • www.imcusa.org

Association of Government Accountants

CGFM

The Professional Certification Board

Having determined that

Bryan A. Mantz

Has successfully met the Board's certification requirements as an expert government financial manager, hereby grants the designation of

Certified Government Financial Manager

Witness the seal of said Board and the official signatures of the President of the Association and the Chair of the Board at Alexandria, Virginia, this fifth day of November, two thousand eleven.

Certificate No. 15636

R. O. Bunce Jr.
National President

Gerry C. Boaz
Chair, Professional Certification Board

Projects Completed On Time, Within Budget, and With a Successful Outcome

Projects recently completed by GovRates on time, within budget, and with a successful outcome are shown in the following table. Many of these projects represent repeat business (e.g., updated rate study).

GOVRATES PROJECTS RECENTLY COMPLETED ON TIME, WITHIN BUDGET, AND WITH A SUCCESSFUL OUTCOME			
Project	**Client**	**State**	**How Secured**
Water and Wastewater Rate and Impact Fee Study	**City of Deltona**	**Volusia County, Florida**	**Sole Source; Piggyback off Contract Secured Through RFP**
Bond / Financial Feasibility Report for Utility Revenue Bonds	**City of Deltona**	**Volusia County, Florida**	**Sole Source**
Stormwater Rate Study	**City of Deltona**	**Volusia County, Florida**	**Sole Source; Piggyback off Contract Secured Through RFP**
Water, Sewer, Reclaimed Water, Solid Waste, Recycling, and Stormwater Rate Study	**City of Edgewater**	**Volusia County, Florida**	**RFP**
Water and Wastewater Rate Study for North Sumter County Utility Dependent District and Villages Water Conservation Authority	The Villages Community Development Districts	Florida	Request for Quote
Water and Wastewater Rate Study for Central Sumter Utility and Sumter Water Conservation Authority	The Villages Community Development Districts	Florida	Sole Source; Piggyback off Contract Secured Through RFQ
Water and Wastewater Rate Study for the Village Center Service Area	The Villages Community Development Districts	Florida	Request for Quote
Water and Wastewater Rate Study for the Little Sumter Service Area	The Villages Community Development Districts	Florida	Sole Source; Piggyback off Contract Secured Through RFQ
Utility Financial Management Policies Development	The Villages Community Development Districts	Florida	Sole Source
Residential Districts Financial Management Policies Development	The Villages Community Development Districts	Florida	Sole Source
Utility Rate Analysis (Comprehensive Rate Study)	City of North Port	Florida	RFP and Competitive Bidding
Building Permit Fee Study	City of North Port	Florida	RFP and Competitive Bidding
Water and Wastewater Rate Study and Wholesale Rate Increase Pass-Through Analysis	Town of Longboat Key	Florida	Sole Source Based on Expertise and Experience
Beach Financial Management Plan	Town of Longboat Key	Florida	Sole Source
Evaluation of Vehicle Fleet Management Options	Town of Longboat Key	Florida	Sole Source
Water and Sewer Rate Study	City of Miami Beach	Florida	Request for Quote
Water and Sewer Impact Fee Study	City of Miami Beach	Florida	Request for Quote
Rate and Charge Review – All Departments – and Assistance with Major Overhaul of City's Code of Ordinances	City of Miami Beach	Florida	Competitive Bidding
Water and Wastewater Rate Study	City of Miramar	Florida	RFQ
Water and Wastewater State Revolving Fund (SRF) Loan Procurement Assistance - Multiple Projects	City of Miramar	Florida	RFQ
Preparation of Fiscal Sustainability Plan for State Revolving Fund (SRF) Loan	City of Miramar	Florida	RFQ
Stormwater Financial Checkup and State Revolving Fund Loan Procurement Assistance	City of Miramar	Florida	RFQ
Comprehensive Water and Wastewater Rate Study	City of Plantation	Florida	Request for Quote
Water and Wastewater Impact Fee Study	City of Plantation	Forida	Sole Source
Audit / Review of Maintenance Operations and Service Costs	City of Plantation	Florida	Sole Source
Irrigation Water Rate Study	West Villages Improvement District	Florida	RFQ
Comprehensive Water and Wastewater Rate Study	City of Margate	Florida	Competitive Bidding
Stormwater Rate Study	City of Margate	Florida	Competitive Bidding

GOVRATES PROJECTS RECENTLY COMPLETED ON TIME, WITHIN BUDGET, AND WITH A SUCCESSFUL OUTCOME (cont.)			
Project	**Client**	**State**	**How Secured**
Comprehensive Water, Wastewater, and Stormwater Rate Study	City of Fruitland Park	Florida	Competitive Bidding; Subconsultant to Engineering Firm
State Revolving Fund (SRF) Loan Procurement Assistance - Multiple Projects / Loans	City of Fruitland Park	Florida	Sole Source; Subconsultant to Engineering Firm
Water and Wastewater Revenue Sufficiency Study and Impact Fee Review	City of Maitland	Florida	Sole Source; Piggyback off Contract Secured Through RFP
Water and Stormwater Rate Study	Town of Fort Myers Beach	Florida	RFP
Water and Wastewater Rate Study	City of Umatilla	Florida	Sole Source; Subconsultant to Engineering Firm
Water and Wastewater Rate Study	City of Wauchula	Florida	RFP
High-Level Water and Wastewater Revenue Sufficiency and State Revolving Fund (SRF) Loan Procurement Assistance	City of North Lauderdale	Florida	Sole Source
Stormwater Rate Study	City of North Lauderdale	Florida	Competitive Bidding
Water and Wastewater Rate Study	Gasparilla Island Water Association	Florida	Sole Source
Water and Wastewater Rate Study	Holley-Navarre Water System, Inc.	Florida	RFP
Water and Wastewater Capacity Fee Study	Seminole County	Florida	RFP
Water and Wastewater Impact Fee Study	Putnam County	Florida	Subconsultant to Engineering Firm
State Revolving Fund (SRF) Loan Procurement Assistance for Water Plant	City of Sanford	Florida	Subconsultant to Engineering Firm
Wastewater Rate Study	City of Treasure Island	Florida	Request for Quote
Sewer and Stormwater Impact Fee Study	Town of Pembroke Park	Florida	Subconsultant on Sole Source Contract
Stormwater Assessment	Town of Davie	Florida	Subconsultant to Engineering Firm
Financial Section for Engineering Report Associated with Outstanding Bonds - Consolidated System	Florida Governmental Utility Authority (FGUA)	Florida	Subconsultant to Engineering Firm
Financial Section for Engineering Report Associated with Outstanding Bonds - Dunnellon System	Florida Governmental Utility Authority (FGUA)	Florida	Subconsultant to Engineering Firm
Financial Section for Engineering Report Associated with Outstanding Bonds - Flagler System	Florida Governmental Utility Authority (FGUA)	Florida	Subconsultant to Engineering Firm
Financial Section for Engineering Report Associated with Outstanding Bonds - Lehigh Acres System	Florida Governmental Utility Authority (FGUA)	Florida	Subconsultant to Engineering Firm
Financial Section for Engineering Report Associated with Outstanding Bonds - Lindrick System	Florida Governmental Utility Authority (FGUA)	Florida	Subconsultant to Engineering Firm
Building Permit Fee Study	City of Palm Coast	Florida	Competitive Bidding
Water and Sewer Rate Study	City of Seward	Alaska	RFP
Assistance to United States Air Force in Negotiating New Water Supply Contract with Antelope Valley-East Kern Water Agency	Edwards Air Force Base	California	Subcontractor
Water and Wastewater Rate Study	City of Glenwood Springs	Colorado	RFP
Water Impact Fee Study	Town of Rico	Colorado	Sole Source
Wholesale Sewer Rate Study	City of Flint	Michigan	ITB
Comprehensive Water and Sewer Rate Study	City of Alamogordo	New Mexico	Sole Source
Utility Revenue Analysis	City of Alamogordo	New Mexico	Sole Source
Water, Sewer, and Surface Water Management (Stormwater) Rate Study and System Development Charge Review	City of Cornelius	Oregon	RFP
Water and Sewer Rate Study	City of Silverton	Oregon	RFP

RFP = Request for Proposals; RFQ = Request for Qualifications; ITB = Invitation to Bid

References

The RFP Reference Form in Tab 6 has contact information for five (5) GovRates clients who have worked with us for several years. The following two pages contain written references from other clients not on the RFP Reference Form. GovRates has a long history of excellent performance, repeat business, completing projects within budget, and offering exceptional customer service and value.

From: Marta Reczko <mreczko@margatefl.com>
Sent: Thursday, December 7, 2023 3:51 PM
To: Bryan Mantz <bmantz@govrates.com>
Cc: Ismael Diaz <idiaz@margatefl.com>; Jackie Earll <jearll@margatefl.com>; Curt Keyser <ckeyser@margatefl.com>
Subject: Collective Thanks from the Margate Utilities Team

Bryan
The entire Utilities Team wants to thank you for your incredible work on the water and wastewater rates project. Your expertise and hard work were key to getting approval from the city commissioners. Your patience and dedication over the last two years really kept us on track. Your report and presentation skills were crucial for our success.

Working with you has been a great pleasure. We've all learned a lot and enjoyed the collaboration. As we wrap up this project, we're keeping you in mind for future work. Your impact on our team has been significant.

Thanks again for everything.
Best regards,

Happy Holidays!

Marta Reczko
Assistant Director Utilities

City of Margate
Dept. of Environmental &
Engineering Services (DEES)
901 NW 66 Ave, Margate, FL 33063
Phone 954-884-3632 **Mobile** 615-585-1994

From: Stephanie Hernandez <shernandez@ci.alamogordo.nm.us>
Sent: Wednesday, June 26, 2024 2:19 AM
To: Bryan Mantz <bmantz@govrates.com>
Cc: Evelyn Huff <ehuff@ci.alamogordo.nm.us>; David Nunnelley <dnunnelley@ci.alamogordo.nm.us>; Nichole Sierra <nsierra@ci.alamogordo.nm.us>; Rick Holden <rholden@ci.alamogordo.nm.us>
Subject: Re: Fantastic Teamwork!

Bryan!

Thank you for all your hard work and time. This project took a long time to complete and I appreciate you not giving up on us. This was amazing and I've always our staff is amazing. And thank you for adjusting your schedule so quickly to be here for this meeting.

Soooooo what do you know about airport rates???? As you can see we've always said when it comes to staff providing the information it's never trusted or believed.
You sat through two meetings on airport leases, I bet you could go up there next meeting and just get it passed!

Seriously… you've kind of been an honorary staff member. I think I can speak for the rest when I say, we're gonna miss working with you.

If you ever need a reference… sign us up. You and your company are top notch.

Thank you again and safe travels.

Stephanie Hernandez
Assistant City Manager

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Tab 4:
PROJECT APPROACH

TAB 4:

PROJECT APPROACH

Value Added

The Project Team offers as part of our standard engagement for utility rate studies:

- Assistance with developing or improving a financial management policy document for the utility that could address debt service coverage and cash targets; capital reinvestment; debt management, etc. Having an adopted financial management policy document helps to guide future rate and financial decisions and is looked upon favorably by third-party evaluators such as credit rating agencies. The financial management policy document, which could possibly be presented concurrently with the rate study recommendations, also helps a utility communicate with customers. An article co-written by the proposed project manager entitled "Utility Best Management Practices: Strong Adopted Financial Management Policies" was the cover story of the April 2022 *Journal AWWA*.

- Assistance with developing appropriate automatic rate indexing or pass-through adjustment clauses. Many utilities increase their rates automatically (i.e., no formal hearing) each year based on a formula or established percentage / amount. Smaller, incremental rate increases over time are considered a utility best management practice. Automatic rate increase provisions are considered favorably by lenders and credit rating agencies since there is more assurance that rates will keep up with inflation and that the utility will be able to make its debt payments. An article written by the proposed project manager entitled "Automatic Rate, Fee, and Charge Increases for Water Utilities" was featured in the March 2021 *Journal AWWA*.

- State-of-the-art, customized, and easy-to-use financial models that are provided to the client. Clients have called GovRates models "worth the price of admission." We include in our models a single-tab financial rate scenario worksheet that can be extracted for high-level analysis. This one-tab worksheet allows the user to change rate adjustment, revenue, operating expense, pay-as-you-go capital funding, and other assumptions and to immediately see the effect on the utility financial metrics such as cash and debt service coverage.

- Extended planning periods based on client preferences. If a client would like a longer forecast period than what is specified in a request for proposals or qualifications, we will put together an extended forecast model at no additional charge.

- Performance benchmarking with similar utilities and with utility best management practices.

- Models developed so that future staff members can easily update the work of predecessors. For example, within our miscellaneous service charge models, we will typically have a tab that

defines each fee and what it recovers, and another tab that contains assumptions (linked to the fee calculations) used to calculate / derive the fees.

- Depending upon client preferences, development and integration into the financial models an asset replacement schedule linked to each utility's schedule of fixed assets. Deposits to renewal, replacement, and improvement funds should ideally be linked to asset replacement schedules.

- Exploration of revenue enhancement opportunities to mitigate or lower the need for user rate increases by fully developing other rates, charges, and fees and by reviewing certain policies. For example, we can consider approaches for utilities such as:
  - Right-sizing or developing new miscellaneous service charges.
  - Right-sizing or developing new charges to growth / development such as impact fees, guaranteed revenue charges / capacity reservation fees, accrued guaranteed revenue fees, and plan and construction review / inspection fees.
  - Right-sizing or implementing private fire protection service charges.
  - Modifying inactive account policies such that property owners are responsible for payment of monthly charges for service where service is available, regardless of whether the property is considered an active account.
  - Implementing mandatory connection policies.

- Pro bono (free) financial model technical support after project completion. We want to make sure that our clients can always use our financial models for planning purposes, and we provide support over the phone or via Teams or another virtual platform.

- A commitment to "no change orders" and completing our scope of services within budget to help ensure that our clients receive the very best value for financial and rate work.

Project Understanding

Developing a financial and rate plan for the City's water and wastewater utilities will involve:

- Working with the City to establish business and financial goals, objectives, and targets to be incorporated into the financial and rate plan for each utility. The plan should consider best management practices as recognized by the utility industry.

- Developing an in-depth understanding of each utility's operations and processes such that the cost of service and revenue necessary to fully fund the utility's operations can be identified.

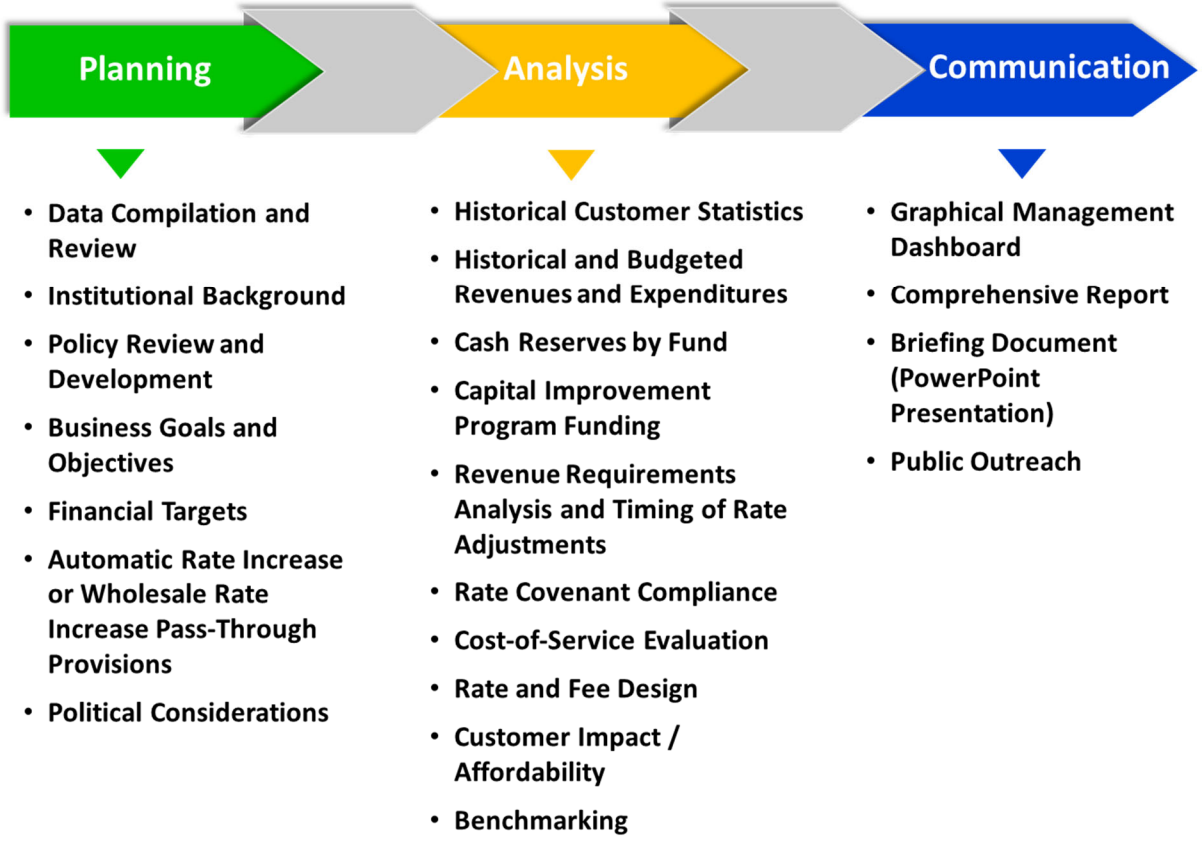
- Developing optimal funding and financing strategies for the multi-year capital improvement program to minimize rate increases and help keep rates affordable and competitive while adhering to utility best management practices and enabling the utility to accomplish its mission.

- Classifying costs as appropriate among customer classes and developing equitable and defensible rates, fees, and charges for each customer class.

- Developing impact fees that fully comply with the requirements of Florida statutory and case law.
- Performing rate / bill comparisons and benchmarking with other utilities.
- Developing a non-propriety, high-quality, state-of-the-art, customized, and easy-to-use financial planning model that properly represents each utility's business attributes and allows for scenario, sensitivity, and risk assessment analyses given changes in key assumptions such as system growth, usage per customer, staffing changes, capital needs, etc. The models will have graphical management dashboards to allow the City to analyze the forecasted financial position of the utility system, to evaluate funding and rate scenarios, and to determine potential risks and business strategies. The management dashboard will graphically represent financial and operational metrics that add value to the presentation of the financial forecast results for each scenario that the City would like to explore. GovRates includes in our models a single-tab financial and rate scenario worksheet that can be extracted for high-level analysis. This one-tab worksheet allows the user to change rate adjustment, revenue, operating expense, pay-as-you-go capital funding, and other assumptions and to immediately see the effect on the utility financial metrics such as cash and debt service coverage.
- Preparing a comprehensive report documenting all assumptions, methodologies, and findings. A detailed report will help the City staff reconcile projected vs. actual results and will provide assurance that all relevant operational and financial considerations were incorporated into the financial plan.
- Providing easy-to-understand briefing documents and other deliverables to facilitate public acceptance of the study recommendations.

Project Approach

An overview of the Project Team's approach is shown in the following chart. The recommendations developed during the study would consider utility best management practices.



Frequent communication would be a cornerstone of the project management approach. We would provide regular updates on our progress to provide the City staff with confidence that project goals and objectives were being met.

The Project Team uses Microsoft Teams and other virtual platforms to provide real-time review of our financial / rate models and project deliverables with clients. Teams sessions:

- Are very cost-effective, as they eliminate travel time and expenses.
- Can be scheduled with minimal lead time.
- Allow the working group to have more frequent meetings to communicate results, ideas, plans, and strategies as well as to address issues and help keep the project on schedule and within budget.

We will establish a shared project folder via Microsoft Teams to enable working group members to share files (e.g., data and deliverables). All of the data will be organized in the shared project folder so that working group members can see what has been provided.

The Project Team will attend up to five (5) onsite meetings with the City staff and/or the City Commission. We can attend as many virtual meetings as needed to discuss the project progress and present / review results.

The following is an overview of the major tasks to be performed for the water and wastewater system financial and rate plans. Many of the tasks are interrelated and will be performed concurrently.

Task 1: Administration and Coordination with the City

The Project Team will work with the City staff to initiate the project; review compiled information; finalize management goals and objectives for the project; establish financial policies and targets; recognize key issues to be addressed during the analyses; and identify primary staff members to interview as part of the financial planning process. We will discuss with the City staff any legal, operational, economic, or political constraints that may exist.

Task 2: Data Collection and Review

To perform the rate study as efficiently as possible, the Project Team will collect as much information as possible at the beginning of the study process. A detailed data request will be prepared for the City staff to compile information pertaining to the operation of each utility system. This information may include:

- Operating budget and historical operating results.
- Available cash or fund balances.
- Historical customer and usage statistics.
- Historical impact fee collections and associated equivalent residential units.
- Plant permits and capacity information.
- Monthly operating reports for the City treatment facilities that indicate the utilization of capacity.
- Anticipated hiring plan for the forecast period.
- Existing debt service schedule and associated financing documents.
- Detailed fixed asset records.
- Multi-year capital improvement program for each utility system.
- Master planning documents.
- Water consumptive use permit.
- Water and wastewater line inventory by size.
- Service area population estimates.
- Capacity reservations extended to the service area (e.g., sewer expansion program).
- Interlocal agreements.
- Historical and anticipated grant or other external funding for the utility system.
- Historical and anticipated debt financing for the utility system.
- Possible use of other funding sources (e.g., sales tax) for utility infrastructure.

We will review compiled information as soon as it is received to identify current issues. One of our fundamental goals is to ensure that the project is performed efficiently and cost-effectively and that

we make the best use of City staff time during onsite and virtual meetings. As previously mentioned, we will organize the data in a shared project folder.

Task 3: Water, Wastewater, Reclaimed Water, and Irrigation User Rates

Historical Customer Statistical Compilation

The project team will compile historical customer statistics based on reports generated from the City billing system for up to five (5) years to evaluate customer trends in customer growth; billed consumption / sales / flow; and the average billed usage or flow per customer. The Project Team will apply the customer statistics to the City rates for the historical period to derive revenue totals. If the revenues reconcile within the acceptable limits, the Project Team will have assurance that the detailed financial model would provide a reasonable platform from which to make customer and revenue projections.

Projected Customer Statistics, User Rate Revenues, and Other Revenues

The Project Team will prepare a forecast of customers and usage requirements by class for the City utility systems. The forecast will include the current budget year and extend up to 10 additional years (collectively, the "Forecast Period").

Based on the detailed customer billing information and corresponding forecast of customer growth and use, the Project Team will develop user rate revenue projections for the Forecast Period. The revenue forecast will also include projections of operating revenues other than user rate revenues, impact fee collections, and interest income. The financial model will have the flexibility to automatically adjust the rate / revenue projections based on changes in rates, consumption, and customer accounts.

Development of Projected Revenue Requirements

The Project Team will prepare a financial projection of the net revenue requirements for the water and wastewater systems that represent the funding requirements to be recovered through the user fee revenues. The Project Team will consider:

- Recent historical financial operations.
- Budgeted operations and maintenance expenses.
- Any expected cost trends or incremental operating expenses due to upgrades as a result of regulatory requirements and other investments in the multi-year capital improvement plan.
- Multi-year capital improvement program and projected funding sources.
- Any other funding criteria as provided by the City.
- Other non-operating revenue requirements such as interfund transfers, debt service, and renewal / replacement funding requirements.

Based on the collected data, the Project Team would develop customized planning models for the City. Clients have called GovRates models "worth the price of admission." GovRates financial and operational planning models are typically Excel-based, are tailored to a client's operation, and are structured to facilitate the decision-making process. **Our financial models are detailed, but also typically have single-tab high-level financial and rate worksheets that can be extracted for high-level analysis**. Many of our clients have found these high-level worksheets to be valuable and have sometimes used them to communicate with members of the governing body. The following graphic shows a sample high-level financial and rate worksheet. Within this worksheet, the user can change any of the numbers **highlighted in yellow** and immediately see the effect on the overall financial picture.

Table RateScenario

High-Level Water and Wastewater Financial and Rate Scenario Worksheet

Line No.	Description	Fiscal Year Ending September 30, 2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1	**Overall Rate Adjustments**	0.00%	8.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.00%	3.00%	3.00%
2	**All-In Net Revenues Debt Service Coverage (Target 200%)**	225%	391%	276%	248%	285%	314%	302%	305%	274%	363%	508%
3	**Debt Service Coverage Target Met?**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	**Amount Available for Pay-As-You-Go Capital Funding After Payment of Operating Expenses and Debt Service**	$ 4,614,508	$ 6,523,531	$ 5,487,592	$ 5,925,391	$ 7,382,456	$ 8,571,633	$ 9,036,241	$ 9,879,679	$ 9,860,779	$ 11,910,157	$ 13,960,718
5	**Ending Unrestricted Cash and Cash Equivalents Balance [1]**	$ 24,327,258	$ 16,551,224	$ 15,818,313	$ 16,503,916	$ 16,971,632	$ 18,982,258	$ 21,793,256	$ 22,718,820	$ 25,058,806	$ 29,671,504	$ 36,435,920
6	Target Cash Balance (Recognized Cash Target) [2]	$ 12,544,223	$ 13,946,275	$ 14,918,581	$ 15,946,358	$ 17,032,486	$ 18,179,991	$ 19,392,045	$ 20,671,974	$ 21,811,509	$ 23,000,810	$ 24,241,840
7	**Cash Balance Target Met?**	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
8	Minimum Balance - 20% of Operating Budget for Emergencies and Disasters Per City Policy) [2]	$ 5,763,637	$ 6,150,340	$ 6,495,044	$ 7,010,115	$ 7,577,968	$ 8,098,097	$ 8,601,901	$ 9,125,314	$ 9,589,138	$ 10,087,701	$ 10,599,649
9	**Cash Balance Minimum Met?**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	**Residential Bill as % of Median Household Income [2]**	1.59%	1.68%	1.71%	1.75%	1.78%	1.82%	1.85%	1.89%	1.91%	1.92%	1.94%
11	**Is Rate and Financial Plan Affordable? (< 2% MHI)**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Residential Water and Wastewater Bill @ 3,000 Gallons Usage	$ 85.34	$ 92.17	$ 95.85	$ 99.69	$ 103.68	$ 107.82	$ 112.14	$ 116.62	$ 120.12	$ 123.72	$ 127.43
13	Change in Monthly Bill		6.83	3.69	3.83	3.99	4.15	4.31	4.49	3.50	3.60	3.71
14	Average of Surveyed Utilities (Assumes 4% Annual Increase)	72.82	75.73	78.76	81.91	85.19	88.60	92.14	95.83	99.66	103.65	107.79
15	Starting Cash and Cash Equivalents Balance	$ 38,573,364	$ 24,327,258	$ 16,551,224	$ 15,818,313	$ 16,503,916	$ 16,971,632	$ 18,982,258	$ 21,793,256	$ 22,718,820	$ 25,058,806	$ 29,671,504
16	Year-End Surplus / (Deficiency)	(14,246,106)	(7,776,033)	(732,911)	685,603	467,716	2,010,627	2,810,998	925,564	2,339,986	4,612,698	6,764,417
17	**Operating Expenses** (Does Not Include Depreciation and Amortization Expenses)	$ 20,507,342	$ 21,985,925	$ 23,877,691	$ 25,121,440	$ 26,507,584	$ 27,919,192	$ 29,494,150	$ 30,921,904	$ 32,421,584	$ 33,993,964	$ 35,615,395
18	**Total Debt Service [3]**	$ 3,696,335	$ 2,242,244	$ 3,109,937	$ 4,003,743	$ 3,999,803	$ 3,999,659	$ 4,479,113	$ 4,824,985	$ 5,663,330	$ 4,534,386	$ 3,422,132
	Other Revenue Requirements											
19	**Pay-As-You-Go Capital Improvement Program [4]**	$ 20,010,614	$ 15,799,564	$ 7,520,502	$ 6,639,788	$ 8,314,740	$ 7,961,006	$ 7,625,243	$ 10,354,115	$ 8,920,793	$ 8,697,459	$ 8,596,301
20	Additional Item	-	-	-	-	-	-	-	-	-	-	-
21	Total Other Revenue Requirements	$ 20,010,614	$ 15,799,564	$ 7,520,502	$ 6,639,788	$ 8,314,740	$ 7,961,006	$ 7,625,243	$ 10,354,115	$ 8,920,793	$ 8,697,459	$ 8,596,301
22	Gross Revenue Requirements	$ 44,214,292	$ 40,027,733	$ 34,508,130	$ 35,764,972	$ 38,822,127	$ 39,879,857	$ 41,598,506	$ 46,101,004	$ 47,005,707	$ 47,225,809	$ 47,633,828
	Less Income and Funds from Other Sources											
23	Other Operating Revenue	$ 3,343,250	$ 2,370,950	$ 2,141,770	$ 2,591,770	$ 3,225,270	$ 3,496,770	$ 3,496,770	$ 3,496,770	$ 3,496,770	$ 3,496,770	$ 3,496,770
24	Bulk Water Revenue	38,039	38,039	38,039	38,039	38,039	38,039	38,039	38,039	38,039	38,039	38,039
25	**Grant Reimbursements**	-	-	-	-	-	-	-	-	-	-	-
26	**Capacity Fees Used to Pay City Debt Service**	150,000	500,000	500,000	600,000	600,000	600,000	600,000	600,000	600,000	650,000	650,000
27	**Capacity Fees Used to Pay Peace River Debt Service**	1,000,000	1,000,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	750,000	750,000
28	Unrestricted Interest Income	-	62,764	43,843	85,097	88,437	90,693	151,938	173,590	181,991	263,166	306,372
29	Net Revenue Requirements	$ 39,683,003	$ 36,055,980	$ 30,984,478	$ 31,650,067	$ 34,070,382	$ 34,854,356	$ 36,511,760	$ 40,992,606	$ 41,888,907	$ 42,027,834	$ 42,392,648
	Revenue from Existing Rates											
30	**System Revenue**	$ 25,436,897	$ 26,185,136	$ 26,933,376	$ 27,681,615	$ 28,429,854	$ 29,178,094	$ 29,926,333	$ 30,674,573	$ 31,422,812	$ 32,171,052	$ 32,919,291
31	Prior Year Rate Adjustment	-	-	2,154,670	3,410,375	4,779,855	6,269,005	7,884,010	9,631,360	11,517,860	13,111,019	14,806,014
32	Total Applicable Rate Revenue	$ 25,436,897	$ 26,185,136	$ 29,088,046	$ 31,091,990	$ 33,209,709	$ 35,447,098	$ 37,810,343	$ 40,305,933	$ 42,940,673	$ 45,282,070	$ 47,725,305
33	Rate Adjustments	0.00%	8.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.00%	3.00%	3.00%
34	Effective Months	12	12	12	12	12	12	12	12	12	12	12
35	Percent of Current Year Effective	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
36	Revenue from Current Rate Adjustment w/ Effective Months	$ -	$ 2,094,811	$ 1,163,522	$ 1,243,680	$ 1,328,388	$ 1,417,884	$ 1,512,414	$ 1,612,237	$ 1,288,220	$ 1,358,462	$ 1,431,759
37	Total Revenue w/ Effective Months	$ 25,436,897	$ 28,279,947	$ 30,251,567	$ 32,335,670	$ 34,538,097	$ 36,864,982	$ 39,322,757	$ 41,918,170	$ 44,228,893	$ 46,640,532	$ 49,157,065
38	Revenue Surplus/(Deficiency) Under Proposed Rates	$ (14,246,106)	$ (7,776,033)	$ (732,911)	$ 685,603	$ 467,716	$ 2,010,627	$ 2,810,998	$ 925,564	$ 2,339,986	$ 4,612,698	$ 6,764,417
39	Revenue Surplus/(Deficiency) as % of Revenue	-56.0%	-27.5%	-2.4%	2.1%	1.4%	5.5%	7.1%	2.2%	5.3%	9.9%	13.8%

Footnotes:

[1] Does not include cash balances in capacity fee funds or construction funds from debt financing.

[2] Amounts derived as follows:

Cash Target												
120 Days of Rate Revenue	$ 8,362,815	$ 9,297,517	$ 9,945,721	$ 10,630,905	$ 11,354,991	$ 12,119,994	$ 12,928,030	$ 13,781,316	$ 14,541,006	$ 15,333,874	$ 16,161,227
Annual Depreciation Expense	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219	5,797,219
Total	$ 14,160,034	$ 15,094,736	$ 15,742,940	$ 16,428,124	$ 17,152,210	$ 17,917,213	$ 18,725,249	$ 19,578,535	$ 20,338,225	$ 21,131,093	$ 21,958,446
180 Days of Rate Revenue	$ 12,544,223	$ 13,946,275	$ 14,918,581	$ 15,946,358	$ 17,032,486	$ 18,179,991	$ 19,392,045	$ 20,671,974	$ 21,811,509	$ 23,000,810	$ 24,241,840
365 Days Cash on Hand	$ 20,507,342	$ 21,985,925	$ 23,877,691	$ 25,121,440	$ 26,507,584	$ 27,919,192	$ 29,494,150	$ 30,921,904	$ 32,421,584	$ 33,993,964	$ 35,615,395
Recognized Cash Target	$ 12,544,223	$ 13,946,275	$ 14,918,581	$ 15,946,358	$ 17,032,486	$ 18,179,991	$ 19,392,045	$ 20,671,974	$ 21,811,509	$ 23,000,810	$ 24,241,840
Cash Minimum												
Minimum Balance - 20% of Operating Budget for Emergencies and Disasters Per City Policy	$ 5,763,637	$ 6,150,340	$ 6,495,044	$ 7,010,115	$ 7,577,968	$ 8,098,097	$ 8,601,901	$ 9,125,314	$ 9,589,138	$ 10,087,701	$ 10,599,649
Debt Service Coverage Target												
All-In Debt Service Coverage Target	200%											

The models are non-proprietary and would be provided to the City staff for internal use following the completion of any project. The financial planning models can help project the potential outcomes of various scenarios and can assist management in analyzing the "big picture" from both departmental and comprehensive perspectives.

All information and calculations in GovRates models are fully disclosed. We do not typically use hidden logic or password-protected cells unless requested by a client. A user of any model

developed for the City could easily review numbers for accuracy and make adjustments based on the changing needs of the City. The GovRates models have checks, balances, and reconciliations throughout the various tabs to i) ensure that data and information incorporated into the models reconcile with source documents; and ii) validate the integrity of data from tabs that are linked.

A GovRates model often has an "Index of Tabs" at the front of the model with hyperlinks to allow the user to instantly go to specific tabs in the model. The model tabs are colored by theme (e.g., revenues, operating expenses, capital improvement program, etc.) and numbered for easy navigation.

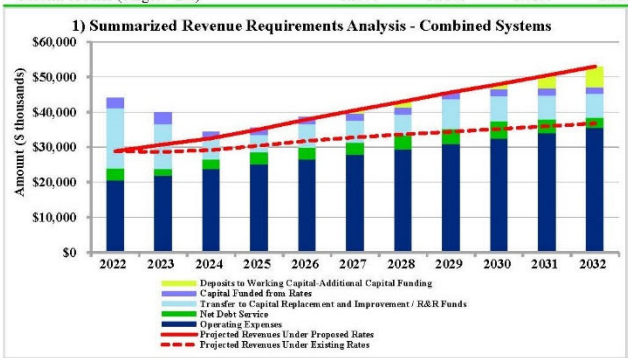
The "Executive Summary" or high-level results tabs are typically toward the front of the model. Based on the high-level results, users can review the additional detail in supporting tabs. The high-level results tabs usually include graphical management dashboards that show relevant financial and operational metrics. The data behind all of the graphs is on a single tab which can be printed to facilitate the review process. Sample pages from a graphical management dashboard are shown in the following graphics:

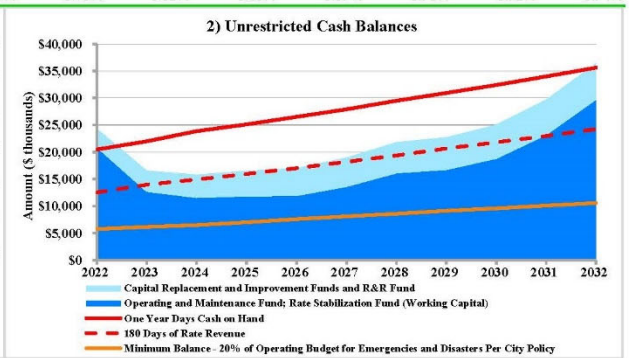
SAMPLE PAGES FROM GRAPHICAL MANAGEMENT DASHBOARD

Utility Rate Analysis

Water and Wastewater System Financial Overview

High-Level Summary	Fiscal Year Ending September 30, 2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Identified Revenue Adjustments											
Water System	**0.00%**	**8.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**3.00%**	**3.00%**	**3.00%**
Wastewater System	**0.00%**	**8.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**3.00%**	**3.00%**	**3.00%**
Combined System	**0.00%**	**8.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**4.00%**	**3.00%**	**3.00%**	**3.00%**
Effective Months	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
Unrestricted Cash Balance ($ 000's)	$ 24,327	$ 16,551	$ 15,818	$ 16,504	$ 16,972	$ 18,982	$ 21,793	$ 22,719	$ 25,059	$ 29,672	$ 36,436
One Year Days Cash on Hand	20,507	21,986	23,878	25,121	26,508	27,919	29,494	30,922	32,422	33,994	35,615
180 Days of Rate Revenue	12,544	13,946	14,919	15,946	17,032	18,180	19,392	20,672	21,812	23,001	24,242
20% of Op Budget for Emerg. and Disast.	5,764	6,150	6,495	7,010	7,578	8,098	8,602	9,125	9,589	10,088	10,600
All-In Net Revenues Debt Coverage	225%	391%	276%	248%	285%	314%	302%	305%	274%	363%	508%
Revenue Surplus / (Deficiency) ($ 000's):											
Water System	$ (8,063)	$ (3,230)	$ (534)	$ (511)	$ (631)	$ (32)	$ (22)	$ (1,004)	$ (431)	$ (298)	$ (91)
Wastewater System	(6,183)	(4,982)	(616)	796	731	1,709	2,521	1,638	2,509	4,662	6,635
Combined System	(14,246)	(8,212)	(1,150)	285	101	1,677	2,498	634	2,078	4,364	6,544
Monthly Bill @ 3,000 Gallons	$ 85.34	$ 92.16	$ 95.84	$ 99.67	$ 103.65	$ 107.79	$ 112.12	$ 116.61	$ 120.09	$ 123.69	$ 127.42
Increase		6.82	3.68	3.83	3.98	4.14	4.33	4.49	3.48	3.60	3.73
Cost Per Gallon of Total Bill	$ 0.028	$ 0.031	$ 0.032	$ 0.033	$ 0.035	$ 0.036	$ 0.037	$ 0.039	$ 0.040	$ 0.041	$ 0.042
Percent of MHI (Target < 2%)	1.59%	1.68%	1.71%	1.75%	1.78%	1.82%	1.85%	1.89%	1.91%	1.92%	1.94%

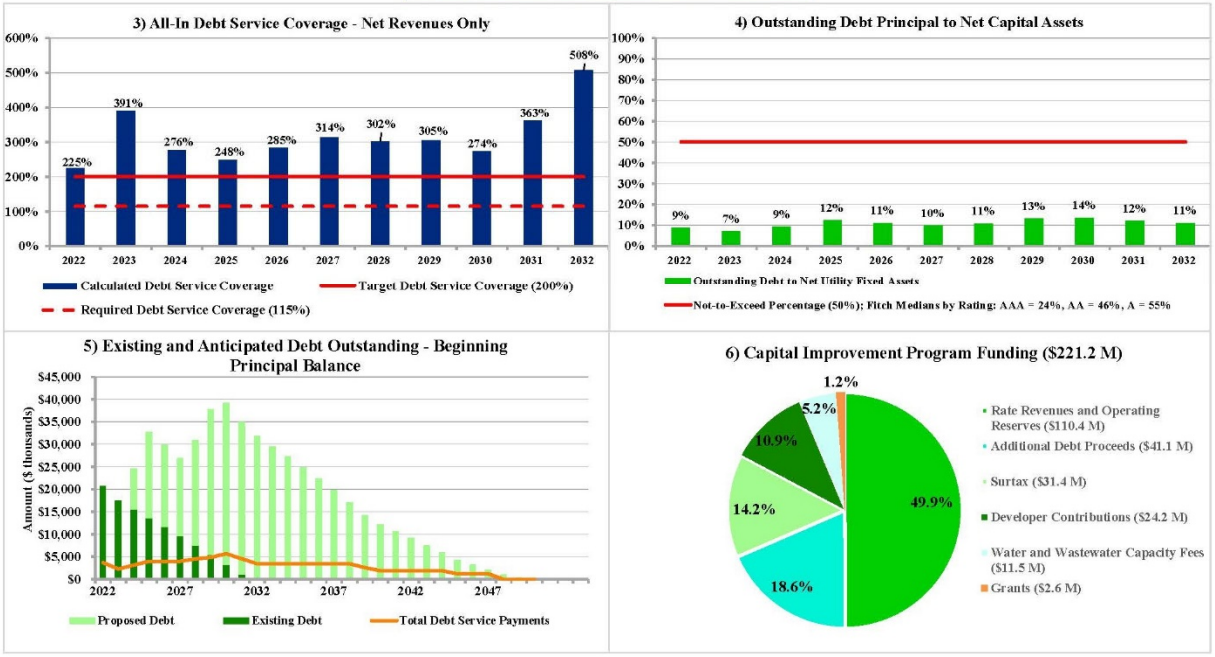




SAMPLE PAGES FROM GRAPHICAL MANAGEMENT DASHBOARD

Utility Rate Analysis

Water and Wastewater System Financial Overview



GovRates models have specific tabs for major assumptions and client accounting codes, and the models automatically adjust in real-time based on assumption changes. During meetings, we can perform "what if" scenario analyses with clients. Different colors may be used to indicate whether a component of a model is a link to another tab or a user input.

For rate studies, GovRates models may contain projections of:

- Customer statistics / customer growth.
- User rate revenue.
- Impact / capacity fee collections where applicable.
- Other "miscellaneous" revenues.
- Operating expenses.
- Multi-year capital program and funding sources.
- Cash balances and interest income.
- Existing and projected debt service.
- Debt service coverage and other financial metrics (e.g., outstanding debt-to-net fixed assets, operating margin, affordability based on median household income, etc.).
- Transfers for reinvestment (e.g., renewals and replacements).
- Other transfers (e.g., to the General Fund).
- Sources and uses of funds.
- Revenue requirements and revenue sufficiency.
- Capacity utilization.

- Other financial or operational metrics that add value to the presentation.

Cost-of-Service Analysis, Rate / Fee Designs, and Customer Impact Analysis

The cost-of-service and rate design analysis will equitably allocate the revenue requirements among the various customer classes of service for each utility. For each applicable year of rate design, the Project Team will classify the various revenue requirements among the customer classes and rate structure components to assist in the evaluation of cost-based rates and overall cost recovery strategies.

Cost allocation factors may be based on:

- Peaking relationships of customer usage and treated flows.
- Classification or functionalization of system assets.
- Revenue classifications.
- Employee salaries and functions.
- Line inventories.
- Customer usage by class.
- Functionalization of projects financed with debt issues.
- Other factors.

Unit costs will be calculated for each customer class, and the customer class costs will be compared with revenues from existing rates to determine appropriate customer class rate adjustments, if any. The unit costs calculated in the cost-of-service analysis will be compared with existing rate components and prices to establish a plan – in conjunction with the City staff – to implement cost-based rates.

The Project Team will design rates for service based on:

- Customer class / service type.
- Cost classification analyses / unit cost and customer class costs.
- Cost classifications by rate structure component.
- Consideration of historical rate form.
- Customer impact.
- City goals and objectives regarding pricing policy.

Some other key considerations for the rate designs are competitiveness, the avoidance of "rate shock," and affordability. For any proposed rate design, the Project Team will prepare a customer impact analysis (e.g., effect on monthly bills for each customer class / service type) as well as pros and cons of the alternative.

Task 4: Evaluate Impact Fees and Miscellaneous Service Charges

To evaluate the water and wastewater impact fees, GovRates will:

- Review the fixed asset register of utility system assets and functionalize the assets to determine the asset cost base appropriate for the impact fee calculations.
- Review the multi-year capital improvement program of the utility and functionalizing each project to determine the cost basis appropriate for the system development fee calculations.
- Determine appropriate utility level of service standards for the impact fee calculations.
- Prepare a comparison of the existing and proposed impact fees with those of neighboring utilities.

The Project Team will discuss with the City staff any management preferences with respect to the Equivalent Residential Unit (ERU) determination methodology for nonresidential customers. We maintain a database on how many other utilities in Florida determine ERU's. Accepted methodologies within the State of Florida for water and wastewater impact fees include meter equivalents; customer attributes (e.g., flow per seat, square feet, etc.); plumbing fixtures; historical flow of similar establishments or projected usage / flow; and hybrid approaches. Each accepted methodology has advantages and disadvantages.

The Project Team will also discuss with the City staff alternative impact fee submission policies as well as policies to review actual usage vs. capacity paid for through the impact fees. Alternative impact fee submission policies provide a formal process for developers to submit alternative impact fee calculations if the developers believe that the development impacts on the system(s) are less than the calculated amounts under the adopted methodology. If the alternative impact fee is accepted, the City may want to reserve the right to review actual consumption over, say, a 24-month period and require payment of additional impact fees if the actual consumption exceeds what is reflected in the alternative impact fee calculations.

For the review of miscellaneous service charges and policies, the Project Team will:

- Work with the City staff to determine miscellaneous service charges which should be updated as well as potential additional fees for service (e.g., revenue enhancement opportunities).
- For all applicable fees, identify the costs of providing service by component, including but not limited to labor and time; vehicle and equipment use; parts and materials; customer service-related costs, etc. Within the miscellaneous service charge model, we will have a tab that defines each fee and what it recovers and another tab that contains assumptions (linked to the fee calculations) used to calculate / derive the fees.
- Review applicable utility policies to determine if the City may want to update them.

Task 5: Report and Presentation

The Project Team will prepare a comprehensive report documenting our assumptions, analyses, and primary data sources. We strongly believe in the principles of full disclosure in all of our deliverables. Detailing our assumptions, methodologies, and findings will help the City staff reconcile projected vs. actual results and will provide assurance that all relevant operational and financial considerations were incorporated into the financial forecast. We will review the rate resolutions or ordinances prepared by the City attorney as well as the executive summaries prepared by the City staff for consistency with the study recommendations.

The Project Team will prepare briefing documents (PowerPoint presentation) as applicable to summarize the project results for presentation to the City Commission and public.

List of Study Deliverables

The anticipated deliverables to be provided to the City for the financial and rate plan developed during the utility rate study include the following items:

- Initial data request for information compilation.
- Kickoff meeting agenda package.
- Financial models for all rates evaluated – drafts and final.
- Schedule of existing and proposed rates, fees, and charges.
- Financial management policy document, as applicable.
- Rate / bill comparisons of existing and proposed rates among customer classes and benchmarking with neighboring or other jurisdictions.
- Comprehensive rate study report providing the assumptions, findings, and conclusions of the study – drafts and final.
- Briefing document for presentation of study results to the City Commission and public – drafts and final.

Project Timeline

If selected, GovRates would work to complete the project within three or four months so that the City staff could incorporate the study results during the Fiscal Year 2027 budgetary process. The "Project Tasks and Not-to-Exceed Budget" detail in Tab 5: Price Form section of this proposal shows estimated hours by project tasks. Overall, GovRates has budgeted up to 242 hours to complete the project.

Prior Implementation Methodologies

GovRates always performs cost-based analyses to determine the full cost of providing each service. We use industry-standard approaches recognized by the American Water Works Association (AWWA) and Water Environment Federation (WEF), and we have been heavily involved in the

development of industry-leading manuals of practice on the development of utility rates, fees, and charges. Based on the results of the cost-of-service analysis, an implementation plan is developed based on rate goals and objectives, as well as what would be acceptable to the governing body and public. Conforming with utility best financial management practices will usually provide the lowest rates over the long term that would still enable the utility to accomplish its mission.

Rate Structure Changes for Utilities Within Volusia County

For the City of Deltona, Florida, GovRates restructured the wastewater and reclaimed water rates to provide more revenue stability. For the City of Edgewater, Florida, we restructured the water user rates so that 1,000 gallons of the average residential customer's monthly water usage (3,000 gallons) would not be billed at an expensive second pricing tier.

Tab 5:
PRICE FORM

TAB 5:
PRICE FORM

Proposed Not-to-Exceed Budget

For our level of expertise and experience, the Project Team offers top value for the services we provide. **We have always completed projects on time and within budget.** We propose to establish a not-to-exceed budget for the project of **$29,800**, which assumes a level of service of up to 242 hours to complete the project and includes all direct (including travel) and indirect costs. We have assumed up to five (5) onsite meetings. A breakdown of the not-to-exceed budget starts on the following page. The level of service recognized includes:

- Deriving defensible water, wastewater, reclaimed water, and irrigation rates, fees, and charges that fully comply with all requirements of Florida statutory and case law.
- Providing the City with state-of-the-art financial models – detailed and high-level – with the rate calculations.
- Providing the City with a detailed report containing all of the assumptions, methodologies, and conclusions.
- Working with the City to determine appropriate financial management policies for the utility and to develop or update a financial management policy document.
- Providing the necessary outreach to secure public acceptance of our recommendations.
- Providing outstanding customer service and value to exceed the City's expectations for the project.

Standard Hourly Rates

The Project Team's proposed hourly billing rates are as follows:

SCHEDULE OF PROPOSED HOURLY BILLING RATES [*]	
Project Team Member	**Hourly Billing Rate**
Project Manager	$150.00
Senior Consultant	$100.00

[*] Rates would be applied to actual hours worked on the project, subject to the not-to-exceed budget.

City of DeLand, Florida

Project Tasks and Not-to-Exceed Budget for Utility Rate Study

Line No.	Description	Principal-in-Charge / Project Manager	Senior Consultant	Total Estimated Hours	Total Estimated Cost
	Project Billing Rates ($/Hour)	**$150.00**	**$100.00**		
	Task 1: Administration and Coordination with the City				
1	Review of Fiscal Policies / Objectives	2	4	6	$700
	Five Onsite Meetings, Including Preparation: [*]				
2	Five (5) Onsite Meetings (Dates To Be Determined)	12	2	14	2,000
	Task 2: Data Collection and Review				
3	Data Collection and Review	2	4	6	700
	Task 3: Water, Wastewater, Reclaimed Water, and Irrigation User Rates				
4	Historical Customer Statistical Compilation	8	16	24	2,800
5	Projected Customer Statistics, User Rate Revenues, and Other Revenues	2	4	6	700
	Development of Projected Revenue Requirements				
6	a. Operating Expense Projections	4	8	12	1,400
7	b. Capital Improvement Program Funding Analysis	8	16	24	2,800
8	c. Other Revenue Requirements	2	2	4	500
9	d. Development of Net Revenue Requirements / Rate Phasing	8	12	20	2,400
10	e. Rate Covenant Compliance Review	2	0	2	300
	Cost-of-Service, Rate / Fee Designs, and Customer Impact Analysis				
11	a. Water, Wastewater, Reclaimed Water, and Irrigation Billing Units Analysis	4	8	12	1,400
12	b. Allocation of Net Revenue Requirements to Customer Classes	4	4	8	1,000
13	c. Design Water, Wastewater, Reclaimed Water, and Irrigation Rates	4	8	12	1,400
14	d. Bill Impact Analysis and Rate Comparisons	2	4	6	700

City of DeLand, Florida

Project Tasks and Not-to-Exceed Budget for Utility Rate Study

Line No.	Description	Principal-in-Charge / Project Manager	Senior Consultant	Total Estimated Hours	Total Estimated Cost
	Project Billing Rates ($/Hour)	**$150.00**	**$100.00**		
	Task 4: Development of Water and Wastewater Impact Fees and Review of Miscellaneous Service Charges				
15	Impact Fee Review	16	8	24	3,200
16	Impact Fee Comparison	1	4	5	550
17	Miscellaneous Fee Evaluation and Existing Utility Ordinance Review	4	8	12	1,400
18	Miscellaneous Fee Comparison	1	8	9	950
	Task 5: Report and Presentation				
19	Report and Briefing Document Preparation	24	8	32	4,400
20	Rate Resolution / Ordinance Assistance and Executive Summary Review	2	2	4	500
21	**Total Cost**	**112**	**130**	**242**	**$29,800**
22	**Total Not-to-Exceed Budget (Rounded)**				**$29,800**

[*] Additional meetings will be conducted virtually as a component of accomplishing the various Project tasks.

GovRates
Utility, Financial, Rate, and Management Consultants for Governments
www.govrates.com

Tab 6:
REQUIRED PROPOSAL FORMS

SUBMIT TO: CITY OF DELAND FINANCE DEPT., 2ND FLOOR PURCHASING COORDINATOR 120 SOUTH FLORIDA AVENUE DELAND, FLORIDA 32720	**REQUEST FOR PROPOSAL**	
CONTACT: **Corey McMillen** mcmillenc@deland.org purchasing@deland.org		
PHONE: **386-626-7078**	**RFP-26-02**	*SUBMITTALS RECEIVED AFTER SPECIFIED DATE AND TIME WILL NOT BE CONSIDERED*
RFP TITLE: Utility Rate Study		**SUBMITTAL DEADLINE:** **November 25, 2025 @ 2:00 P.M.**
PRE-PROPOSAL CONFERENCE DATE, TIME AND LOCATION: N/A		**PROPOSAL BOND REQUIRED: N/A**
RESPONDENT NAME: GovRates, Inc.		**FEDERAL ID # OR SOCIAL SECURITY #:** 81-4944696
MAILING ADDRESS: 1988 Varick Way		**TELEPHONE #:** (833) GOV-PLAN; (833) 468-7526
CITY – STATE – ZIP: Casselberry, FL 32707-2409		**FAX #:** (833) GOV-PLAN; (833) 468-7526
X  *AUTHORIZED SIGNATURE*		**EMAIL:** govrates@govrates.com
		Title Chief Executive Officer
Printed Name Jenny Mantz		Date 11/21/2025

By my signature I certify that this offer is made without prior understanding, agreement, or connection with any corporation, firm, business entity, or person submitting an offer for the same materials, supplies, equipment, or service(s), and is in all respects fair and without collusion or fraud. I further agree that if the offer is accepted, the offeror will convey, sell, assign, or transfer to the City of DeLand all right, title, and interest in and to all causes of action it may now or hereafter acquire under the Antitrust laws of the United States and the State of Florida for price fixing relating to the particular commodity(s) or services(s) purchased or acquired by the City of DeLand. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the vendor.

THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR RESPONSE

GENERAL CONDITIONS AND INSTRUCTIONS

******PLEASE READ CAREFULLY******

1. **SUBMISSION OF OFFERS:** All offers shall be submitted in a sealed envelope or package. The invitation numbers, title, and opening date shall be clearly displayed on the outside of the sealed envelope or package. The delivery of responses to the receptionist located on the 2nd floor of City Hall prior to the specified date and time is solely and strictly the responsibility of the offeror. Any submittal received after the specified date and time will not be considered.

   Responses shall be submitted on forms provided by the City. Additional information may be attached to the submittal. Facsimile submissions are NOT acceptable. No offer may be modified after acceptance. No offer may be withdrawn after opening for a period of sixty (60) days unless otherwise specified.

2. **EXECUTION OF OFFER:** Offer shall contain a manual signature in the space(s) provided of a representative authorized to legally bind the offeror to the provisions therein. All spaces requesting information from the offeror shall be completed. Responses shall be typed or printed in ink. Use of erasable ink or pencil is not permitted. Any correction made by the offeror to any entry must be initialed.

UTILITY RATE STUDY
RFP-26-02
ACKNOWLEDGMENT OF TERMS, CONDITIONS, AND ADDENDA

PROMPT PAYMENT DISCOUNT

The City of Deland shall remit payment in accordance with the Florida Prompt Payment Act, Florida Statutes section 218.70. Contractors may offer cash discounts for prompt payment but they will not be considered in determination of award. If a bidder offers a discount, it is understood that the discount time will be from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.

* If Prompt Payment Discount is offered please state discount and terms:

_____

ADDENDUM ACKNOWLEDGMENT:

Add. No. N/A Dated _____ / Add. No. _____ Dated _____

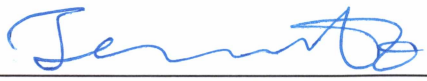
Add. No. _____ Dated _____ / Add. No. _____ Dated _____

I hereby acknowledge that I have read, understand, and agree to all terms, conditions, insurance, scope of work, specifications and pricing for Proposal # RFP-26-02/Utility Rate Study.

VENDOR NAME GovRates, Inc.

ADDRESS 1988 Varick Way; Casselberry, FL 32707-2409

AUTHORIZED

SIGNATURE 

PRINTED

SIGNATURE Jenny Mantz
Chief Executive Officer DATE 11/21/2025

TELEPHONE# (833) GOV-PLAN; (833) 468-7526 FAX # (833) GOV-PLAN; (833) 468-7526

EMAIL: govrates@govrates.com

CONTRACTOR AFFIDAVIT REGARDING SCRUTINIZED COMPANY LIST

Awarded Contractor shall certify that it and its subcontractors are not on the Scrutinized Companies that Boycott Israel List. Pursuant to Section 287.135, F.S. If the Contract is for more than $1,000,000 the Contractor further certifies that it and its subcontractors are also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in Section 287.135, F.S.

For Contracts of any amount, if the City determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, the City shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the City's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or on a case-by-case basis the City may choose to maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met. For Contracts $1,000,000 and greater, if the City determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the City shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the City's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or on a case-by-case basis the City may choose to maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

STATE OF FLORIDA

CITY OF Seminole

BEFORE ME, the undersigned authority, personally appeared Jenny Mantz, who, being by me first duly sworn, made the following statement:

1. The Business address of GovRates, Inc. (name of bidder or Contractor) is 1988 Varick Way; Casselberry, FL 32707-2409.

2. My relationship to GovRates, Inc. (name of bidder or Contractor) is Chief Executive Officer (relationship such as sole proprietor, partner, president, vice president).

3. I understand that "Boycott of Israel" has the same meaning as defined in §215.4725, Florida Statutes, and means refusing to deal, terminating business activities, or taking other actions to limit commercial relations with Israel, or persons or entities doing business in Israel or in Israeli-controlled territories, in a discriminatory manner. A statement by a

NON-COLLUSION AFFIDAVIT

State of Florida)

City of Seminole)

Jenny Mantz being first duly sworn, deposes and says that:

(1) He/she is the Chief Executive Officer, (Owner, Partner, Officer, Representative or Agent) of GovRates, Inc., the Contractor that has submitted the attached Proposal;

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal;

(3) Such Proposal is genuine and is not a collusive or sham Proposal;

(4) Neither the said Contractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Contractor, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or to refrain from bidding in connection with such Work; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Contractor, firm, or person to fix the price or prices in the attached Proposal or of any other Contractor, or to fix any overhead, profit, or cost elements of the Proposal price or the Proposal price of any other Contractor, or to secure trough any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Work;

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Contractor or any other of its agents, representatives, owners, employees or parties in interest, including this affiant.

By: _____
Signature of Individual

Jenny Mantz
Printed Name of Individual

Chief Executive Officer
Title of Individual

Signed, sealed and delivered in the presence of:

_____, Nicole Valoy
Witness

_____
Witness

company that it is participating in a boycott of Israel, or that it has initiated a boycott in response to a request for a boycott of Israel or in compliance with, or in furtherance of, calls for a boycott of Israel, may be considered by the State Board of Administration to be evidence that a company is participating in a boycott of Israel. The term does not include restrictive trade practices or boycotts fostered or imposed by foreign countries against Israel.

4. I understand that "business operations" means, for purposes specifically related to Cuba or Syria, engaging in commerce in any form in Cuba or Syria, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, military equipment, or any other apparatus of business or commerce.

5. GovRates, Inc. (name of the bidder or Contractor) is not on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, Florida Statutes, or is engaged in a boycott of Israel.

6. GovRates, Inc. (name of the bidder or Contractor) is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, Florida Statutes.

7. GovRates, Inc. (name of the bidder or Contractor) is not engaged in business operations in Cuba or Syria.

Signature

Sworn to and subscribed before me in the state and City first mentioned above on the 21st day of November, 2025.

Valerie Viola Prince
Notary Public
Valerie Viola Prince
My commission expires:
02/05/2028

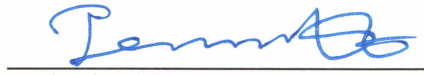
(AFFIX SEAL or STAMP)

VALERIE VIOLA PRINCE
Notary Public
State of Florida
Comm# HH489367
Expires 2/5/2028

CONFLICT OF INTEREST AFFIDAVIT

By the signature below, the firm (employees, officers and/or agents) certifies, and hereby discloses, that, to the best of their knowledge and belief, all relevant facts concerning past, present, or currently planned interest or activity (financial, contractual, organizational, or otherwise) which relates to the proposed work; and bear on whether the firm (employees, officers and/or agents) has a possible conflict have been fully disclosed.

Additionally, the firm (employees, officers and/or agents) agrees to immediately notify in writing the Finance Director, or designee, if any actual or potential conflict of interest arises during the contract and/or project duration.

GovRates, Inc. Company	1988 Varick Way Address
 Authorized Signature	Casselberry, FL 32707-2409 City, State, Zip Code
Jenny Mantz, CEO Printed Name & Title	(833) GOV-PLAN; (833) 468-7526 Telephone No.
govrates@govrates.com Email	(833) GOV-PLAN; (833) 468-7526 Fax No.

State of Florida)
City of Seminole)

SUBSCRIBED AND SWORN to before me this 21st day of November, 2025, by Jenny Mantz, who is personally known to me to be the Owner for the Firm, OR who produced the following identification: FLDL M532439729250

Notary Public

VALERIE VIOLA PRINCE
Notary Public
State of Florida
Comm# HH489367
Expires 2/5/2028

My Commission Expires: 02/05/2028

State of Florida

County of Seminole

The foregoing instrument was acknowledged before me this 21st day of November 2025 by Jenny Mantz, Owner, who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

Valerie Viola Prince

NOTARY PUBLIC

Valerie Viola Prince

(Name of Notary Public: Print, Stamp, or Type as Commissioned)

VALERIE VIOLA PRINCE
Notary Public
State of Florida
Comm# HH489367
Expires 2/5/2028

PUBLIC ENTITY CRIME FORM

Section 287.133(3)(a), Florida Statutes, on Public Entity Crimes:

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid/quote/proposal on a contract to provide goods or services to a public entity, may not submit a bid/quote/proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids/quotes/proposals on leases of rental property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

Acknowledged: _____ Date: 11/21/2025

Jenny Mantz, Chief Executive Officer

CITY OF DeLAND
CONFIRMATION OF DRUG-FREE WORKPLACE FORM

In accordance with Section 287.087, Florida Statutes, "[w]henever two or more bids are equal with respect to price, quality, and service which are received by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall:

(1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection one (1).

(4) In the statement specified in subsection one (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section."

As the person authorized to sign the statement, I certify that this firm complies with the above requirements and the Florida Statutes Section 287.087. This form is in conjunction with The City of DeLand's General Conditions, Drug-Free Workplace.

GovRates, Inc.	RFP-26-02 Utility Rate Study
Business Name	Bid Number and Name
Authorized Representative's Signature	11/21/2025
	Date
Jenny Mantz	Chief Executive Officer
Name	Position

REFERENCE FORM

List a minimum of three (3) / maximum five (5) customers for the services specified in the solicitation in the spaces provided.

Note: A contact person shall be someone who has personal knowledge of the Contractor's performance for the specific requirement listed. Contact person must have been informed that they are being used as a reference and that the County may be calling them. Do no list persons who will be unable to answer specific questions regarding the requirements.

Ref #1. Customer/Client: City of Deltona, Florida
Date of Services: 2020 to Present
Description of Services: Comprehensive water and wastewater rate study; stormwater assessment study
Street Address: 2345 Providence Blvd.
City, State, ZIP Code: Deltona, FL 32725
Telephone #: (386) 878-8929 Fax #: N/A
Contact Person: Glenn Whitcomb, Public Works Director Email: gwhitcomb@deltonafl.gov

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Ref #2. Customer/Client: City of Edgewater, Florida
Date of Services: 2023 to Present
Description of Services: Water, sewer, stormwater, and solid waste rate studies; water, sewer, and stormwater impact fee studies
Street Address: 104 North Riverside Drive
City, State, ZIP Code: Edgewater, FL 32132
Telephone #: (386) 424-2400 Ext. 1301 Fax #: (386) 424-2409
Contact Person: Bridgette Vaissiere, Finance Director Email: bvaissiere@cityofedgewater.org

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Ref #3. Customer/Client: City of North Port, Florida
Date of Services: Project manager has provided rate consulting services to North Port since 2003
Description of Services: Comprehensive water and wastewater rate study
Street Address: 5930 Sam Shapos Way
City, State, ZIP Code: North Port, FL 34287
Telephone #: (941) 240-8007 Fax #: N/A
Contact Person: Michelle Tipp, Senior Business Manager / Utilities Email: mtipp@northportfl.gov

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Ref #4. Customer/Client: City of Plantation, Florida
Date of Services: Project manager has provided rate consulting services to Plantation since 2005
Description of Services: Comprehensive water and wastewater rate study
Street Address: 400 NW 73 Avenue
City, State, ZIP Code: Plantation, FL 33317
Telephone #: (954) 797-2163 Fax #: N.A
Contact Person: Anna C. Otiniano, Financial Services Director Email: aotiniano@plantation.org

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Ref #5. Customer/Client: City of Miramar, Florida
Date of Services: Project manager has provided rate consulting services to Miramar since 2009
Description of Services: Water and wastewater rate studies; State Revolving Fund (SRF) loan procurement assistance
Street Address: 13900 Pembroke Road
City, State, ZIP Code: Miramar, FL 33027
Telephone #: (954) 602-3026 Fax #: (954) 602-3427
Contact Person: Karen Shields, Senioe Fiscal Operations Manager Email: krshields@miramarfl.gov

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CONTRACTOR NAME GovRates, Inc.
ADDRESS 1988 Varick Way; Casselberry, FL 32707-2409
PRINTED SIGNATURE Jenny Mantz, Chief Executive Officer
AUTHORIZED SIGNATURE
TELEPHONE # (833) GOV-PLAN; (833) 468-7526 FAX# (833) GOV-PLAN; (833) 468-7526 DATE 11/21/2025
EMAIL: govrates@govrates.com

HUMAN TRAFFICKING AFFIDAVIT

1. I am over the age of 18 and I have personal knowledge of the matters set forth herein and execute this affidavit in order to comply with the requirements of Section 787.06(13), Florida Statutes.

2. I currently serve in the capacity listed below on behalf of the company listed below.

3. The company listed below does not use coercion for labor or services, as those terms are defined in Florida Statute 787.06.

4. This declaration is made in accordance with Florida Statute 92.525. I understand that making a false statement in this declaration may subject me to criminal penalties.

Under penalties of perjury, I declare that I have read the foregoing Human Trafficking Affidavit and that the facts stated in it are true.

Further Affiant sayeth naught.

Date executed 11/21/2025.

COMPANY

GovRates, Inc.
NAME OF BUSINESS ENTITY

SIGNATURE

Jenny Mantz, Chief Executive Officer
NAME AND TITLE

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See ***Specific Instructions*** on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

GovRates, Inc.

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☑ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) _____

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions ☐

5 Address (number, street, and apt. or suite no.). See instructions.

1988 Varick Way

Requester's name and address (optional)

6 City, state, and ZIP code

Casselberry, FL 32707-2409

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

8	1	–	4	9	4	4	6	9	6

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** [signature] **Date** 05/19/2025

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Response to RFP-26-02 Utility Rate Study

GovRates, Inc.

AGREEMENT FOR CONSULTING SERVICES FOR CITY OF DELAND

THIS AGREEMENT, made this 2nd day of February, 2026, is by and between the City of DeLand, a Florida municipality ("City"), whose address is 120 South Florida Avenue, DeLand, Florida 32720, and GovRates, Inc. a company authorized to do business in the State of Florida ("Contractor"), whose address and phone number are 1988 Varick Way, Casselberry, FL 32707, Phone:833-468-7526, Email: bmantz@govrates.com (collectively, " Parties").

NOW THEREFORE , for and in consideration of the mutual promises and covenants set forth herein and other good and valuable consideration, the City and the Contractor covenant and agree as follows:

WITNESSETH:

I. DOCUMENTS

The following documents (collectively "Contract Documents") are hereby incorporated into and made a part of this Agreement:

(1) RFP-26-02 – Utility Rate Study, including any and all addenda, prepared by the City of DeLand (" Exhibit A").

(2) The Contractor's proposal dated November 25, 2025, ("Exhibit B").

All Contract Documents may also be collectively referred to as the "Documents." In the event of any conflict between or among the Documents or any ambiguity or missing specifications or instruction, the following priority is established:

A. First, this Agreement February 2, 2026, and any attachments.
B. Second, Solicitation Number, Exhibit A
C. Third, The contractor's proposal, Exhibit B

II. SCOPE

The Contractor shall perform the Work under the general direction of the City as set forth in the Contract Documents.

Unless otherwise specified herein, the Contractor shall perform all work identified in this Agreement. The Parties agree that the scope of services is a description of Contractor's obligations and responsibilities, and is deemed to include preliminary considerations and prerequisites, and all labor, materials, equipment, and tasks which are such an inseparable part of the Work described that exclusion would render performance by Contractor impractical, illogical, or unconscionable.

Contractor acknowledges and agrees that the City's Contract Administrator has no authority to make changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under this Agreement.

By signing this Agreement, the Contractor represents that it thoroughly reviewed the documents incorporated into this Agreement by reference and that it accepts the description of the work and the conditions under which the Work is to be performed.

III. TERM OF AGREEMENT

The initial contract period shall commence on February 2, 2026, and shall end when specified work has been deemed completed by the City. The City reserves the right to extend the contract for three additional one-year terms, providing all terms conditions and specifications remain the same, both Parties agree to the extension, and such extension is approved by the City. In the event the term of this Agreement extends beyond the end of any fiscal year of City, to wit, September 30, the continuation of this Agreement beyond the end of such fiscal year shall be subject to both the appropriation and the availability of funds.

IV. COMPENSATION

The Contractor agrees to provide the services and for materials as specified in the Contract Documents at the cost specified in Exhibit A. It is acknowledged and agreed by Contractor that this amount is the maximum payable and constitutes a limitation upon City's obligation to compensate Contractor for Contractor's services related to this Agreement. This maximum amount, however, does not constitute a limitation of any sort upon Contractor's obligation to perform all items of work required by or which can be reasonably inferred from the Scope of Services. Except as otherwise provided in the solicitation, no amount shall be paid to Contractor to reimburse Contractor's expenses.

V. METHOD OF BILLING AND PAYMENT

Contractor may submit invoices for compensation no more often than monthly, but only after the services for which the invoices are submitted have been completed. An original invoice plus one copy is due within fifteen (15) days of the end of the month except the final invoice which must be received no later than sixty (60) days after this Agreement expires. Invoices shall designate the nature of the services performed and/or the goods provided.

City shall pay Contractor within forty-five (45) days of receipt of Contractor's proper invoice, as provided in the Florida Local Government Prompt Payment Act.

To be deemed proper, all invoices must comply with the requirements set forth in this Agreement and must be submitted on the form and pursuant to instructions prescribed by the City's Contract Administrator. Payment may be withheld for failure of Contractor to comply with a term, condition, or requirement of this Agreement.

Notwithstanding any provision of this Agreement to the contrary, City may withhold, in whole or in part, payment to the extent necessary to protect itself from loss on account of inadequate or defective work that has not been remedied or resolved in a manner satisfactory to the City's Contract

Administrator or failure to comply with this Agreement. The amount withheld shall not be subject to payment of interest by City.

VI. GENERAL CONDITIONS

A. Indemnification

(1) Indemnification for Professional Liability Claims: For liability arising out of the Consultant's services, the Consultant shall indemnify but shall have no duty to defend the City and the City's officers and employees against liability for damages for which they may be liable to the extent such damages are actually caused by the negligent professional acts, errors or omissions of Consultant, or any of its employees or subconsultants' negligent professional acts or omissions, under this Agreement.

(2) Indemnification for all Other Claims: The Consultant shall hold harmless, defend and indemnify the City, and the City's officers and employees, against claims, damages, demands, actions and suits (including reasonable post-tender attorney's fees and costs) brought against any of them arising directly or indirectly out of any act or omission (other than professional negligence as set forth in subsection (1) above) by the Consultant, or the Consultant's employees, agents or subconsultants. Selection of counsel to defend the City being subject to the City's approval, which shall not be unreasonably withheld.

For all indemnification claims made under this Agreement, both for professional liability claims and all other claims, the following provisions apply: To the extent that the services which are the subject of this Agreement are in connection with a construction project for the City, this indemnification is limited to the negligent acts of the Consultant or of any officer, employee, agent, invitee, sub-consultant, sub-contractor or sublicensee of the Consultant. The provisions and obligations of this Section shall survive the expiration or earlier termination of this Agreement. To the extent considered necessary by the City Manager, any sums due to Consultant from City under this Agreement may be retained by City until all of City's claims for indemnification pursuant to this Agreement have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by City.

B. Intellectual Property

Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, which shall not be unreasonably withheld, and indemnify and hold harmless the City from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, royalties, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any infringement or allegation of infringement of any patent, copyright, or other intellectual property right in connection with the Contractor's or the City's use of any copyrighted, patented or un-patented invention, process, article, material, or device that is manufactured, provided, or used pursuant to this Agreement. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.

C. Termination for Cause

The aggrieved party may terminate this Agreement for cause if the party in breach has not corrected the breach within thirty (30) days after written notice from the aggrieved party identifying the breach. The City Manager may also terminate this Agreement upon such notice as the City Manager deems appropriate under the circumstances in the event the City Manager determines that termination is necessary to protect the public health or safety. The Parties agree that if the City erroneously, improperly or unjustifiably terminates for cause, such termination shall be deemed a termination for convenience, which shall be effective sixty (60) days after such notice of termination for cause is provided.

This Agreement may be terminated for cause for reasons including, but not limited to, Contractor's repeated (whether negligent or intentional) submission for payment of false or incorrect bills or invoices, failure to perform the Work to the City's satisfaction; or failure to continuously perform the Work in a manner calculated to meet or accomplish the objectives as set forth in this Agreement.

D. Termination for Convenience

The City reserves the right, in its best interest as determined by the City, to cancel this Agreement for convenience by giving written notice to the Contractor at least sixty (60) days prior to the effective date of such cancellation. In the event this Agreement is terminated for convenience, Contractor shall be paid for any services performed to the City's satisfaction pursuant to the Agreement through the termination date specified in the written notice of termination. Contractor acknowledges and agrees that it has received good, valuable and sufficient consideration from City, the receipt and adequacy of which are hereby acknowledged by Contractor, for City's right to terminate this Agreement for convenience.

E. Cancellation for Unappropriated Funds

The City reserves the right, in its best interest as determined by the City, to cancel this Agreement for unappropriated funds or unavailability of funds by giving written notice to the Contractor at least thirty (30) days prior to the effective date of such cancellation. The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the Agreement into a subsequent fiscal period is subject to appropriation of funds, unless otherwise provided by law.

F. Insurance

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at the Contractor's sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be from insurers authorized to write insurance policies in the State of Florida and that possess an A.M. Best

rating of "A-" VII or better. All insurance policies are subject to approval by the City's Risk Manager.

The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and endorsements may not be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposure, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

Commercial General Liability
Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- $1,000,000 each occurrence and $2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- $1,000,000 each occurrence and $2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for Contractual Liability and Independent Contractors.

The City and the City's officers, employees, and volunteers are to be covered as additional insureds with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City or the City's officers, employees, and volunteers.

Business Automobile Liability
Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than $1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation and Employer's Liability
Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City and the City's officers, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with

WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

Insurance Certificate Requirements:

a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than thirty (30) days prior to the start of work contemplated in this Agreement.
b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
d. In the event the Agreement term goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
e. The Certificate of Insurance shall indicate whether coverage is provided under a claims- made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
h. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

<u>The Certificate Holder should read as follows</u>:
City of DeLand
120 South Florida Avenue
DeLand, FL 32720

The Contractor has the sole responsibility for the payment of all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an

Umbrella/Excess insurance policy to comply with this requirement.

The Contractor's insurance coverage shall be primary insurance as applied to the City and the City's officers, employees, and volunteers. Any insurance or self-insurance maintained by the City covering the City, the City's officers, employees, or volunteers shall be non-contributory.

Any exclusion or provision in the insurance maintained by the Contractor that excludes coverage for work contemplated in this Agreement shall be unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.

The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement shall be provided to the Contractor's insurance company or companies and the City's Risk Management office as soon as practical.

It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

G. Environmental, Health and Safety

Contractor shall place the highest priority on health and safety and shall maintain a safe working environment during performance of the Work. Contractor shall comply, and shall secure compliance by its employees, agents, and subcontractors, with all applicable environmental, health, safety and security laws and regulations, and performance conditions in this Agreement. Compliance with such requirements shall represent the minimum standard required of Contractor. Contractor shall be responsible for examining all requirements and determine whether additional or more stringent environmental, health, safety and security provisions are required for the Work. Contractor agrees to utilize protective devices as required by applicable laws, regulations, and any industry or Contractor's health and safety plans and regulations, and to pay the costs and expenses thereof, and warrants that all such persons shall be fit and qualified to carry out the Work.

H. Standard of Care

Contractor represents that it is qualified to perform the Work, that Contractor and its subcontractors possess current, valid state and/or local licenses to perform the Work, and that their services shall be performed in a manner consistent with that level of care and skill ordinarily exercised by other qualified contractors under similar circumstances.

I. Rights in Documents and Work

Any and all reports, photographs, surveys, and other data and documents provided or created in connection with this Agreement are and shall remain the property of City; and Contractor disclaims any copyright in such materials. In the event of and upon termination of this Agreement, any reports, photographs, surveys, and other data and documents prepared by Contractor, whether finished or unfinished, shall become the property of City and shall be delivered by Contractor to the City's Contract Administrator within seven (7) days of termination of this Agreement by either party. Any compensation due to Contractor shall be withheld until Contractor delivers all documents to the City as provided herein.

J. Audit Right and Retention of Records

City shall have the right to audit the books, records, and accounts of Contractor and Contractor's subcontractors that are related to this Agreement. Contractor shall keep, and Contractor shall cause Contractor's subcontractors to keep, such books, records, and accounts as may be necessary in order to record complete and correct entries related to this Agreement. All books, records, and accounts of Contractor and Contractor's subcontractors shall be kept in written form, or in a form capable of conversion into written form within a reasonable time, and upon request to do so, Contractor or Contractor's subcontractor, as applicable, shall make same available at no cost to City in written form.

Contractor and Contractor's subcontractors shall preserve and make available, at reasonable times for examination and audit by City in Volusia County, Florida, all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for the required retention period of the Florida public records law, Chapter 119, Florida Statutes, as may be amended from time to time, if applicable, or, if the Florida Public Records Act is not applicable, for a minimum period of three (3) years after termination of this Agreement. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the books, records, and accounts shall be retained until resolution of the audit findings. If the Florida public records law is determined by City to be applicable to Contractor and Contractor's subcontractors' records, Contractor and Contractor's subcontractors shall comply with all requirements thereof; however, Contractor and Contractor's subcontractors shall violate no confidentiality or non-disclosure requirement of either federal or state law. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for City's disallowance and recovery of any payment upon such entry.

Contractor shall, by written contract, require Contractor's subcontractors to agree to the requirements and obligations of this Section.

The Contractor shall maintain during the term of the Agreement all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this Agreement.

K. Public Entity Crime Act

Contractor represents that the execution of this Agreement will not violate the Public Entity Crime Act, Section 287.133, Florida Statutes, as may be amended or revised , which essentially provides that a person or affiliate who is a contractor, consultant, or other provider and who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to City, may not submit a bid on a contract with City for the construction or repair of a public building or public work, may not submit bids on leases of real property to City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with City, and may not transact any business with City in excess of the threshold amount provided in Section 287.017, Florida Statutes, as may be amended or revised, for category two purchases for a period of 36 months from the date of being placed on the convicted vendor list. Violation of this Section shall result in termination of this Agreement and recovery of all monies paid by City pursuant to this Agreement and may result in debarment from City's competitive procurement activities.

L. Independent Contractor

Contractor is an independent contractor under this Agreement. Services provided by Contractor pursuant to this Agreement shall be subject to the supervision of the Contractor. In providing such services, neither Contractor nor Contractor's agents shall act as officers, employees, or agents of City. No partnership, joint venture, or other joint relationship is created hereby. City does not extend to Contractor or Contractor's agents any authority of any kind to bind City in any respect whatsoever.

M. Non-Waiver

The failure of the City to insist upon strict performance of any other terms of this Agreement or to exercise any rights conferred by this Agreement shall not be construed by Contractor as a waiver of the City's right to assert or rely on any such terms or rights on any future occasion or as a waiver of any other terms or rights.

N. Assignment and Performance

Neither this Agreement nor any right or interest herein shall be assigned, transferred, or encumbered without the written consent of the other party, which shall not be unreasonably withheld. In addition, Contractor shall not subcontract any portion of the Work required by this Agreement. City may terminate this Agreement, effective immediately, if there is any assignment, or attempted assignment, transfer, or encumbrance, by Contractor of this Agreement or any right or interest herein without City's prior written consent.

Contractor represents that each person who will render services pursuant to this Agreement

is duly qualified to perform such services by all appropriate governmental authorities, where required, and that each such person is reasonably experienced and skilled in the area(s) for which he or she will render his or her services.

Contractor shall perform Contractor's duties, obligations, and services under this Agreement in a skillful and respectable manner. The quality of Contractor's performance and all interim and final product(s) provided to or on behalf of City shall be comparable to the best local and national standards.

In the event Contractor engages any subcontractor in the performance of this Agreement, Contractor shall ensure that all of Contractor's subcontractors perform in accordance with the terms and conditions of this Agreement. Contractor shall be fully responsible for all of Contractor's subcontractors' performance, and liable for any of Contractor's subcontractors' non-performance and all of Contractor's subcontractors' acts and omissions. Contractor shall defend at Contractor's expense, counsel being subject to City's approval or disapproval, and indemnify and hold City and City's officers, employees, and agents harmless from and against any claim, lawsuit, third party action, fine, penalty, settlement, or judgment, including any award of attorney fees and any award of costs, by or in favor of any of Contractor's subcontractors for payment for work performed for City by any of such subcontractors, and from and against any claim, lawsuit, third party action, fine, penalty, settlement, or judgment, including any award of attorney fees and any award of costs, occasioned by or arising out of any act or omission by any of Contractor's subcontractors or by any of Contractor's subcontractors' officers, agents, or employees. Contractor's use of subcontractors in connection with this Agreement shall be subject to City's prior written approval, which approval City may revoke at any time.

O. Conflicts

Neither Contractor nor any of Contractor's employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Contractor's loyal and conscientious exercise of judgment and care related to Contractor's performance under this Agreement.

Contractor further agrees that none of Contractor's officers or employees shall, during the term of this Agreement, serve as an expert witness against City in any legal or administrative proceeding in which he, she, or Contractor is not a party, unless compelled by court process. Further, Contractor agrees that such persons shall not give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of City in connection with any such pending or threatened legal or administrative proceeding unless compelled by court process. The limitations of this Section shall not preclude Contractor or any persons in any way from representing themselves, including giving expert testimony in support thereof, in any action or in any administrative or legal proceeding.

In the event Contractor is permitted pursuant to this Agreement to utilize subcontractors to perform any services required by this Agreement, Contractor agrees to require such subcontractors, by written contract, to comply with the provisions of this Section to the same extent as Contractor.

P. Schedule and Delays

Time is of the essence in this Agreement. By signing, Contractor affirms that it believes the schedule to be reasonable; provided, however, the Parties acknowledge that the schedule might be modified as the City directs.

Q. Materiality and Waiver of Breach

City and Contractor agree that each requirement, duty, and obligation set forth herein was bargained for at arm's-length and is agreed to by the Parties in exchange for *quid pro quo*, that each is substantial and important to the formation of this Agreement and that each is, therefore, a material term hereof.

City's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement.

R. Compliance With Laws

Contractor shall comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations in performing Contractor's duties, responsibilities, and obligations pursuant to this Agreement.

S. Severance

In the event a portion of this Agreement is found by a court of competent jurisdiction to be invalid or unenforceable, the provisions not having been found by a court of competent jurisdiction to be invalid or unenforceable shall continue to be effective.

T. Limitation of Liability

The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action for money damages due to an alleged breach by the City of this Agreement, so that its liability for any such breach never exceeds the sum of $1,000. Contractor hereby expresses its willingness to enter into this Agreement with Contractor's recovery from the City for any damage action for breach of contract or for any action or claim arising from this Agreement to be limited to a maximum amount of $1,000 less the amount of all funds actually paid by the City to Contractor pursuant to this Agreement.

Accordingly, and notwithstanding any other term or condition of this Agreement, Contractor hereby agrees that the City shall not be liable to Contractor for damages in an amount in excess of $1,000 which amount shall be reduced by the amount actually paid by the City to Contractor pursuant to this Agreement, for any action for breach of contract or for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended to be a waiver of the limitation placed upon City's liability as set forth in Section 768.28, Florida Statutes (2022), as may be amended or revised.

To the maximum extent permitted by applicable law, Contractor shall not be liable for any incidental or consequential damages, whether foreseeable or not, including but not limited to: those arising out of access to or inability to access the services, software, content, or related technical support; damages or costs relating to the loss of: goodwill, data (including loss of use or of data, loss or inaccuracy or corruption of data); or cost of procurement of substitute goods, services or technology, even if advised of the possibility of such damages and even in the event of the failure of any exclusive remedy.

U. Jurisdiction, Venue, Waiver, Waiver of Jury Trial

This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of this Agreement, and for any other legal proceeding, shall be in the Seventh Judicial Circuit in and for Volusia County, Florida, or in the event of federal jurisdiction, in the Middle District of Florida, Orlando Division. THE PARTIES EXPRESSLY AGREE TO WAIVE ALL RIGHTS TO A TRIAL BY JURY OF ALL ISSUES SO TRIABLE UNDER THIS AGREEMENT.

In the event Contractor is a corporation organized under the laws of any province of Canada or is a Canadian federal corporation, the City may enforce in the United States of America or in Canada or in both countries a judgment entered against the Contractor. The Contractor waives any and all defenses to the City's enforcement in Canada of a judgment entered by a court in the United States of America.

V. Amendments

No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by the Mayor and/or City Manager, as determined by City Charter and Ordinances, and Contractor or others delegated authority to or otherwise authorized to execute same on their behalf.

W. Prior Agreements

This document represents the final and complete understanding of the Parties and incorporates or supersedes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein. The Parties agree that there is no commitment, agreement, or understanding concerning the subject matter of this Agreement that is not contained in this written document. Accordingly, the

Parties agree that no deviation from the terms hereof shall be predicated upon any prior representation or agreement, whether oral or written.

X. Payable Interest

Except as required and provided for by the Florida Local Government Prompt Payment Act, City shall not be liable for interest for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof Contractor waives, rejects, disclaims and surrenders any and all entitlement it has or may have to receive interest in connection with a dispute or claim based on or related to this Agreement.

Y. Representation of Authority

Each individual executing this Agreement on behalf of a party hereto hereby represents and warrants that he or she is, on the date he or she signs this Agreement, duly authorized by all necessary and appropriate action to execute this Agreement on behalf of such party and does so with full legal authority.

Z. Uncontrollable Circumstances ("Force Majeure")

The City and Contractor will be excused from the performance of their respective obligations under this Agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, act of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

1. The non-performing party gives the other party prompt written notice describing the particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;

2. The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

3. No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and

4. The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force Majeure. The term of the Agreement shall be extended by a period equal to that during which either party's performance is suspended under this Section.

AA. Scrutinized Companies

The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2022), as may be amended or revised, and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of Section 287.135, Florida Statutes (2022), as may be amended or revised, or been placed on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2022), as may be amended or revised, or is engaged in a boycott of Israel.

BB. Public Records

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY CLERK'S OFFICE, 120 SOUTH FLORIDA AVENUE, DELAND, FLORIDA 32720, PHONE: 386-626-7132, EMAIL: HENNESSY@DELAND.ORG

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.

2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2022), as may be amended or revised, or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.

4. Upon completion of the Agreement, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

CC. E-Verify

As a condition precedent to the effectiveness of this Agreement, pursuant to Section 448.095, Florida Statutes (2022), as may be amended or revised, the Contractor and its subcontractors shall register with and use the E-Verify system to electronically verify the employment eligibility of newly hired employees.

1. The Contractor shall require each of its subcontractors, if any, to provide the Contractor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Contractor shall maintain a copy of the subcontractor's affidavit for the duration of this Agreement and in accordance with the public records requirements of this Agreement.

2. The City, the Contractor, or any subcontractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated Section 448.09(1), Florida Statutes (2022), as may be amended or revised, shall terminate the Agreement with the person or entity.

3. The City, upon good faith belief that a subcontractor knowingly violated the provisions of Section 448.095(2), Florida Statutes (2022), as may be amended or revised, but that the Contractor otherwise complied with Section 448.095(2), Florida Statutes (2022), as may be amended or revised, shall promptly notify Contractor and order the Contractor to immediately terminate the contract with the subcontractor, and the Contractor shall comply with such order.

4. An Agreement terminated under Sections 448.095(2)(c)1. or 2., Florida Statutes (2022), as may be amended or revised, is not a breach of contract and may not be considered as such. If the City terminates this Agreement under Section 448.095(2)(c), Florida Statutes (2022), as may be amended or revised, the Contractor may not be awarded a public contract for at least one year after the date on which the Agreement was terminated. The Contractor is liable for any additional costs incurred by the City as a result of termination of this Agreement.

5. Contractor shall include in each of its subcontracts, if any, the requirements set forth in this Section, including this subparagraph, requiring any and all subcontractors, as defined in Section 448.095(1)(j), Florida Statutes (2022), as may be amended or revised, to include all of the requirements of this Section in their subcontracts. Contractor shall be responsible for compliance by any and all subcontractors, as defined in Section 448.095(1)(j), Florida Statutes (2022), as may be amended or revised, with the requirements of Section 448.095, Florida Statutes (2022), as may be amended or revised.

DD. Security Breach

The Contractor agrees to provide electronic and physical security to personal information, as defined in Section 501.171, Florida Statutes (2022), as may be amended or revised, ("Section 501.171"), that Contractor obtains in connection with this Agreement, in accordance with the standard set forth in Section 501.171. As provided in Section 501.171,

the Contractor shall take reasonable measures to protect and secure data in electronic form containing personal information. The Contractor shall notify the City of any breach of security of a system maintained by the Contractor as expeditiously as practicable, but no later than 10 days following the determination of the breach of security or reason to believe the breach occurred. Such notification from the Contractor shall include all information that the City needs to comply with the notice requirements set forth in Section 501.171. The Contractor, as the City's third-party agent, as defined in Section 501.171, shall comply with and perform all of the requirements set forth in Subsections 501.171(3) and (4), Florida Statutes (2022), as may be amended or revised, in the event the Contractor experiences a breach of security involving unauthorized access of data in electronic form containing personal information obtained in connection with this Agreement. In addition to complying with Subsections 501.171 (3) and (4), Florida Statutes (2022), as may be amended or revised, the Contractor shall provide or cause to be provided credit monitoring, identity theft protection, and a call center for affected persons, and shall perform other functions and services as required by law. Contractor shall ensure that the City is in compliance with all laws, rules, and regulations governing any breach or potential breach of security of a system maintained by the Contractor.

IN WITNESS WHEREOF, the City and the Contractor execute this Contract as follows:

IN WITNESS WHEREOF, the City and the Consultant execute this Contract as follows:

_____[CONSULTANT]

By:_____
Printed Name:_____
Title:_____

Date Executed: _____

CITY OF DELAND

By:_____
Christopher M. Cloudman, Mayor

Date Executed: _____

ATTEST:

By:_____
Julie A. Hennessy, City Clerk

Utility Rate Study

RFP-26-02

SELECTION COMMITTEE SCORING AND OVERALL RANKING OF SUBMITTALS

Evaluator's Name: James Ailes Date: 1/12/2026

Evaluator's Signature:

	Project Approach	Qualifications & Experience	Price/Cost Proposal		
Points Possible:	30	30	40	100	
▼Consultant/Company▼				TOTAL POINTS	RANK
Burns & McDonnell Engineering Company Inc. dba 1898 & Co.	20	20	13	53	5 ~~4~~
GovRates, Inc.	10	20	40	70	~~3~~
Raftelis Financial Consultants, Inc.	28	30	21	79	1
Shpigler Consulting, Inc.	23	15	31	69	4 ~~3~~
Tangibl Group, Inc.	15	10	24	49	6 ~~5~~
Willdan Financial Services	25	30	24	79	1

Utility Rate Study

RFP-26-02

SELECTION COMMITTEE SCORING AND OVERALL RANKING OF SUBMITTALS

Evaluator's Name: DAN STAUFFER Date: 1/12/22

Evaluator's Signature:

	Project Approach	Qualifications & Experience	Price/Cost Proposal		
Points Possible:	30	30	40	100	
▼Consultant/Company▼				TOTAL POINTS	RANK
Burns & McDonnell Engineering Company Inc. dba 1898 & Co.	25	15	13	53	6
GovRates, Inc.	25	20	40	85	1
Raftelis Financial Consultants, Inc.	30	30	21	81	2
Shpigler Consulting, Inc.	30	15	31	76	4
Tangibl Group, Inc.	30	5	24	59	5
Willdan Financial Services	30	25	24	79	3

Utility Rate Study

RFP-26-02

SELECTION COMMITTEE SCORING AND OVERALL RANKING OF SUBMITTALS

Evaluator's Name: Michael Grebosz Date: 1/12/26

Evaluator's Signature: Michael Grebosz

	Project Approach	Qualifications & Experience	Price/Cost Proposal		
Points Possible:	30	30	40	100	
▼Consultant/Company▼				TOTAL POINTS	RANK
Burns & McDonnell Engineering Company Inc. dba 1898 & Co.	30	5	13	48	6
GovRates, Inc.	30	22	40	92	1
Raftelis Financial Consultants, Inc.	30	27	21	78	3
Shpigler Consulting, Inc.	30	5	31	66	4
Tangibl Group, Inc.	30	10	24	64	5
Willdan Financial Services	30	26	24	80	2

Utility Rate Study

RFP-26-02

SELECTION COMMITTEE SCORING AND OVERALL RANKING OF SUBMITTALS

Evaluator's Name: Brandi Weaver Date: 1/12/26

Evaluator's Signature:

	Project Approach	Qualifications & Experience	Price/Cost Proposal		
Points Possible:	30	30	40	100	
▼Consultant/Company▼				TOTAL POINTS	RANK
Burns & McDonnell Engineering Company Inc. dba 1898 & Co.	30	25	13	68	6
GovRates, Inc.	25	30	40	95	1
Raftelis Financial Consultants, Inc.	30	30	21	81	4
Shpigler Consulting, Inc.	30	25	31	86	2
Tangibl Group, Inc.	30	20	24	74	5
Willdan Financial Services	30	30	24	84	3

SELECTION COMMITTEE CONSOLIDATED EVALUATION SCORESHEET

POSTING DATE: January 12, 2026 POSTED BY: Corey McMillen

▼Committee Member▼	Burns & McDonnell Engineering Company Inc. dba 1898 & Co.	GovRates, Inc.	Raftelis Financial Consultants, Inc.	Shpigler Consulting, Inc.	Tangibl Group, Inc.	Willdan Financial Services
Brandi Weaver	6	1	4	2	5	3
Mike Grebosz	6	1	3	4	5	2
Jim Ailes	5	3	1	4	6	1
Dan Stauffer	6	1	2	4	5	3
TOTAL POINTS	23	6	10	14	21	9
RANKING	**6**	**1**	**3**	**4**	**5**	**2**

*** Motion by Mike Grebosz, Second by Dan Stauffer to enter intocontract with the top ranked firm [Unanimous vote]: GovRates, Inc.

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Consideration re Amendment No.1 to the Ground Lease Agreement with renewal with the County of Volusia.

DEPARTMENT: Legal

PREPARED BY:

ATTACHMENTS: 951 Singleton Renewal Amendment

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

This is a lease amendment for the sole purpose of documenting that Volusia County has renewed the ground lease for the land where the Volusia Sheriff's Office helicopter hangar is located at the DeLand Municipal Airport.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High value government.

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The tenant will continue to pay rent for the leased space at the contractual rate.

RECOMMENDATION:

Approve the attached lease.

BACKGROUND/DISCUSSION:

In 2005 The County of Volusia executed a ground lease with the City for 1.14 acres of land where the Sheriff's helicopter hangar is located. The lease had a twenty year term and provided the Sheriff with one twenty year renewal option. The County has elected to exercise the option to renew the lease. The City and County are documenting the exercise of the renewal by way of the attached lease amendment. The current rent is $12,009.20 per year, which amount will be adjusted upward for the year 2026 based upon CPI. The rental is based upon the value of the land, and not the hangar that was built upon the land.

AMENDMENT NO. 1 TO GROUND LEASE AGREEMENT

BETWEEN THE COUNTY OF VOLUSIA
AND
THE CITY OF DELAND

THIS AMENDMENT No. 1 TO GROUND LEASE AGREEMENT (hereinafter "AMENDMENT No. 1") is made by and between COUNTY OF VOLUSIA, a body corporate and politic and a political subdivision of the State of Florida, 123 West Indiana Avenue, DeLand, FL 32720 (hereinafter "LESSEE") and CITY OF DELAND a body corporate and politic and a political subdivision of the State of Florida, 120 S. Florida Avenue, DeLand, Florida 32720 (hereinafter "LESSOR") and is dated as of the last date of signature below.

RECITALS

WHEREAS, the LESSOR and LESSEE entered into a certain Ground Lease Agreement (hereinafter "Original Lease") dated January 9, 2006, wherein LESSOR agreed to let and LESSEE agreed to lease 1.14 acres of land located at the DeLand Municipal Airport with an address of 951 Singleton Drive, DeLand, Florida 32724; and,

WHEREAS, through this Amendment No. 1 the LESSOR and LESSEE agree to exercise the twenty year renewal allowed for in the Original Lease.

NOW, THEREFORE, in consideration of the foregoing recitals which are incorporated by reference, and other consideration, the receipt and sufficiency of which are hereby acknowledged by LESSOR and LESSEE, the parties agree and stipulate to amend the LEASE as follows:

1. The parties agree that the foregoing recitals are true, correct and material to this AMENDMENT NO. 1.

2. Term: This Lease shall renew for a period of twenty (20) years commencing January 10, 2026, and expiring January 9, 2046 (the "Extended Term"). There are no renewal terms remaining under the Lease following the expiration of the Extended Term.

3. This AMENDMENT NO. 1 sets forth the entire modifications to the LEASE with respect to the property provided under this AMENDMENT NO. 1.

4. This AMENDMENT NO. 1 is incorporated by reference into the LEASE as if fully set forth therein. Except as provided above, all other terms and conditions of the LEASE shall remain unchanged and in full force and effect and are hereby ratified and reaffirmed by the parties hereto. In the event of any conflict or inconsistency between the provisions set forth in this AMENDMENT NO. 1 and the LEASE, this AMENDMENT NO. 1 shall govern and control.

5. LESSOR acknowledges that the undersigned (the "Authorized Signatory") is authorized to execute leases with the County of Volusia and the signature of the Authorized Signatory shall be the act of and attributable to the Authorized Signatory and the LESSOR.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties hereto have set their hands to this Amendment No. 1 to Ground Lease Agreement between the County of Volusia and the City of DeLand on the respective dates under each signature.

LESSOR:

CITY OF DELAND

Attest:

_____
Julia Hewitt, Interim City Clerk

BY:_____
Christopher M. Cloudman, Mayor/Commissioner

Date: _____

Date: _____

LESSEE:

Attest:

COUNTY OF VOLUSIA

_____
George Recktenwald
County Manager

BY: _____
Jeff Brower
County Chair

Date: _____

Date: _____

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Second Reading of Ordinance No. 2026-03, Approving a Second Amendment to the DeLand Tech Park PD to Allow for One Additional Use, for Property, Located on the South Side of Cassadaga Road, West of Interstate 4.

DEPARTMENT: Planning

PREPARED BY: Kendall Story, Senior Planner

ATTACHMENTS: DeLand Tech Park Second Amendment Ordinance, Exhibit A - DeLand Tech Park Second Amendment, Z25-170 Staff Report, Z25-170 Narrative, Z25-170 Aerial Map, Z25-170 Zoning Map

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The ± 143.8-acre subject property known as the DeLand Tech Park PD, was originally approved on October 3, 2022, and is within the Southwest Activity Center. The purpose of this amendment is to modify the existing PD to add one additional use to the list of commercial uses permitted within the development.

Currently, the Tech Park PD agreement allows for a variety of commercial and industrial uses, including packaged sales of beer and/or wine (package sales where beer and/or wine are sold for consumption off-premises with a DBPR 2APS license), as well as restaurants serving beer, wine and liquor, for on-site consumption. This amendment clarifies that in addition to restaurant sales, packaged beer, wine and liquor, such as those offered by a liquor/package store or similar retail establishment (uses requiring a DBPR 3PS liquor license (package sales) would be allowed within the PD. Any establishment that intends on selling alcohol will be required to obtain a proper state license from the Florida Department of Business and Professional Regulation (DBPR).

Besides the additional use, there are no proposed changes to the DeLand Tech Park PD agreement and the developer will need to follow the requirements that were previously outlined in the agreement.

On November 12, 2025, the Planning Board unanimously voted to recommend approval of the PD amendment.
On December 15, 2025, the City Commission unanimously voted to approve the PD amendment on First Reading.
On January 5, 2025, the City Commission continued Second Reading to accommodate a procedural issue.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Strategic Focus Area: Preparing for the Future/Sustainability — The Strategic Plan recognizes that "...the city itself is dynamic and that extensive changes will occur in the region in the near and long term future." The subject property is located within the Southwest Activity Center (SWAC). One of the objectives of the SWAC is to, "...provide adequate and appropriate areas resulting in a mixture of urban land uses." The DeLand Tech Park PD supports said objective, as it will provide for commercial, office and light industrial jobs while being located to varying residential uses, such as Canopy Terrace (single-family residential) to the north and Yardly (detached multi-family) to the west.

SUSTAINABILITY:

NA

FISCAL IMPACT:

Once constructed, the DeLand Tech Park PD will positively impact the city's tax roll and increase funds for city services.

RECOMMENDATION:

Staff recommends that the City Commission approve the second PD amendment to the DeLand Tech Park PD, on second reading.

BACKGROUND/DISCUSSION:

The subject property lies within the Southwest Activity Center (SWAC) and shall comply with the policies identified in the Local Plan. The DeLand Tech Park PD was originally approved on October 3, 2022, and includes a mixture of commercial and light industrial uses. All development shall comply with the land development regulations and development standards outlined in the PD agreement. On January 22, 2025, the first amendment to the PD was approved by City Commission, to allow for off-site tree protection area.

ORDINANCE NO. 2026 - 03

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, APPROVING A SECOND AMENDMENT TO THE DELAND TECH PARK PLANNED DEVELOPMENT (PD) TO ALLOW FOR ONE ADDITIONAL PERMITTED USE, ON PROPERTY LOCATED ON THE SOUTH SIDE OF CASSADAGA ROAD, WEST OF INTERSTATE 4; MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the Applicant, Mark Watts, Esquire, on behalf of the owners, has filed a request for a second amendment to the DeLand Tech Park Planned Development (PD) Agreement for land consisting of approximately ±143.8 acres located on the south side of Cassadaga Road, west of Interstate 4, which is more particularly described in the legal description included in the Second Amendment to DeLand Tech Park Planned Development Agreement attached hereto as Exhibit "A" and by this reference made a part hereof; and

WHEREAS, the DeLand Tech Park Planned Development was approved by the City Commission on October 3, 2022 (Ordinance No. 2022-30) and amended on January 22, 2025 (Ordinance No. 2024-43); and

WHEREAS, the applicant is proposing a second amendment to the DeLand Tech Park PD in order to add one additional use to the list of commercial uses permitted in the development; and

WHEREAS, said second amendment is consistent with both the Comprehensive Plan and the purpose and intent of Section 33-32 and Section 33-135 of the Code of Ordinances of the City of DeLand (the "Code").

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission has held a public hearing to approve the second amendment to the DeLand Tech Park Planned Development (PD) Agreement.

Section 2. Pursuant to the determination made at public hearing, the City Commission hereby amends the approved Development Agreement for DeLand Tech Park, Planned Development District, in accordance with the attached Exhibit "A" which by this reference is made a part hereof.

Section 3. The DELAND TECH PARK PLANNED DEVELOPMENT AGREEMENT, as amended, is hereby further amended by the Second Amendment to DeLand Tech Park Planned Development Agreement attached hereto as Exhibit "A".

Section 4. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the validity of the remaining portions of this Ordinance.

Section 5. This Ordinance shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of January, 2026.

_____
Christopher M. Cloudman
Mayor - Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk - Auditor

Passed on first reading: December 15, 2025
Adopted on second reading: January 21, 2026

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

"Exhibit A"

SECOND AMENDMENT TO DELAND TECH PARK

PLANNED DEVELOPMENT AGREEMENT

This Second Amendment to the Planned Development Agreement (the "Second Amendment") is made this 21st day of January, 2026, between the **CITY OF DELAND,** a Florida municipal corporation (hereafter, the "City"), whose mailing address is 120 S. Florida Avenue, DeLand, FL 32720, and **LONGLEAF FOUR, LLC**, a limited liability company, whose mailing address is 320 N. Meridian St., Ste 700, Indianapolis, IN 46204 (hereafter, "Applicant").

WHEREAS, the City and Applicant previously entered into that certain Planned Development Agreement (the "PD Agreement") dated on or about October 3, 2022, and recorded in Official Records Book 8663, Page 3282 of the Public Records of Volusia County, Florida in connection with the rezoning of ±143.24 acres known as the "DeLand Tech Park PD"; and

WHEREAS, the City and Applicant previously entered into the First Amendment to DeLand Tech Park Planned Development Agreement (the "First Amendment") dated on or about January 22, 2025, and recorded in Official Records Book 8671, Page 3729 of the Public Records of Volusia County, Florida known as the "First Amendment to DeLand Tech Park PD", which added land to the PD for a total current acreage of 143.795 +/-, as legally described on Exhibit "A", attached; and

WHEREAS, the Applicant wishes to amend the DeLand Tech Park PD to revise and include certain commercial uses as described in the PD Agreement; and

WHEREAS, the application to amend the DeLand Tech Park PD was duly and properly filed with the City on September 22, 2025, and the application was reviewed by the City's

Community Development Department and determined to be consistent with the City's Comprehensive Plan; and

WHEREAS, public hearings on this Second Amendment to the DeLand Tech Park Planned Development Agreement were held on by the City's Planning Board on November 15, 2025 and by the City Commission on December 15, 2025 and January 21, 2025.

WHEREAS, the owners of the properties: Longleaf Four, LLC, W.L. Kirk, Jr. and Nancy C. Kirk, are in agreement with the provisions of this Amendment.

NOW THEREFORE, the City and Applicant acknowledge and agree that the DeLand Tech Park PD is hereby amended to reflect the following changes, revisions and amendments to the DeLand Tech Park Planned Development Agreement and amended Planned Development Plan:

1. Paragraph D -- Land Uses within the PD is amended to include the following commercial use (changes shown in ~~strikethrough~~/underline format):

Permitted Uses within the PD:

1. Commercial Uses

General/Professional Offices.

Medical Office.

Drugstores and pharmacies.

Laboratories, hospitals and clinics.

Medical clinics over 5,000 sq. ft.

Veterinary clinics allowing overnight boarding for clinical care, no outside runs or kennels.

Copying, printing and lithography.

Showroom commercial.

Day care facilities, adult or child.

Hotels or motels and associated accessory uses including restaurant and conference facilities.

Uses requiring a DBPR 3PS liquor license (package sales)

Package sales where beer and/or wine are sold for consumption off-premises with DBPR 2APS license.

Restaurants, including fast food and/or drive through facilities, including establishments serving alcohol requiring a DBPR 2COP, 3PS or 4COP license with special class.

Convenience stores with or without gas pumps.

Grocery.

Retail sales.

Retail and service land uses.

Colleges or schools.

Government and public land uses and buildings.

Music, dance, gymnasium, art school or studio excluding discotheques.

Outdoor recreation land use.

Parks, mini and neighborhood.

Electrical, gas, plumbing and HVAC sales/service.

2. Except as expressly modified by this Second Amendment, all terms, conditions, and provisions of the PD Agreement, as previously amended by that certain First Amendment to PD Agreement approved on January 22, 2025, shall remain unchanged and in full force and effect,

and are hereby ratified and confirmed.

IN WITNESS WHEREOF, the City and the Applicant have caused this Second Amendment to the DeLand Tech Park Planned Development Agreement to be duly executed by their authorized representatives as of the last date entered below.

(Signatures on Following Pages)

ATTEST:

City Commission of DeLand Florida

_____

Michael P. Pleus
City Manager

_____

Christopher M. Cloudman
Mayor

STATE OF FLORIDA

CITY OF DELAND

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ___ day of _____, 2026 by Michael P. Pleus and Christopher M. Cloudman, as City Manager and Mayor, City of DeLand, respectively, on behalf of the City of DeLand, and who are personally known to me.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.: _____

My Commission Expires: _____

WITNESSES

_____
Print Name

_____
Sign Name

_____
Print Name

_____
Sign Name

LONGLEAF FOUR, LLC

By: _____
Print: Harry F McNaught
Title: Manager

Date: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ___ day of _____, 2026, by Harry F. McNaught, as Manager of **LONGLEAF FOUR, LLC,** who is personally known to me or has produced _____ as identification.

_____
Notary Public

Seal

Type or Print Name:_____
Commission No. _____
My Commission Expires:_____

WITNESSES

_____
Print Name

_____
Sign Name

_____
Print Name

_____
Sign Name

W. L. Kirk, Jr. and Nancy C. Kirk

By: _____
Print: _____

Date: _____

By: _____
Print: _____

Date: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ___ day of _____, 2026, by _____ and _____, who are personally known to me or have produced _____ as identification.

_____
Notary Public

Seal

Type or Print Name:_____
Commission No. _____
My Commission Expires:_____

EXHIBIT "A"
Legal Description

A PORTION OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST LYING IN VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST, THENCE RUN N89°54'53"E ALONG THE NORTH LINE OF SAID SECTION 6, A DISTANCE OF 1406.09 FEET TO THE EAST LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID EAST LINE S00°05'07"E 1400.66 FEET TO THE MONUMENTED SOUTHERLY RIGHT OF WAY LINE OF CASSADAGA ROAD AND THE POINT OF BEGINNING; THENCE ALONG SAID SOUTHERLY RIGHT OF WAY LINE AND THE EASTERLY EXTENSION THEREOF N89°31'56"E, 1314.15 FEET; THENCE N00°23'02"W, 3.98 FEET TO THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 567.62 FEET, A CENTRAL ANGLE OF 10°54'08", A CHORD BEARING OF S80°02'11"E AND A CORD DISTANCE OF 107.84 FEET; THENCE ALONG THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 108.01 FEET; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT OF WAY LINE S85°29'15"E, 356.07 FEET; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT OF WAY LINE N89°16'03"E, 313.13 FEET TO THE WESTERLY LIMITED ACCESS RIGHT OF WAY LINE OF INTERSTATE 4 (STATE ROAD 400) AS SHOWN ON FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP. SECTION 79110, FINANCIAL PROJECT 242655-1; THENCE DEPARTING SAID SOUTHERLY RIGHT OF WAY LINE ALONG SAID WESTERLY RIGHT OF WAY LINE S15°45'16"W, 2426.29 FEET TO THE SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7, SAID SECTION 6; THENCE DEPARTING SAID WESTERLY LIMITED ACCESS RIGHT OF WAY LINE ALONG SAID SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7 AND GOVERNMENT LOT 6, N89°30'43"W, 802.91 FEET TO THE SOUTHEAST CORNER OF LOT 19, YOURLANDO FARMS AND GROVES, ACCORDING TO THE MAP OF PLAT RECORDED IN MAP BOOK 10, PAGES 227-228, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE N89°50'02"W, ALONG THE SOUTH LINE OF SAID LOTS 19 AND 20, A DISTANCE OF 617.62 FEET TO THE SOUTHWEST CORNER OF SAID LOT 20, ALSO BEING THE NORTHEAST CORNER OF LOT 27 OF SAID PLAT; THENCE S00°14'30"E ALONG EAST LINE OF LOT 27, A DISTANCE OF 250.12 FEET; THENCE DEPARTING SAID EASTERLY LINE S35°50'39"W, 354.19 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472, AS SHOWN ON SAID FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, SECTION 79110; THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE N54°12'54"W, 1481.04 FEET TO THE EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY AS SHOWN ON VOLUSIA COUNTY RIGHT OF WAY MAP, PROJECT 1113-3; THENCE DEPART SAID NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472 ALONG SAID EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY N00°27'19"W, 703.97 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 98.09 FEET, A CENTRAL ANGLE OF 45°56'03"; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE AND ALONG THE ARC OF SAID CURVE 78.64 FEET; THENCE CONTINUE

ALONG SAID EASTERLY RIGHT OF WAY LINE N45°28'45"E, 26.79 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 5629.58 FEET, A CENTRAL ANGLE OF 02°41'26", A CHORD BEARING OF N04°10'14"E AND A CHORD DISTANCE OF 264.32 FEET; THENCE CONTINUE ALONG SAID EASTERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 264.35 FEET; THENCE DEPART SAID EASTERLY RIGHT OF WAY LINE N89°31'31"E, 361.54 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 1440.00 FEET, A CENTRAL ANGLE OF 12°42'11", A CHORD BEARING OF S84°07'35"E AND A CHORD DISTANCE OF 318.61 FEET; THENCE CONTINUE ALONG THE ARC OF SAID CURVE 319.26 FEET; THENCE N12°13'31"E, 80.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 1519.95 FEET, A CENTRAL ANGLE OF 03°39'55", A CHORD BEARING OF S75°56'11"E AND A CHORD DISTANCE OF 97.21 FEET; THENCE ALONG THE ARC OF SAID CURVE 97.23 FEET; THENCE S74°06'12"E, 169.11 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 1000.00 FEET AND A CENTRAL ANGLE OF 15°36'56"; THENCE ALONG THE ARC OF SAID CURVE 272.54 FEET TO THE SOUTH LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID SOUTH LINE S89°43'08"E, 118.51 FEET TO THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 4; THENCE ALONG THE EASTERLY LINE OF SAID GOVERNMENT LOT 4, N00°10'37"W, 1028.79 FEET TO THE POINT OF BEGINNING.

CONTAINING 6263726 SQ. FT., OR 143.795 ACRES MORE OR LESS.

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

November 12, 2025

A. **APPLICATION NO.:** Z25-170 (DeLand Tech Park 2nd Amendment)
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
OWNER: Longleaf Four, LLC
STAFF PLANNER: Kendall Story, Senior Planner
REQUEST: Request for a 2nd amendment to the DeLand Tech Park PD to add one additional use

B. **APPLICABLE REGULATIONS:**

Article IV **OVERLAY AND FLOATING ZONES**
Sec. 33-32 – Planned Development District.

Article XII **ADMINISTRATION AND ENFORCEMENT**
Sec. 33-135 – Procedure for text amendments & rezoning.

C. **SITE FACTORS:**

PARCEL NUMBER: 810604000170+
LOCATION: North of SR 472 and east of Dr. Martin Luther King Jr. Blvd.
SIZE OF PROPERTY: ±143.8 acres

D. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

Future Land Use: Southwest Activity Center West Central District (SWAC WSD), Southwest Activity Center Commerce (SWAC COM)
Existing Zoning: DeLand Tech Park Planned Development (PD)
Existing Use: Mostly Vacant/Undeveloped

E. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	VC: Urban Low Intensity (ULI); SWAC COM	Kirkland DeLand PD (Canopy Terrace); R-4
South:	Orange City	Orange City
East:	VC: ULI	VC: Rural Residential (RR)
West:	VC: SWAC Community, VC: Unincorporated	VC: Unincorporated

F. **BACKGROUND:** The ± 143.8 acre subject property is known as the DeLand Tech Park PD, which was originally approved on October 3, 2022, within in the Southwest Activity Center. The purpose of this amendment is to modify the existing PD to add one additional use to the list of commercial uses permitted within the development. Currently, the Tech Park PD agreement allows for a variety of commercial and industrial uses, including packaged sales of beer and/or wine, sold for off-site consumption, as well as restaurants serving beer, wine and liquor, for on-site consumption. This amendment clarifies that in

addition to restaurant sales, packaged beer, wine and liquor, such as those offered by a liquor/package store or similar retail establishment, would be allowed within the PD as well, with the proper state licenses. The Department of Business and Professional Regulation (DBPR) is the state agency that regulates licenses for all alcohol sales. A retailer is required to obtain a license through the DBPR prior to selling alcohol.

As described in the original Planned Development, the applicant intends to develop the eastern side of the subject property as industrial space and the western side as commercial/neighborhood retail. Lying within the Southwest Activity Center (SWAC), development shall comply with the policies identified within the Local Plan as "Commerce" and "West Central District".

None of the development standards from the original DeLand Tech Park PD agreement are being changed and the developer will need to follow the requirements that were previously outlined in the original agreement. Additionally, any establishment that intends on selling alcohol will be required to obtain a license from the DBPR, as described above.

Section 33-135 of the Land Development Regulations provides the following criteria, which the City Commission shall utilize in reviewing any rezoning request:

1. **Is the proposed rezoning consistent with the Comprehensive Land Use Plan, the land use, zoning pattern and character of the surrounding area?**
   The proposed zoning classification of Planned Development (PD) is consistent with the Comprehensive Land Use Plan and the existing Commerce/West Central District future land use designations.

2. **Will the proposed rezoning have an impact upon the environment or natural resources?**
   The second amendment will not have an affect upon the environment, as none of the development standards are being changed.

3. **Will the proposed rezoning have an impact upon the economy of the affected area?**
   The proposed amendment would allow for packaged liquor stores, which would allow for individual liquor stores as well as wholesale retail stores such as grocery stores. If a grocer were to locate to the subject property, that could be a positive effect, as the nearest supermarket is more than 3 miles away.

4. **Will the proposed rezoning have an impact upon governmental services?**
   Governmental services such as potable water, sewer, code enforcement, police and fire are available for the subject property. At this time, a preliminary plat for the infrastructure improvements has been submitted and is under review.

5. **Are there changes in the circumstances or conditions affecting the area since the original assignment of zoning that will support the proposed zoning?**
   There have not been any significant changes in the area surrounding DeLand Tech Park since its original approval in 2022. The area continues to develop a variety of residential housing and anticipates the future development of DeLand Tech Park which will provide both commercial and industrial uses and local employment opportunities.

6. **Was there a mistake in the original classification?**
   There were no mistakes in the original classification.

7. **Will the proposed rezoning have any effect upon the use or value of the affected area?**
   The current PD agreement allows for a variety of commercial and industrial uses which could have a positive impact by providing jobs, retail and restaurants to the area. Existing and future development will benefit from having access to these services.

   Additionally, the development will provide a road connecting the north end of the development to the south end, lessening congestion on nearby thoroughfares.

8. **Will the proposed rezoning have an impact upon public health, safety and welfare?**
   There is no indication at this time that the new proposal will create additional impacts upon public health, safety or welfare, as the development will provide local retail options and greater connectivity with the additional roadway that will be part of the DeLand Tech Park development.

G. **Next Steps:** The request for a rezoning will go before the City Commission on December 15, 2025, for first reading, with the second reading date to be likely in January.

H. **STAFF RECOMMENDATION**: Staff recommends that the Planning Board forward the application to the City Commission with a recommendation of approval.

Scott W. Cichon
Robert A. Merrell III
John P. Ferguson
Mark A. Watts
Heather Bond Vargas
Michael J. Woods
Raymond L. Schumann
Kathleen L. Crotty
Michael O. Sznapstajler
Andrew C. Grant
Matthew S. Welch
Edward H. Thompson
Robert E. Doan
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OF COUNSEL
Larry D. Marsh

William M. Cobb (1881-1939)
Thomas T. Cobb (1916-2004)
W. Warren Cole, Jr. (1926-2008)

September 22, 2025

Carol Kuhn, AICP
Planning Director
City of DeLand
120 S. Florida Avenue
DeLand, FL 32720

Re: DeLand Tech Park PD Agreement, Second Amendment

Dear Carol:

As you are aware, this firm has the pleasure of representing the applicant, Longleaf Four, LLC (owner/developer) with their Planned Development application for the above-referenced development project. As part of their online submittal, below is the narrative as to the Second Amendment to the DeLand Tech Park Development Agreement (the "PD"), originally approved on October 3, 2022.

The purpose of this amendment is to modify the existing PD for the subject property to expand the list of commercial uses permitted within the development. In particular, the amendment clarifies that package sales of alcoholic beverages, such as those offered by a liquor/package store or similar retail establishment, are authorized on the property.

This targeted change is intended to reflect the type of retail activity that is compatible with the commercial character of the development. Allowing liquor/package store sales will increase flexibility for potential tenants while remaining subject to all applicable state and local licensing requirements.

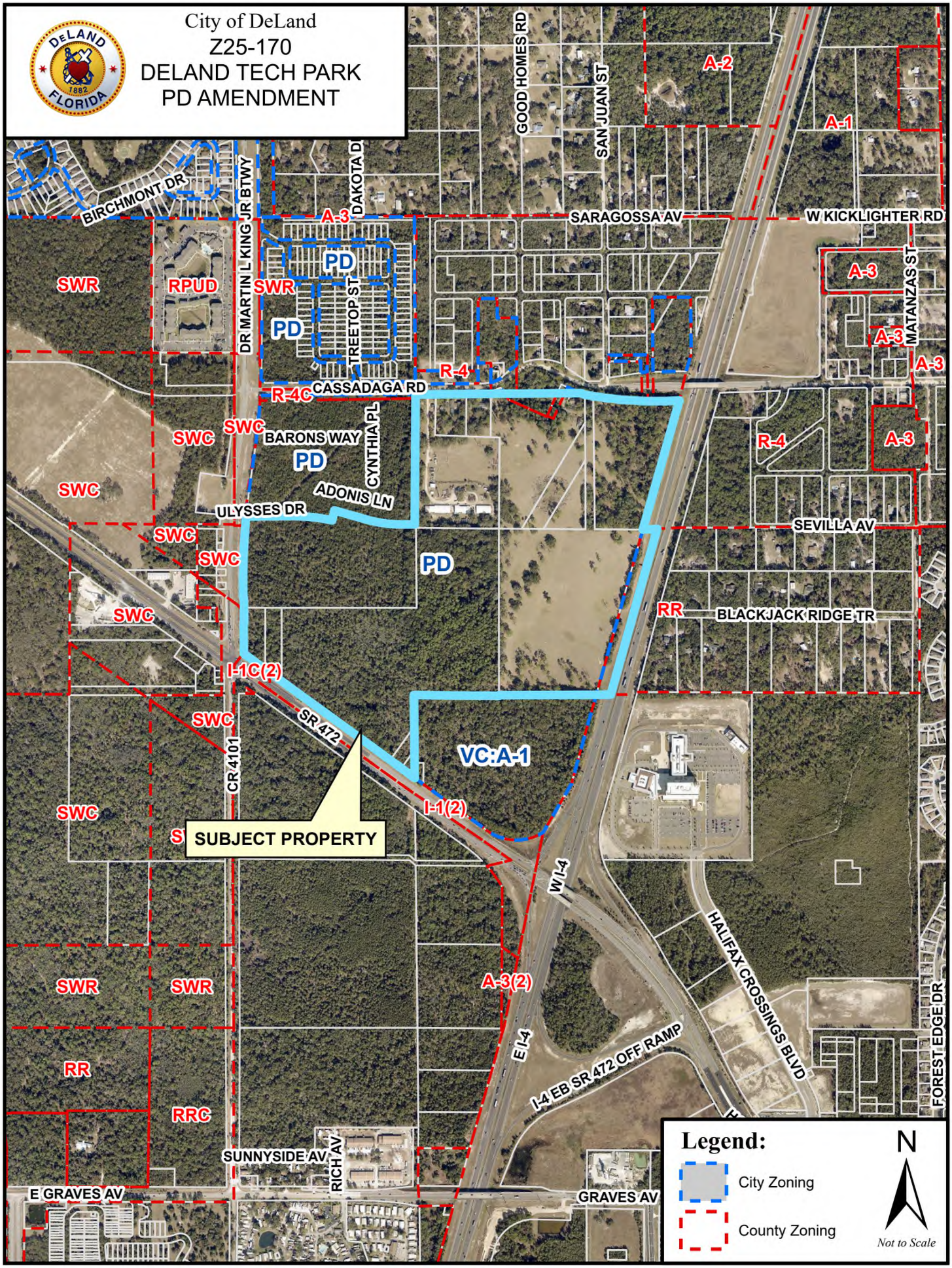
The amendment does not alter the previously approved development agreement, intensity, or design standards. It represents a limited modification that ensures the PD continues to support viable commercial activity consistent with the City's land development regulations and Comprehensive Plan.

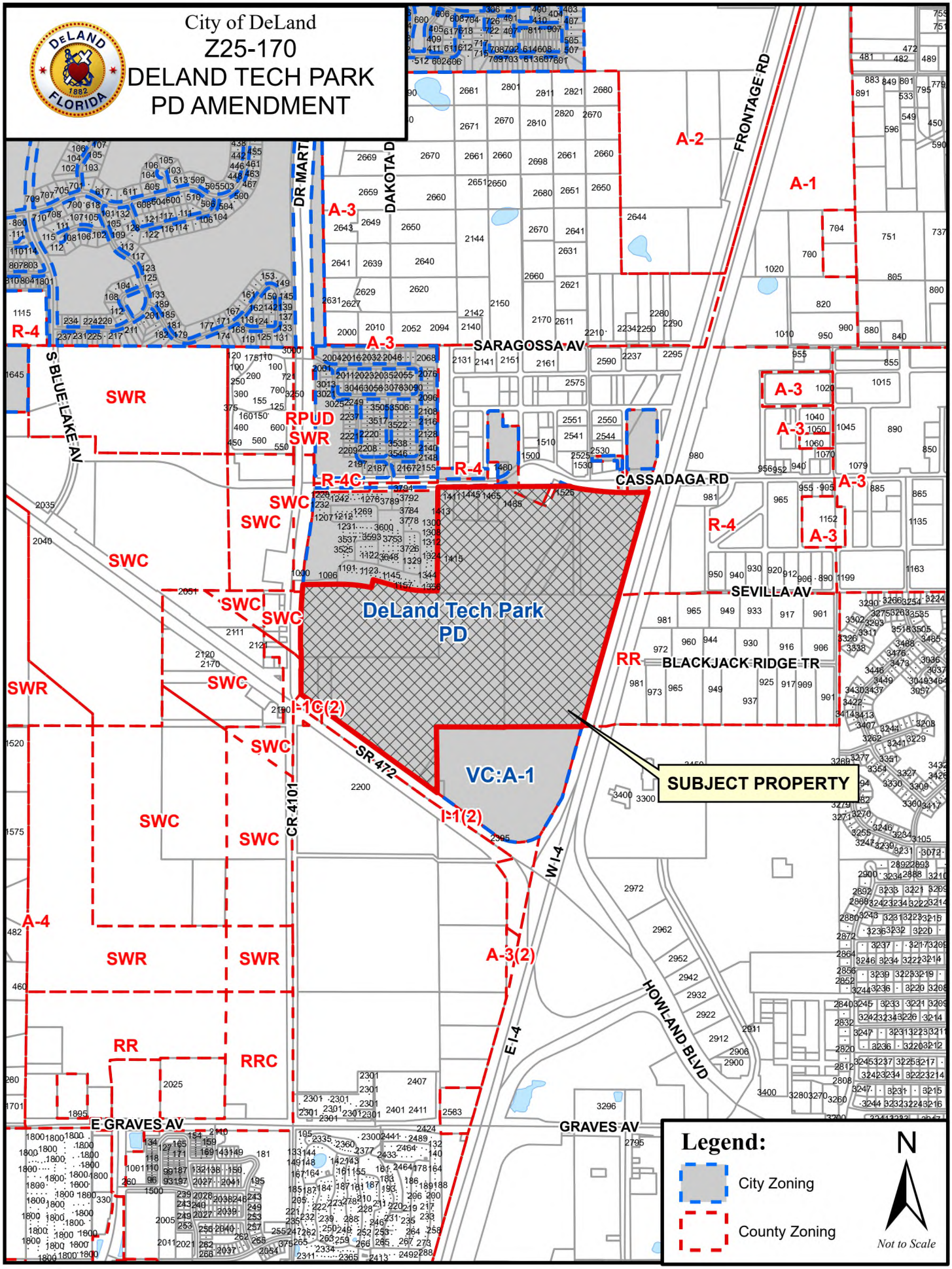
If you have any questions, please do not hesitate to contact me.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

MAW/khw


City of DeLand
Z25-170
DELAND TECH PARK
PD AMENDMENT
SUBJECT PROPERTY
VC:A-1
PD
I-1C(2)
I-1(2)
A-3(2)
A-1
A-2
A-3
R-4
R-4C
RR
RRC
RPUD
SWR
SWC
BIRCHMONT DR
DR MARTIN L KING JR BTWY
DAKOTA D
GOOD HOMES RD
SAN JUAN ST
SARAGOSSA AV
W KICKLIGHTER RD
MATANZAS ST
TREETOP ST
CASSADAGA RD
BARONS WAY
CYNTHIA PL
ADONIS LN
ULYSSES DR
SEVILLA AV
BLACKJACK RIDGE TR
SR 472
CR 4101
W I-4
E I-4
HALIFAX CROSSINGS BLVD
FOREST EDGE DR
I-4 EB SR 472 OFF RAMP
SUNNYSIDE AV
RICH AV
E GRAVES AV
GRAVES AV
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
Z25-170
DELAND TECH PARK
PD AMENDMENT
DeLand Tech Park
PD
VC:A-1
SUBJECT PROPERTY
A-1
A-2
A-3
A-4
R-4
R-4C
RPUD
SWR
SWC
RR
RRC
I-1C(2)
I-1(2)
A-3(2)
FRONTAGE RD
DR MARTIN
DAKOTA D
SARAGOSSA AV
CASSADAGA RD
SEVILLA AV
BLACKJACK RIDGE TR
S BLUE LAKE AV
SR 472
CR 4101
W I-4
E I-4
HOWLAND BLVD
E GRAVES AV
GRAVES AV
Legend:
City Zoning
County Zoning
N
Not to Scale

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Second Reading of Ordinance No. 2026-04, Amending Chapter 30, Section 30-3, and Adding Section 30-49A, Oil and Grease Management Program.

DEPARTMENT: Legal

PREPARED BY: Darren Elkind, City Attorney

ATTACHMENTS: ORD-2026-04 FOG, Business Impact Estimate

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

In the 24/25 fiscal budget, the Utilities Department received approval by the adoption of the budget for the personnel and equipment to implemented a fats, oil and grease (FOG) management program to align with Florida Department of Environmental Protection (FDEP) and the State of Florida Administrative Code (F.A.C.) 62-705 concerning grease waste removal and disposal. The purpose of this City program is to proactively monitor the largest grease producing commercial establishments in the city, bringing them into compliance and reduce the environmental risks that occur with sanitary sewer overflows caused by fats, oils and grease discharge.

The (FDEP) issued Domestic Wastewater Facility Permit for the Wiley M. Nash Water Reclamation Facility, under F.A.C. 62-705, also requires that the City adopt regulations which prohibit illicit discharge to the City's wastewater collection's system from commercial establishments providing for control of fats, oil and grease pollutant contributions to the City's wastewater collection's systems and the point of treatment. The attached ordinance is intended to fulfill these permit requirements.

In accordance with instructions from the City Commission at the first reading of this Ordinance, the City Attorney has removed the requirement to charge a fee for permit issuance or routine inspections.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government.

SUSTAINABILITY:

Infrastructure.

FISCAL IMPACT:

The implementation of this ordinance will not, in itself, have a significant fiscal impact on the Utilities Department. Significant effort is already being made by the wastewater collections staff in the maintenance and cleaning of lift stations, manholes, gravity sewer and wastewater force mains. As well as, emergency responses to sanitary sewer overflows and possible fines that we could face. A proactive approach will reduce the efforts above and help keep a much cleaner environmental approach for all.

RECOMMENDATION:

It is recommended that the City Commission adopt the attached amended Chapter 30-47 (b) (3) ordinance on first reading.

BACKGROUND/DISCUSSION:

N/A

ORDINANCE NO. 2026-04

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING CHAPTER 30 "UTILITIES" OF THE CODE OF ORDINANCES FOR THE CITY OF DELAND, BY AMENDING SECTION 30-3 "DEFINITIONS"; BY ADDING A NEW SECTION 30-49A "OIL AND GREASE MANAGEMENT PROGRAM"; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of DeLand operates a publicly owned utility system which, amongst other things, treats wastewater generated by restaurants and other commercial establishments that have a higher concentration of fats, oils and greases in its wastewater; and

WHEREAS, the City, as a utility operator, is required to comply with myriad federal and state regulations related to the operation of its utility system and the removal of fats, oils and greases from wastewater; and

WHEREAS, current regulations require the operators of commercial establishments that discharge fats, oils and grease in their wastewater to install pre-treatment devices which remove such fats, oils and greases before they enter into the City's sanitary sewer collection system; and

WHEREAS, when these pre-treatment systems fail or otherwise do not operate properly, fats, oils and greases can be discharged into the City's sanitary sewer collection system causing stoppages or other issues that have to be dealt with, all at cost to the City's utility system; and

WHEREAS, given the growth in the number of commercial establishments which are connected to the City's sanitary sewer collection system, it has become necessary to implement a comprehensive and robust system to ensure the proper installation and maintenance of pre-treatment systems; and

WHEREAS, the City in the current budget year has budgeted for and created a position to implement and operate this pre-treatment monitoring and enforcement program, the goal of which, amongst other things, is to prevent discharges of fats, oils and greases into the City's sanitary sewer collection system, thereby creating greater efficiency within the system; and

WHEREAS, the City Commission finds that the adoption of this Ordinance is in the best interests and will serve the health, safety and welfare of not only the citizens of the City of DeLand, but also all users of the City's utility system.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA

Section 1. The foregoing preamble is hereby adopted, incorporated into this Ordinance and forms a part of the legislative history for the adoption of this Ordinance.

Section 2. Chapter 30 "Utilities" of the Code of Ordinances of the City of DeLand is hereby amended by amending Section 30-3, "Definitions" by replacing the definition (31) of

"Controlling authority" with the underlined language below and adding the new underlined language in the existing definitions alphabetically to be renumbered as follows:

Sec. 30-3. - Definitions.

(31) *Control authority* means the City of DeLand which administers a pretreatment program which has been approved by the approval authority in accordance with the requirements of the Florida Administrative Code and other applicable laws. Control authority may also be referred to as the "Controlling authority" or the "Control Authority" all of which shall have the same meaning.

(51) *Hydromechanical Grease Interceptor,* also commonly referred to as an under-the-sink oil and grease trap, means a City-approved device that is designed for a flow of less than fifty (50) gallons per minute (GPM) and generally installed inside a building beneath or in close proximity to the sink or the other facilities likely to discharge fat, oil and grease substances from animal and/or vegetable sources, in an attempt to separate, trap or store their fat-soluble substances and prevent their entry into the collection system.

(78) *Notice of Violation* means a written response from the Control Authority to specific noncompliance situations by a Commercial User, or the owner of a private wastewater collection system or private lift station. The purpose of the document is to notify the recipient of the noncompliance situation and to demand implementation of definitive corrective measure within a specified time frame to achieve compliance with the provisions of this Article and other applicable sections of the City Code. The Notice of Fats, Oils and Grease Violation may or may not include a fine or penalty for the violation(s). The Notice of Fats, Oils and Grease Violation is issued to Commercial Users and owners of private lift stations and private wastewater collection systems in the Fats, Oils and Grease Management Program.

(79) *Oil and Grease* or *Fats, Oils, and Grease* means materials, either liquid or solid, that are composed primarily of fatty matter from animal or vegetable sources or petroleum-based hydrocarbons.

(81) *Oil and Grease Interceptor* or *Interceptor* means a City approved device that is designed to separate, trap and hold fat, oil and grease substances from animal and/or vegetable sources that are present in the discharge from Users of the City wastewater system, and installed outside of the building. The purpose of the interceptor shall be to prevent fat, oil and grease from entering the City wastewater system.

(82) *Oil and Grease Management Permit* means a permit issued through the Oil and Grease Management Program.

(83) *Oil and Grease Management Program* means the program implemented in order to minimize the introduction of Oil and Grease into the POTW pursuant to Section 30-49A of the City Code.

(84) Oil and Grease Pretreatment Device means a device or system of devices designed and constructed to separate, trap, and retain Oil and Grease that are found in the discharge from Users of the City wastewater system. Oil and Grease Pretreatment Devices include, but are not limited to, Oil and Grease Interceptors, Oil and Water Separators, and Hydromechanical Grease Interceptors.

(85) Oil and Grease Waste means waste streams containing fatty, oily, or greasy liquids or solids that are discharged into the municipal wastewater system from a Commercial User or Industrial User, as being distinct from domestic wastewater.

(86) Oil and Water Separator means a City approved device designated and constructed to separate, trap and retain oil and grease substances derived from petroleum-based hydrocarbons that are found in the discharge from Users of the City wastewater system. The purpose of the separator is to prevent petroleum-based hydrocarbons from entering the City wastewater system and to improve the safety of said system for both City personnel and the general public.

(123) Utilities Department Officials means the persons designated by either the Utilities director or the City Manager to administer the provisions of this Article.

Section 3. Chapter 30 "Utilities" of the Code of Ordinances of the City of DeLand is hereby amended by inserting a new Section 30-49A "Oil and grease management program" by adding the new underlined language to read in full as follows:

Sec. 30-49A. - Oil and grease management program.

(a) *Purpose and Intent.*

(1) This Program sets forth uniform requirements for users of the POTW of the City of DeLand, and enables the City to comply with all the applicable regional, state and federal laws including the Clean Water Act and General Pretreatment Regulations. The purpose of this Section is to provide for the implementation of the Oil and Grease Management Program (also referred to as the "Program"). The objective of the Oil and Grease Management Program is to minimize the introduction of fat-soluble wastes, food particles, and petroleum-based substances to the collection system.

(2) The Oil and Grease Management Program authorizes:

a. The issuance of Oil and Grease Management Permits that provide for monitoring, compliance, and enforcement activities.

b. Approval of the installation and maintenance of Oil and Grease Pretreatment Devices.

c. The establishment of administrative review procedures for the Program and requires user record keeping and reporting.

d. The setting of fees for the equitable distribution of cost resulting for the program established herein.

(b) *Program Applicability*.

(1) This program shall apply to any non-domestic user connected to the City of DeLand's sanitary sewer system at a location at which preparation, manufacturing, or processing of food occurs including, but not limited to, restaurants, cafes, fast food outlets, pizza outlets, delicatessens, sandwich shops, coffee shops, ice cream shops, smoothie shops, schools, nursing homes, bakeries, supermarkets, commissaries, commercial kitchens, caterers and other facilities that prepare, serve, or otherwise make food products available for consumption. These users shall install, operate, and maintain an approved Oil and Grease Pretreatment Device and implement Best Management Practices (BMP) as approved by the City of DeLand's Utility Department.

This program also applies to any non-domestic user where auto-related services occur including, but not limited to, oil change centers, car washes, auto service centers, truck service centers and other facilities that manage coolants, petroleum oils, or derivatives. These users shall install and maintain an approved Oil and Water Separator and implement BMP as determined by the Control Authority.

(2) All Users to whom this Program applies, as listed in Section 30-49A(b)(1), are required to submit an application for an Oil and Grease Management Permit.

(3) If a building permit is issued for construction of a new food service facility on or after the effective date of this subsection, such food service facility shall be required to install, operate, and maintain an Oil and Grease Pretreatment Device in compliance with this division. The Oil and Grease Pretreatment Device shall be permitted and installed prior to the issuance of a certificate of occupancy or certificate of completion for the building permit.

(4) An Oil and Grease Pretreatment Device may not be required for facilities that only sell/serve/provide clear drinks and/or prepackaged foods. Such facilities shall submit an application for an Oil and Grease Management Permit and a variance request. If the request is approved, a letter of exemption may be issued.

(5) Commercial users and large residential facilities such as, apartment complexes, assisted living facilities, or areas of intensified dwelling which are found by Utilities Department Officials to be contributing Oil and Grease in quantities sufficient to cause main line stoppages, lift station malfunctions, or necessitate increased maintenance on the collection system, shall be directed to cease discharging Oil and Grease to the POTW and/or shall be required to install an Oil and Grease Interceptor. The required capacity of the Oil and Grease Interceptor for such commercial users shall be determined by Utilities Department Officials on a case-by-case basis.

(6) Significant Commercial Users and Industrial Users with an Industrial Wastewater Discharge Permit may also be subject to the Oil & Grease Management Program

requirements in this Section and may be required to obtain an Oil and Grease Management Permit.

(7) In any case, a User may be required by Utilities Department Officials to obtain an Oil and Grease Management Permit and install an Oil and Grease Pretreatment Device if the User is discharging Oil and Grease in excess of the quantities set forth in the General Sewer Use Requirements in Section 30-47(d) ("Specific limits developed by the Control Authority").

(c) *Existing Facilities*. Existing facilities to which the Program applies as described in Section 30-49A(b)(1) who are not currently a part of the Program shall proceed through the following phases:

(1) Phase 1: Within six (6) months of receipt of notification by the City, all existing food service or automotive related facilities that do not have an Oil and Grease Management Permit shall apply for an Oil and Grease Management Permit.

If there is no Oil and Grease Pretreatment Device in place at the time of application and the information provided in the application indicates that an Oil and Grease Pretreatment Device is required in accordance with the criteria listed in Section 30-49A(b)(1), the applicant will be required to install an approved, properly operated and maintained Hydromechanical Grease Interceptor within the time specified in the Permit.

(2) Phase 2: If determined necessary by the application, an Oil and Grease Management Permit will be issued for a period of two (2) years. During those two (2) years, sampling shall be conducted quarterly by the City. If the running annual average concentration of Oil and Grease is below the Local Limit set forth by the City, the Oil and Grease Management Permit may be renewed with the existing Oil and Grease Pretreatment Device. Sampling may be terminated before two (2) years, but after no less than one (1) year, if the running annual average Oil and Grease concentration is below the Local Limit for four (4) consecutive sampling events.

(3) Phase 3: If after two (2) years, the running annual average Oil and Grease concentration exceeds the Local Limit or if the applicant violates any conditions of the Oil and Grease Management Permit, the applicant must install a new, properly sized Oil and Grease Interceptor approved by the City. The Oil and Grease Management Permit may be renewed with the condition that the interceptor be installed within two (2) years of the permit renewal date. The existing Oil and Grease Pretreatment Device must be maintained properly in accordance with the Permit requirements and City sampling may be required until the new interceptor is installed. The determination as to whether or not sampling is necessary is in the sole discretion of the City

a. Once the new Oil and Grease Interceptor is installed, a new Oil and Grease Management Permit must be obtained. Building permit fees associated with the installation of the Oil and Grease Interceptor may also be waived if the interceptor is installed on time.

b. If the Oil and Grease Interceptor is not installed within the allotted two (2) years, the Oil and Grease Management Permit will not be renewed and enforcement actions will be taken pursuant to Section 30-49A(m).

c. If the existing Oil and Grease Pretreatment Device can be repaired or restored to the manufacturer's original specifications and can operate to meet the requirements of the Program, the applicant may be allowed to repair or restore the device in lieu of installing a new Oil and Grease Interceptor. The repair or restoration must be approved by Utilities Department Officials and occur within the two (2) years allotted by the Oil and Grease Management Permit. Once the repair or restoration is completed, a new Oil and Grease Management Permit must be obtained. The building permit fees associated with the repair or replacement may be waived if the repair or restoration is approved by Utilities Department Officials and completed within the timeframe required by the existing permit.

(d) New Facilities.

(1) For the purposes of this Section, all expansions and/or renovations of existing facilities requiring an engineering, building, or plumbing permit shall be considered new facilities. All changes of use, capacity, or operations of existing facilities shall also be considered new facilities. New facilities shall be subject to the requirements contained in this Section.

(2) New facilities shall submit an application for an Oil and Grease Management Permit and shall install new or modify existing Oil and Grease Pretreatment Device(s) prior to the commencement of operations.

(e) *Management Program*—General Criteria. Unless otherwise exempt under the provisions of this Section, this Article, or a permit issued pursuant to this Article, owners of private wastewater collection systems and private lift stations, and other commercial users contributing Oil and Grease to the City wastewater system will meet the following criteria and the provisions set forth in this Section.

(1) The discharge by a User or owner of a private wastewater collection system or private lift station to the POTW of certain liquids or wastes may be prohibited and/or limited by the provisions of this Section.

(2) Wastes which contain food particles and/or Oil and Grease may be discharged to the POTW in accordance with the conditions set forth in this Section.

(3) Waste haulers that provide services to Commercial Users or owners of private lift stations or private wastewater collection systems, which include Oil and Grease Pretreatment Devices, within the wastewater service area of the City shall be licensed in the state of Florida.

(4) Where the installation and use of an Oil and Grease Pretreatment Device is required by this Section, wastes containing food particles or Oil and Grease shall be directed to the Oil and Grease Pretreatment Device through the inlet pipe only and in accordance with the design and operating specifications of the device prior to discharge to the POTW.

(5) The installation of garbage disposals and/or grinders into a commercial food facility is prohibited by the City of DeLand.

(6) Sanitary facilities, such as water closets, lavatories, and showers, and other similar fixtures shall not be discharged to the Oil and Grease Pretreatment Device.

(7) Oil and Grease Pretreatment Devices shall be permitted, installed, inspected, operated, cleaned, pumped, maintained, and repaired solely at the User's expense.

(8) Upon request of Utilities Department Officials, the User must provide documentation on the design and performance of the existing or proposed Oil and Grease Pretreatment Device. The requested information may include, but is not limited to, manufacturer specifications, performance data, sample analysis, capacity calculations, construction materials, installation instructions, and operation and maintenance manuals.

(9) If at any point in time, an existing Oil and Grease Pretreatment Device (or lack thereof) is found to be causing sanitary sewer overflows or otherwise posing a threat to environmental or public health because the device is undersized, dilapidated, deteriorated, impaired, or improperly installed, the facility will be required to install a new device meeting the specifications of the Program within six (6) months of notification by the City.

(f) *Design* - General.

(1) In some instances, Oil and Grease Pretreatment Devices other than Oil and Grease Interceptors may be allowed. Utilities Department Officials may approve an exemption or variance from the installation of an Oil and Grease Interceptor if specific requirements are met.

a. A User may be eligible for an exemption from the installation of an Oil and Grease Pretreatment Device if the facility meets the following conditions including, but not limited to:

1. The facility sells/serves/provides ONLY prepackaged, ready-to-eat foods with no preparation required other than warming in a microwave oven.
2. The facility serves ONLY clear drinks which do not include milk products, fruit or vegetable solids, or protein/energy powders.
3. The facility ONLY serves food on disposable dishware and with disposable silverware.

b. A User MAY be eligible for a variance for the installation of a Hydromechanical Grease Interceptor if the facility meets the following conditions including, but not limited to:

1. The facility will sell/serve/provide ONLY sandwiches, pre-made ice cream, popcorn, or roller hot dogs/taquitos.
2. The facility will prepare uncooked or unbaked food or meals that will be taken from the facility to be cooked or baked in another location.

c. Eligibility for an exemption or variance is at the sole discretion of the City. The use of any of the following appliances may render the facility not eligible for an

exemption or variance: a wok stove, oven, fryer, dishwasher, griddle, flat top grill, or mixer/blender.

d. Other factors that may be considered when evaluating a facility will include: seating capacity, number of meals served daily, and hours of operation.

e. Oil and Grease Interceptor exemption and variance requests are evaluated on an individual basis and may be rescinded or modified if the menu, kitchen equipment, seating capacity, and/or other factors are changed in a way that affects the discharge of Oil and Grease to the POTW.

1. Hydromechanical Grease Interceptors may only be installed at new facilities with an approved variance.
2. Users requesting a variance must submit a written request during the engineering or building permit application process and must submit sufficient calculations and/or documentation to support their request.
3. Variances will not be considered for caterers, commissaries, fast food outlets, or any restaurant with a fryer.

(2) Oil and Grease Pretreatment Devices shall be designed and constructed in accordance with this Section and other applicable Federal, State, and local regulations. Utilities Department Officials or assignee shall approve design, location, capacity, and construction.

(3) Oil and Grease Pretreatment Devices shall have a minimum of two compartments and shall be capable of separation and retention of oil and grease and storage of settleable solids.

(4) The design of Oil and Grease Pretreatment Devices shall be based on peak flow or seating capacity, and when applicable, capable of treating emulsions. Oil and Grease Pretreatment Devices shall be sized to allow efficient removal and retention of the Oil and Grease from the User's discharge to the POTW.

(5) Alternative Oil and Grease removal technologies shall be subject to written approval by Utilities Department Officials and shall be based on demonstrated removal efficiencies.

(6) An adequate number of inspection and monitoring points, such as manholes, shall be provided. Covers shall have a gas-tight fit.

(7) Where additional weight loads may exist, the Oil and Grease Pretreatment Devices shall be designed, constructed and installed for adequate load bearing capacity.

(8) The sizing calculations with the supporting information for determination of the effective capacity shall be included on the plan set and submitted to the Utilities Department for review and permit issuance. The Utilities Department may review the sizing calculations and may require modification of the capacity and other requirements as may be necessary on a case-by-case basis.

(9) Oil and Grease Pretreatment Devices shall be installed in a location which provides easy access at all times for inspections, cleaning, and proper maintenance, including

pumping. Utilities Department Officials shall approve the location of the Oil and Grease Pretreatment Device prior to installation.

(g) *Oil and Grease Interceptors and Separators*

(1) Shall be designed, tested, sized and installed in accordance with the Florida Building Code – Plumbing in effect.

a. Construction materials and structural requirements for precast Oil and Grease Interceptors shall comply with ASTM-C1613; Chapter 10, Section 1003 of the Florida Plumbing Code: 64E-6.013 F.A.C.

b. Construction materials and structural requirements for fiberglass or polyethylene Oil and Grease Interceptors shall comply with 64E-6.013 F.A.C.

c. Each Oil and Grease Interceptor shall be equipped with two (2) hatches on the top surface and one manhole located over each compartment for inspection, sampling, monitoring, cleaning, and maintenance. Grease interceptors shall be installed in a location outside the building which provides access at all times for inspection, sampling, pumping, cleaning, and maintenance.

d. Oil and Grease Interceptors shall be water and gas tight. Each Interceptor shall be engineered to withstand the proper weight load, such as from vehicular traffic, to be placed on the Interceptor. The minimum tank volume of Oil and Grease Interceptors shall be 750 gallons (2,839 L). The maximum volume of an individual single grease interceptor chamber shall be 1,250 gallons (4,731 L). Installation of Oil and Grease Interceptors in series may be required to meet capacity requirements.

e. Flow control devices shall be required when the water flow through the Oil and Grease Interceptor could exceed its rated flow.

(2) Capacity.

a. The effective capacity of the approved Oil and Grease Pretreatment Device shall be determined in accordance with the Florida Building Code - Plumbing, Rule 64E-6, F.A.C., other applicable laws, codes, and regulations. The sizing formulas for Oil and Grease Interceptors shall be as follows or as defined in the Florida Building Code, whichever is stricter:

1. SIZING FORMULA FOR FOOD SERVICE FACILITIES WITH SEATS:

(S) × (GS) × (HR/12) × (LF) = Effective capacity of Oil and Grease Interceptor in gallons

Where:

"S" = Number of seats in dining area.

"GS" = Gallons of wastewater per seat (use 25 gallons for restaurants with china dishes and/or automatic dishwater or use 10 gallons for restaurants with paper or baskets and no dishwashers).

"HR" = Number of hours restaurant is open.

"LF" = Loading Factor (Use 2.00 interstate highway; 1.50 other freeways; 1.25 recreational area; 1.00 main highway; 0.75 other highway).

2. SIZING FORMULA FOR FOOD SERVICE FACILITIES WITHOUT SEATS:

(GPM) × (RT30) = Effective capacity of Oil and Grease Interceptor in gallons

Where:

"GPM" = Peak drain flow into the interceptor in gallons per minute.

"RT30" = Retention time of 30 minutes.

3. OTHER ESTABLISHMENTS WITH COMMERCIAL KITCHENS:

(M) × (GM) × (LF) = Effective capacity of Oil and Grease Interceptor in gallons

Where:

"M" = Meals prepared per day.

"GM" = Gallons of wastewater per meal (Use 5 gallons).

"LF" = Loading Factor (Use 1.00 with dishwasher and 0.75 without dishwasher).

(3) Installation.

a. The Oil and Grease Interceptor shall be installed in accordance with the Florida Building Code and any applicable manufacturer specifications.

b. A minimum notice of two (2) business days shall be given to the City's Utility Department before the installation of the Oil and Grease Pretreatment Device commences.

c. The City shall inspect the Oil and Grease Pretreatment Device at the time of delivery to the site before installation. An additional inspection is required after the device has been installed and plumbed, but before it has been covered, to assure compliance with the Florida Building Code and applicable manufacturer specifications.

(h) *Hydromechanical Grease Interceptors*.

(1) Design specifications.

a. Hydromechanical Grease Interceptors shall conform to the standards of the Florida Building Code - Plumbing. A certification seal shall be attached to the unit.

b. A Hydromechanical Grease Interceptor must be designed and certified to operate efficiently at its maximum flow rate in GPM and retain a minimum of twice its rated GPM in pounds of Oil and Grease.

c. On or after the effective date of this Section, existing food service facilities that already have a Hydromechanical Grease Interceptor installed shall be evaluated by

the City to determine whether the device meets the current requirements of Chapter 10 of the Florida Building Code—Plumbing.

d. The original design of the Hydromechanical Grease Interceptor shall not be modified unless the manufacturer of the Hydromechanical Grease Interceptor recommends the modification in writing and it is approved by the City. Any modification to the Hydromechanical Grease Interceptor shall be done at the sole cost, expense, risk, and liability of the User.

(2) Capacity.

a. The effective capacity of the approved Hydromechanical Grease Interceptor shall be determined in accordance with the Florida Building Code - Plumbing, other applicable laws, codes, and regulations.

b. The minimum effective capacity of the Hydromechanical Grease Interceptor shall be determined by the following formula:

1. SIZING FORMULA FOR HYDROMECHANICAL GREASE INTERCEPTORS:

(V) × 0.75 ÷ (DT) = Effective capacity of Hydromechanical Grease Interceptor in gallons per minute.

Where:

"V" = Volume of all compartments of fixture/sink draining to Hydromechanical Grease Interceptor in gallons.

"0.75" = The fixture/sink is normally filled to about 75% of capacity with water. The items being washed displace about 25% of the fixture content, thus actual drainage load = 75% of fixture/sink capacity.

"DT" = Drainage period is the time required to completely drain the fixture/sink in minutes.

(3) Installation.

a. Hydromechanical Grease Interceptors shall be installed in strict accordance with the manufacturer's instructions.

b. Hydromechanical Grease Interceptors shall be installed at a location with sufficient clearance for removal of interceptor cover for cleaning.

c. The flow control device provided by the manufacturer with the Hydromechanical Grease Interceptor must be installed prior to the interceptor on the drain line.

(i) *Oil/Water Separators*.

(1) Design specifications.

a. Oil and Water Separators shall conform to the standards in the Florida Building Code - Plumbing.

b. Oil and Water Separators shall have a depth of not less than 2 feet (610 mm) below the invert of the discharge drain. The outlet opening of the separator shall have not less than an 18-inch (457 mm) water seal.

c. Where the installation and use of an Oil and Water Separator is required by the Florida Building Code - Plumbing, wastes containing residual petroleum-based Oil and Grease shall be directed to the Oil and Water Separator.

d. Parking garages in which servicing, repairing or washing is not conducted, and in which gasoline is not dispensed, shall not require an Oil and Water Separator. Areas of commercial garages utilized only for storage of automobiles are not required to be drained through an Oil and Water Separator.

(2) Capacity.

a. Where automobiles are serviced, greased, repaired or washed, oil separators shall have a capacity of not less than 6 cubic feet (0.168 m^3) for the first 100 square feet (9.3 m^2) of area to be drained, plus 1 cubic foot (0.028 m^3) for each additional 100 square feet (9.3 m^2) of area to be drained into the separator.

(j) *Maintenance*.

(1) The User shall be responsible for cleaning and maintaining its Oil and Grease Pretreatment Device in such condition as necessary for its proper and efficient function and operation at all times. Except as may be indicated below, all maintenance, repair and cleaning activities shall be performed by a licensed contractor. Cleaning shall involve the complete removal of all contents, including floating materials, wastewater, bottom sludge and solids from the walls, baffles, piping, and vents, associated with the Oil and Grease Pretreatment Device, the private lift station or private wastewater collection system.

(2) The operation and maintenance of an Oil and Grease Pretreatment Device, including the proper disposal of waste; or a private wastewater collection system; or a private lift station; shall be performed at the sole expense of the User or owner.

(3) Decanting, backflushing, or discharging of removed wastes back into the Oil and Grease Pretreatment Device, private lift station or wastewater collection system from which the wastes were removed, or into any other Oil and Grease Pretreatment Device, private lift station or wastewater collection system, for the purpose of reducing the volume to be hauled and disposed, is prohibited.

(4) Pumping frequency shall be determined by Utilities Department Officials based on flows, quantity of Oil and Grease in the discharge, volume of business, hours of operations and seasonal variations. The User shall be responsible for maintaining the Oil and Grease Pretreatment Device in such a condition for efficient operation. Wastes removed from each Oil and Grease Pretreatment Device shall be disposed of at a facility permitted to receive such wastes, in accordance with the provisions of this Section.

(5) Oil and Grease Pretreatment Devices shall be pumped out completely a minimum of once every ninety (90) days, or as stated in the User's Oil and Grease Management

Permit. If Utilities Department Officials reasonably determine that pumping out the Oil and Grease Pretreatment Device every ninety days is not sufficient, the User may be required to pump out more frequently.

(6) Users may request a permit modification to extend the maintenance frequency of the Oil and Grease Interceptors to no more than one hundred eighty (180) days.

a. The request must be submitted in writing to Utilities Department Officials with the permit application or renewal application. In order to be eligible for a permit modification, the User must be in compliance with their current permit, if applicable. Approval of the permit modification shall require sampling and laboratory testing for Oil and Grease, $CBOD_5$, and TSS at the User's sole expense.

b. Prior to a permit modification being approved, the Oil and Grease Interceptor will be inspected and measurements of the solids layer and grease cap will be taken ninety (90) days after the most recent maintenance. If the device is in compliance, the device will be sampled for Oil and Grease, CBOD, and TSS. If the Oil and Grease in the sample exceeds the Local Limits or the CBOD or TSS exceeds the surcharge limits, the User will not be eligible for a permit modification.

c. If the User passes the first inspection and sampling as provided in Section 30-49A (j)(6)b., the above process will be repeated every thirty (30) days, up to one hundred eighty (180) days after the previous maintenance. If at any of these inspections or sampling, or the CBOD or TSS in the sample exceeds the surcharge limits, the inspections and sampling will end and the User may be considered eligible for a permit modification to reduce the frequency of pumping out the Oil and Grease Interceptor, based on the date of the most recent passed inspection and sampling event.

(7) Hydromechanical Grease Interceptors shall be cleaned completely a minimum of once a week, or more frequently as needed, to prevent carryover of Oil and Grease into the collection system. Maintenance shall include the complete removal of waste materials (oil, grease, and solids) and cleaning of the device, including the pipes, inlets and outlets. The User shall submit sufficient documentation on maintenance activities to the Utility Department official in accordance with the requirements set forth in the User's Oil and Grease Management Permit.

a. All Oil and Grease and other materials removed during the scheduled cleaning shall be stored in dedicated containers provided by a licensed hauling company. The containers shall be pumped out by the hauler when 80% of total volume of the containers has been filled.

b. Containers shall be labeled with the name and address of the User. Containers showing signs of deterioration, corrosion, or other damage shall be replaced within thirty (30) days. The lids of the dedicated containers shall be fastened and secured to prevent spills and entry of rainwater. Should any wastewater or Oil and Grease materials spill during the cleaning of the Hydromechanical Grease Interceptor or

should the containers be overfilled, the User shall be responsible for cleaning the affected area.

(8) Food establishments with fryers shall store the spent oil in dedicated containers only. Spent oil is not to be mixed with the wastewater from any other pretreatment device. Disposal of spent oil into any Oil and Grease Pretreatment Device or any part of the wastewater collection system is strictly prohibited. The contracted hauling company must dispose of all spent oil at a facility permitted to receive such wastes (hauled manifest forms shall be kept at the establishment for maintenance records).

a. Containers shall be labeled with the name and address of the User. Containers showing signs of deterioration, corrosion, or other damage shall be replaced. The lids of the dedicated containers shall be fastened and secured to prevent spills and entry of rainwater. Should any spent oil spill or should the dedicated containers be overfilled, the User shall be responsible for cleaning the affected area.

(9) The User shall keep the spent oil disposal manifests onsite and available for review by the Utilities Department upon request.

(10) Flushing the Oil and Grease Pretreatment Device with water having a temperature in excess of 140°F is strictly prohibited.

(11) Utilities Department Officials may require the User to provide, operate and maintain, at the User's expense, appropriate monitoring facilities, such as a manhole, that are safe and accessible at all times, for observation, inspection, sample collection and flow measurement of the User's discharge to the POTW. The owner of the property served by the public sewer shall be responsible for the proper operation and maintenance of the building sewer; specifically, all plumbing from the public sewer into and including the building drain.

(12) Additives.

a. The use of additives is strictly prohibited as a substitute for pumping and cleaning the Oil and Grease Pretreatment Device.

b. Additives shall include, but are not limited to, emulsifiers, enzymes, degreasers, bacteria and mixtures that are designed to purge, flush, eliminate or treat Oil and Grease in such a manner as to avoid capture and retention of said material in the Oil and Grease Pretreatment Device.

c. The use of bacteria for drain line maintenance may be considered by Utilities Department Officials on a case-by-case basis. To be eligible for consideration by Utilities Department Officials, the User shall complete a written request. If approved by Utilities Department Officials written approval shall be issued. The use of bacteria shall in no way be considered as a substitution for the required maintenance.

(13) The City shall require an Oil and Grease Pretreatment Device found to be dilapidated, deteriorated, or otherwise impaired to be repaired or replaced. All repairs and replacements must be approved by Utilities Department Officials before the repair

or replacement is performed and must be inspected before and after the repair or replacement is complete.

a. If the existing Oil and Grease Pretreatment Device can be repaired or restored to the manufacturer's original specifications and to the specifications of the Program, the applicant may be allowed to repair or restore the device in lieu of installing a new Oil and Grease Interceptor. This repair or restoration must be approved by Utilities Department Officials If approved, this repair or restoration must occur within the two (2) years allotted by the Oil and Grease Management Permit.

b. Any user that receives a notice from Utilities Department Officials to install a new Oil and Grease Pretreatment Device shall install the device within one hundred eighty (180) days from the date of such notice unless otherwise specified by Utilities Department Officials. Any requests for extension to the required installation timeframe must be made in writing to Utilities Department Officials at least fifteen (15) days in advance of the required installation date. The written request shall include the reasons for the User's failure or inability to comply within the required timeframe, the work accomplished, the additional time needed to complete the remaining work, and the steps to be taken to avoid future delays.

(k) *Oil and Grease Management Permit*.

(1) It is prohibited for any facility producing Oil and Grease to discharge waste into the collection system without authorization from Utilities Department Officials. Any facility discharging Oil and Grease without authorization shall be subject to enforcement actions. Authorization shall be given in the form of an Oil and Grease Management Permit. Application for a permit shall be made to Utilities Department Officials. If, after examining the information contained in the Oil and Grease Management Permit application, it is determined by Utilities Department Officials that the proposed facility complies with the provisions of the Section, a permit may be issued allowing the discharge of such wastes into the collection system.

(2) Oil and Grease Management Permits shall expire two (2) years from the effective date of the permit. The User shall apply for permit reissuance a minimum of sixty (60) days prior to the expiration of the User's existing permit.

(3) The terms and conditions of the permit may be subject to modification by the City as limitations or requirements identified in this Section are modified or if other just causes exist. The User shall be informed of any proposed changes in the issued permit at least sixty (60) days prior to the effective date of the change(s). Any changes or new conditions in the permit shall include a reasonable schedule for compliance.

(4) As a condition precedent to the granting of an Oil and Grease Management Permit, the applicant shall agree to the following:

a. To hold harmless the City and the City's employees from any liabilities arising from the permit holder's operations under this permit.

b. The right for the City to enter the property for planned or random inspections and to mitigate situations related to Oil and Grease Pretreatment Devices harming the environment.

(5) No fee shall be charged by the City for the issuance of an Oil and Grease Management Permit.

(6) Persons who have filed incomplete applications will be notified by the City of the deficiency. The User will be given ten (10) days to correct the noted deficiency. For assistance or clarification in completing the application, contact the Utilities Department.

(7) The Oil and Grease Management Permit may only be transferred to a new owner if more than twelve (12) months remain on the current permit, the services and menu remain the same, and the facility is not increasing the seating capacity or undergoing any service area, kitchen or food preparation area remodeling. The new permittee shall receive a transfer permit package and may be allowed to operate under that permit until its expiration date.

(8) Common Grease Interceptors. Food service establishments inside shopping or retail centers, or users with food preparation facilities within a single structure or warehouse with different operators may be connected to a common grease interceptor. Each food service establishment shall obtain an Oil and Grease Management Permit even if utilizing a common system. Each food service establishment shall be responsible for ensuring that maintenance of the Common Grease Interceptor is performed properly and shall keep maintenance records onsite.

(9) Administrative Procedures.

a. Pumped oil and grease waste from Oil and Grease Pretreatment Devices shall be tracked by a manifest, which confirms pumping, hauling and disposal of waste. The uniform Oil and Grease waste manifest form for the state of Florida shall be used to track pumping, hauling and disposal of waste. The manifest shall be completed and executed by (1) the generator or its authorized representative, (2) the hauler or its authorized representative, and (3) an authorized representative of the disposal facility.

b. The manifest shall be available on site for immediate access by City personnel. The manifest shall be kept on file at the User's facility for a minimum of three years. The User shall submit the fully completed manifest within seven business days of the service to Utilities Department Officials.

(l) Conditions of Non-Compliance. Any User discharging Oil and Grease shall be subject to the terms and conditions of this Section, regardless of whether the User has a current Oil and Grease Management Permit or not. Violations of this Section include, but are not limited to, the following:

(1) General Violations.

a. Failure to report maintenance activities to the City;

b. Failure to properly maintain the Oil and Grease Pretreatment Device in accordance with the provisions of this Article or the Oil and Grease Management Permit;
c. Failure to maintain a record of maintenance activities onsite at all times;
d. Failure to provide manifests, files, records or access for inspection or monitoring activities;
e. Failure to obtain or renew an Oil and Grease Management Permit;
f. Failure to install an Oil and Grease Pretreatment Device as required by Utilities Department Officials;
g. Installation and/or operation of an improperly sized or otherwise unauthorized Oil and Grease Pretreatment Device;
h. Discharge of liquid waste that contains Oil and Grease waste that exceeds the Local Limits set forth in Section 30-47(d);
i. Discharge of liquid waste that contains $CBOD_5$ and/or TSS that exceeds the Local Limits set forth in Section 30-47(d);
j. Failure to report significant changes in operations and/or wastewater constituents and characteristics;
k. Failure to report truthful information on an application, written request or manifest form;
l. Failure to repair or replace a deteriorated, dilapidated, and/or otherwise impaired Oil and Grease Pretreatment Device;
m. Failure to meet or maintain compliance as directed by a Compliance Advisory, Notice of Violation, Administrative Order (all as defined in 30-49A(m)) and/or a schedule of compliance established for improvements or corrections of deficiencies cited;
n. Failure to meet all other regulations or standards contained in the City of DeLand Code of Ordinances and/or the permittee's permit package;
o. Overflow of a sanitary sewer due to the discharge of Oil and Grease.

(2) Violations related to Oil and Grease Interceptors. An Oil and Grease Interceptor shall be considered to be out of compliance if:
a. The grease layer on top exceeds six (6) inches;
b. The solids layer on the bottom exceeds eight (8) inches;
c. Removal efficiencies, as determined through sampling and analysis, indicate less than eighty percent (80%) removal;
d. The manifests of maintenance activities demonstrate that the Oil and Grease Interceptor has not been maintained within the amount of time specified in the Oil and Grease Management Permit.

(3) Violations related to Hydromechanical Grease Interceptors. A Hydromechanical Grease Interceptor shall be considered out of compliance if:
a. The total volume of grease and solids is more than 25% of total fluid volume or as otherwise stated in manufacturer's specifications;

b. The dedicated container for Oil and Grease is more than eighty percent (80%) full;
c. The solids collector is more than fifty percent (50%) full;
d. Monitoring results for the device indicate that the removal efficiency is less than eighty percent (80%);
e. A bypass is occurring;
f. The manifests of maintenance activities demonstrate that the Hydromechanical Grease Interceptor has not been maintained within the amount of time specified in the Oil and Grease Management Permit.

(4) Violations related to Oil and Water Separators. An Oil and Water Separator shall be considered out of compliance if:
a. The retained oil layer is leaking into the discharge;
b. The captured oil reservoir is more than ninety percent (90%) full;
c. There are more than eight (8) inches of solids on the bottom;
d. The manifests of maintenance activities demonstrate that the Oil and Water Separator has not been maintained within the amount of time specified in the Oil and Grease Management Permit;
e. Removal efficiencies, as determined through sampling and analysis, indicate less than ninety percent (90%) removal.

(m) *Enforcement*.

(1) Stage 1 Enforcement. A Compliance Advisory is an informal letter or email issued to the permittee as a reminder of the conditions contained in their Oil and Grease Management Permit and the City Code for minor noncompliance issues that have no negative impact on the surrounding environment or the POTW. Stage 1 Enforcement may be bypassed to Stage 2 or Stage 3 based on the severity of the violation. No fines are associated with the Compliance Advisory. If the noncompliance issues are not addressed in the time specified in the Compliance Advisory, Stage 2 or Stage 3 enforcement actions shall be taken.

(2) Stage 2 Enforcement. A Notice of Violation (NOV) is a formal, certified letter from the City detailing the type of violation(s) and the time frame for compliance with the City's requirements. Evidence of compliance must be furnished to the City within the time specified in the NOV. No fines are associated with the NOV. If the noncompliance issues are not addressed within the time specified in the NOV, additional enforcement actions shall be taken.

(3) Stage 3 Enforcement. An Administrative Order (AO) is a certified letter from the City making reference to a previous NOV or AO for substantial noncompliance issues. An AO shall include a timeframe for compliance that may be shortened by Utilities Department Officials depending on whether or not the User has previously been given time to comply. Evidence of compliance must be furnished to the City within the time specified in the AO. If a User violates or continues to violate the provisions set forth in this section or fails to initiate/complete corrective action in response to a NOV or

previously issued AO, then an AO shall be issued and/or Utilities Department Officials may pursue one or more of the following options:

a. Impose a monetary penalty as listed in the table below;

MONETARY PENALTY CHART FOR NON-COMPLIANCE	
Failure to submit a manifest form for Oil and Grease Pretreatment Device maintenance within the time specified in the Permit.	$250.00
Failure to submit an application or a renewal application for an Oil and Grease Management Permit.	
Failure to submit a payment for an Oil and Grease Management Permit or Permit Renewal.	
Failure to maintain a file of records, onsite, for the facility's Oil and Grease Pretreatment Device. The file shall be available at all times for inspection and review by City personnel.	
Failure to properly maintain an Oil and Grease Pretreatment Device as dictated by the conditions established in the permit.	$500.00
Failure to install, repair or replace an Oil and Grease Pretreatment Device in accordance with this Section.	$1,000.00
Failure to comply with the City's Local Limits. (Additional Surcharges may be applied on top of the penalties for CBOD, TSS and/or Oil and Grease.)	
Failure to properly maintain an Oil and Grease Pretreatment Device as dictated by the conditions established in the permit resulting in the occurrence of environmental damage (i.e. a sanitary sewer overflow.)	

b. Collect a sample and assess for compatible wastes in accordance with the provisions of Section 30-49A;
c. If the violation is causing environmental damage, pump the Oil and Grease Pretreatment Device and place the appropriate charge on the User's monthly sewer bill;
d. Assess a reasonable fee for additional inspection, sample collection and laboratory analyses; and/or
e. Terminate water and sewer service.

(4) Progressive enforcement action shall be pursued against users with multiple violations of the provisions of this Article.
(5) Each day in which any violation of the Oil and Grease Management Program continues may be deemed a separate offense.
(6) In cases where utility services have been turned off due to a violation, utility service will not be reinstated until the User comes into compliance and all fees and penalties have been paid in full to the City.
(7) Enforcement, penalties and proceedings. If the permittee fails to comply with previous AO requirements, the City may pursue judicial action pursuant to Section 30-53.

Section 4. Severability. If any section, sentence, phrase, word or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word or portion of this Ordinance not otherwise determined to be invalid, unlawful or unconstitutional.

Section 5. Codification; Directions to Code Codifier; Correction of Scrivener's Errors.

(a). The provisions of Sections 2 and 3 of this Ordinance shall become and be made a part of the Code of Ordinances of the City of DeLand and the Sections of this Ordinance may be renumbered or re-lettered to accomplish such intention and the word "Ordinance", or similar words, may be changed to "Section," "Article", or other appropriate word; provided, however, that Sections 1, 4, 5 and 6 shall not be codified.

(b). The Code codifier shall instruct the Municipal Code Corporation to make all changes necessary in the Code of Ordinances of the City of DeLand to implement the provisions of this Ordinance and is granted liberal authority to codify the provisions of this Ordinance in such manner and in such places as deemed advisable.

(c). In accordance with the City's ongoing codification program; the City Clerk, in conjunction with the City Attorney, may make corrections to the provisions of this Ordinance relative to Scrivener's errors of whatever type or nature.

Section 6. Effective Date. This Ordinance shall become effective January 1, 2026.

PASSED AND DULY ADOPTED this 21st day of January, 2026.

_____
Christopher M. Cloudman
Mayor–Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk - Auditor

Passed on first reading: January 05, 2026
Adopted on second reading: January 21, 2026

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Business Impact Estimate

Proposed ordinance's title/reference:

ORDINANCE NO. 2026-04

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE CODE OF ORDINANCES OF THE CITY OF DELAND LAND DEVELOPMENT REGULATIONS BY AMENDING SECTION 33-94.01; BY AMENDING SECTION 33-94.02(C); BY AMENDING SECTION 33-94.03(A)5; BY AMENDING SECTION 33-94.03 (H)4; BY AMENDING SECTION 33.94.04; BY AMENDING SECTION 33.94.04(B); BY AMEDING SECTION 33-94.06(A)(5); PROVIDING FOR CONFLICTS, CODIFICATION, SEVERABILITY AND PROVIDING FOR AN EFFECTIVE DATE

This Business Impact Estimate is provided in accordance with section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is not required by state law[1] for the proposed ordinance, but the City is, nevertheless, providing this Business Impact Estimate as a courtesy and to avoid any procedural issues that could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

☐X The proposed ordinance is required for compliance with Federal or State law or regulation;

☐ The proposed ordinance relates to the issuance or refinancing of debt;

☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;

☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;

☐ The proposed ordinance is an emergency ordinance;

☐ The ordinance relates to procurement; or

☐ The proposed ordinance is enacted to implement the following:

a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

[1] See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the City hereby publishes the following information:

1. Summary of the proposed ordinance (must include a statement of the public purpose, such as serving the public health, safety, morals and welfare):

The ordinance requires fat producing establishments to obtain registration permits relative to the otherwise required installation and maintenance of grease interceptors to reduce fats, oils, and grease (FOG) discharges into the sewer system and document the proper operation of those devices. Implementation of the grease interceptor ordinance is expected to result in significant environmental and public-health benefits. Fats, oils, and grease (FOG) are a major cause of sewer blockages, sanitary sewer overflows, and backups into streets, waterways, and private property. Properly sized and maintained grease interceptors will reduce FOG discharge at the source, improving the reliability of the wastewater collection system. The ordinance also implements a comprehensive inspection program by the city to help businesses understand the operation of and ensure compliance with the requirements related to grease interceptors.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:

There is no cost to the businesses for registering / obtaining the permit or the inspections. There may be some, but likely very few, older existing businesses that will be required to install interceptors. Based on current industry cost data (2024–2025), installation expenses vary widely depending on business size: $250–$1,500 for small passive traps, $1,000–$3,000 for hydromechanical under-sink units, and $3,000–$10,000+ for large outdoor gravity interceptors. Retrofit installations may cost $1,000–$5,000. Ongoing maintenance — including routine pumping for outdoor systems — ranges from $150–$500 every 3 months, while small indoor units require staff time for cleaning and recordkeeping. Although the ordinance introduces new costs for all food service establishments, long-term benefits include reduced sewer blockages, fewer emergency repairs, and improved wastewater system performance. Most modern businesses already have these interceptors in place as they have been required by the building code for some time. There are likely very few businesses that will be financially impacted by this ordinance, but it is impossible to know the number that are not currently in compliance with the requirement to install intercceptors.

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

None.

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs.

There will be no new revenue. Although there will be an indeterminate additional cost for inspections, there will likely be an overall savings to the utility system associated with reduced fats, oils and greases making their way into he sewer system, which will result in reduced maintenance costs.

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

Grease containment devices are required by plumbing codes. Most existing establishments will not be significantly impacted by this ordinance. There is likely a maximum of 10% of existing establishments that would need to upgrade or install an adequate system.

4. Additional information the governing body deems useful (if any):
N/A

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: First Reading of Ordinance Changing the Land Use for Approximately 1.49 Acres of Property, Located Northwest of the Intersection of East Rich Avenue and North Hill Avenue, from Low Density Residential to Medium Density Residential.

DEPARTMENT: Planning

PREPARED BY: Kendall Story, Senior Planner

ATTACHMENTS: Ordinance, Exhibit A , SMLU24-154 Staff Report North Hill Villas Land Use Amendment, SMLU24-154 Current Land Use, SMLU24-154 Proposed Land Use, SMLU24-154 Aerial, SMLU24-154 Zoning, SMLU24-154 Traffic Statement, SMLU24-154 VCS Signed Adq. Letter

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The applicant, Mark Watts, Cobb Cole, is requesting the future land use designation be amended for a ±1.49-acre parcel located on Hill Avenue from Low Density Residential (LDR) land use designation to the Medium-Density Residential (MDR) land use designation. The request for a small-scale future land use map amendment is accompanied by a request for rezoning (Z24-153 North Hill Villas PD, to allow for 13 multi-family townhome units, each 2-stories high with a single-car garage and single-car driveway).

On December 10, 2025, the Planning Board unanimously voted to recommend approval of the proposed land use change.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Institute Smart Growth Principles.

SUSTAINABILITY:

Strategic Plan Focus Area: Preparing for Future Sustainability - adopting the future land use designation of Medium Density Residential (MDR) is in line with the city's policies and long-term goals, as the city grows.

FISCAL IMPACT:

Inclusion of the subject property in the city's tax rolls will increase funds towards city services.

RECOMMENDATION:

Staff recommends that the City Commission approve the proposed land use amendment, on first reading.

BACKGROUND/DISCUSSION:

Per the 2050 Vision plan, the subject property is located within the Urban Core. The Urban Core is described as the area where the majority of the new growth will take place. A greater focus is made on “missing middle” housing options such as duplexes, townhomes, small-sized apartment buildings and live-work units, allowing for infill and redevelopment to encourage increased density.

ORDINANCE NO. 2026 -

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND, BY CHANGING THE LAND USE DESIGNATION OF CERTAIN PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF NORTH HILL AVENUE AND EAST RICH AVENUE FROM LOW- DENSITY RESIDENTIAL FUTURE LAND USE DESIGNATION TO MEDIUM-DENSITY RESIDENTIAL FUTURE LAND USE DESIGNATION; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, F.S. §163.3161, et seq., creates the Community Planning Act (hereinafter the "Act"); and

WHEREAS, the Act allows each local government to approve comprehensive plan amendments related to small scale development activities at any time during the year under certain conditions; and

WHEREAS, the Act permits small area amendments to be approved without regard to statutory limits on the frequency of comprehensive plan amendments as long as:

1. The proposed amendment involves the change to the land use designation of a parcel of property that is 50 acres or less; and

2. The cumulative effect of the above amendment does not exceed 120 acres annually; and

WHEREAS, the City Commission adopted a comprehensive plan for the future growth and development of the City pursuant to Ordinance No. 90-4, as amended, (hereinafter the "Comprehensive Plan"); and

WHEREAS, the City Commission has received a request to amend the Comprehensive Plan by changing the land use designation of approximately +/- 1.49 acres of land located northwest of the intersection of North Hill Avenue and East Rich Avenue; from Low-Density Residential future land use designation to Medium-Density Residential future land use designation; and

WHEREAS, the Planning Board held a public hearing, after due public notice, for the purpose of recommending the adoption of the proposed Comprehensive Plan amendment; and

WHEREAS, the City Commission held a public hearing after due public notice, in accordance with F.S. §163.3184(11); and

WHEREAS, this land use amendment has been transmitted to and reviewed by the Volusia Growth Management Commission.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission hereby amends the Future Land Use Map for the incorporated area by changing the land use designation of that certain parcel of land located northwest of the intersection of North Hill Avenue and East Rich Avenue; consisting of

approximately +/- 1.49 acres of land from Low-Density Residential Future Land Use designation to Medium-Density Residential Future Land Use designation, as more particularly described in the Exhibit "A" attached hereto and by this reference made a part hereof.

Section 2. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the validity of the remaining portions of this Ordinance.

Section 3. The effective date of this Ordinance shall be the later date of the following events: (1) the date of issuance of a certificate of consistency or conditional certificate of consistency with regard to the land use designation of the subject property by the Volusia Growth Management Commission; (2) thirty-one (31) days after its adoption by the City Commission; or (3) if properly challenged by an affected person, after the state land planning agency or the Administration Commission, respectively, issues a final order determining this adopted small scale development amendment to be in compliance. No development orders, development permits or land uses dependent on this Ordinance may be issued or commence before it has become effective.

PASSED AND DULY ADOPTED this ___ day of _____, 2026.

_____
Christopher M. Cloudman
Mayor - Commissioner

ATTEST:

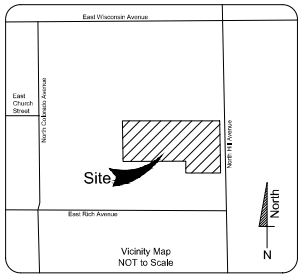
_____
Julia M. Hewitt
Interim City Clerk - Auditor

Passed on first reading:
Adopted on second reading:

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

ALTA/NSPS Land Title Survey
Boundary Survey



Schedule B-II (Exceptions)

Issued by: Old Republic National Title Insurance Company
Your File No.: 154080V
Issuing Agent: Alonis Title Company (Oviedo)
Effective Date: October 14, 2024 @ 5:00 PM

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
No Adverse Claims or Other Matters Observed at Time of Survey.
2. Facts which would be disclosed by an accurate and comprehensive survey of the premises herein described. *Visible Ground Encroachments Shown if Any.*
3. Rights or claims of parties in possession. *Not a Survey Matter.*
4. Construction, Mechanic's, Contractors' or Materialmen's lien claims, if any, where no notice thereof appears of record. *Not a Survey Matter.*
5. Easements or claims of easements not shown by the public records.
None Other than Those Provided to Surveyor at Time of Survey.
6. General or special taxes and assessments required to be paid in the year 2024 and subsequent years. *Not a Survey Matter.*
7. Restrictions, conditions, reservations, easements, dedications and other matters contained on the plat of Delmay Subdivision, as recorded in Map Book 8, Page 74, Public Records of Volusia County, Florida. *Nothing on Plat to Address.*
8. Easement to City of Deland contained in instrument recorded in O.R. Book 2706, Page 158, Public Records Volusia County, Florida. (Parcel 1 only)
Parcel Affected, Easements Shown Hereon.
9. Any lien provided by County Ordinance or by Ch. 159, F.S., in favor of any city, town, village or port authority, for unpaid service charges for services by any water systems, sewer systems or gas systems serving the land described herein; and any lien for waste fees in favor of any county or municipality. *Not a Survey Matter.*

-Benchmark Information-
NGS Datum Sheet
Designation: T 711
Point: DM3873
Elevation: 47.36'
(Elevations are based upon NAVD 88)

-Site Benchmark Information-
#1
Set ½" Iron & Cap "LB # 7623" In Ground.
Elevation: 81.55'
#2
Set ½ Iron & Cap "LB # 7623" In Ground.
Elevation: 80.74'



L1
187.00'(D)
S 01°13'10" E 211.68'(M)
between Witnesses

Tree Note:
Palm - Denotes Tree Type
(18") - Diameter of Tree measured at Chest Height

Legal Description (Per Deed):

PARCEL 1:
LOT 1, AND THE NORTH 42 FEET OF LOTS 23 AND 24, AND THE NORTH 42 FEET OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 2:
LOT 2, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 3:
LOTS 3, 4, 5, 6 AND 7, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

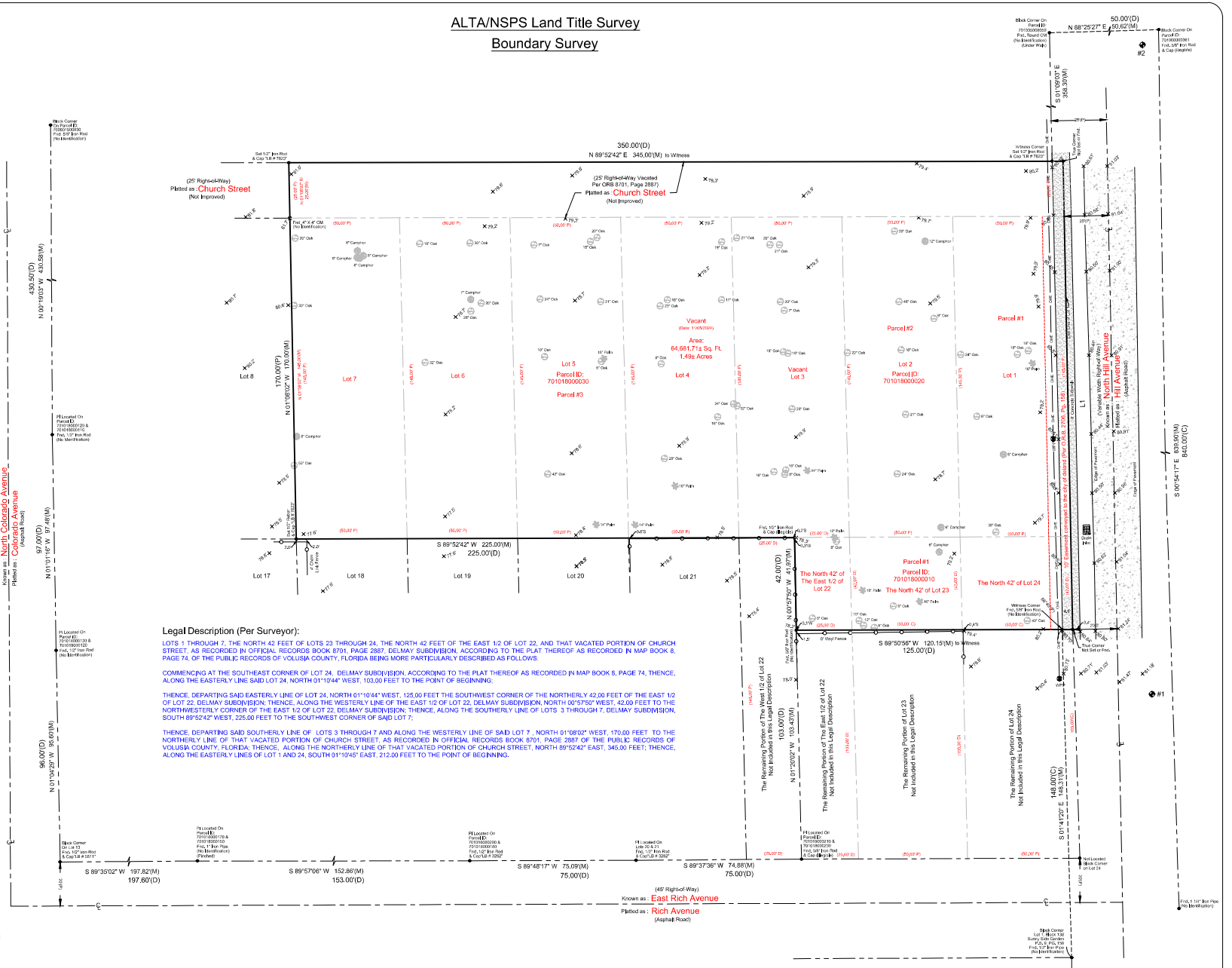
Legal Description (Per Surveyor):

LOTS 1 THROUGH 7, THE NORTH 42 FEET OF LOTS 23 THROUGH 24, THE NORTH 42 FEET OF THE EAST 1/2 OF LOT 22, AND THAT VACATED PORTION OF CHURCH STREET, AS RECORDED IN OFFICIAL RECORDS BOOK 8701, PAGE 2887, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF LOT 24, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, THENCE, ALONG THE EASTERLY LINE SAID LOT 24, NORTH 01°10'44" WEST, 103.00 FEET TO THE POINT OF BEGINNING;

THENCE, DEPARTING SAID EASTERLY LINE OF LOT 24, NORTH 01°10'44" WEST, 125.00 FEET THE SOUTHWEST CORNER OF THE NORTHERLY 42.00 FEET OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE WESTERLY LINE OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, NORTH 00°57'50" WEST, 42.00 FEET TO THE NORTHWESTERLY CORNER OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE SOUTHERLY LINE OF LOTS 3 THROUGH 7, DELMAY SUBDIVISION, SOUTH 89°52'42" WEST, 225.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 7;

THENCE, DEPARTING SAID SOUTHERLY LINE OF LOTS 3 THROUGH 7 AND ALONG THE WESTERLY LINE OF SAID LOT 7, NORTH 01°08'02" WEST, 170.00 FEET TO THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, AS RECORDED IN OFFICIAL RECORDS BOOK 8701, PAGE 2887 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE, ALONG THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, NORTH 89°52'42" EAST, 345.00 FEET; THENCE, ALONG THE EASTERLY LINES OF LOT 1 AND 24, SOUTH 01°10'45" EAST, 212.00 FEET TO THE POINT OF BEGINNING.


(25' Right-of-Way)
Platted as : Church Street
(Not Improved)
(25' Right-of-Way Vacated
Per ORB 8701, Page 2887)
Platted as: Church Street
(Not Improved)
350.00'(D)
N 89°52'42" E 345.00'(M) to Witness
50.00'(D)
N 88°25'27" E 50.62'(M)
S 01°09'03" E
356.39'(M)
(60' Right-of-Way)
Known as : North Colorado Avenue
Platted as : Colorado Avenue
(Asphalt Road)
430.56'(D)
N 00°10'03" W 430.58'(M)
97.00'(D)
N 01°13'16" W 97.46'(M)
96.00'(D)
N 01°10'29" W 96.60'(M)
170.00'(P)
N 01°08'02" W 170.00'(M)
Lot 8
Lot 7
Lot 6
Lot 5
Parcel ID:
7010180000030
Parcel #3
Lot 4
Vacant
Area:
64,681.71± Sq. Ft.
1.49± Acres
Lot 3
Lot 2
Parcel ID:
7010180000020
Lot 1
Parcel #2
Parcel #1
Lot 17
Lot 18
Lot 19
Lot 20
Lot 21
S 89°52'42" W 225.00'(M)
225.00'(D)
The North 42' of
The East 1/2 of
Lot 22
The North 42' of Lot 23
Parcel #1
Parcel ID:
7010180000010
The North 42' of Lot 24
S 89°50'56" W 120.15'(M) to Witness
125.00'(D)
N 00°57'50" W 41.97'(M)
42.00'(D)
S 89°35'02" W 197.82'(M)
197.60'(D)
S 89°57'06" W 152.86'(M)
153.00'(D)
S 89°48'17" W 75.09'(M)
75.00'(D)
S 89°37'36" W 74.88'(M)
75.00'(D)
The Remaining Portion of The West 1/2 of Lot 22
Not Included in this Legal Description
103.00'(D)
N 01°10'44" W 103.42'(M)
The Remaining Portion of The East 1/2 of Lot 22
Not Included in this Legal Description
The Remaining Portion of Lot 23
Not Included in this Legal Description
The Remaining Portion of Lot 24
Not Included in this Legal Description
148.00'(C)
S 01°41'20" E 148.31'(M)
S 00°54'17" E 839.90'(M)
840.00'(C)
(45' Right-of-Way)
Known as : East Rich Avenue
Platted as : Rich Avenue
(Asphalt Road)
North Hill Avenue
(Variable Width Right-of-Way)
Known as : North Hill Avenue
Platted as : Hill Avenue
(Asphalt Road)
10' Easement conveyed to the City of Deland (Per O.R. Book 2706, Pg. 158)
Witness Corner
Set 1/2" Iron Rod
& Cap "LB # 7623"
Witness Corner
Fnd. 3/8" Iron Rod,
(No Identification)
Witness Corner
Fnd. 1/2" Iron Rod
& Cap "LB # 7623"
Witness Corner
Fnd. 1/2" Iron Rod,
(No Identification)
Witness Corner
Fnd. 5/8" Iron Rod
& Cap (Illegible)
Witness Corner
Fnd. 1/2" Iron Rod
& Cap "LB # 7623"
Witness Corner
Fnd. 1/2" Iron Rod
& Cap "LB # 7623"
Witness Corner
Fnd. 1/2" Iron Rod,
(No Identification)

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

December 10, 2025

A. **APPLICATION NO.:** SMLU24-154 *(North Hill Villas Land Use)*
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
OWNER: Vidal Homes, LLC
STAFF PLANNER: Kendall Story, *Senior Planner*
REQUEST: To amend the land use designation from Low-Density Residential (LDR) to Medium-Density Residential (MDR)

B. **SITE FACTORS:**
PARCEL NUMBER: 701018000010; 701018000020; 701018000030
LOCATION: Northwest corner of N. Hill Ave. and E. Rich Ave.
SIZE OF PROPERTY: ±1.49 acres

C. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**
Future Land Use: Low Density Residential; Core Area Gateway/Downtown Support District
Existing Zoning: R-1B
Existing Use: Vacant, undeveloped

D. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	LDR (Low Density Residential)	R-1A (single-family residential)
South:	MDR (Medium Density Residential)	R-2 (two-family residential)
East:	HDR (High Density Residential)	R-16 (multi-family residential)
West:	LDR (Low Density Residential)	R-1A (single-family residential)

E. **REQUESTED ACTION:**

1. **REQUEST:** The applicant is requesting the future land use designation be amended for a ±1.49-acre parcel located on Hill Avenue from Low Density Residential (LDR) land use designation to the Medium-Density Residential (MDR) land use designation. The request for a small-scale future land use map amendment is accompanied by a request for rezoning (Z24-153).

F. ANALYSIS:

The purpose of this section is to analyze the reasonableness of the applicant's request for an amendment of the land use designation for the subject property. This analysis will include a description of the current and future land uses of the site and the surrounding area, potential impacts on the transportation system, and any significant adverse environmental impacts. Florida Statute 163.3187 allows for a Future Land Use Map amendment for area of use under 50 acres, and are not an area of critical state concern.

1. **Availability of Public Facilities *(water, sewer, drainage, traffic, and schools if residential):***

   The City's Utilities Department determined that the site has water, sewer and reclaim available for extension as needed by the developer and that a Utility Service Agreement will be required.

   A Traffic Impact Statement letter dated July 8, 2024, states that the proposed development is projected to generate 95 average daily trips, of which 8 trips occur during the PM peak hour. Per the River to Sea Transportation Planning Organization (R2CTPO) traffic study guidelines, since the proposed development is not anticipated to generate more than 1,000 daily new trips, a TIA is not required.

   In a memo dated August 28, 2025, the Volusia County School Board issued a capacity determination letter which found that there is adequate capacity for the proposed project.

2. **Compatibility with Land Use and Other Elements:** The Future Land Use element requires that the subject property be consistent with surrounding development. The subject property is located within the City's Core Area Gateway/Downtown Support District, and the future land use is Low-Density Residential, which allows a maximum density of 5.8 dwelling units per acre. Per the 2050 Vision plan, the subject property is located within the Category 2, Urban Core. The Urban Core is described as the area where the majority of the new growth will take place. A greater focus is made on "missing middle" housing options such as duplexes, townhomes, small-sized apartment buildings and live-work units by allowing for infill and redevelopment to encourage increased density.

   The Comprehensive Plan describes the Medium-Density Residential land use designation as being typified by detached and attached moderate density housing types, serving as a transitional area between nonresidential or high-density residential and low-density residential land use with a maximum density of 12 dwelling units per acre. The development should provide recreation and open space through the clustering of dwelling units and shall include on-site amenities such as, but not limited to, recreational facilities, such as the provided tot lot, open space, and pedestrian walkways. The site is small in scale and considered an infill development. The applicant is meeting the intent of this section by providing additional TPA, sidewalks on both sides of the road and a tot lot.

   The proposed maximum density of the North Hill Villas townhome community proposes a density of 8.72 dwelling units per acre. This provides a transition from the

surrounding lower density single-family residential area, to the adjacent higher density residential units to the east (The Lofts of DeLand). Therefore, the request is compatible with the Comprehensive Plan and the 2050 Vision Plan.

3. **Future Land Use Map:** The proposed change in the land use designation to Medium-Density Residential (MDR) will be shown on the revised Future Land Use Map. There will be no change in the 2050 Vision Map, as the subject property is also within the Core Area Gateway/Downtown Support District.

4. **Location of Lakes, Floodplains, and Wetlands:** The property does not contain bodies of water, nor is it located within a floodplain.

5. **Analysis of Natural Resources:**
   - **a.** *Soil types:* Astatula, fine sand
   - **b.** *Presence of Endangered Species*: None known at this time.

6. **Existing and Future Impact upon Infrastructure Capacity:**
   - **a.** ***Water and Sewer:*** The City's Utility Department has indicated sufficient water supply is available for the proposed land use designation. The fully engineered plans and Utility Service Agreement will be reviewed at the time of preliminary plat.
   - **b.** ***Drainage:*** The city adheres to the County's standard to retain for the 100-year frequency, 24-hour storm event for landlocked basins. Stormwater capture for future development will be addressed on-site and will be further evaluated at the time of preliminary plat.
   - **c.** ***Solid Waste:*** Solid waste services are available for the property. The County has landfill capacity available to receive waste projected to be generated from the development. The Volusia County Waste Management Facility has capacity for the next twenty-seven (27) years.
   - **d.** ***Transportation*****:** In order to estimate traffic generation by development on the subject property, Staff must make projections for the most intense type of development allowed under the existing and proposed land use designations. Development under the most intensive of the uses allowed under the current land use designation of Volusia County Rural must be compared with the most intensive use proposed under the City's Medium-Density Residential (MDR) designation.

     The Low-Density Residential land use designation allows a maximum density of 5.8 dwelling units per acre; and with the most-intense allowable residential use, the property would currently be permitted to yield up to 8 units and would generate **75** trips per day according to the Institute of Transportation Engineers Trip Generation Manual (11th ed.).

     DeLand's Medium-Density Residential land use designation allows for a maximum residential density up to 12 dwelling units per acre. If the land use amendment is approved, the ± 1.49 acres of property could yield as many as 17 units and would generate **115** trips per day.

7. **Impact upon Recreation and Open Space:** The on-site amenities for the development includes a small park and open space. Therefore, the future land use amendment should not have an impact to the existing level of service.

8. **New Public Facilities Needed to Serve Land Use:** Per the feasibility analysis completed by staff, no need for new public facilities is anticipated.

9. **Impact Upon Existing Facilities:** Any future development on this site will be required to manage its own stormwater, based on retaining for the 100 year/24-hour storm event, and it will be further reviewed as part of the preliminary plat submittal.

10. **Impact upon Ability of the City to Fund Capital Improvements:** The development should not create an additional impact upon the City's ability to fund the projects listed in the adopted Five-Year Capital Improvement Program and will not require revision to the City's adopted Five-Year Capital Improvement Program.

11. **Compatibility with Existing Zoning Classification:** The proposed North Hill Villas PD would be compatible with the Medium-Density Residential land use designation.

12. **Will the proposed land use change impact schools?** The applicant has provided a current Finding of Adequate Capacity letter from the Volusia County School Board, determining that capacity is available for the proposed land use. At the time of the preliminary plat, the applicant will be required to reserve said capacity and submit an approval letter from the school board at that time.

13. **How does this proposal fit with the guidelines developed for DeLand 2050 Vision and the City's Strategic Plan?**
    a. **2050 Vision Plan:** The proposed development is located within Category 2, "Urban Core" which encourages higher density and infill housing to support the "missing middle".
    b. **DeLand Strategic Plan:** "To manage growth, the city will institute a number of smart growth principles" that provide "quality growth that preserves the character of the city." Smart growth includes development, redevelopment and infill development in areas of the city that already have access to city facilities. A key component of "Smart Growth" addresses housing for the "missing middle" that provides a variety of housing types that are smaller in scale, but higher in density. The subject property is 1.49 acres in size and has access to existing city facilities. Increasing the density of the site from Low Density Residential, to Medium Density Residential, will act as a transition between the lower density (single-family homes) and higher density (The Lofts of DeLand apartments.

G. CONCLUSION: The facility analysis presented in the above sections suggests the proposed land use should not cause any of the City's facilities to degrade below the adopted or current operational level of service (LOS). The proposed land use designation, Medium-

Density Residential, is consistent with the surrounding area, and is not expected to create any land use incompatibilities.

H. **NEXT STEPS:** The request for a small-scale future land use map amendment will go before the City Commission on January 21, 2026, for first reading, followed by Volusia Growth Management Commission Review (VGMC). After VGMC review, the request is anticipated to go before City Commission in February of 2026, for second reading.

I. **STAFF RECOMMENDATION:** Staff recommends that the Planning Board forward the request to the City Commission with a recommendation of approval of the proposed amendment of the subject property's future land use designation to the City's Medium-Density Residential.

J. **VGMC INFRASTRUCTURE IMPACT ASSESSMENT:**
In accordance with standard practice from the Florida Department of Economic Opportunity (DEO) and other review agencies, an impact comparison analysis of the proposed amendment has been completed based upon the theoretical maximum development potential under the currently adopted future land use designation versus the proposed designation.

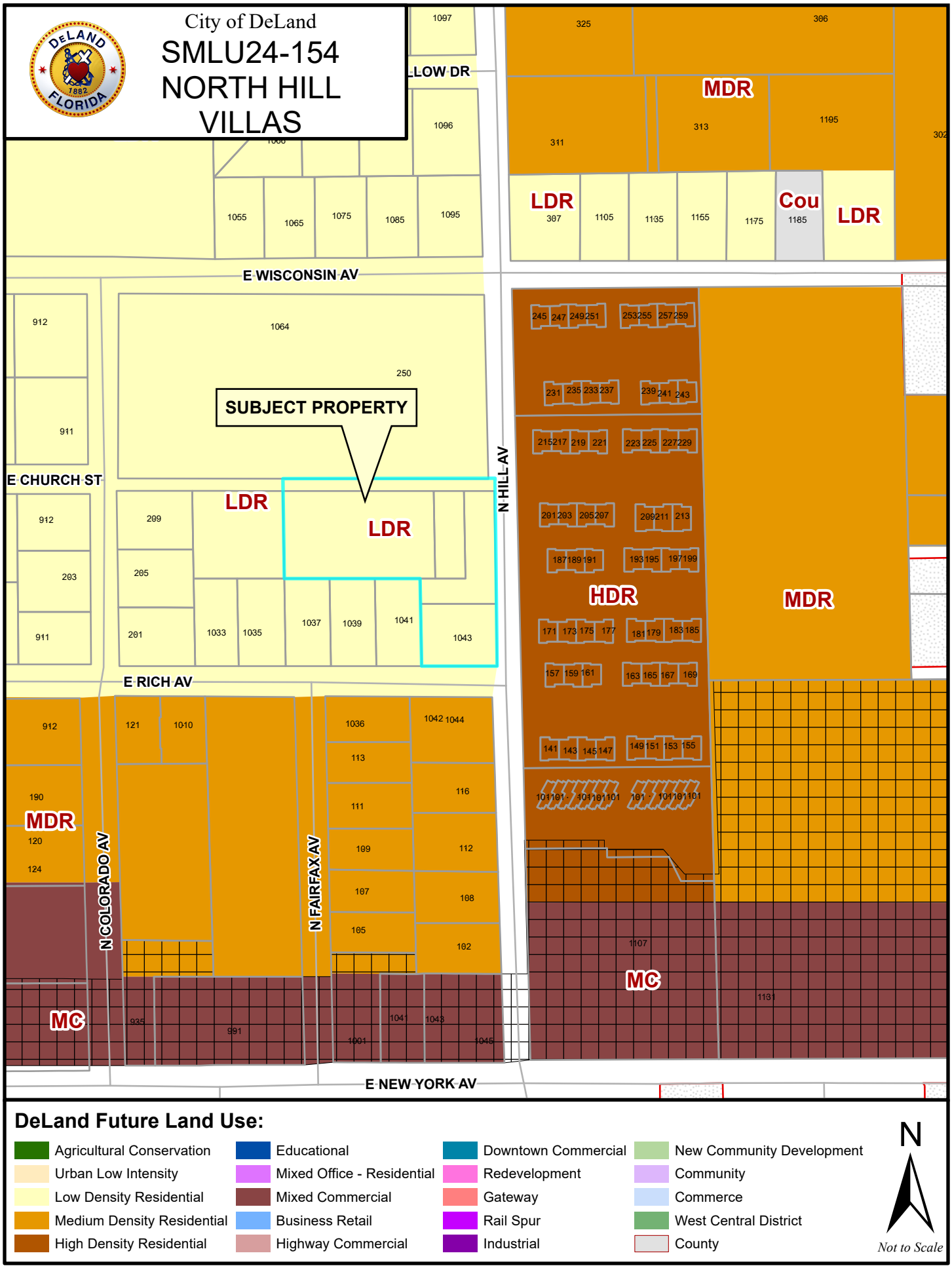
The following seven public facilities and services were examined (Table 4): Transportation, Stormwater Drainage, Sanitary Sewer, Recreation, Potable Water, Schools, and Solid Waste.

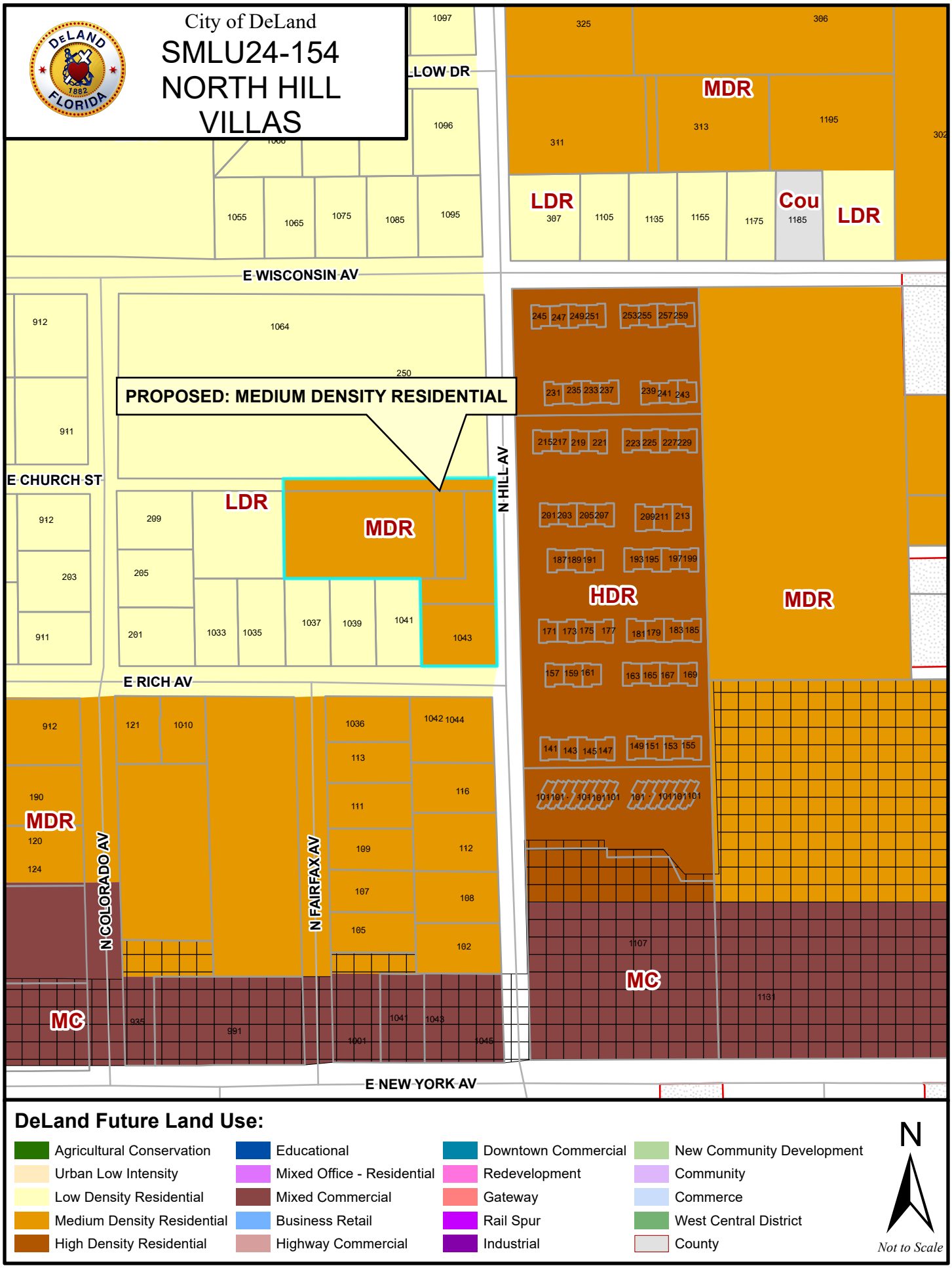
Table 4. Impact Analysis (Theoretical Maximums)

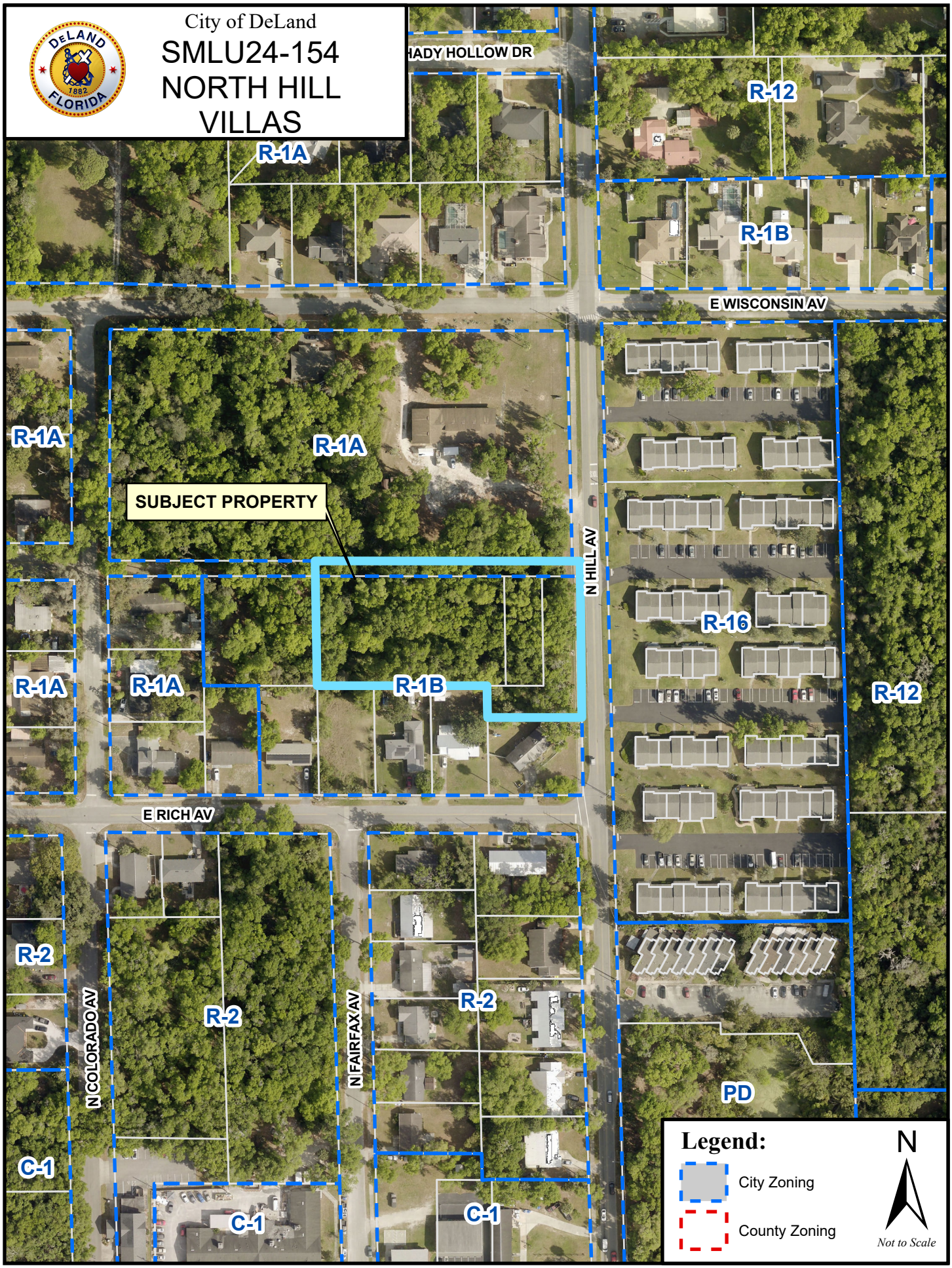
Development Variable	**Theoretical Maximums**		
	EXISTING *LDR*	**PROPOSED *MDR***	**Net Change**
Permitted Density/Intensity	5.8 du/acre	12 du/acre	+6.2 du/acre
Dwelling Units	8	17	+9
Non-residential Sq. Ft.	N/A	N/A	N/A
Population *2.44 persons per household (per 2020 Census)*	19.52	41.48	+21.96
Transportation ***(PM Peak Hr. Trips/Daily Trips)*** *(ITE Trip Generation Manual, 11th Edition): PM PEAK HR rate (210): 0.94 trips per unit; ADT rate (220): 0.57 trips per day per unit*	8 peak/75 ADT	10 peak/115 ADT	+2 peak/+40 ADT
Sanitary Sewer ***(gallons/day)*** *225 GPD per Equivalent Residential Unit (ERU)*	1,800	3,825	+2,025
Potable Water ***(gallons/day)*** *255 GPD per Equivalent Residential Unit (ERU)*	2,040	4,335	+2,295
Solid Waste ***(pounds/day)*** *8.6 pounds per person per day*	68.8	146.2	+77.4

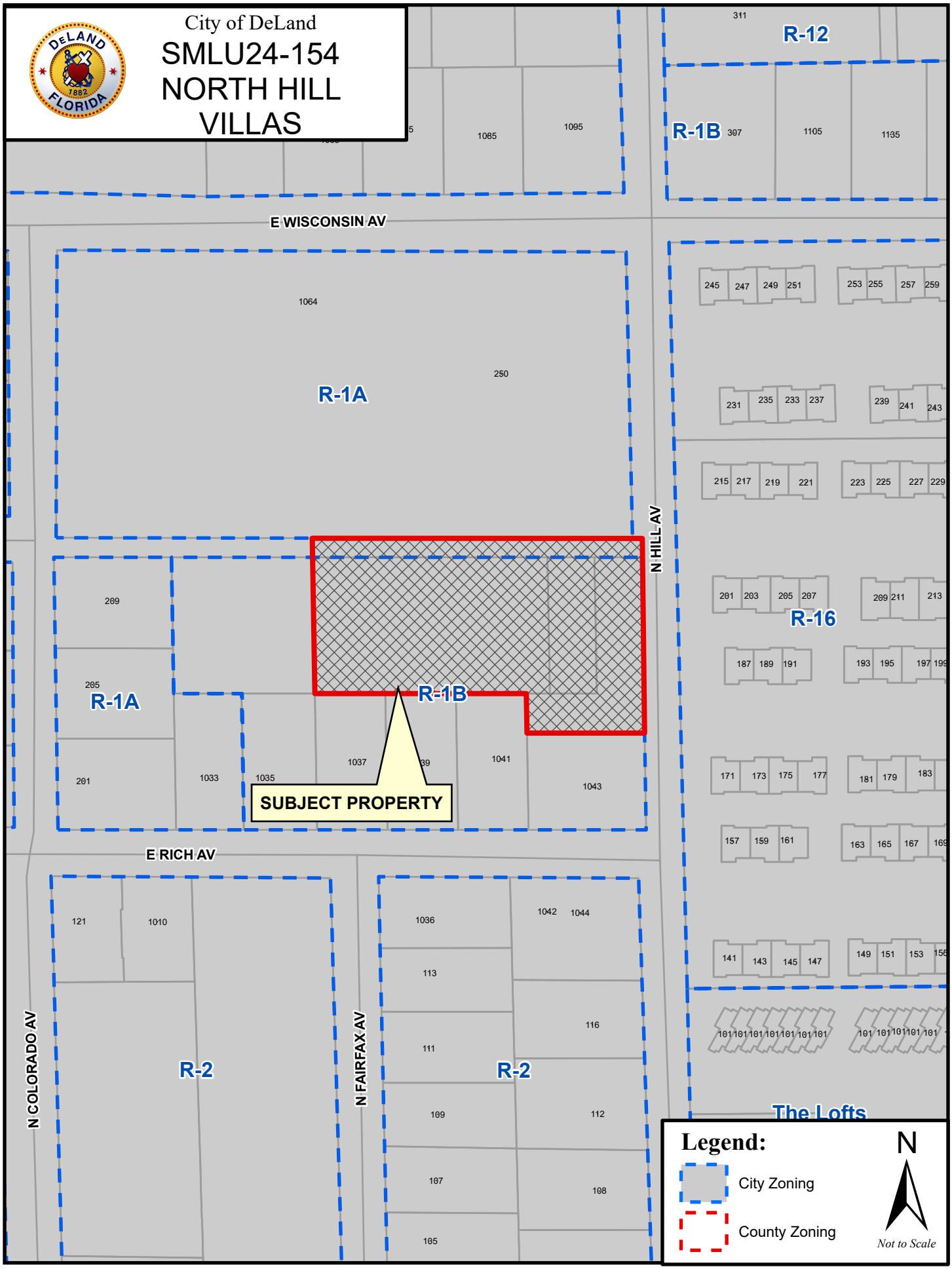
Stormwater Drainage *LOS Standard 100-yr/24-hr event. Drainage system to be designed to meet the req. of the LDR during subdivision or site plan review.*	N/A	N/A	N/A
Recreation/Open Space *4.6 parkland acres/1,000 persons (0.0046 acres/person)*	0.09	0.19	+0.10

The proposed amendment results in increased impacts to all public infrastructure and services based on the theoretical maximum impact analysis.


City of DeLand
SMLU24-154
NORTH HILL VILLAS
SUBJECT PROPERTY
E WISCONSIN AV
E CHURCH ST
E RICH AV
E NEW YORK AV
N HILL AV
N COLORADO AV
N FAIRFAX AV
LDR
MDR
HDR
MC
Cou
DeLand Future Land Use:
Agricultural Conservation
Urban Low Intensity
Low Density Residential
Medium Density Residential
High Density Residential
Educational
Mixed Office - Residential
Mixed Commercial
Business Retail
Highway Commercial
Downtown Commercial
Redevelopment
Gateway
Rail Spur
Industrial
New Community Development
Community
Commerce
West Central District
County
N
Not to Scale


City of DeLand
SMLU24-154
NORTH HILL VILLAS
PROPOSED: MEDIUM DENSITY RESIDENTIAL
E WISCONSIN AV
E CHURCH ST
E RICH AV
E NEW YORK AV
N HILL AV
N COLORADO AV
N FAIRFAX AV
LDR
MDR
HDR
MC
Cou
DeLand Future Land Use:
Agricultural Conservation
Urban Low Intensity
Low Density Residential
Medium Density Residential
High Density Residential
Educational
Mixed Office - Residential
Mixed Commercial
Business Retail
Highway Commercial
Downtown Commercial
Redevelopment
Gateway
Rail Spur
Industrial
New Community Development
Community
Commerce
West Central District
County
N
Not to Scale


City of DeLand
SMLU24-154
NORTH HILL
VILLAS
ADY HOLLOW DR
R-12
R-1A
R-1B
E WISCONSIN AV
R-1A
R-1A
SUBJECT PROPERTY
N HILL AV
R-16
R-1A
R-1A
R-1B
R-12
E RICH AV
R-2
R-2
N COLORADO AV
N FAIRFAX AV
R-2
PD
C-1
C-1
C-1
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
SMLU24-154
NORTH HILL VILLAS
E WISCONSIN AV
E RICH AV
N HILL AV
N COLORADO AV
N FAIRFAX AV
R-1A
R-1B
R-2
R-12
R-16
The Lofts
SUBJECT PROPERTY
Legend:
City Zoning
County Zoning
N
Not to Scale

Juan Manuel Vasquez

P.O. Box 560487, Orlando, FL 32856 * Ph: 407.219.8277 * Juan@vasquezcivil.com

July 8, 2024

City of Deland Engineering Department
1102 S Garfield Ave
Deland, Fl 32724

Reference Address	E Church St, Deland, Fl 32724
Owner	Vidal Homes Llc

Subject **Traffic Statement for 13 Apartment Units**

I, Juan Manuel Vasquez, licensed as Professional Engineer in the State of Florida, PE No. 95783 **hereby certify the traffic statement below** per the Trip Generation Manual, 11th Edition:

Traffic Statement:

THIS PROJECT WILL GENERATE APPROXIMATELY 8 PM PEAK HOUR TRIPS PER DAY (0.56 TRIPS PER UNIT) AND APPROXIMATELY 95.16 AVERAGE DAILY TRIPS PER DAY (7.32 TRIPS PER UNIT) BASED ON THE TRIP GENERATION MANUAL, 11TH. EDITION FOR LAND USE (220) MULTI–FAMILY HOUSING (LOW RISE).

In accordance with the current Trip Generation Manual, 11th Edition.

I certify that my statements herein are true and accurate to the best of my belief.

Sincerely,

Juan M Vasquez
Digitally signed by Juan M Vasquez
Date: 2024.07.08 10:47:49 -05'00'

Juan Manuel Vasquez
State of Florida Professional Engineer
PE No. 95783

School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Adequate Capacity Determination
Finding of Adequate Capacity Letter

August 28, 2025

Mr. Mark A. Watts, Esq
Cobb Cole
231 N Woodland Blvd
DeLand, FL 32720

RE: North Hill Villas – City of DeLand
School Concurrency Case # 24-07-25-001-A

Mr. Watts:

The County Charter requires any Comprehensive Plan Amendment or Rezoning that allows increased residential density to be effective only when adequate public schools can be timely planned and constructed to serve the projected increase in student population. The district uses this requirement as the guiding principle behind the school adequate capacity review.

District staff have reviewed the school concurrency application for the proposed project known as North Hill Villas, associated with 1.49 +/- acres of property. The property is located at or near the intersection of E Rich Ave and N Hill Ave within DeLand city limits. Information provided in the application indicates the proposed project would provide thirteen (13) multi-family units.

The district uses a county wide Student Generation Rate (SGR) of (0.137) per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate two (2) full time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	0	0
Multifamily Dwelling Unit	0.137	13	2
Manufactured Home Dwelling Unit	0.052	0	0
Total		**13**	**2**

When performing an adequate capacity review, district staff evaluates the effects of the proposed change compared to any remaining permanent capacity within the impacted schools, up to 100%, Table 2 (next page). The projected increase in student population may be over 100% if there are plans to serve increased student population in that planning area within the long-term planning horizon. A finding of adequate capacity may be issued in either case.

Table 2

Schools	SY 2024/25 Enrollment	% of Permanent Capacity	Plans for Capacity Increase Long-Term	Traditional K-12 students projected
Blue Lake Elementary	541	96%	No	1
DeLand Middle	1,067	99%	No	0
West CSA (DeLand High)	2,956	113%	No	1
Other				0

The student projections generated by this project **will** increase the existing percentage above 100% permanent capacity at the high school level. However, the concurrency service area (CSA) for DeLand High is over 100% but below 120% for level of service (LOS) standards. Based on this, the school district has no objections to the proposed development plan.

Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering. Additional considerations, particularly for gated and muti-family communities, include accessibility for school buses, by ensuring a turn radius of at least 60 feet at all entrances and exits, and the inclusion of dedicated pickup/drop off sites.

All future development orders, such as site plans and subdivisions, are subject to school concurrency review. School concurrency will be evaluated at the time when the impact of development is specifically quantified and known. Only funded school improvements and then current capacity will be considered at that time.

No student reservations have been made at this time.

Please note the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Consequently, students generated from this project may not attend the currently assigned schools.

Should you need additional information, please contact me at (386) 734-7190, ext. 50802.

Sincerely,

James F. Roberts
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Patricia S. Smith, AICP, Planning Coordinator
Kendall Story, CNU-A, Senior Planner, City of DeLand

FACILITIES SERVICES
3750 OLSON DRIVE ◆ DAYTONA BEACH, FL 32124
PHONE: (386) 947-8786 ◆ FAX (386) 506-5056

Finding of Adequate School Capacity

VOLUSIA COUNTY SCHOOL BOARD

Project Information	
Project Name	North Hill Villas
VCSB Project #	**24-07-25-001-A**
Jurisdiction Project #	
Parcel ID Numbers	7010-18-00-0010; 7010-18-00-0020 7010-18-00-0030
Project Location	E Rich Ave and N Hill Ave
Potential Residential Units	13 Multi-Family Units
Property Owner/Applicant	Mark A. Watts, Esq Cobb Cole

Notes: Additional review will be required at the time of subdivision/site plan submittal(s). No Student Reservations have been made.

Based upon the Findings of Fact, pursuant to School Board Policy 612 and Section 206 of the County Charter, the school district has determined at this time that school capacity is adequate to serve the proposed increase in residential density. This Finding shall constitute competent substantial evidence that adequate public school capacity is likely to be available at the time it is required to serve the planned new development.

Capacity is not being reserved with this Finding unless otherwise noted on this document. This Finding of Adequate School Capacity allows this subject project to continue through the Comprehensive Plan Amendment and/or rezoning process; however, it may be subject to additional school capacity review in the future.

James F. Roberts
Specialist, Planning & GIS

August 28, 2025
Issue Date

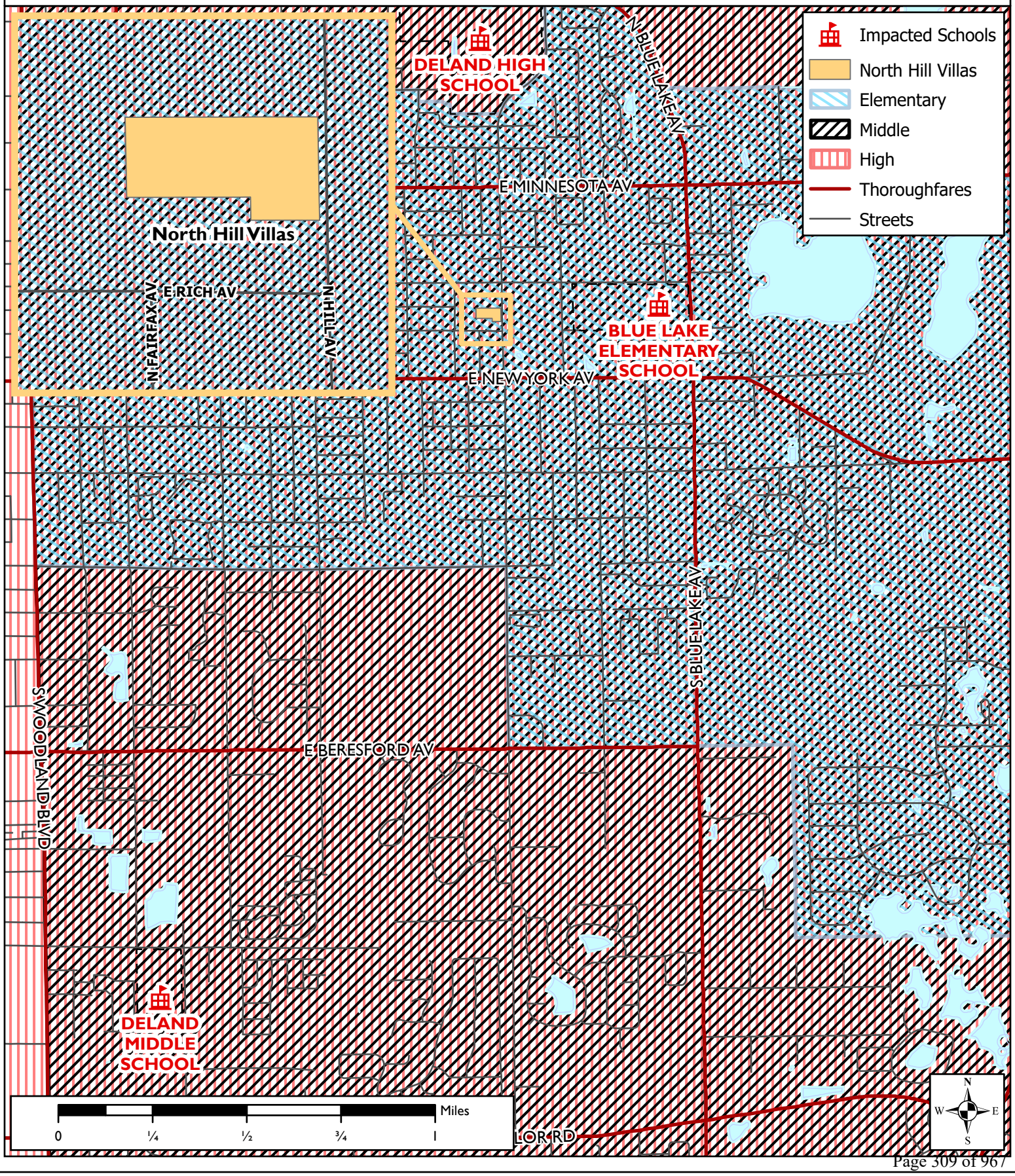
Created: 9/2007
Owner: Facilities Services

2007-073-VCS
Print Locally

VCSB Schools Impacted by Development

School Concurrency Review - North Hill Villas

VOLUSIA COUNTY SCHOOLS
PLANNING AND BUSINESS SERVICES
Created August 2025



CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: First Reading of Ordinance Changing the Zoning for ±1.49 Acres of Property, Located at the Northwest of the Intersection of East Rich Avenue and North Hill Avenue, from R-1B (Single-Family Dwelling) to North Hill Villas Planned Development.

DEPARTMENT: Planning

PREPARED BY: Kendall Story, Senior Planner

ATTACHMENTS: Ordinance, Exhibit A, Exhibit B-PD Agreement North Hill Villas, Z24-153 Survey, Z24-153 North Hill Villas Plan Set, Z24-153 Staff Report North Hill Villas, Z24-153 Aerial, Z24-153 Zoning, Z24-153 Traffic Statement, Z24-153 VCS Signed Adq. Letter

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The subject property is ± 1.49 acres, vacant, undeveloped and surrounded by single-family and multi-family residential properties. The current zoning is R-1B, single-family residential, which allows for single-family residential homes on a minimum of 7,500 SF lots. The applicant is requesting to rezone the property to the North Hill Villas PD, to allow for 13 multi-family townhome units, each 2-stories high with a single-car garage and single-car driveway. The property will be accessed from N. Hill Ave., with a driveway designed for a firetruck to turn around.

On December 10, 2025, the Planning Board unanimously voted to recommend approval of the proposed Planned Development zoning.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Institute Smart Growth Principles.

SUSTAINABILITY:

Approving the PD will permit the development of residential uses that align with the city's development requirements and will enable the city to continue active pursuit of its vision and strategic plan.

FISCAL IMPACT:

Residential development of this property, and inclusion of the residential units onto the city's tax rolls will increase funds for city services.

RECOMMENDATION:

It is recommended that the City Commission approve the North Hill Villas PD rezone, on first reading.

BACKGROUND/DISCUSSION:

The proposed multi-family development is an "infill" development that is small in scale and intensity, providing “missing middle” housing options for the city.

ORDINANCE NO. 2026 -

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING FROM R-1B, SINGLE FAMILY RESIDENTIAL TO NORTH HILL VILLAS PLANNED DEVELOPMENT (PD), ON PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF EAST RICH AVENUE AND NORTH HILL AVENUE; APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 1.49 ACRES OF PROPERTY; MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the Applicant, Mark Watts (hereinafter referred to as "Applicant"), on behalf of the owner Vidal Homes, LLC owns approximately 1.49 +/- acres of land located northwest of the intersection of East Rich Avenue and North Hill Avenue, which is more particularly described in the legal description attached hereto as Exhibit "A" and by this reference made a part hereof; and

WHEREAS, the Applicant has applied for a change of zoning designation from R1-B, single family residential to North Hill Villas Planned Development (PD); and

WHEREAS, the Applicant wishes to amend the zoning to planned development to develop the property into 13 multi-family townhome units; and

WHEREAS, said rezoning is consistent with both the Comprehensive Plan and the purpose and intent of Section 33-32 of the Code of Ordinances of the City of DeLand (the "Code"); and

WHEREAS, the Applicant has submitted an application for the approval of a development plan in order to amend the property zoning designation so as to change certain development standards for the property described in Exhibit "A" (hereinafter the "Property" or the "Project"); and

WHEREAS, the proposed development plan meets or exceeds the minimum conditions and standards for the PD District with respect to minimum development size, perimeter setbacks, comprehensive plan consistency, internal compatibility, external compatibility, open spaces, sidewalks, environmental constraints, internal access and circulation, external transportation access, off-street parking, public facilities and unified control; and

WHEREAS, the proposed development plan is consistent with the Medium-Density Residential land use designation.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission has held a public hearing to approve the change of zoning from R1-B, Single-family residential to North Hill Villas Planned Development (PD) on the property located northwest of the intersection of East Rich Avenue and North Hill Avenue, consisting of approximately 1.49 +/- acres.

Section 2. Pursuant to the determination made at public hearing, the City Commission hereby amends the Comprehensive Zoning Map of the City to include the land described in Exhibit "A" as North Hill Villas PD, Planned Development District.

Section 3. The zoning of the Property as Planned Development District (PD), is made pursuant to Section 33-32 of the Code and the development of the Property shall take place in accordance with that Section and in substantial compliance with the Development Plan Agreement, Maps and other supporting documentation submitted by Applicant which shall be filed and retained for public inspection in the office of the City Planning Department and constitute a supplement to the official Zoning Map of the City.

Section 4. The approved Development Plan for North Hill Villas PD, Planned Development District, including the Development Plan Agreement, Map and other supporting documentation (on file with the City Planning Department), are attached hereto as Exhibit "B" and by this reference made a part hereof.

Section 5. The failure of the approved Development Plan to address a particular permit, condition, term or restriction shall not relieve the Applicant of the necessity of complying with any law governing said permitting requirements, conditions, terms or restrictions, as same may be amended or enacted from time to time in the future. All current land development regulations of the City are applicable to the PD District except to the extent that they conflict with a specific provision of the approved Development Plan.

Section 6. At the time of development, the Applicant shall comply with all relevant building codes and development standards contained in the City's Code of Ordinances or in the Development Plan; provided, however, that the development standards contained in the adopted Development Plan shall supersede comparable standards contained in the Code of Ordinances.

Section 7. Pursuant to Article 5 of the City's Land Development Regulations, the Applicant shall comply with all applicable infrastructure regulations.

Section 8. The Planning Director is hereby directed to change the Comprehensive Zoning Map of the City of DeLand to conform with the change of zoning enacted in this Ordinance.

Section 9. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the validity of the remaining portions of this Ordinance.

Section 10. This Ordinance shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this _____ day of _____, 2026.

_____
Christopher M. Cloudman
Mayor - Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk - Auditor

Passed on first reading:
Adopted on second reading:

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

“EXHIBIT A”

(PER DEED):

PARCEL 1:

LOT 1, AND THE NORTH 42 FEET OF LOTS 23 AND 24; AND THE NORTH 42 FEET OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 2:

LOT 2, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 3:

LOTS 3, 4, 5, 6 AND 7, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

(PER SURVEYOR):

LOTS 1 THROUGH 7, THE NORTH 42 FEET OF LOTS 23 THROUGH 24, THE NORTH 42 FEET OF THE EAST 1/2 OF LOT 22, AND THAT VACATED PORTION OF CHURCH STREET, AS RECORDED IN OFFICIAL RECORDS BOOK 8701, PAGE 2887, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF LOT 24, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, THENCE,

ALONG THE EASTERLY LINE SAID LOT 24, NORTH 01°10'44" WEST, 103.00 FEET TO THE POINT OF BEGINNING; THENCE, DEPARTING SAID EASTERLY LINE OF LOT 24, NORTH 01°10'44" WEST, 125.00 FEET THE SOUTHWEST CORNER OF THE NORTHERLY 42.00 FEET

OF THE EAST ½ OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE WESTERLY LINE OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, NORTH 00°57'50" WEST, 42.00 FEET TO THE NORTHWESTERLY CORNER OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE SOUTHERLY LINE OF LOTS 3 THROUGH 7, DELMAY SUBDIVISION, SOUTH 89°52'42" WEST, 225.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 7; THENCE, DEPARTING SAID SOUTHERLY LINE OF LOTS 3 THROUGH 7 AND ALONG THE WESTERLY LINE OF SAID LOT 7 , NORTH 01°08'02" WEST, 170.00 FEET TO THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, AS RECORDED IN OFFICIAL RECORDS BOOK 8701, PAGE 2887 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE, ALONG THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, NORTH 89°52'42" EAST, 345.00 FEET; THENCE, ALONG THE EASTERLY LINES OF LOT 1 AND 24, SOUTH 01°10'45" EAST, 212.00 FEET TO THE POINT OF BEGINNING.

CONTAINS 1.49 +/- ACRES, MORE OR LESS

“EXHIBIT B”

PLANNED DEVELOPMENT AGREEMENT

IN THE CITY COMMISSION OF THE

CITY OF DELAND, FLORIDA

IN RE: Case # Z-24-153, Application of

VIDAL HOMES, LLC

ORDINANCE # 26____-_____

NORTH HILL VILLAS PD

The application of Vidal Homes, LLC, hereinafter, "Applicant", for rezoning was heard by and before the City Commission, DeLand Florida, on _____, Based upon the verified Application and other supporting documents, maps, charts, overlays, other evidence and instruments; the advice, report, and recommendations of the Community Development, and other Departments and agencies of DeLand, Florida; and the testimony adduced and evidence received at the Public Hearing on this Application by the Planning Board on December 10, 2025, and otherwise being fully advised, the City Commission does hereby find and determine as follows:

GENERAL FINDINGS

A. That the application of Vidal Homes, LLC was duly and properly filed herein on July 15, 2024 as required by law.

B. That all fees and costs which are by law, regulation, or Ordinance required to be borne and paid by the applicant have been paid.

C. That the Applicant is the owner of a 1.49 +/- acre parcel of land which is the subject of this application and which land is situated in DeLand, Florida.

D. That the Applicant has complied with the Planned Development Plan provision as required by Land Development Regulations of the Code of Ordinances of the City of DeLand.

E. That the Applicant has complied with the "Due Public Notice" requirements of the City Commission, Land Development Regulations of the Code of Ordinances of the City of DeLand.

F. That the owner of the properties, Vidal Homes, LLC, agrees with the provisions of the Development Agreement adopted hereby.

FINDINGS REGARDING REZONING

A. That the applicant has applied for a change of zoning from the present zoning classification of the parcels described in Exhibit “A” (the “Property”) from R-1B to NORTH HILL VILLAS PD (Planned Development).

B. That the said rezoning to a PD is consistent with both the City of DeLand Comprehensive Plan and the intent and purpose of the Land Development Regulations contained in Chapter 33 of the Code of Ordinances of the City of DeLand (the “LDR”) and does promote the public health, safety, morals, general welfare and orderly growth of the area affected by the rezoning request.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED BY THE CITY OF DELAND, FLORIDA, IN OPEN MEETING DULY ASSEMBLED IN THE CITY COMMISSION CHAMBERS, 120 SOUTH FLORIDA AVENUE, DELAND, FLORIDA, THIS _____ DAY OF _____, 2026, AS FOLLOWS:

A. That the Application of Vidal Homes, LLC, a Florida limited liability company, for the rezoning of the Property is hereby granted and the Development Agreement included herein is hereby approved and adopted by the City of DeLand.

B. That the zoning classification of the Property described in Exhibit “A” attached hereto is hereby amended from R-1B to NORTH HILL VILLAS PD as described

in the LDR.

C. That the Official Zoning Map of the City of DeLand is hereby amended to show the rezoning of the Property to NORTH HILL VILLAS PD.

D. That the provisions of the “Development Agreement” as hereinafter set forth are consistent with the LDR and with respect to any conflict between the LDR and the Development Agreement, the provisions of the Development Agreement shall govern. The LDR shall govern with respect to any matter not covered by the Development Agreement. The City of DeLand will ensure overall compliance with the Development Agreement.

E. Unless otherwise provided for in the Development Agreement, the LDR shall apply to the Property in the same manner as the R-12 zoning classification.

F. Except as otherwise stated herein, nothing in the Development Agreement is intended to abridge the requirements of the LDR or any other City Ordinances.

DEVELOPMENT AGREEMENT

The City of DeLand and the other parties executing this Development Agreement hereby enter into this Development Agreement which shall constitute a binding agreement, but is not a statutory development agreement as provided for in Sections 163.3220-163.3243, Florida Statutes, the Florida Local Government Development Agreement Act.

A. Development Concept. The Property shall be developed as NORTH HILL VILLAS PD, substantially in accordance with the Planned Development Plan. The Planned Development Plan shall govern the development of the Property and shall regulate the future land use of the Property.

B. Planned Development Plan. The Planned Development Plan shall consist of this Development Agreement and the Development Plan Map prepared by Jose R. Melo Assoc., and dated November 20, 2025. The Development Plan Map is hereby approved and incorporated in this Development Agreement by reference as Exhibit “B”. The Planned Development Plan shall be filed and retained for public inspection in the Planning Department, and it shall constitute a supplement to the Official Zoning Map of the City of DeLand.

C. Amendments. All amendments of the Planned Development Plan shall require the review and recommendation of the Planning Board and action by the City Commission in the same manner as a rezoning of the parcel. No administrative amendments may be authorized.

D. Subdivision Approval. After the Planned Development Plan is recorded, and prior to any construction, including clearing and fill, a preliminary plat of the Property shall be submitted for review and approval in the manner required by the LDR.

E. Unified Ownership. The Applicant or its successors shall maintain unified ownership of the Property until after the recordation of the Final Subdivision Plat in the public records of Volusia County.

F. Phase of Development/Burning and Fire Safety. The project will be developed in one phase. No burning shall be permitted on site. No vertical construction or combustibles may be stored onsite until the utilities and roads have been inspected and approved by utilities/engineering and fire prevention.

G. Land Uses Within the PD. The development of the Property shall be consistent with the uses prescribed for each area within the proposed North Hill Villas PD. The location and size of said land use areas are shown on the Development Plan Map, attached hereto as Exhibit “B”. The following land uses shall be allowed as permitted principal uses and structures along with their customary accessory uses and structures:

1. Permitted Uses:

Townhouses.

Community uses including but not limited to clubhouse, cabana, dog park, community garden, and bicycle facilities.

H. Development Standards. All development for the Property shall rely upon

the standards set forth below.

1. Townhomes:

a) Minimum Lot Area: 1,452 sq. ft.

b) Minimum Lot Width: 22 feet

c) Minimum Lot Depth: 66 feet

d) Minimum Individual Unit Size: 1,500 sq. ft. living space

e) Maximum Building Height: 35 ft.

f) Maximum Building Length: 110 ft.

g) Maximum Unit Count Per Building: 5 units

h) Minimum Setbacks:

a. Front yard: 20 ft.

b. Rear yard: 10 ft.

c. Side yard:

Internal: 0 ft.

End Unit: 3 ft.

d. Between buildings (side to side): 15 ft.

e. Between buildings: 50 ft.

(front to front, rear to rear, front to rear, or in other orientations other than parallel building sides):

i) Perimeter Building Setback: 30 ft.

j) The eave or architectural roof overhangs on any principle structure may project up to 42” into any required front or rear setback.

a. Maximum Impervious Surface Area of Property: 80% per lot/60%

per entire Property area

k) Maximum Townhouse Unit Count: 13 units

l) All mechanical equipment will be screened from view from the front of each unit by planted vegetation or screening panels that do not exceed 4 feet in height.

m) All utility boxes will be painted to match the primary color of the adjacent buildings so long as allowed by the applicable utility provider.

n) Architectural elevation renderings will be consistent with Exhibit “C”, subject to final approval during preliminary plat phase.

2. Accessory Structures. Unless otherwise stated herein, all accessory structures shall meet the development standards of the LDR.

3. Parking Standards. There will be two (2) parking spaces provided per unit. One (1) within the garage and one (1) within the driveway, which driveway shall be a minimum of twenty (20) feet long by eleven (11) feet wide. An additional total of six (6) guest parking spaces, which shall be a minimum of twenty (20) feet long and nine (9) feet wide, plus one (1) handicap compliant space, will be provided within the residential area. Enforcement of parking and maintenance of the access road(s) shall be the responsibility of a centrally managed homeowners association.

4. Buffer Standards. The following buffer requirements shall apply to the Property:

Residential Area

a. A minimum of a 20 ft. buffer will run along the north side of the Property and will meet Buffer Standard “B” of Section 33-92.02(b)(2) of the LDR. The size and intensity of the north landscape buffer was coordinated with the church located north of the Property and, together with the construction of a 6 ft. screening wall or vinyl fence, was deemed to provide a sufficient visual buffer between the adjacent uses. The Applicant, its successors and assigns, hereby acknowledge that the church operates and maintains ongoing community outreach programs from its property, including the operation of a food pantry, and hereby expressly waives any claims of nuisance resulting from the church operations as long as they are otherwise in compliance with all applicable local ordinances and regulations.

b. A minimum of a 20 ft. buffer will run along the south side of the Property and will meet Buffer Standard “B” of Section 33-92.02(b)(2) of the LDR. The southern buffer will include as much existing vegetation as possible depending on the extent of site grading required to construct the stormwater management system.

c. The western side of the Property is providing an excess of 40 feet of total perimeter setback with an estimated 10 feet of landscape buffer. In addition, the primary stormwater pond serving the Property is located adjacent to the western landscape buffer and will provide

additional separation from adjacent single-family homes and single-family zoned property. Plantings will be included to meet Buffer Standard “B” of Section 33-92.02(b)(2) of the LDR.

d. A minimum of a 20 ft. buffer will run along the east side of the Property and will meet Buffer Standard “B” of Section 33-92.02(b)(2) of the City of DeLand Land Development Regulations.

e. A six (6’) foot wall or vinyl fence shall run along the north, south, east, and west Property lines, except in areas required for the primary driveway entrance or community identification signage.

5. Signage: Signage shall be provided per the LDR. Monument signs identifying the development shall be placed at the primary driveway entrance along North Hill Avenue.

6. Tree Protection Area: 15% of the square footage of the Property shall be designated for the protection of trees and shall meet the requirement of the LDR. A 15 ft. tree protection area will be provided as part of the required landscape buffer on the north side of the Property. A 20 ft. tree protection area will be provided as part of the required landscape buffer on the east and south sides of the Property. A 10 ft. tree protection area will be provided on the western side of the property as part of the required landscape buffer. All required landscape buffers shown on the Planned Development Plan will count toward the required 15% tree protection area requirement regardless of minimum width or whether they include retained or planted trees. The 20’-30’ tree protection area width standard is waived based on the infill

nature of the this development.

7. Open Space. Open Space and/or Common Area shall meet the requirements of the LDR.

I. Environmental Considerations. The development shall comply with the requirements for preservation of environmental resources as set forth in the LDR. The development has been laid out in a manner to best accommodate the existing topography and drainage conditions identified on the property. However, the actual location and layout of the developed areas within the development shall be determined during subdivision process. In addition, all landscaping, including buffers, shall predominantly utilize Florida-Friendly Landscaping, as defined by the University of Florida/Institute of Food and Agricultural Sciences ("UF/IFAS") Center for Landscape Conservation and Ecology, native, or low-water plant material. The development shall include landscape designs such that plants will serve environmentally friendly functions including, but not limited to, cooling, privacy screening, shade, aesthetics, wildlife habitat and runoff pollution prevention, such as low impact development standards. All mulching will be conducted in accordance with the most current version of the Florida Green Industries Best Management Practices (BMPs) handbook guidelines. Mowing in common areas shall be done in accordance with the most current version of the Florida Green Industries BMPs handbook and by certified landscaping contractors. Mowing adjacent to swales shall be performed such that no clippings are deposited into any swales or water bodies. All clippings that may have been deposited on impervious surfaces will be swept back

into the vegetated area. All pesticide applications in common areas shall be done by a certified professional in accordance with the most current version of the Florida Green Industries BMPs handbook.

1. Dark Sky Standards: All lighting shall be downward and of the full cut-off shield variety in which the light source is recessed and shielded in a manner which prohibits upward light overspill into the night sky, except as otherwise permitted by the LDR. This type of lighting is specifically designed to reduce light pollution by restricting the amount of upward-directed light, avoiding glare, avoiding over-lighting, utilizing dimming and other appropriate lighting controls, and minimizing short-wavelength (bluish) light in the nighttime environment.

2. Street Trees: Street trees may be planted within the rights-of-way within the Property and said trees may be included in mitigation calculations; however, the Homeowners' Association shall be responsible for the maintenance of all trees planted in the public right-of-way, including the responsibility to repair any and all impacts upon the right-of-way infrastructure created by the presence of said trees, including any road or sidewalk facilities. Ornamental grasses shall be installed in lieu of street trees in landscaping areas located between the sidewalks and private access roadway shown on the Planned Development Plan.

J. Sewage Disposal, Potable Water and Reclaimed Water. Provision for sewage disposal, potable and reclaimed water needs of the development will be provided

in accordance with the City of DeLand Comprehensive Plan, the LDR, and all other applicable regulations.

K. Solid Waste Collection. Solid waste bins will be provided for each unit and collected by the City's franchised solid waste hauler, in accordance with the City's solid waste ordinance. All solid waste bins will be stored in individual garages for each unit and only outside on designated collection days in accordance with City standards.

L. Stormwater Drainage. The stormwater retention system shall be designed to retain a 100-year, 24-hour storm event and to meet all other applicable governmental regulations. All stormwater systems on the Property shall be designed to accommodate existing onsite flows such that no adverse upstream or downstream flooding occurs due to the development of the property. All stormwater ponds shall utilize supplemental plantings. Wet detention ponds shall have littoral zone plantings, and dry retention ponds shall have supplemental plantings consisting of species native to Florida. The required property owner's association shall be responsible for the maintenance of Low Impact Design Elements and in no event shall they be the responsibility of the City of DeLand. Low Impact Development standards will be incorporated in the stormwater design to the greatest extent practicable.

M. Access and Transportation System Improvements. All access and transportation system improvements shall be provided in accordance with the LDR. The parcel shall be developed in substantial accordance with the following access and

transportation system improvements:

1. Access. Access to the site will be from North Hill Avenue. The Planned Development Plan indicates the anticipated connection location; however, the final location may vary due to final engineering design and permitting considerations. The final location and design of the access driveway shall be approved by the City fire department to ensure adequate emergency access. The development shall meet height/weight/slope and turning radius for fire apparatus, as approved by the City fire department.

2. Waiver of Secondary Access Requirement. The secondary access requirement currently provided for in Sections33-90.05(g)(4) and 33-90.03(h)1.b of the LDR is hereby waived. A turn-around for fire equipment shall be provided generally as depicted on the Planned Development Plan. The turnaround may be designed and constructed in a similar manner as approved for the primary access driveway, but alternative, stabilized surfaces and designs may be approved by, and at the sole discretion of, the City's Fire Department during the subdivision process.

3. Transportation System Improvements. Transportation system improvements will be provided as may be required by permitting agencies.

N. Internal Roadways. A primary access driveway will be developed as detailed on the Planned Development Plan. The access driveway will be privately owned and maintained by the Homeowners Association.

O. Maintenance Association. The Applicant shall create a Homeowners Association (HOA) which shall be responsible for owning and maintaining all common areas, including but not limited to roadways and sidewalks. The HOA shall be responsible for the maintenance of the stormwater system serving the Property, and in no event shall either it be the responsibility of the City of DeLand. The HOA shall be responsible for the maintenance of street trees and any damage caused thereby. Moreover, the HOA shall also be responsible to repair any and all impacts upon the right of way infrastructure created by the presence of said trees, including any road, sidewalk, curb and gutter facilities. The charter and by-laws of said association and any other agreements, covenants, easements or restrictions shall be furnished to the City of DeLand for review prior to the time of creation. The Applicant shall be responsible for recording said information in the Public Records of Volusia County, Florida. Also, the applicant shall bear and pay all costs for recording all of the aforementioned documents.

With respect to the enforcement of any HOA agreements, covenants, easements or restrictions entered into between the Applicant and the owners or occupiers of property within the North Hill Villas PD, the City of DeLand shall only enforce the provisions of the "Development Agreement" and the LDR, whichever is applicable, and not the private agreements entered into between the aforementioned parties.

P. Expiration: The terms of this Development Agreement shall be vested upon issuance of a final plat for the Property, which shall occur within five (5) years from the effective date hereof. If not vestedwithin said time frame, this Development Agreement shall automatically terminate and be of no further force or effect, unless the City

Commission, for good cause shown, shall extend the time period indicated in this paragraph. Thereafter, the City Commission may rezone the Property as may be necessary or appropriate to protect adjoining properties or the health, safety, and welfare of the community.

Q. Binding Effect of Plans; Recording; and Effective Date. The Planned Development Plan, including any and all amendments shall bind and inure to the benefit of the Applicant and his successor in title or interest. The North Hill Villas PD zoning, provisions of the "Development Agreement," and all approved plans shall run with the land and shall be administered in a manner consistent with Article 12 of the LDR.

The Ordinance adopting this Development Agreement and all subsequent amendments shall be filed with the Clerk of the Court and recorded within forty-five (45) days following execution of the document by the City Commission, in the Official Records of Volusia County, Florida. One copy of the document, bearing the book and page number of the Official Record in which the document was recorded, shall be submitted to the Planning Department for placement in the public file. The date of recording of this document shall constitute the effective date of this Development Agreementand any subsequent amendments. The applicant shall pay all filing costs for recording documents.

DONE and ORDERED by the City Commission, City of DeLand, Florida, this ____ day of _____, 20___.

ATTEST: City Commission of DeLand Florida

_____ _____

Michael P. Pleus
City Manager

Christopher M. Cloudman
Mayor

STATE OF FLORIDA

CITY OF DELAND

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ____ day of _____, 20___, by Michael P. Pleus and Christopher M. Cloudman, as City Manager and Mayor of the City of DeLand, respectively, on behalf of the City of DeLand, and who are personally known to me.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.:_____

My Commission Expires:_____

WITNESSES:

APPLICANT/OWNER:
VIDAL HOMES, LLC
a Florida limited liability company

_____

By:_____
Yohalmen Vidal, Manager

_____
Printed Name

_____

_____
Printed Name

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ____ day of _____, 20___, by _____ as Manager of VIDAL HOMES, LLC, who is personally known to me or who has produced _____ as identification.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.:_____

My Commission Expires:_____

EXHIBIT “A”
LEGAL DESCRIPTION

(PER DEED):

PARCEL 1:
LOT 1, AND THE NORTH 42 FEET OF LOTS 23 AND 24; AND THE NORTH 42 FEET OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 2:
LOT 2, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 3:
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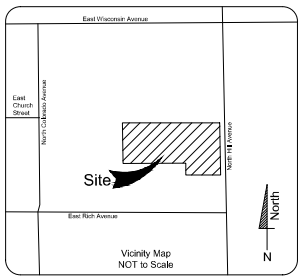
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CONTAINS 1.49 +/- ACRES, MORE OR LESS

EXHIBIT “B”
DEVELOPMENT PLAN MAP

EXHIBIT “C”
ARCHITECTURAL ELEVATIONS

ALTA/NSPS Land Title Survey
Boundary Survey



Schedule B-II (Exceptions)

Issued by: Old Republic National Title Insurance Company
Your File No.: 154080V
Issuing Agent: Alonia Title Company (Oviedo)
Effective Date: October 14, 2024 @ 5:00 PM

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
No Adverse Claims or Other Matters Observed at Time of Survey.
2. Facts which would be disclosed by an accurate and comprehensive survey of the premises herein described. *Visible Ground Encroachments Shown if Any.*
3. Rights or claims of parties in possession. *Not a Survey Matter.*
4. Construction, Mechanic's, Contractors' or Materialmen's lien claims, if any, where no notice thereof appears of record. *Not a Survey Matter.*
5. Easements or claims of easements not shown by the public records.
None Other than Those Provided to Surveyor at Time of Survey.
6. General or special taxes and assessments required to be paid in the year 2024 and subsequent years. *Not a Survey Matter.*
7. Restrictions, conditions, reservations, easements, dedications and other matters contained on the plat of Delmay Subdivision, as recorded in Map Book 8, Page 74, Public Records of Volusia County, Florida. *Nothing on Plat to Address.*
8. Easement to City of Deland contained in instrument recorded in O.R. Book 2706, Page 158, Public Records Volusia County, Florida. (Parcel 1 only)
Parcel Affected, Easements Shown Hereon.
9. Any lien provided by County Ordinance or by Ch. 159, F.S., in favor of any city, town, village or port authority, for unpaid service charges for services by any water systems, sewer systems or gas systems serving the land described herein; and any lien for waste fees in favor of any county or municipality. *Not a Survey Matter.*

-Benchmark Information-
NGS Datum Sheet
Designation: T 711
Point: DM3873
Elevation: 47.36'
(Elevations are based upon NAVD 88)

-Site Benchmark Information-
#1
Set ½" Iron & Cap "LB # 7623" In Ground.
Elevation: 81.55'
#2
Set ½ Iron & Cap "LB # 7623" In Ground.
Elevation: 80.74'

Legal Description (Per Deed):

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COMMENCING AT THE SOUTHEAST CORNER OF LOT 24, DELMAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 8, PAGE 74, THENCE, ALONG THE EASTERLY LINE SAID LOT 24, NORTH 01°10'44" WEST, 103.00 FEET TO THE POINT OF BEGINNING;

THENCE, DEPARTING SAID EASTERLY LINE OF LOT 24, NORTH 01°10'44" WEST, 125.00 FEET THE SOUTHWEST CORNER OF THE NORTHERLY 42.00 FEET OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE WESTERLY LINE OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION, NORTH 00°57'50" WEST, 42.00 FEET TO THE NORTHWESTERLY CORNER OF THE EAST 1/2 OF LOT 22, DELMAY SUBDIVISION; THENCE, ALONG THE SOUTHERLY LINE OF LOTS 3 THROUGH 7, DELMAY SUBDIVISION, SOUTH 89°52'42" WEST, 225.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 7;

THENCE, DEPARTING SAID SOUTHERLY LINE OF LOTS 3 THROUGH 7 AND ALONG THE WESTERLY LINE OF SAID LOT 7, NORTH 01°08'02" WEST, 170.00 FEET TO THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, AS RECORDED IN OFFICIAL RECORDS BOOK 8701, PAGE 2887 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE, ALONG THE NORTHERLY LINE OF THAT VACATED PORTION OF CHURCH STREET, NORTH 89°52'42" EAST, 345.00 FEET; THENCE, ALONG THE EASTERLY LINES OF LOT 1 AND 24, SOUTH 01°10'45" EAST, 212.00 FEET TO THE POINT OF BEGINNING.



L1
187.00'(D)
S 01°13'10" E 211.68'(M)
between Witnesses

Tree Note:
Palm - Denotes Tree Type
(18") - Diameter of Tree measured at Chest Height

There was NO Right of Way information provided to this Surveying Company at the time of the execution of this Boundary Survey. Therefore, this Survey is based upon field monumentation and occupation discovered on the date of 01-15-24, and delineated hereon the face of this Survey. Property Boundaries are subject to change, if or when, Right of Way information is discovered and determined to affect Subject Property. Said change is without hesitation, consultation or notification.

Flood Disclaimer:
BY PERFORMING A SEARCH WITH THE LOCAL GOVERNING MUNICIPALITY OR WWW.FEMA.GOV, THE PROPERTY APPEARS TO BE LOCATED IN ZONE X, THIS PROPERTY WAS FOUND IN CITY OF DELAND, COMMUNITY NUMBER 120037, DATED 02-19-2014.

ALTA/NSPS CERTIFICATION

Certified to: VIDAL HOMES LLC; ALONIA TITLE COMPANY; OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY;

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 6(a), 7(a), 7(b)(1), 8, 9, 11(b), 13, 16, and 18 of Table A thereof.

The Fieldwork was completed on 01/15/2024.

Date of Plat or Map: 11/05/2024.

I hereby Certify that this Boundary Survey of the above Described Property is True and Correct to the Best of my Knowledge and Belief as recently Surveyed under my Direction on the Date Shown. Based on Information furnished to Me as Noted and Conforms to the Standard of Practice for Land Surveying in the State of Florida in accordance with Chapter 5J-17.052 Florida Administrative Codes. Pursuant to Section 472.027 Florida Statutes.

Patrick K. Ireland, PSM 6637

Gross Land Area:	54,871.50 Square Feet or 1.26 Acres more or less
Setback Requirements:	Front: XX Side: XX Rear: XX
Zoning:	XXX
Square footage of Buildings:	0.00 Square Feet more or less
Parking Space Size:	(Standard) 00 Parking Stripes found at time of Survey (Handicap) 00 Parking Stripes found at time of Survey

In the process of conducting the fieldwork, no of earth moving work, building construction or building additions within recent months were observed.
In the process of conducting the fieldwork, no evidence of recent street or sidewalk construction or repairs were observed.
In the process of conducting the fieldwork, no evidence of site use as a solid waste dump, sump or sanitary landfill was observed.
In the process of conducting the fieldwork, no evidence of cemeteries and/or burial grounds were observed.
In the process of conducting the fieldwork, no evidence of any water features were observed.
In the process of conducting the fieldwork, no evidence of wetland delineation markers were observed.
Vehicular Access to Subject Property is provided by:
North Hill Avenue

Revisions
11/05/24 - TCK
11/14/24 - TCD
06/05/25 - AWW
06/27/25 - AWW

Field Date: 01/11/24 | Date Completed: 01/17/24
Drawn By: SD | File Number: IS-125850

-Legend-

C	- Calculated	PC	- Point of Curvature
CB	- Centerline	PG	- Page
CB	- Concrete Block	PI	- Point of Intersection
CM	- Concrete Monument	P.O.B.	- Point of Beginning
Conc.	- Concrete	P.O.C.	- Point on Line
D	- Description	PP	- Power Pole
D.E.	- Drainage Easement	P.R.M.	- Permanent Reference Monument
Esmt.	- Easement	PT	- Point of Tangency
F.E.M.A.	- Federal Emergency Management Agency	R	- Radius
F.F.E.	- Finished Floor Elevation	Rad.	- Radial
Fnd.	- Found	R&C	- Record & Calc
IP	- Iron Pipe	Rec.	- Recorded
L	- Length (Arc)	RS	- Rectified
M	- Measured	Set	- Set ½" Rebar & Cap "LB 7623"
N&D	- Nail & Disk	Typ.	- Typical
N.R.	- Non-Radial	UE	- Utility Easement
O.R.B.	- Official Records Book	WM	- Water Meter
P	- Plat	Δ	- Delta (Central Angle)
P.B.	- Plat Book		- Chain Link Fence
	- Wood Fence		

-Notes-
>Survey is Based upon the Legal Description Supplied by Client.
>Subject to any Easements and/or Restrictions of Record.
>Bearings Shown hereon are based upon the Florida State Plane Coordinate System, East Zone, NAD 83.
>Building Ties are NOT to be used to reconstruct Property Lines.
>Fence Ownership is NOT determined.
>Roof Overhangs, Underground Utilities and/or Footers have NOT been located UNLESS otherwise noted.
>Septic Tanks and/or Drainfield locations are approximate and MUST be verified by appropriate Utility Location Companies.
>Use of This Survey for Purposes other than Intended, Without Written Verification, Will be at the User's Sole Risk and Without Liability to the Surveyor. Nothing Hereon shall be Construed to give ANY Rights or Benefits to Anyone Other than those Certified.
>If Flood Zone Determination Shown Hereon is Given as a Courtesy, and is Subject to Final Approval by F.E.M.A. This Determination may be affected by Flood Factors and/or other information NOT HERE known by NOR given to this Surveying Company at the time of this Endeavor. Ireland & Associates Surveying Inc. and the signing surveyor assume NO Liability for the Accuracy of this Determination.

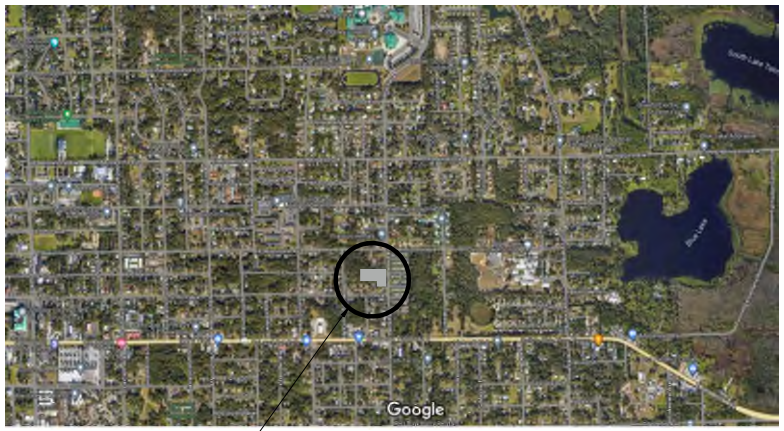
Ireland & Associates Surveying, Inc.
800 Currency Circle Suite 1020
Lake Mary, Florida 32746
www.irelandsurveying.com
Office-407.678.3366
Fax-407.320.8165

NORTH HILL VILLA -TOWNHOUSES APARMENT COMPLEX



3 3D View 9

SHEET LIST	
Sheet Number	Sheet Name
A-100	Cover Sheet
A-100.1	Site Plan
A-100.2	Overall Site Plan
A-100.3	Site Green Protected Area plan
A-100.5	Fire-Truck Maneuvers Simulation
A-250	3D Views
A-300	Architectural Elevations Type IA Unit Views
A-301	Architectural Elevations Type IIA Unit Views
A-303	Overall Architectural Elevations



1 LOCATION
1" = 1'-0"



2 SITE PLAN - Proposed
1" = 50'-0"

300 Broadway st, Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams
Jose R Melo Assoc. AIA
Professional Designer

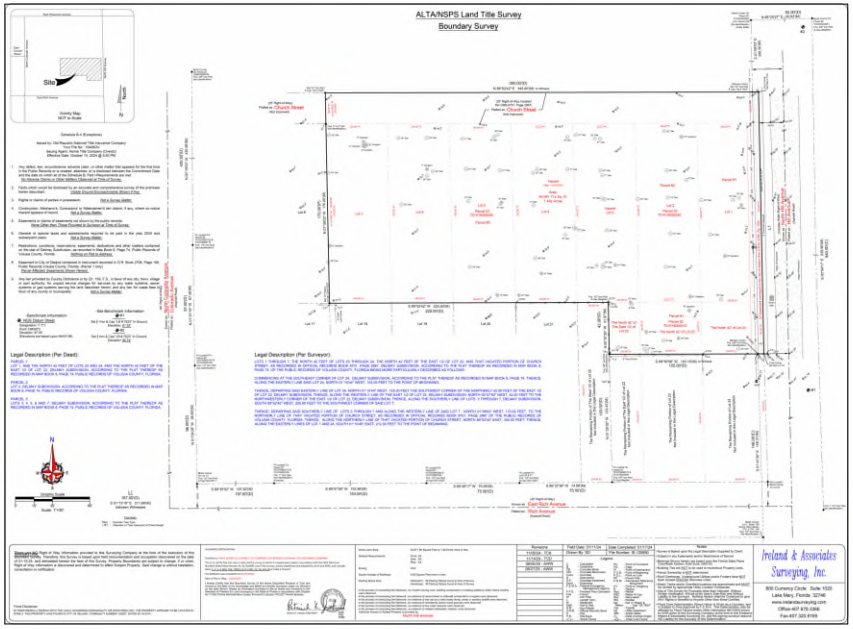
Sheet Name
Cover Sheet

Revision Schedule
Revision # | Revision Description | Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: As indicated
Design by: JRM

A-100



1 **Site Plan**
1" = 80'-0"



2 **SITE PLAN - Proposed**
1" = 30'-0"

310 Broadway st. Methuen
978 | 902 - 1152
M DESIGN STUDIO

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams

Jose R Melo Assoc. AIA
Professional Designer

Sheet Name: Site Plan

Revision Schedule

Revision #	Revision Description	Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: As indicated
Design by: JRM

A-100.1

RESIDENTIAL AREA

a)	Minimum Lot Area of	1,452 sq/ft min. ,1.650 sq/ft max
b)	Minimum Lot Width of	22 ft.
c)	Minimum Lot Depth of	65 ft.
d)	Total Area (Acreage)	1.49 acres/64,904 SF
e)	Minimum Individual Unit Size of	1,500 sq. ft.
f)	Maximum Building Height of	35' ft.
g)	Maximum Unit Count Per Building:	5 units
h)	Minimum Setbacks:	
	a. Front yard:	20 ft.
	b. Rear yard:	10 ft.
	c. Side yard:	0 ft.
	d. Sideyard (end units)	3 ft
	e. Between buildings (side to side):	15 ft.
	f. Between buildings (front to front or rear to rear):	50 ft.
iii.	Eaves: "Into any required setback"	42"
i)	Maximum Impervious Surface Area:	60%
j)	Maximum Townhouse Unit Count:	13 unit

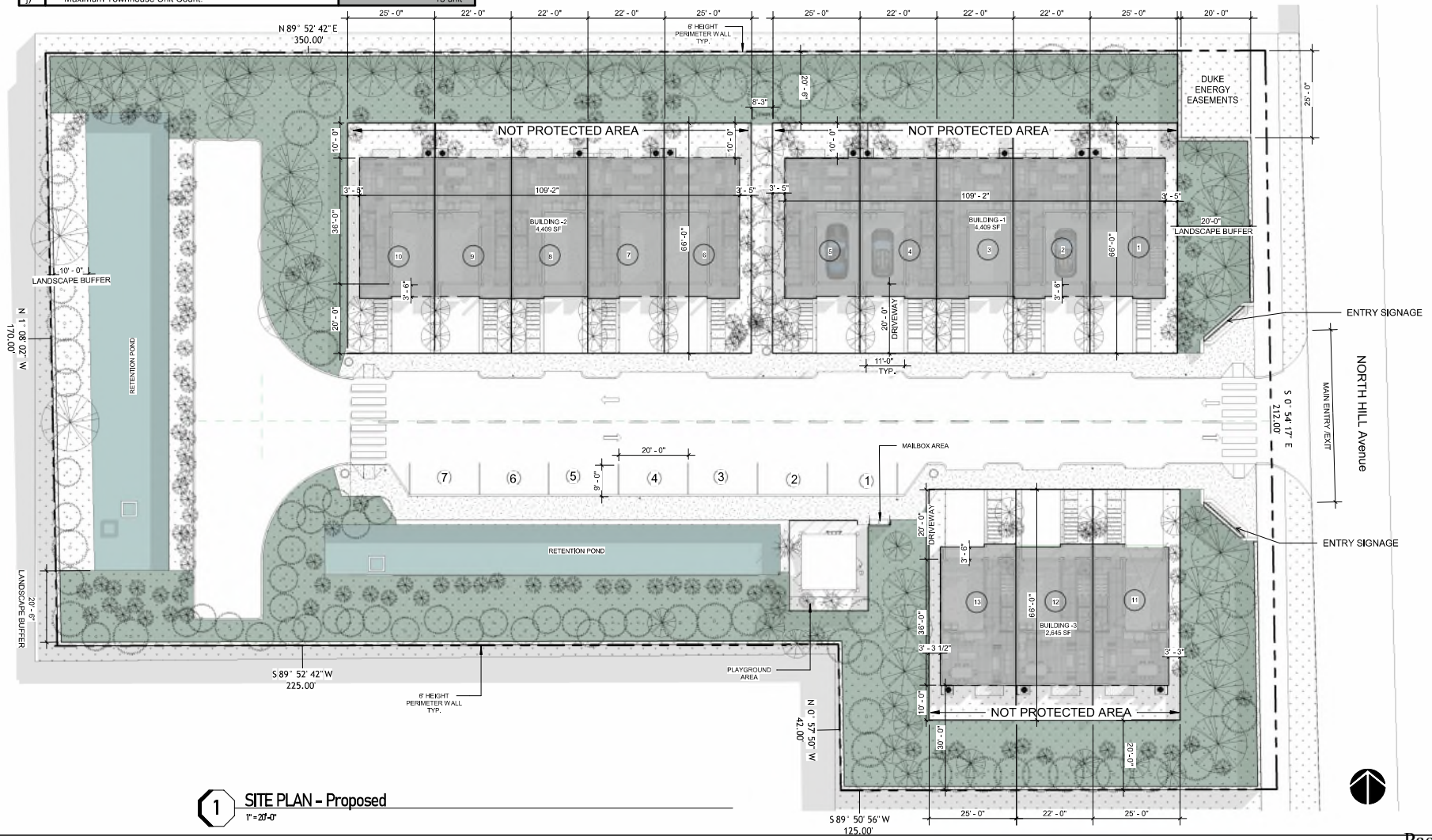
PROPOSE BUILDING (11,463 SF)

PROPOSED CONCRETE SIDEWALK (3,991 SF)

PROPOSED TREE PROTECTION AREA (TPA) (18,290 SF)

PROPOSED RETENTION PONDS

OPEN SPACES(NOT PROTECTED AREA)



1 SITE PLAN - Proposed

1" = 20'-0"

300 Broadway st. Methuen
978 | 902 - 1152
M DESIGN STUDIO

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams
Jose R Melo Assoc. AIA
Professional Designer

Sheet Name
Overall Site Plan

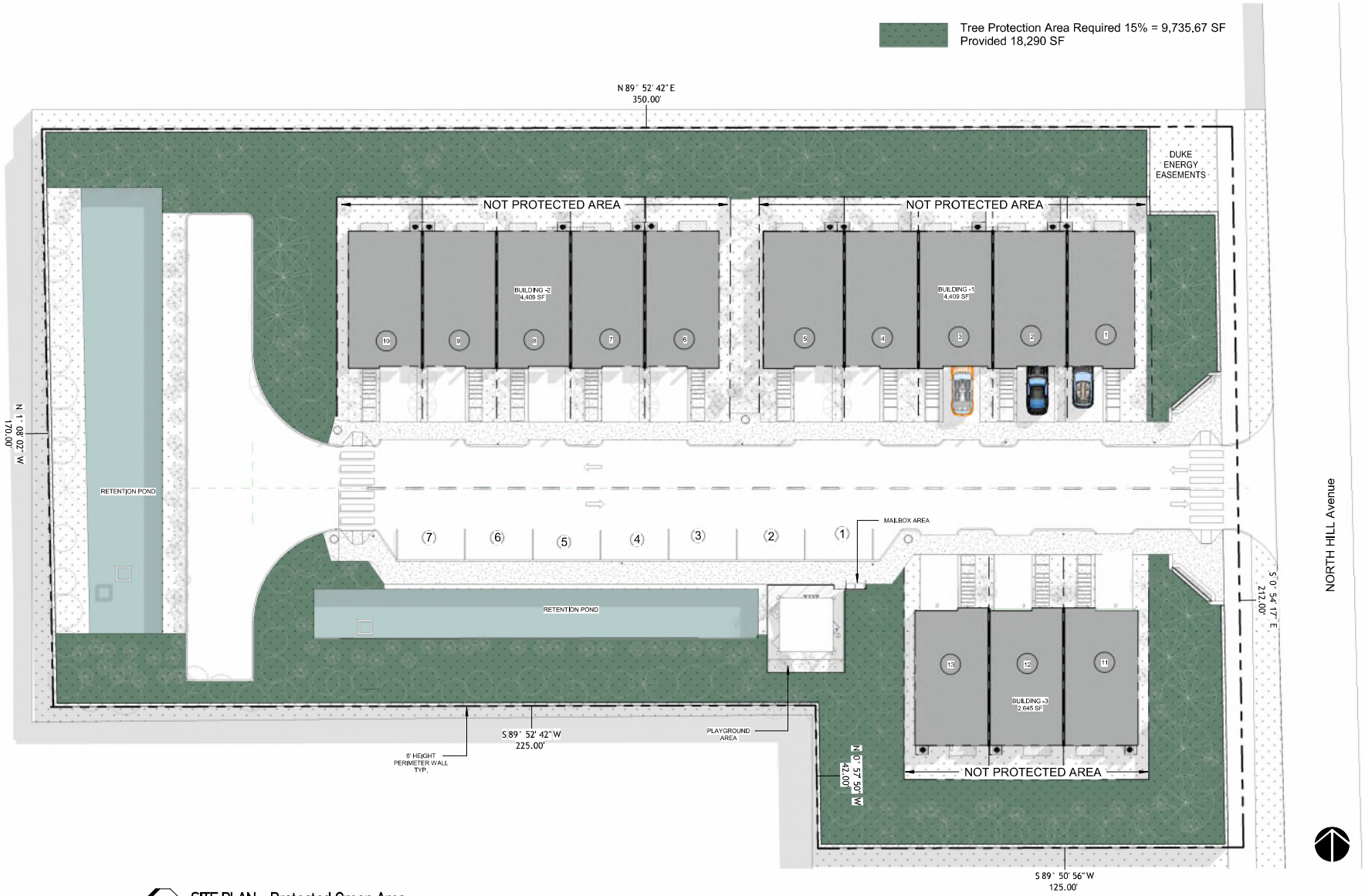
Revision Schedule

Revision #	Revision Description	Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: As indicated
Design by: JRM

A-100.2



1 SITE PLAN - Protected Green Area
1" = 20'-0"

300 Broadway st. Methuen
978 | 902 - 1152
M DESIGN STUDIO

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams

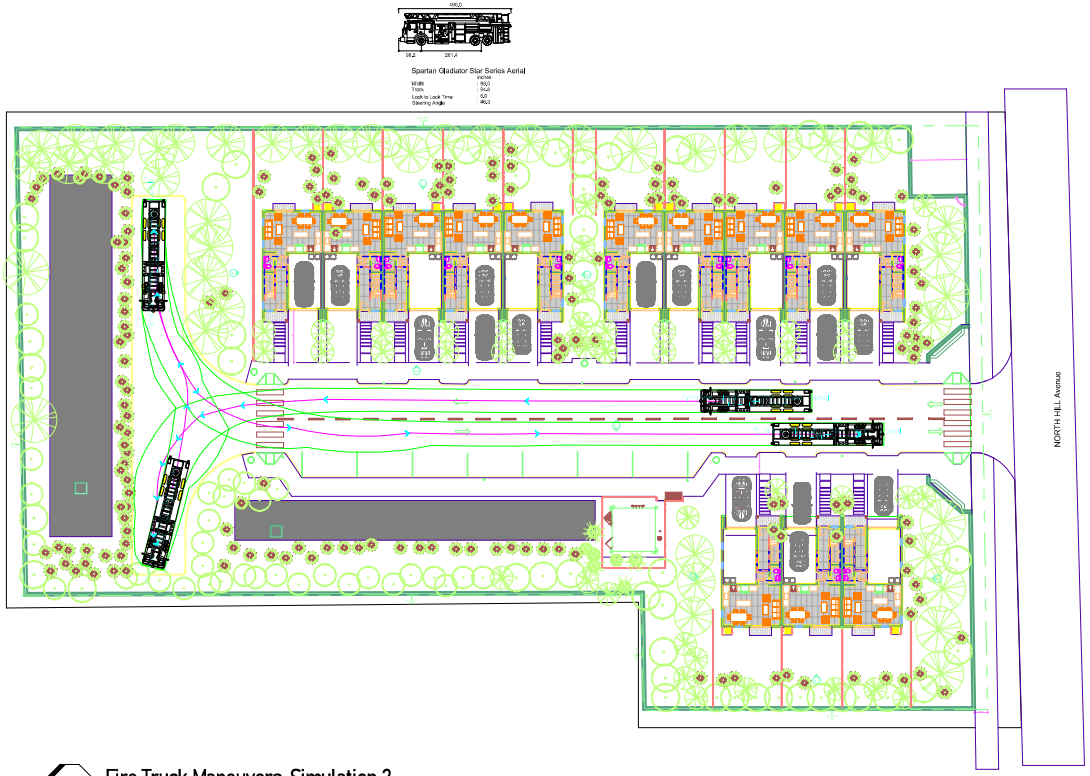
Sheet Name: Site Green Protected Area plan

Revision Schedule
Revision # | Revision Description | Revision Date

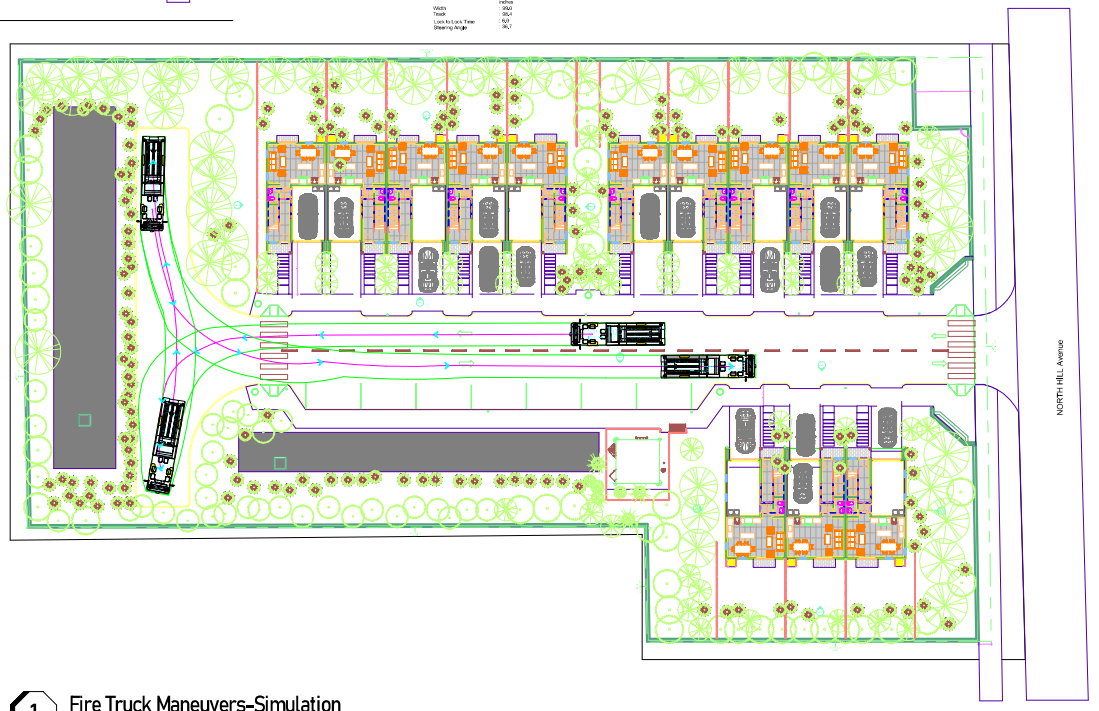
General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: 1" = 20'-0"
Design by: JRM

A-100.3



2 Fire Truck Maneuvers-Simulation 2
1/32" = 1'-0"



1 Fire Truck Maneuvers-Simulation
1/32" = 1'-0"

300 Broadway st, Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams
Jose R Melo Assoc. AIA
Professional Designer

Sheet Name
Fire-Truck Maneuvers Simulation

Revision Schedule

Revision #	Revision Description	Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: 1/32" = 1'-0"
Design by: JRM

A-100.5



2 3D View 4





3 3D View 7

1 Site 3D Arial View

310 Broadway st. Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams
Jose R Melo Assoc. AIA
Professional Designer

Sheet Name
3D Views

Revision Schedule
Revision # | Revision Description | Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale:
Design by: JRM

A-250



4 Left Elevation Type IA Units-Proposed
1/8" = 1'-0"



3 Rigth Elevation Type IA Units-Proposed
1/8" = 1'-0"



2 Rear Elevation Type IA Units-Proposed
1/8" = 1'-0"



1 Front Elevation Type IA Units-Proposed
1/8" = 1'-0"

310 Broadway st. Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams

Sheet Name
Architectural Elevations
Type IA Unit Views

Revision Schedule
Revision # | Revision Description | Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: 1/8" = 1'-0"
Design by: JRM

A-300



4 Right Elevacion View
1/8" = 1'-0"



3 Left Elevacion View
1/8" = 1'-0"



2 Rear Elevation Type IIA Units
1/8" = 1'-0"



1 Enlarged Elevation Type IIA Units-Proposed
1/8" = 1'-0"

300 Broadway st. Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams

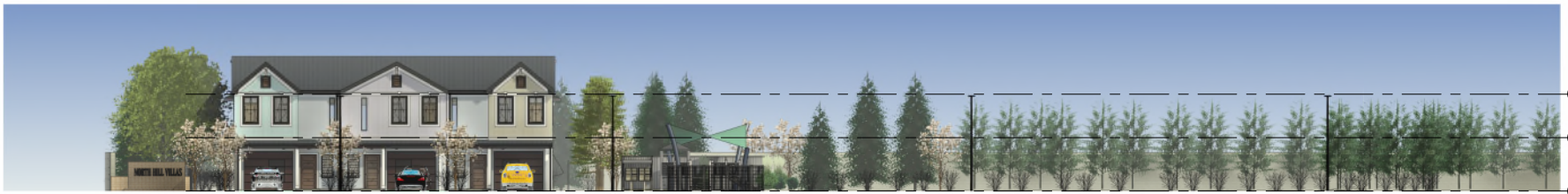
Sheet Name: Architectural Elevations Type IIA Unit Views

Revision Schedule
Revision # | Revision Description | Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: 1/8" = 1'-0"
Design by: JRM

A-301



2 Overall Elevation Type IIA Units -Proposal
1/16" = 1'-0"



1 Overall Elevation Type IA Units -Proposal
1/16" = 1'-0"

310 Broadway st. Methuen
978 | 902 - 1152

Project Description
Project Name: North Hill Villa
Address: North Hill Ave, Deland Fl
Client: Vidal Homes LLC.

Teams

Sheet Name: Overall Architectural Elevations

Revision Schedule

Revision #	Revision Description	Revision Date

General Notes
1- ALL DIMENSIONS AND CONDITIONS MUST BE CHECKED AND VERIFIED ON SITE BY THE CONTRACTOR AND SUB-CONTRACTORS, THE PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

Date: 11/20/2025
Scale: 1/16" = 1'-0"
Design by: JRM

A-303

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

December 10, 2025

A. **APPLICATION NO.:** Z24-153 (North Hill Villas PD)
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
OWNER: Vidal Homes, LLC
STAFF PLANNER: Kendall Story, Senior Planner
REQUEST: Request for a rezone from R-1B (single-family residential) to North Hill Villas PD (Planned Development) for a 13-lot townhome community

B. **APPLICABLE REGULATIONS:**

Article IV **OVERLAY AND FLOATING ZONES**
Sec. 33-32 – Planned Development District.

Article XII **ADMINISTRATION AND ENFORCEMENT**
Sec. 33-135 – Procedure for text amendments & rezoning.

C. **SITE FACTORS:**

PARCEL NUMBER: 701018000010; 701018000020; 701018000030
LOCATION: Northwest corner of N. Hill Ave. and E. Rich Ave.
SIZE OF PROPERTY: ±1.49 acres

D. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

Future Land Use: MDR (Medium Density Residential)
Existing Zoning: R-1B
Existing Use: Vacant/Undeveloped

E. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	LDR (Low Density Residential)	R-1A (single-family residential)
South:	MDR (Medium Density Residential)	R-2 (two-family residential)
East:	HDR (High Density Residential)	R-16 (multi-family residential)
West:	LDR (Low Density Residential)	R-1A (single-family residential)

F. **BACKGROUND:** The subject property is ± 1.49 acres, vacant, undeveloped and surrounded by single-family and multi-family residential properties. The current zoning is R-1B, single-family residential, which allows for single-family residential homes on a minimum of 7,500 SF lots. The applicant is requesting to rezone the property to the North Hill Villas PD, for 13 multi-family townhome units, each 2-stories high with a single-car garage and single-car driveway. The property will be accessed from N. Hill Ave., with a driveway designed for a firetruck to turn around.

G. ANALYSIS: The applicant is proposing to develop the site into a multi-family (townhomes) subdivision with 13 front-loaded lots, 7 visitor parking spaces and a tot lot that will be covered by a shade sail. The application for rezoning is accompanied by a request for a small-scale future land use map amendment (SMLU25-154).

Per Sec. 33-32 of the Land Development Regulations, in return for flexibility in site design and development, Planned Developments (PDs) are expected to include exceptional design that preserves critical environmental resources; provides above-average open space and recreational amenities, and incorporates creative design in the layout of buildings.

All development for the property shall rely upon the standards set forth below as identified on the Planned Development Plan. Where this document is silent, the R-12 zoning regulations shall apply.

Below is a table that compares the existing zoning district (R-1B) compared to the R-12 zoning district and the development standards outlined in the PD.

SITE DATA	R-1B (SINGLE-FAMILY)	R-12 (MULTI-FAMILY)	NORTH HILL VILLAS PD
Unit count (max)	8	17	13
Overall size	1.49 ACRES		
Density	5.81/ACRE	12/ACRE	8.72/ACRE
Maximum Height	35 ft.	65 ft.	35 ft.
Lot Width	75 ft.	60 ft.	22 ft.
Maximum impervious	45 %	N/A	60 % Overall, 80 % per lot
Minimum floor area	900 sq. ft.	900 sq. ft.	1,500 sq. ft.
Minimum lot area	7,500 sq. ft.		1,650 sq. ft.
Setbacks	Front: 30 ft. Rear: 25 ft. Side yard: 10 ft.	Front: 30 ft. Rear: N/A Side yard: N/A	Front: 20 ft. Rear: 10 ft. Side yard internal: 0 ft. Side yard end unit: 3 ft.
Eave Encroachment Over Driveway	24 in.	24 in.	48 in.

The concept plan shows approximately 18 % of the site being dedicated towards tree protection which shall include the required landscape buffers. As shown in the elevations, a variety of paint colors and façade finishes are used, with garage overhangs and small backyard private areas provided for each unit. Sidewalks are included along both sides of the roadway. The development shall include landscape designs such that plants will serve environmentally friendly functions including, but not limited to, cooling, privacy screening, shade, aesthetics and runoff pollution prevention. And unless stated otherwise in the PD, development shall comply with the city's Land Development Regulations as well as International Dark Sky standards, designed to reduce light pollution by restricting upward-directed light and avoiding glare.

As seen in the chart below, Type B buffers are proposed along the north, south, east, and west boundaries of the site. The applicant is requesting a deviation from the code requirement on the east boundary by providing a 10 ft. wide landscape buffer, in lieu of the required15 ft. buffer.

LANDSCAPE BUFFERS		
	REQUIRED	**PROVIDED**
NORTH	TYPE B, 15 ft.	TYPE B, 20 ft. *(with a 6-ft opaque fence)*
SOUTH	TYPE B, 15 ft.	TYPE B, 20 ft.
EAST	TYPE B, 15 ft.	TYPE B, 10 ft.
WEST	TYPE B, 15 ft.	TYPE B, 20 ft.

Parking shall comply with the city's Land Development Regulations, at a ratio of two (2) parking spaces per unit, and an additional 0.5 guest parking spaces per unit.

School Concurrency: A school concurrency letter dated August 28, 2025, was provided, stating that the district has no objections to the proposed development plan.

Traffic Analysis: A Traffic Impact Statement letter dated July 8, 2024, states that the proposed development is projected to generate 95 average daily trips, of which 8 trips occur during the PM peak hour. Per the River to Sea Transportation Planning Organization (R2CTPO) traffic study guidelines, since the proposed development is not anticipated to generate more than 1,000 daily new trips, a TIA is not required.

Stormwater: A stormwater retention pond is being provided along the west side of the site. Per the proposed PD Agreement, the stormwater system will be designed to meet all required governmental regulations, and that it shall be designed to accommodate a 100-year, 24-hour storm event which will be retained on site.

Section 33-135 of the Land Development Regulations provides the following criteria, which the City Commission shall utilize in reviewing any rezoning request:

1. **Is the proposed rezoning consistent with the Comprehensive Land Use Plan, the land use, zoning pattern and character of the surrounding area?**
   The proposed zoning classification of Planned Development (PD) is consistent with the Comprehensive Plan with a future land use designation of Medium Density Residential (MDR). The surrounding area is typified by single family residential homes and single-story multi-family apartments to the east. "Missing middle" housing options such as duplexes, townhomes, small-sized apartment buildings and live-work units allow for infill and redevelopment to encourage increased density.
2. **Will the proposed rezoning have an impact upon the environment or natural resources?**
   The subject property is currently undeveloped and heavily-wooded. Although trees will be removed during the future construction phase, the applicant is providing a greater Tree Protection Area (TPA) than required by code. Per the Land Development Regulations, the

developer is required to provide a minimum of 15% TPA. The PD is proposing a TPA of approximately 28% (18,290 SF).

3. **Will the proposed rezoning have an impact upon the economy of the affected area?**
   The subject property is currently vacant and undeveloped; therefore, the development should have a positive impact on the city and surrounding area, providing housing with small-scale development.

4. **Will the proposed rezoning have an impact upon governmental services?**
   Governmental services such as potable water, reclaimed water, sewer, code enforcement, police, and fire will be provided by the City. The TRC has indicated that there is adequate infrastructure and facilities to service the development, therefore there will be no impact to the level of governmental services. Additionally, a Utility Service Agreement (USA) will be required by the City's Utilities Department during the preliminary plat review.

5. **Are there changes in the circumstances or conditions affecting the area since the original assignment of zoning that will support the proposed zoning?**
   There have not been any significant changes in the area surrounding the subject property. The immediate area is typified by single-family homes and small-scale multi-family residences. The townhomes proposed are small-scale residences compatible with the existing single-family and multi-family homes in the area. The development is restricted to no more than 13 townhomes, with each no more than two-stories.

6. **Was there a mistake in the original classification?**
   There were no mistakes in the original classification.

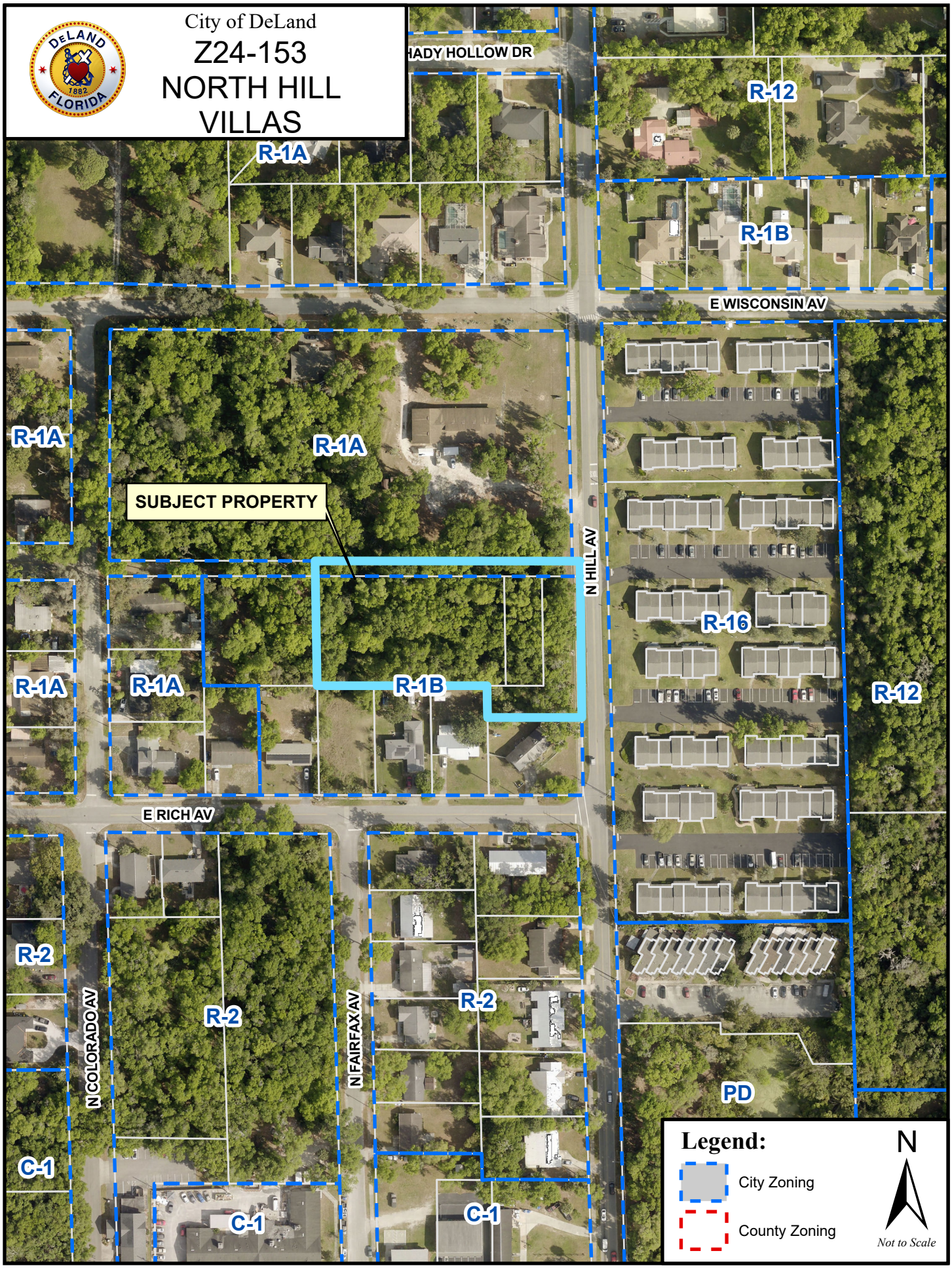
7. **Will the proposed rezoning have any effect upon the use or value of the affected area?**
   The proposed rezoning should have a positive impact upon the surrounding area, as the infusion of new homes should raise overall values and providing additional housing options.

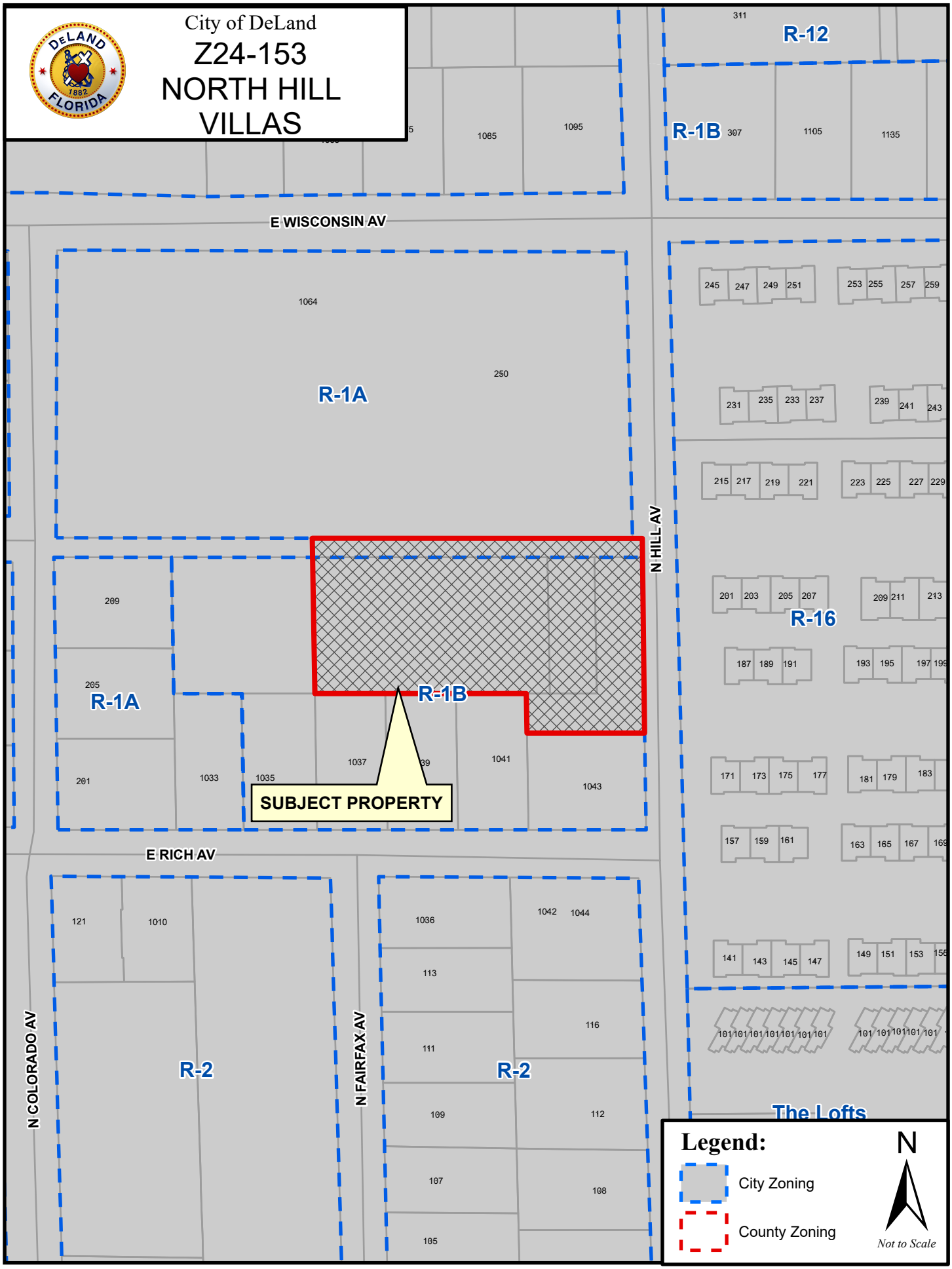
8. **Will the proposed rezoning have an impact upon public health, safety and welfare?**

   There is no indication at this time that the new proposal will create additional impacts upon public health, safety or welfare, as all provided public services have the capacity needed to accommodate the proposed development. The rezoning would be consistent and compatible with the uses of the surrounding area.

H. **NEXT STEPS:** The request for a rezoning will go before the City Commission on December 15, 2025, for first reading. The request for the land use amendment will be transmitted to Volusia Growth Management Commission (VGMC) for review. After VGMC review, the request is anticipated to go before City Commission for second reading in February of 2026.

I. **STAFF RECOMMENDATION**: Staff recommends that the Planning Board forward the application to the City Commission with a recommendation of approval for the request to rezone from R-1B (single-family residential) to North Hill Villas PD (Planned Development).


City of DeLand
Z24-153
NORTH HILL VILLAS
ADY HOLLOW DR
R-12
R-1A
R-1B
E WISCONSIN AV
R-1A
R-1A
SUBJECT PROPERTY
N HILL AV
R-16
R-1A
R-1A
R-1B
R-12
E RICH AV
R-2
R-2
N COLORADO AV
N FAIRFAX AV
R-2
PD
C-1
C-1
C-1
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
Z24-153
NORTH HILL VILLAS
E WISCONSIN AV
E RICH AV
N HILL AV
N COLORADO AV
N FAIRFAX AV
R-1A
R-1B
R-2
R-12
R-16
The Lofts
SUBJECT PROPERTY
Legend:
City Zoning
County Zoning
N
Not to Scale

Juan Manuel Vasquez

P.O. Box 560487, Orlando, FL 32856 * Ph: 407.219.8277 * Juan@vasquezcivil.com

July 8, 2024

City of Deland Engineering Department
1102 S Garfield Ave
Deland, Fl 32724

Reference Address	E Church St, Deland, Fl 32724
Owner	Vidal Homes Llc

Subject **Traffic Statement for 13 Apartment Units**

I, Juan Manuel Vasquez, licensed as Professional Engineer in the State of Florida, PE No. 95783 **hereby certify the traffic statement below** per the Trip Generation Manual, 11th Edition:

Traffic Statement:

THIS PROJECT WILL GENERATE APPROXIMATELY 8 PM PEAK HOUR TRIPS PER DAY (0.56 TRIPS PER UNIT) AND APPROXIMATELY 95.16 AVERAGE DAILY TRIPS PER DAY (7.32 TRIPS PER UNIT) BASED ON THE TRIP GENERATION MANUAL, 11TH. EDITION FOR LAND USE (220) MULTI–FAMILY HOUSING (LOW RISE).

In accordance with the current Trip Generation Manual, 11th Edition.

I certify that my statements herein are true and accurate to the best of my belief.

Sincerely,

Juan M Vasquez
Digitally signed by Juan M Vasquez
Date: 2024.07.08 10:47:49 -05'00'

Juan Manuel Vasquez
State of Florida Professional Engineer
PE No. 95783

School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Adequate Capacity Determination
Finding of Adequate Capacity Letter

August 28, 2025

Mr. Mark A. Watts, Esq
Cobb Cole
231 N Woodland Blvd
DeLand, FL 32720

RE: North Hill Villas – City of DeLand
School Concurrency Case # 24-07-25-001-A

Mr. Watts:

The County Charter requires any Comprehensive Plan Amendment or Rezoning that allows increased residential density to be effective only when adequate public schools can be timely planned and constructed to serve the projected increase in student population. The district uses this requirement as the guiding principle behind the school adequate capacity review.

District staff have reviewed the school concurrency application for the proposed project known as North Hill Villas, associated with 1.49 +/- acres of property. The property is located at or near the intersection of E Rich Ave and N Hill Ave within DeLand city limits. Information provided in the application indicates the proposed project would provide thirteen (13) multi-family units.

The district uses a county wide Student Generation Rate (SGR) of (0.137) per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate two (2) full time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	0	0
Multifamily Dwelling Unit	0.137	13	2
Manufactured Home Dwelling Unit	0.052	0	0
Total		**13**	**2**

When performing an adequate capacity review, district staff evaluates the effects of the proposed change compared to any remaining permanent capacity within the impacted schools, up to 100%, Table 2 (next page). The projected increase in student population may be over 100% if there are plans to serve increased student population in that planning area within the long-term planning horizon. A finding of adequate capacity may be issued in either case.

Table 2

Schools	SY 2024/25 Enrollment	% of Permanent Capacity	Plans for Capacity Increase Long-Term	Traditional K-12 students projected
Blue Lake Elementary	541	96%	No	1
DeLand Middle	1,067	99%	No	0
West CSA (DeLand High)	2,956	113%	No	1
Other				0

The student projections generated by this project **will** increase the existing percentage above 100% permanent capacity at the high school level. However, the concurrency service area (CSA) for DeLand High is over 100% but below 120% for level of service (LOS) standards. Based on this, the school district has no objections to the proposed development plan.

Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering. Additional considerations, particularly for gated and muti-family communities, include accessibility for school buses, by ensuring a turn radius of at least 60 feet at all entrances and exits, and the inclusion of dedicated pickup/drop off sites.

All future development orders, such as site plans and subdivisions, are subject to school concurrency review. School concurrency will be evaluated at the time when the impact of development is specifically quantified and known. Only funded school improvements and then current capacity will be considered at that time.

No student reservations have been made at this time.

Please note the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Consequently, students generated from this project may not attend the currently assigned schools.

Should you need additional information, please contact me at (386) 734-7190, ext. 50802.

Sincerely,

James F. Roberts
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Patricia S. Smith, AICP, Planning Coordinator
Kendall Story, CNU-A, Senior Planner, City of DeLand

FACILITIES SERVICES
3750 OLSON DRIVE ◆ DAYTONA BEACH, FL 32124
PHONE: (386) 947-8786 ◆ FAX (386) 506-5056

Finding of Adequate School Capacity

VOLUSIA COUNTY SCHOOL BOARD

Project Information	
Project Name	North Hill Villas
VCSB Project #	**24-07-25-001-A**
Jurisdiction Project #	
Parcel ID Numbers	7010-18-00-0010; 7010-18-00-0020 7010-18-00-0030
Project Location	E Rich Ave and N Hill Ave
Potential Residential Units	13 Multi-Family Units
Property Owner/Applicant	Mark A. Watts, Esq Cobb Cole

Notes: Additional review will be required at the time of subdivision/site plan submittal(s). No Student Reservations have been made.

Based upon the Findings of Fact, pursuant to School Board Policy 612 and Section 206 of the County Charter, the school district has determined at this time that school capacity is adequate to serve the proposed increase in residential density. This Finding shall constitute competent substantial evidence that adequate public school capacity is likely to be available at the time it is required to serve the planned new development.

Capacity is not being reserved with this Finding unless otherwise noted on this document. This Finding of Adequate School Capacity allows this subject project to continue through the Comprehensive Plan Amendment and/or rezoning process; however, it may be subject to additional school capacity review in the future.

James F. Roberts
Specialist, Planning & GIS

August 28, 2025
Issue Date

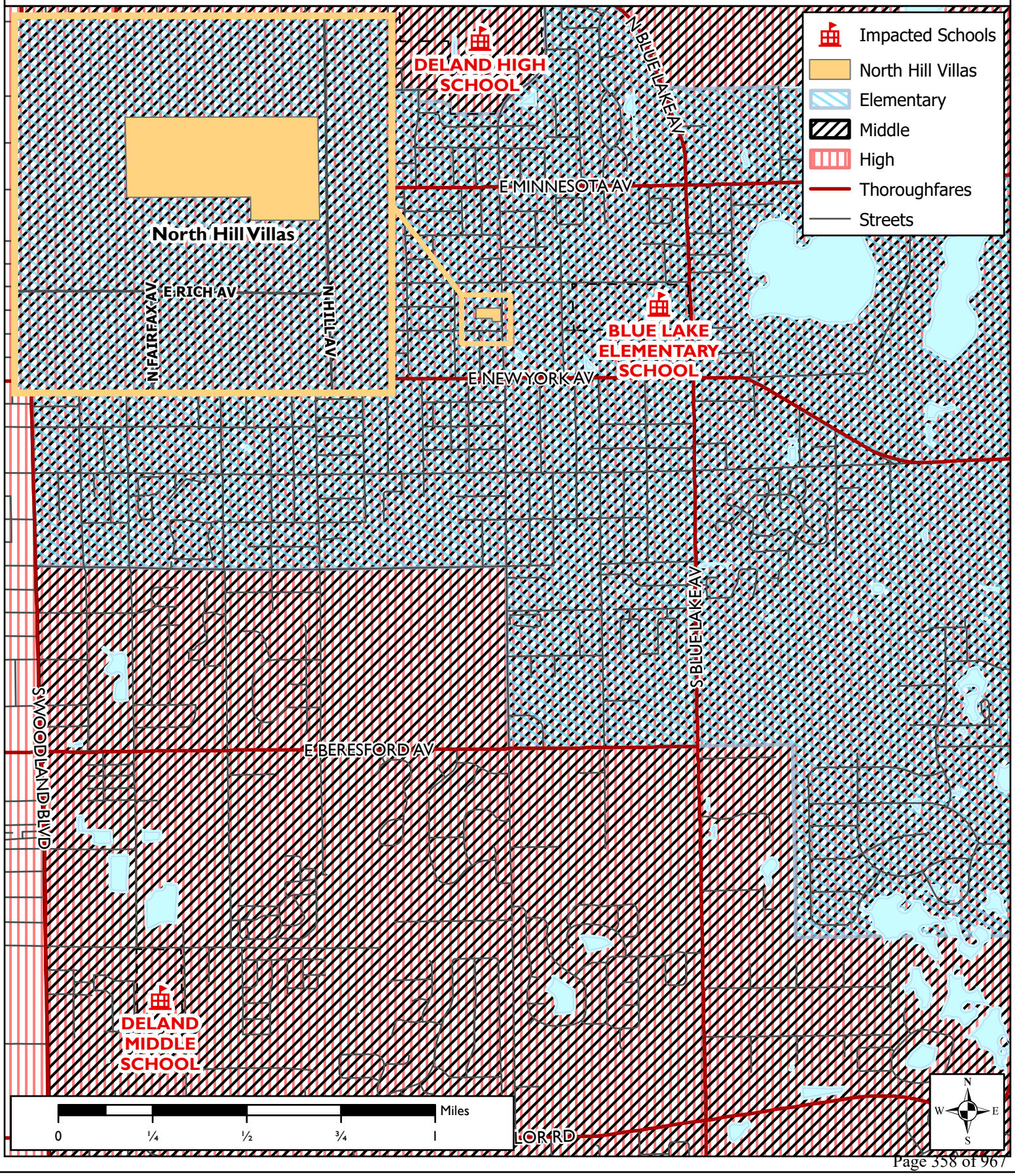
Created: 9/2007
Owner: Facilities Services

2007-073-VCS
Print Locally

VCSB Schools Impacted by Development

School Concurrency Review - North Hill Villas

VOLUSIA COUNTY SCHOOLS
PLANNING AND BUSINESS SERVICES
Created August 2025



CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: First Reading of an Ordinance Amending Chapter 7 - Building and Housing Codes of the Code of Ordinances.

DEPARTMENT: Community Development

PREPARED BY: Deborah Glick, Development Services Manager

ATTACHMENTS: Ordinance, Application Expiration 105.3.2

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

Chapter 7 Building and Housing Codes of the City's Codes and Ordinances was recently updated and upon review of the ordinance, an error was found in Sec. 7-2, specifically 105.3.2 Time limitation of application. A correction to the ordinance to change the expiration from 180 days to 30 days is required as part of our process to become IAS accredited.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government.

SUSTAINABILITY:

N/A

FISCAL IMPACT:

There is no fiscal impact on the city through the adoption of the proposed ordinance.

RECOMMENDATION:

It is recommended that the City Commission approve the proposed ordinance on first reading.

BACKGROUND/DISCUSSION:

Chapter 7 Building and Housing Codes of the City's Codes and Ordinances was recently updated and upon review of the ordinance, an error was found. A correction to the ordinance is required as part of our process to become IAS accredited.

ORDINANCE NO. 2026 –

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING CHAPTER 7 "BUILDING AND HOUSING CODES" OF THE CODE OF ORDINANCES OF THE CITY OF DELAND BY AMENDING SECTION 7-2 "LOCAL SUPPLEMENT TO THE FLORIDA BUILDING CODE", SUBSECTION 105.3.2 "TIME LIMITATION OF APPLICATION" AND PROVIDING FOR CONFLICTS, CODIFICATION, SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, Chapter 7 Building and Housing Codes of the City's Code of Ordinances was recently updated and upon staff's review of this chapter it has been determined that the revisions set forth in this ordinance will be beneficial and necessary in order to become IAS accredited.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. Chapter 7 "Building and Housing Codes." of the Code of Ordinances of the City of DeLand is hereby amended by amending Section 7-2 "Local supplement to the Florida Building Code, administration.", subsection 105.3.2 "Time limitation of application." by deleting the strike-through language and by inserting the new underlined to be read in full as follows:

Chapter 7 - BUILDING AND HOUSING CODES

Sec. 7-2 Local supplement to the Florida Building Code, administration.

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned, becoming null and void ~~180~~ 30 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one ~~or more~~ extensions of time for additional periods ~~not exceeding 90~~ 30 days ~~each~~. The extension shall be requested in writing prior to the abandonment date and justifiable cause demonstrated.

Section 2. Conflicts. All Ordinances or parts of Ordinances and other actions of the City Commission in conflict with this Ordinance are hereby repealed.

Section 3. Severability. If any section, sentence, phrase, word or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word or portion of this Ordinance not otherwise determined to be invalid, unlawful or unconstitutional.

Section 4. Codification; Directions to Code Codifier; Correction of Scrivener's Errors.

(a). The provisions of Sections 1 of this Ordinance shall become and be made a part of the Code of Ordinances of the City of DeLand and the Sections of this Ordinance may be renumbered or re-lettered to accomplish such intention and the word "Ordinance", or similar words, may be changed to "Section," "Article", or other appropriate word; provided, however, that Sections 2 through 4 shall not be codified.

(b). The Code codifier shall instruct the Municipal Code Corporation to make all changes necessary in the Code of Ordinances of the City of DeLand to implement the provisions of this Ordinance and is granted liberal authority to codify the provisions of this Ordinance in such manner and in such places as deemed advisable.

(c). In accordance with the City's ongoing codification program; the City Clerk, in conjunction with the City Attorney, may make corrections to the provisions of this Ordinance relative to Scrivener's errors of whatever type or nature.

Section 5. Effective Date. This Ordinance shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this ____day of _____, 2026.

_____
Christopher M. Cloudman
Mayor–Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk - Auditor

Passed on first reading:
Adopted on second reading:

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Chapter 7 Building and Housing Codes

Sec. 7-2 Local supplement to the Florida Building Code, administration.

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned, becoming null and void ~~180~~ 30 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one ~~or more~~ extension~~s~~ of time for additional period~~s~~ not exceeding ~~90~~ 30days ~~each~~. The extension shall be requested in writing prior to the abandonment date and justifiable cause demonstrated.

CITY OF DELAND
Request for Commission Action
January 21, 2026

SUBJECT: Resolution Approving Preliminary Plat, DeLand Tech Park, Located at 1445 Cassadaga Road.

DEPARTMENT: Planning

PREPARED BY: Kendall Story, Senior Planner

ATTACHMENTS: Resolution, PSB24-150 Preliminary Plat, PSB24-150 Preliminary Plat - Civil Set, PSB24-150 Staff Report, PSB24-150 Project Narrative, PSB24-150 Endangered Species Report, PSB24-150 Traffic Impact Analysis, PSB24-150 Aerial Map, PSB24-150 Zoning Map

APPROVED BY: Michael Pleus, City Manager, January 15, 2026

SUMMARY/HIGHLIGHT:

The applicant, Longleaf Four, LLC, is requesting approval of a preliminary plat for the DeLand Tech Park PD. The applicant seeks to subdivide the subject property into three developable lots, along with tracts for stormwater ponds, tree protection areas, landscape buffers, and other site infrastructure. As described in the original Planned Development, the applicant seeks to develop the eastern side of the subject property as industrial space and the western side of the property as commercial/neighborhood retail. This is the first of three phases of development for the DeLand Tech Park PD.

Phase I (current preliminary plat) includes the construction of Kirk and Ulysses Drive (formerly to-be-known as Pinehurst Drive) to provide site access and transportation circulation, associated infrastructure improvements, and mass clearing and grading of the property. Ulysses Drive will connect to Martin Luther King Jr. Beltway to the west of the property, and Kirk Drive will connect Cassadaga Road to SR 472. The preliminary plat had shown this right of way in tracts. However, the plan has been revised to relabel the right of way. Both roads are being dedicated to the city. The right-of-way will include landscaping, a pedestrian/bicycle trail, three stormwater ponds, and other associated infrastructure.

The ponds are part of a master stormwater system that is designed to retain the 100-year/24-hour storm event for the entire site at full buildout, which includes up to 70% impervious area for the eastern Industrial area and up to 60% impervious area for the western Retail area set forth by the DeLand Tech Park PD.

The applicant intends to mass grade the entire site and install infrastructure, roadways, and stormwater ponds for the entire development. However, since individual sites and lots will be developed in multiple phases, over many years, staff is including a condition of approval to address the need for site stabilization to help mitigate off-site impacts. The following conditions have been added to the preliminary plat approval:

On December 10, 2025, the Planning Board unanimously voted to approve the preliminary plat, with the following conditions:

1. The applicant shall revise the preliminary plat to show all public roadway as right-of-way, rather than tracts. The tract tables and site data tables shall also be revised to reflect the right of way designation.

2. To minimize stormwater impacts and ensure the site is stabilized for the duration of the development, all areas disturbed by construction, and soil stockpiles, shall be stabilized as soon as possible to reduce the duration of soil exposure to runoff events and the potential for erosion. All stockpiles shall be encompassed

by silt fence. All disturbed areas which are either final graded, or will remain inactive for a period of more than 7 days, shall be required to be stabilized within 7 days of the completion of the grading activities. Stabilization may include, but not be limited to seeding, hydromulching and/or resodding.

The applicant has since submitted a revised preliminary plat and construction plans, showing the roads as right of way instead of tracts, therefore, satisfying the first condition. The second condition will remain.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Institute Smart Growth Principles.

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The development of the infrastructure will lead to future site construction that will include retail and industrial businesses.

RECOMMENDATION:

It is recommended that the City Commission approve the Preliminary Plat for DeLand Tech Park's site work and infrastructure.

BACKGROUND/DISCUSSION:

The City Commission approved the original zoning for DeLand Tech Park PD on October 3, 2022. Since then, two amendments to the PD have been approved. The first amendment was to allow for off-site tree preservation area (TPA) and the second amendment, which is being heard for 2nd reading this evening, is requesting to add one additional commercial use to the list of permitted uses.

RESOLUTION NO. 2026 -

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, APPROVING THE PRELIMINARY SUBDIVISION PLAT FOR DELAND TECH PARK LOCATED AT 1445 CASSADAGA ROAD; PROVIDING FOR A CONDITION, PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the applicant, Longleaf Four, LLC, has submitted a proper and complete application under Chapter 33, Article 13 of the City of DeLand Code of Ordinances (hereinafter the "Code") for approval of a preliminary subdivision plat for DeLand Tech Park located at 1445 Cassadaga Road; and

WHEREAS, the applicant seeks to subdivide the subject property into three developable lots, along with tracts for stormwater ponds, tree protection areas, landscape buffers, and other site infrastructure; and

WHEREAS, on December 10, 2025, the Planning Board recommended approval of the preliminary plat for DeLand Tech Park subject to conditions.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission hereby approves the preliminary subdivision plat for DeLand Tech Park, located at 1445 Cassadaga Road on the following condition:

> That the applicant shall minimize stormwater impacts and ensure the site is stabilized for the duration of the development, all areas disturbed by construction, and soil stockpiles, shall be stabilized as soon as possible to reduce the duration of soil exposure to runoff events and the potential for erosion. All stockpiles shall be encompassed by silt fence. All disturbed areas which are either final graded, or will remain inactive for a period of more than 7 days, shall be required to be stabilized within 7 days of the completion of the grading activities. Stabilization may include, but not be limited to seeding, hydromulching and/or resodding.

Section 2. If any section, sentence, clause or phrase of this Resolution is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the remaining portions of this Resolution.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of January, 2026.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Julia M. Hewitt
Interim City Clerk

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

DELAND TECH PARK

A PORTION OF SECTION 06, TOWNSHIP 18 SOUTH, RANGE 31 EAST, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

MAP BOOK:__ PAGE:__

LEGAL DESCRIPTION:

A PORTION OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST LYING IN VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST, THENCE RUN N89°54'53"E, ALONG THE NORTH LINE OF SAID SECTION 6, A DISTANCE OF 1406.09 FEET TO THE EAST LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID EAST LINE S00°05'07"E, 1400.66 FEET TO THE MONUMENTED SOUTHERLY RIGHT OF WAY LINE OF CASSADAGA ROAD AND THE POINT OF BEGINNING; THENCE ALONG SAID SOUTHERLY RIGHT OF WAY LINE AND THE EASTERLY EXTENSION THEREOF N89°31'56"E, 1314.15 FEET; THENCE N00°23'02"W, 3.98 FEET TO THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 567.62 FEET, A CENTRAL ANGLE OF 10°54'08", A CHORD BEARING OF S89°03'11"E AND A CORD DISTANCE OF 107.84 FEET; THENCE ALONG THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 108.01 FEET; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT OF WAY LINE S85°29'15"E, 356.07 FEET; THENCE CONTINUE ALONG THE SOUTHERLY RIGHT OF WAY LINE N89°16'03"E, 313.13 FEET TO THE WESTERLY LIMITED ACCESS RIGHT OF WAY LINE OF INTERSTATE 4 (STATE ROAD 400) AS SHOWN ON FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, SECTION 79110, FINANCIAL PROJECT 242655--1; THENCE DEPARTING SAID SOUTHERLY RIGHT OF WAY LINE ALONG SAID WESTERLY RIGHT OF WAY LINE S15°45'16"W, 2426.29 FEET TO THE SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7, SAID SECTION 6; THENCE DEPARTING SAID WESTERLY LIMITED ACCESS RIGHT OF WAY LINE ALONG SAID SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7 AND GOVERNMENT LOT 6, N89°30'43"W, 802.91 FEET TO THE SOUTHEAST CORNER OF LOT 19, YOURLANDO FARMS AND GROVES, ACCORDING TO THE MAP OF PLAT RECORDED IN MAP BOOK 10, PAGES 227--228, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE N89°50'02"W, ALONG THE SOUTH LINE OF SAID LOTS 19 AND 20, A DISTANCE OF 617.62 FEET TO THE SOUTHWEST CORNER OF SAID LOT 20, ALSO BEING THE NORTHEAST CORNER OF LOT 27 OF SAID PLAT; THENCE S00°14'30"E ALONG EAST LINE OF LOT 27, A DISTANCE OF 250.12 FEET; THENCE DEPARTING SAID EASTERLY LINE S35°07'39"W, 354.19 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472, AS SHOWN ON SAID FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, SECTION 79110; THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE N54°12'54"W, 1481.04 FEET TO THE EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY AS SHOWN ON VOLUSIA COUNTY RIGHT OF WAY MAP, PROJECT 1113--3; THENCE DEPART SAID NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472 ALONG SAID EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY N00°27'19"W, 703.97 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 98.09 FEET, A CENTRAL ANGLE OF 45°56'03", THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE AND ALONG THE ARC OF SAID CURVE 78.64 FEET, THENCE CONTINUE ALONG SAID EASTERLY RIGHT OF WAY LINE N45°28'45"E, 26.79 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 5629.58 FEET, A CENTRAL ANGLE OF 02°41'26", A CHORD BEARING OF N04°10'14"E AND A CHORD DISTANCE OF 264.32 FEET; THENCE CONTINUE ALONG SAID EASTERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 264.35 FEET; THENCE DEPART SAID EASTERLY RIGHT OF WAY LINE N89°31'31"E, 361.54 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 1440.00 FEET, A CENTRAL ANGLE OF 12°42'11", A CHORD BEARING OF S84°07'35"E AND A CHORD DISTANCE OF 318.61 FEET; THENCE CONTINUE ALONG THE ARC OF SAID CURVE 319.26 FEET; THENCE N12°13'31"E, 80.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 1519.95 FEET, A CENTRAL ANGLE OF 03°39'55", A CHORD BEARING OF S75°56'11"E AND A CHORD DISTANCE OF 97.21 FEET; THENCE ALONG THE ARC OF SAID CURVE 97.23 FEET; THENCE S74°06'12"E, 169.11 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 1000.00 FEET AND A CENTRAL ANGLE OF 15°36'56"; THENCE ALONG THE ARC OF SAID CURVE 272.54 FEET TO THE SOUTH LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID SOUTH LINE S89°43'08"E, 118.51 FEET TO THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 4; THENCE ALONG THE EASTERLY LINE OF SAID GOVERNMENT LOT 4, N00°10'37"W, 1028.79 FEET TO THE POINT OF BEGINNING.

CONTAINING 6263726 SQ. FT., OR 143.795 ACRES MORE OR LESS.

GENERAL NOTES:

1) "NOTICE" THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

2) THE MEASURED BEARINGS SHOWN HEREON ARE (GRID BEARINGS) BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, 1983 NORTH AMERICAN DATUM, 2007 ADJUSTMENT, DERIVING A BEARING OF N89°54'53"E, ALONG NORTH LINE OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST.

3) ● DENOTES PERMANENT REFERENCE MONUMENT 4"X4" CONCRETE MONUMENT STAMPED PRM LB 3019.

● 5/8" IRON ROD & CAP DENOTES PERMANENT REFERENCE MONUMENT STAMPED PRM LB 3019.

△ DENOTES NAIL & CAP STAMPED PCP LB 3019.

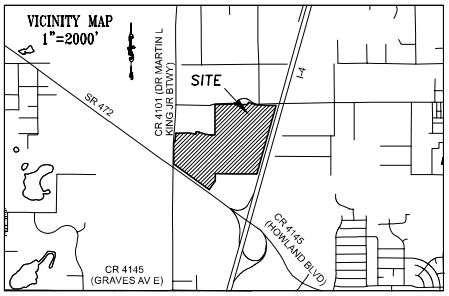
4) UTILITIES IN UTILITY EASEMENTS SHALL INCLUDE, BUT ARE NOT LIMITED TO, PUBLIC UTILITIES, NATURAL GAS, ELECTRIC (INCLUDING FLORIDA POWER & LIGHT CO.), TELEPHONE, CABLE TV

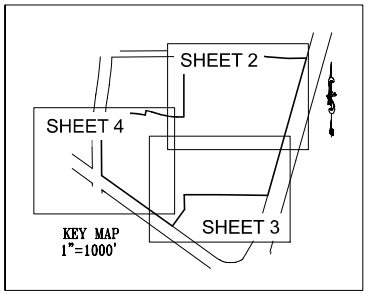
5) PER CHAPTER 177, PART 1, F.S.: ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES; THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.

6) THE UTILITY EASEMENTS REFERENCED ABOVE AND DEPICTED AS SHOWN HEREON ARE GRANTED AND CONVEYED TO ANY PUBLIC OR PRIVATE UTILITY, AND ARE SEVERABLE, NON-EXCLUSIVE EASEMENTS, GRANTING THE RIGHT TO CONSTRUCT, OPERATE, MAINTAIN AND REPAIR UNDERGROUND PUBLIC UTILITY SYSTEMS (INCLUDING WIRES, CABLES, CONDUITS AND ABOVE GROUND APPURTENANT EQUIPMENT) UNLESS OTHERWISE INDICATED.

7) DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.

8) ERROR OF CLOSURE MEETS OR EXCEEDS THE 1 IN 10,000 REQUIREMENT.





NOTES CONTINUED:

9) ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS SHOWN AS NON--RADIAL AND NOTED (NR)

10) COORDINATE VALUES SHOWN HEREON BASED UPON FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE) NAD 83 (2007) DATUM.

11) THE ARTICLES OF INCORPORATION FOR DELAND TECH PARK OWNERS ASSOCIATION, INC. ARE FILED WITH THE STATE OF FLORIDA ON _____, DOCUMENT NUMBER _____.

12) THE DELAND TECH PARK OWNERS ASSOCIATION, INC. AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS RECORDED IN ORB ___, PG ___, PUBLIC RECORDS OF VOLUSIA COUNTY FLORIDA.

DEDICATION:

KNOW ALL MEN BY THESE PRESENTS, THAT LONGLEAF FOUR, LLC, BEING THE OWNERS IN FEE SIMPLE OF THE LANDS SHOWN ON THE ATTACHED PLAT, ENTITLED, "DELAND TECH PARK", LOCATED IN THE CITY OF DELAND, VOLUSIA COUNTY, FLORIDA, DOES HEREBY DEDICATE SAID REAL PROPERTY FOR PROPER PURPOSES AND USES AND DEDICATE OTHER INTERESTS AS SET FORTH IN THIS PLAT.

KIRK DRIVE (TRACT M), AND PINEHURST DRIVE (TRACT N) ARE HEREBY CONVEYED AND DEDICATED TO THE CITY OF DELAND FOR PUBLIC ROAD PURPOSES.

TRACTS A, C, D, E ARE HERE BY DEEDED IN FEE AS COMMON AREA, & DRAINAGE TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

LOT 1 ARE HERE BY DEEDED IN FEE AS FUTURE INDUSTRIAL AREA TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

LOTS 2 AND 3 ARE HERE BY DEEDED IN FEE AS FUTURE RETAIL AREAS TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

TRACTS B, H, L, ARE HERE BY DEEDED IN FEE AS TREE PROTECTION AREAS TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

TRACTS F & G ARE HERE BY DEEDED IN FEE AS LANDSCAPE BUFFER TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

TRACTS I, J, K, ARE HERE BY DEEDED IN FEE AS LANDSCAPE BUFFER AND PROPOSED TREE PROTECTION AREAS TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

TRACTS M, AND N ARE HERE BY DEEDED IN FEE AS ACCESS AREA TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

SIGN EASEMENTS DEDICATED TO THE TO DELAND TECH PARK OWNERS ASSOCIATION, INC.

IN WITNESS WHEREOF, LONGLEAF FOUR, LLC HAS CAUSED THESE PRESENTS TO BE SIGNED AND ATTESTED TO BY THE MEMBER NAMED BELOW ON THIS _____ DAY OF _____ 20___ A.D.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

WITNESS _____ PRESIDENT, LONGLEAF FOUR, LLC

WITNESS _____ SEAL

STATE OF FLORIDA
COUNTY OF VOLUSIA

THIS IS TO CERTIFY THAT THE FOREGOING WAS SIGNED BEFORE ME BY MEANS OF [ ] PHYSICAL PRESENCE OR [ ] ONLINE NOTARIZATION ON THIS _____ DAY OF _____ 20___, BY _____ AS PRESIDENT OF LONGLEAF FOUR, LLC.

"PERSONALLY KNOWN" OR "PRODUCED _____ AS IDENTIFICATION".

NOTARY PUBLIC _____
STATE OF FLORIDA AT LARGE _____
TITLE / RANK: _____ SEAL
MY COMMISSION EXPIRES: _____
COMMISSION NUMBER: _____

CERTIFICATE OF APPROVAL OF THE DESIGN AND INSTALLATION OF STREETS, UTILITIES, AND OTHER REQUIRED IMPROVEMENTS

I HEREBY CERTIFY, THAT ALL STREETS, UTILITIES AND OTHER REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED IN AN ACCEPTABLE MANNER, AND ACCORDING TO CITY SPECIFICATIONS AND STANDARDS, AND ALL APPLICABLE REGULATIONS IN MANCHESTER NEIGHBORHOOD PD PHASE 1A, OR THAT A GUARANTEE OF THE INSTALLATION OF THE REQUIRED IMPROVEMENTS IN A MANNER ACCORDING TO SECTION 33--147 HAS BEEN RECEIVED.

DATE: _____, 20___

BY: _____
CITY ENGINEER

REVIEW BY SURVEYOR AND MAPPER FOR THE CITY

I HEREBY CERTIFY TO THE CITY OF DELAND, FLORIDA, THAT I HAVE REVIEWED THE FOREGOING PLAT ENTITLED "MANCHESTER NEIGHBORHOOD PD PHASE 1A" FOR COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND THAT I HAVE PROVIDED BOTH THE CITY AND THE SURVEYOR MAPPER OF RECORD A LIST OF DEVIATIONS, IF ANY, FROM SUCH REQUIREMENTS.

DATE:_____, 20___

SIGNATURE:_____ SEAL

FLORIDA P.L.S./P.S.M. NO.:_____.

PRINTED NAME:_____.

CERTIFICATE OF APPROVAL BY THE CITY COMMISSION

THE DELAND CITY COMMISSION HEREBY APPROVED THE FINAL PLAT FOR MANCHESTER NEIGHBORHOOD PD PHASE 1A.

DATE: _____, 20___

MAYOR, CITY OF DELAND SEAL

CERTIFICATE OF CLERK

I HEREBY CERTIFY THAT I HAVE EXAMINED THE FOREGOING PLAT AND FIND IT COMPLIES IN FORM WITH ALL THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND WAS FILED FOR RECORD ON _____ AT _____ _____,

FILE NO.: _____

_____
CLERK OF THE CIRCUIT COURT
IN AND FOR VOLUSIA COUNTY, FLORIDA

CERTIFICATE OF SURVEYOR

I HEREBY CERTIFY, THAT THIS IS A TRUE AND CORRECT REPRESENTATION OF THE LANDS SURVEYED, THAT THE SURVEY WAS MADE UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION, AND THAT THE SURVEY DATA CONTAINED HEREIN COMPLIES WITH ALL OF THE REQUIREMENTS OF CHAPTER 177, OF THE FLORIDA STATUTES. I FURTHER CERTIFY THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF CHAPTER 177.091(7) REGARDING "PERMANENT REFERENCE MONUMENTS," THAT THE LAND IS LOCATED WITHIN THE CITY OF DELAND, VOLUSIA COUNTY, FLORIDA AND THAT I AM A PROFESSIONAL SURVEYOR AND MAPPER PURSUANT TO SECTION 177.061 OF THE FLORIDA STATUTES.

_____ SEAL
JEFFREY S. HATTENDORF PROFESSIONAL SURVEYOR & MAPPER NO. 6193 DATE

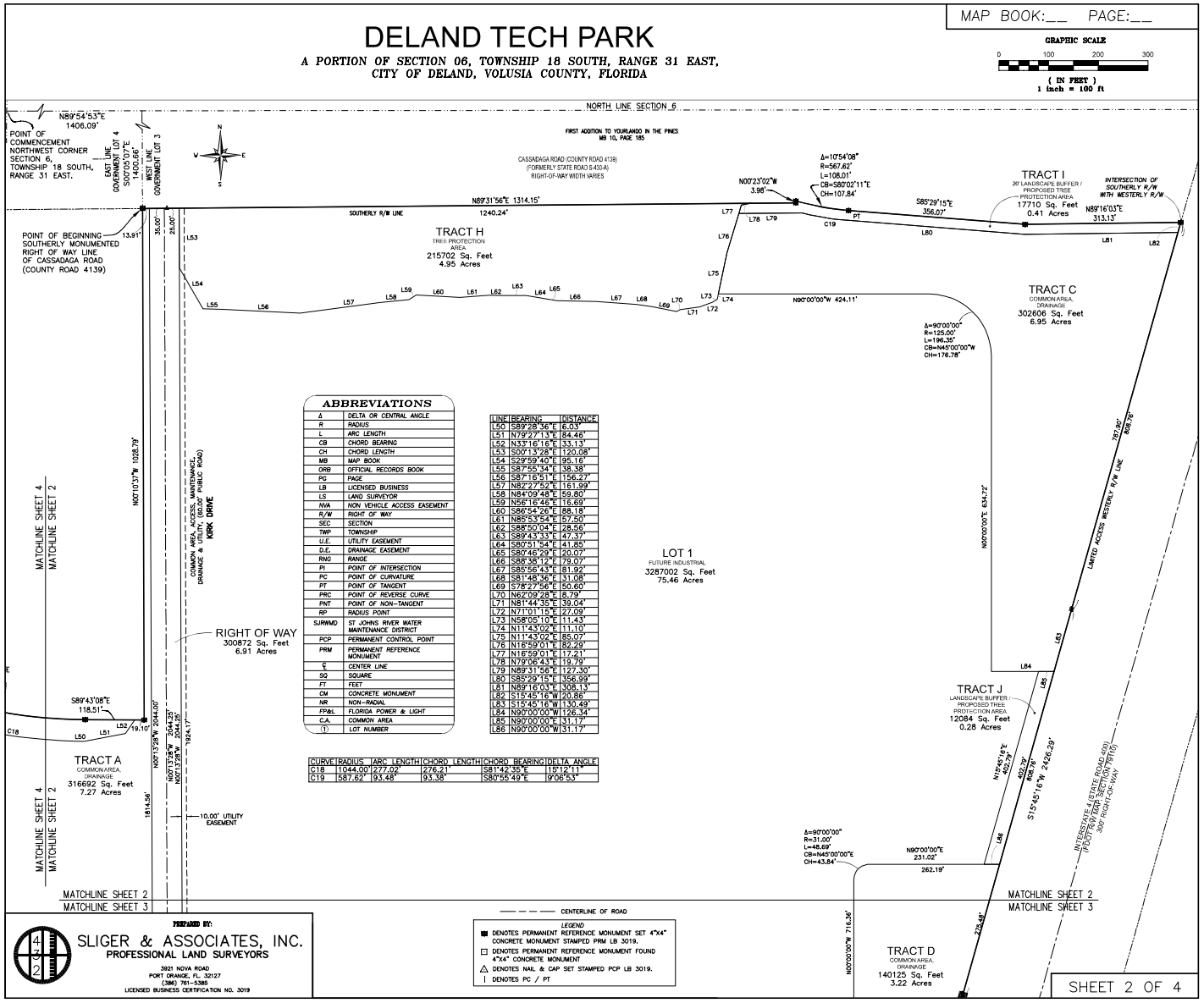
SLIGER & ASSOCIATES INC.,
3921 NOVA ROAD
PORT ORANGE, FLORIDA 32127 (386) 761-5385
LICENSED BUSINESS CERTIFICATION NO. 3019

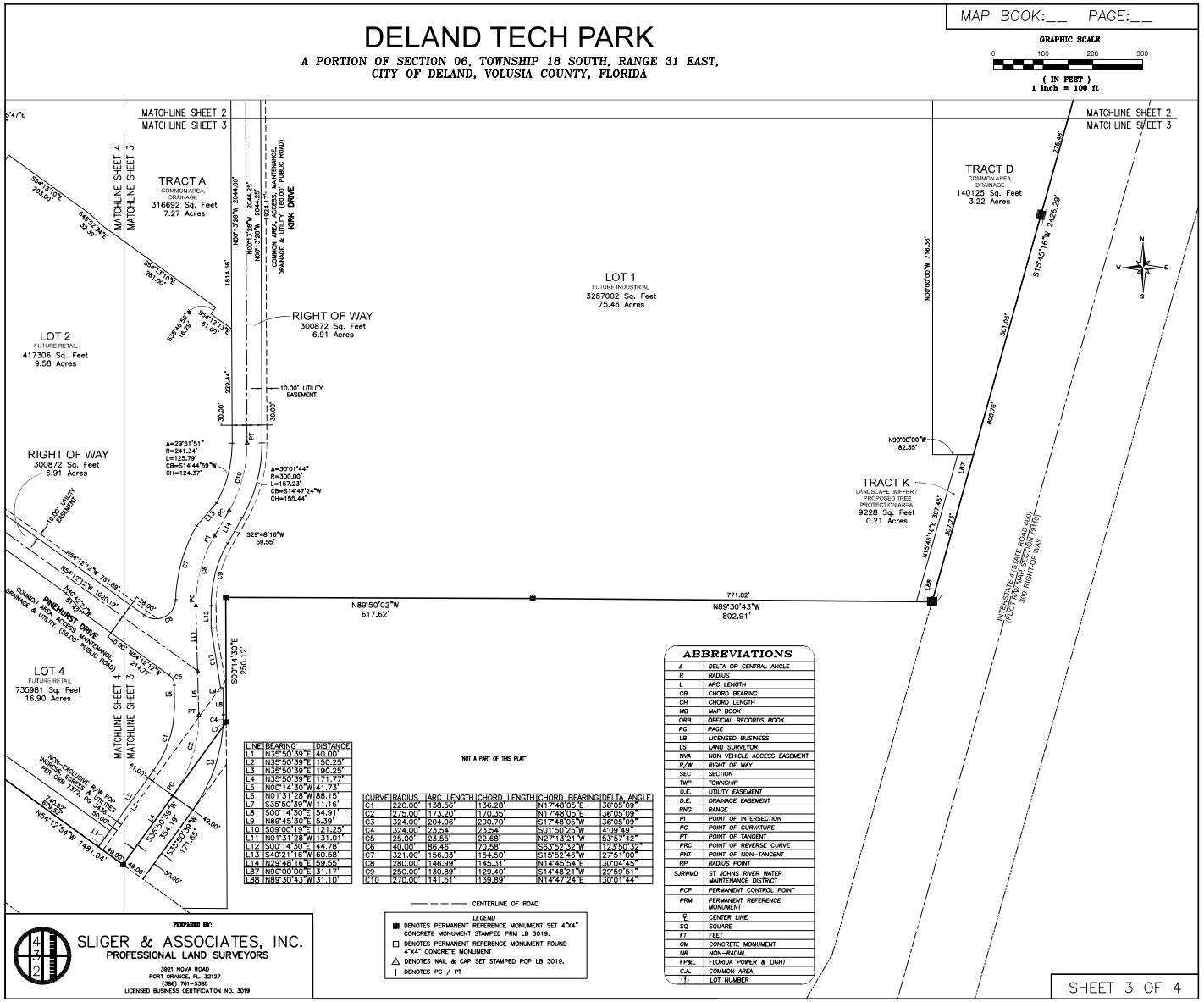
PREPARED BY:
SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761--5385
LICENSED BUSINESS CERTIFICATION NO. 3019

INDEX:

SHEET 1..... COVER
SHEET 2-4..... DETAIL SHEETS

SHEET 1 OF 4


MAP BOOK:___ PAGE:__
DELAND TECH PARK
A PORTION OF SECTION 06, TOWNSHIP 18 SOUTH, RANGE 31 EAST,
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA
GRAPHIC SCALE
0 100 200 300
(IN FEET)
1 inch = 100 ft
NORTH LINE SECTION 6
N89°54'53"E 1406.09'
POINT OF COMMENCEMENT NORTHWEST CORNER SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST.
EAST LINE GOVERNMENT LOT 4
WEST LINE GOVERNMENT LOT 3
S00°05'07"E 1406.16'
FIRST ADDITION TO YOURLANDO IN THE PINES MB 10, PAGE 185
CASSADAGA ROAD (COUNTY ROAD 4139) (FORMERLY STATE ROAD S-430-A) RIGHT-OF-WAY WIDTH VARIES
N89°31'56"E 1314.15'
1240.24'
SOUTHERLY R/W LINE
POINT OF BEGINNING SOUTHERLY MONUMENTED RIGHT OF WAY LINE OF CASSADAGA ROAD (COUNTY ROAD 4139)
13.91'
35.00'
25.00'
TRACT H
TREE PROTECTION AREA
215702 Sq. Feet
4.95 Acres
N00°23'02"W 3.98'
Δ=107°54'08" R=567.62' L=106.01' CB=S80°02'11"E CH=107.84'
S85°29'15"E 356.07'
TRACT I
20' LANDSCAPE BUFFER / PROPOSED TREE PROTECTION AREA
17710 Sq. Feet
0.41 Acres
INTERSECTION OF SOUTHERLY R/W WITH WESTERLY R/W
N89°16'03"E 313.13'
TRACT C
COMMON AREA, DRAINAGE
302606 Sq. Feet
6.95 Acres
N90°00'00"W 424.11'
Δ=90°00'00" R=125.00' L=196.35' CB=N45°00'00"W CH=176.78'
N00°00'00"E 634.72'
787.89'
605.76'
LIMITED ACCESS WESTERLY R/W LINE
N00°10'37"W 1028.79'
MATCHLINE SHEET 4
MATCHLINE SHEET 2
COMMON AREA, ACCESS, MAINTENANCE, DRAINAGE & UTILITY, (60.00' PUBLIC ROAD)
KIRK DRIVE
RIGHT OF WAY
300872 Sq. Feet
6.91 Acres
LOT 1
FUTURE INDUSTRIAL
3287002 Sq. Feet
75.46 Acres
S89°43'08"E 118.51'
19.10'
TRACT A
COMMON AREA, DRAINAGE
316692 Sq. Feet
7.27 Acres
N00°13'28"W 2044.00'
2044.25'
2044.17'
1924.17'
1814.56'
10.00' UTILITY EASEMENT
TRACT J
LANDSCAPE BUFFER / PROPOSED TREE PROTECTION AREA
12084 Sq. Feet
0.28 Acres
N15°45'16"E 402.79'
605.76'
S15°45'16"W 2426.29'
INTERSTATE 4 (STATE ROAD 400) (FDOT PROJECT SECTION 79010) 300' RIGHT-OF-WAY
Δ=90°00'00" R=31.00' L=48.69' CB=N45°00'00"E CH=43.84'
N90°00'00"E 231.02'
262.19'
MATCHLINE SHEET 2
MATCHLINE SHEET 3
TRACT D
COMMON AREA, DRAINAGE
140125 Sq. Feet
3.22 Acres
N00°00'00"W 716.36'
228.48'
ABBREVIATIONS
Δ DELTA OR CENTRAL ANGLE
R RADIUS
L ARC LENGTH
CB CHORD BEARING
CH CHORD LENGTH
MB MAP BOOK
ORB OFFICIAL RECORDS BOOK
PG PAGE
LB LICENSED BUSINESS
LS LAND SURVEYOR
NVA NON VEHICLE ACCESS EASEMENT
R/W RIGHT OF WAY
SEC SECTION
TWP TOWNSHIP
U.E. UTILITY EASEMENT
D.E. DRAINAGE EASEMENT
RNG RANGE
PI POINT OF INTERSECTION
PC POINT OF CURVATURE
PT POINT OF TANGENT
PRC POINT OF REVERSE CURVE
PNT POINT OF NON-TANGENT
RP RADIUS POINT
SJRWMD ST JOHNS RIVER WATER MAINTENANCE DISTRICT
PCP PERMANENT CONTROL POINT
PRM PERMANENT REFERENCE MONUMENT
℄ CENTER LINE
SQ SQUARE
FT FEET
CM CONCRETE MONUMENT
NR NON-RADIAL
FP&L FLORIDA POWER & LIGHT
C.A. COMMON AREA
① LOT NUMBER
LINE BEARING DISTANCE
L50 S89°28'36"E 6.03'
L51 N79°27'13"E 84.46'
L52 N33°16'16"E 33.13'
L53 S00°13'28"E 120.08'
L54 S29°59'40"E 95.16'
L55 S87°55'34"E 38.38'
L56 S87°16'51"E 156.27'
L57 N82°27'52"E 161.99'
L58 N84°09'48"E 59.80'
L59 N56°16'46"E 16.69'
L60 S86°54'26"E 88.18'
L61 N85°53'54"E 57.50'
L62 S88°50'04"E 28.56'
L63 S89°43'33"E 47.37'
L64 S80°51'54"E 141.85'
L65 S80°46'29"E 20.07'
L66 S88°38'12"E 79.07'
L67 S85°56'43"E 81.92'
L68 S81°48'16"E 31.08'
L69 S78°27'56"E 50.60'
L70 N62°09'28"E 8.79'
L71 N81°44'35"E 39.04'
L72 N71°01'15"E 27.09'
L73 N58°05'10"E 11.43'
L74 N11°43'02"E 11.10'
L75 N11°43'02"E 85.07'
L76 N16°59'01"E 82.29'
L77 N16°59'01"E 17.41'
L78 N79°06'43"E 19.79'
L79 N89°31'56"E 127.30'
L80 S85°29'15"E 356.99'
L81 N89°16'03"E 308.13'
L82 S15°45'16"W 20.86'
L83 S15°45'16"W 130.49'
L84 N90°00'00"W 126.34'
L85 N90°00'00"E 31.17'
L86 N90°00'00"W 31.17'
CURVE RADIUS ARC LENGTH CHORD LENGTH CHORD BEARING DELTA ANGLE
C18 1044.00' 277.02' 276.21' S81°42'55"E 15°12'11"
C19 587.62' 93.48' 93.38' S80°55'49"E 9°06'53"
CENTERLINE OF ROAD
LEGEND
DENOTES PERMANENT REFERENCE MONUMENT SET 4"X4" CONCRETE MONUMENT STAMPED PRM LB 3019.
DENOTES PERMANENT REFERENCE MONUMENT FOUND 4"X4" CONCRETE MONUMENT
DENOTES NAIL & CAP SET STAMPED PCP LB 3019.
DENOTES PC / PT
PREPARED BY:
SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NO. 3019
SHEET 2 OF 4

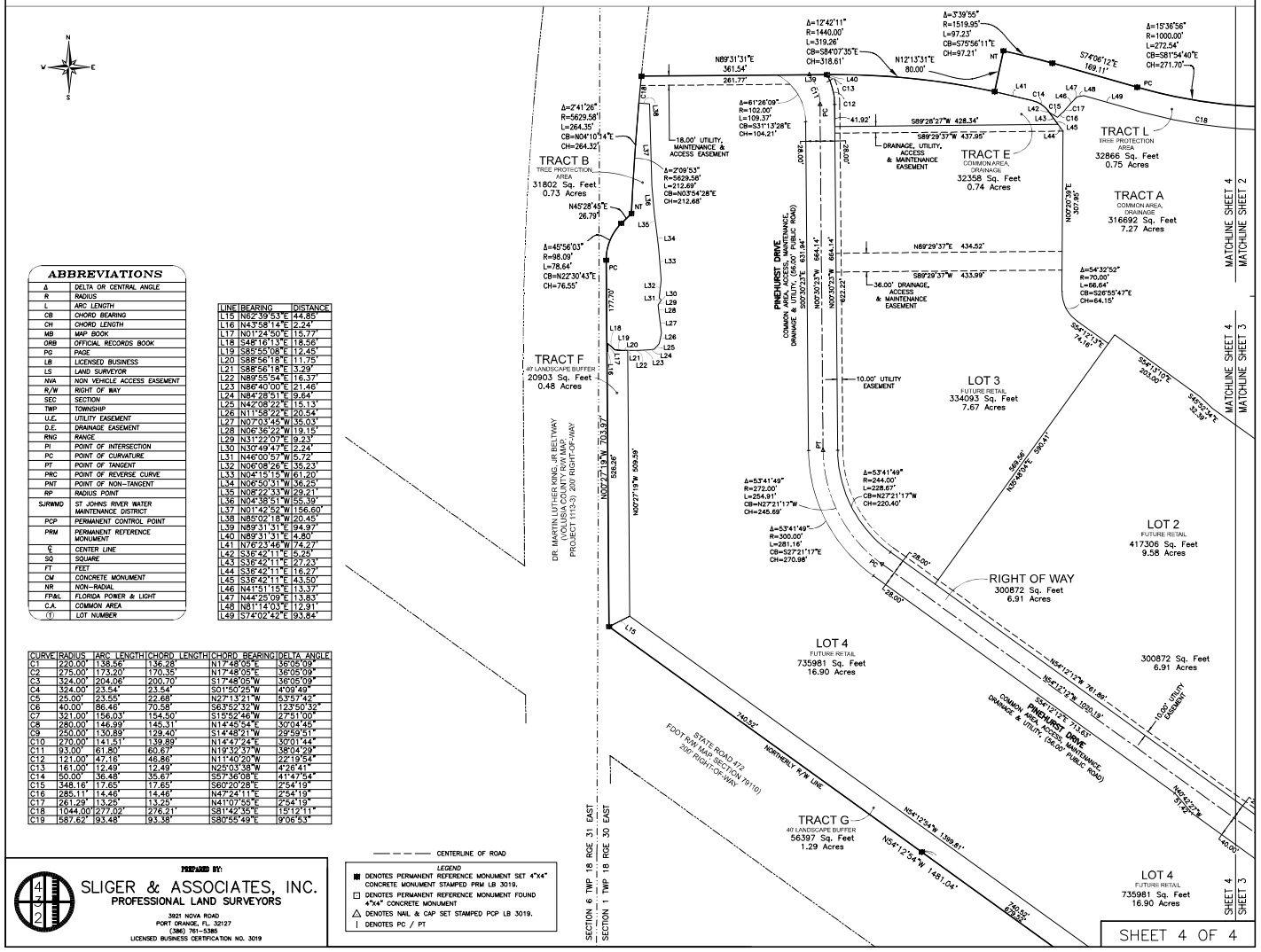

MAP BOOK:__ PAGE:__
DELAND TECH PARK
A PORTION OF SECTION 06, TOWNSHIP 18 SOUTH, RANGE 31 EAST,
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA
GRAPHIC SCALE
0 100 200 300
(IN FEET)
1 inch = 100 ft
MATCHLINE SHEET 2
MATCHLINE SHEET 3
MATCHLINE SHEET 4
TRACT A
COMMON AREA
DRAINAGE
316692 Sq. Feet
7.27 Acres
TRACT D
COMMON AREA
DRAINAGE
140125 Sq. Feet
3.22 Acres
LOT 1
FUTURE INDUSTRIAL
3287002 Sq. Feet
75.46 Acres
LOT 2
FUTURE RETAIL
417306 Sq. Feet
9.58 Acres
RIGHT OF WAY
300872 Sq. Feet
6.91 Acres
TRACT K
LANDSCAPE BUFFER / PROPOSED TREE PROTECTION AREA
9228 Sq. Feet
0.21 Acres
LOT 4
FUTURE RETAIL
735981 Sq. Feet
16.90 Acres
PINEHURST DRIVE
COMMON AREA, ACCESS, DRAINAGE & UTILITY (66.00' PUBLIC ROAD)
KIRK DRIVE
COMMON AREA, ACCESS, MAINTENANCE, DRAINAGE & UTILITY (60.00' PUBLIC ROAD)
10.00' UTILITY EASEMENT
NON-EXCLUSIVE R/W FOR INGRESS, EGRESS & UTILITIES PER Deb 7377, PG 3536
INTERSTATE 4 (STATE ROAD 400) (FROM W'LY R/W SECTION 79110) 300' RIGHT-OF-WAY
N89°50'02"W 617.62'
N89°30'43"W 802.91'
771.82'
S00°14'30"E 250.12'
N00°00'00"W 716.36'
S15°45'16"W 2426.39'
N90°00'00"W 82.35'
LINE BEARING DISTANCE
L1 N35°50'39"E 40.00'
L2 N35°50'39"E 150.25'
L3 N35°50'39"E 190.25'
L4 N35°50'39"E 171.77'
L5 N00°14'30"W 41.73'
L6 N01°31'28"W 88.15'
L7 S35°50'39"W 111.16'
L8 S00°14'30"E 54.91'
L9 N89°45'30"E 15.39'
L10 S09°00'19"E 121.25'
L11 N01°31'28"W 131.01'
L12 S00°14'30"E 44.78'
L13 S40°21'16"W 60.58'
L14 N29°48'16"E 59.55'
L87 N90°00'00"E 31.17'
L88 N89°30'43"W 31.10'
CURVE RADIUS ARC LENGTH CHORD LENGTH CHORD BEARING DELTA ANGLE
C1 220.00' 138.56' 136.28' N17°48'05"E 36°05'09"
C2 275.00' 173.20' 170.35' N17°48'05"E 36°05'09"
C3 324.00' 204.06' 200.70' S17°48'05"W 36°05'09"
C4 324.00' 23.54' 23.54' S01°50'25"W 4°09'49"
C5 25.00' 23.55' 22.68' N27°13'21"W 53°57'42"
C6 40.00' 86.46' 70.58' S63°52'32"W 123°50'32"
C7 321.00' 156.03' 154.50' S15°52'46"W 27°51'00"
C8 280.00' 146.99' 145.31' N14°45'54"E 30°04'45"
C9 250.00' 130.89' 129.40' S14°48'21"W 29°59'51"
C10 270.00' 141.51' 139.89' N14°47'24"E 30°01'44"
"NOT A PART OF THIS PLAT"
CENTERLINE OF ROAD
LEGEND
DENOTES PERMANENT REFERENCE MONUMENT SET 4"X4" CONCRETE MONUMENT STAMPED PRM LB 3019.
DENOTES PERMANENT REFERENCE MONUMENT FOUND 4"X4" CONCRETE MONUMENT
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ABBREVIATIONS
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R RADIUS
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SQ SQUARE
FT FEET
CM CONCRETE MONUMENT
NR NON-RADIAL
FP&L FLORIDA POWER & LIGHT
C.A. COMMON AREA
(1) LOT NUMBER
PREPARED BY:
SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NO. 3019
SHEET 3 OF 4

DELAND TECH PARK

A PORTION OF SECTION 06, TOWNSHIP 18 SOUTH, RANGE 31 EAST, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

MAP BOOK:___ PAGE:___

GRAPHIC SCALE
0 100 200 300
(IN FEET)
1 inch = 100 ft



ABBREVIATIONS

Δ	DELTA OR CENTRAL ANGLE
R	RADIUS
L	ARC LENGTH
CB	CHORD BEARING
CH	CHORD LENGTH
MB	MAP BOOK
ORB	OFFICIAL RECORDS BOOK
PG	PAGE
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
NVA	NON VEHICLE ACCESS EASEMENT
R/W	RIGHT OF WAY
SEC	SECTION
TWP	TOWNSHIP
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
RNG	RANGE
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENT
PRC	POINT OF REVERSE CURVE
PNT	POINT OF NON-TANGENT
RP	RADIUS POINT
SJRWMD	ST JOHNS RIVER WATER MANAGEMENT DISTRICT
PCP	PERMANENT CONTROL POINT
PRM	PERMANENT REFERENCE MONUMENT
℄	CENTER LINE
SQ	SQUARE
FT	FEET
CM	CONCRETE MONUMENT
NR	NON-RADIAL
FP&L	FLORIDA POWER & LIGHT
C.A.	COMMON AREA
①	LOT NUMBER

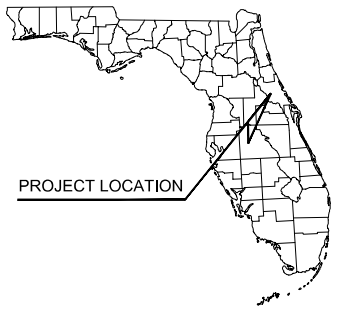
LINE	BEARING	DISTANCE
L15	N62°39'53"E	44.85'
L16	N43°58'14"E	2.24'
L17	N01°24'50"E	15.77'
L18	S48°16'13"E	18.56'
L19	S85°55'08"E	12.45'
L20	S88°56'18"E	11.75'
L21	S88°56'18"E	3.29'
L22	N89°55'54"E	16.37'
L23	N86°40'00"E	21.46'
L24	N84°28'51"E	9.64'
L25	N42°08'22"E	15.13'
L26	N11°58'22"E	20.54'
L27	N07°03'45"W	35.03'
L28	N06°36'22"W	19.15'
L29	N31°22'07"E	9.23'
L30	N30°49'47"E	12.24'
L31	N46°00'57"W	5.72'
L32	N06°08'26"E	35.23'
L33	N04°15'15"W	61.20'
L34	N06°50'31"W	36.25'
L35	N08°22'33"W	29.21'
L36	N04°38'51"W	55.39'
L37	N01°42'52"W	156.60'
L38	N85°02'18"W	20.45'
L39	N89°31'31"E	94.97'
L40	N89°31'31"E	4.80'
L41	N76°23'46"W	74.27'
L42	S36°42'11"E	5.25'
L43	S36°42'11"E	27.23'
L44	S36°42'11"E	16.27'
L45	S36°42'11"E	43.50'
L46	N41°51'15"E	13.37'
L47	N44°25'09"E	13.83'
L48	N81°14'03"E	12.91'
L49	S74°02'42"E	93.84'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	220.00'	138.56'	136.28'	N17°48'05"E	36°05'09"
C2	275.00'	173.20'	170.35'	N17°48'05"E	36°05'09"
C3	324.00'	204.06'	200.70'	S17°48'05"W	36°05'09"
C4	324.00'	23.54'	23.54'	S01°50'25"W	4°09'49"
C5	25.00'	23.55'	22.68'	N27°13'21"W	53°57'42"
C6	40.00'	86.46'	70.58'	S63°52'32"W	123°50'32"
C7	321.00'	156.03'	154.50'	S15°52'46"W	27°51'00"
C8	280.00'	146.99'	145.31'	N14°45'54"E	30°04'45"
C9	250.00'	130.89'	129.40'	S14°48'21"W	29°59'51"
C10	270.00'	141.51'	139.89'	N14°47'24"E	30°01'44"
C11	93.00'	61.80'	60.67'	N19°32'37"W	38°04'29"
C12	121.00'	47.16'	46.86'	N11°40'20"W	22°19'54"
C13	161.00'	12.49'	12.49'	N25°03'38"W	4°26'41"
C14	50.00'	36.48'	35.67'	S57°36'08"E	41°47'54"
C15	348.16'	17.65'	17.65'	S60°20'28"E	2°54'19"
C16	285.11'	14.46'	14.46'	N47°24'11"E	2°54'19"
C17	261.29'	13.25'	13.25'	N41°07'55"E	2°54'19"
C18	1044.00'	277.02'	276.21'	S81°42'35"E	15°12'11"
C19	587.62'	93.48'	93.38'	S80°55'49"E	9°06'53"

PREPARED BY:
SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NO. 3019

LEGEND
- ⊠ DENOTES PERMANENT REFERENCE MONUMENT SET 4"X4" CONCRETE MONUMENT STAMPED PRM LB 3019.
- □ DENOTES PERMANENT REFERENCE MONUMENT FOUND 4"X4" CONCRETE MONUMENT
- △ DENOTES NAIL & CAP SET STAMPED PCP LB 3019.
- | DENOTES PC / PT
- ——— CENTERLINE OF ROAD

SHEET 4 OF 4



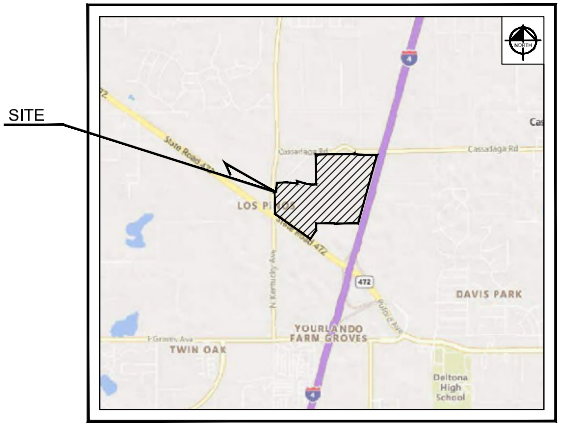
CONSTRUCTION PLANS

FOR

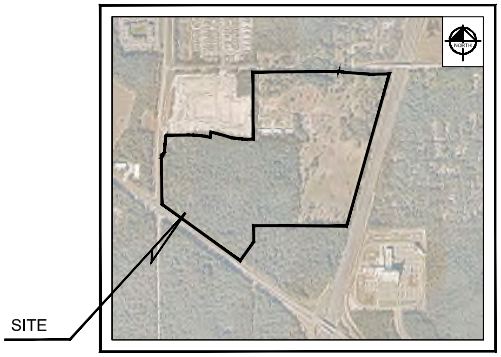
DELAND TECH PARK

PARCEL #:
810600000090, 810600000100, 810600000110,
810600000070, 810600000071, 810600000060,
810600000124, 810604000170, 810600000091,
810600000121, 810600000122, 810600000072

CITY OF DELAND, FLORIDA
AUGUST 19, 2024



SECTION 06 , TOWNSHIP 18, RANGE 31
LOCATION MAP
SCALE: 1" = 2000'



AERIAL PHOTOGRAPH
SCALE: 1" = 900'

LEGAL DESCRIPTION:

A PORTION OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST LYING IN VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 6, TOWNSHIP 18 SOUTH, RANGE 31 EAST, THENCE RUN N89°54'53"E ALONG THE NORTH LINE OF SAID SECTION 6, A DISTANCE OF 1406.09 FEET TO THE EAST LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID EAST LINE S00°05'07"E, 1400.66 FEET TO THE MONUMENTED SOUTHERLY RIGHT OF WAY LINE OF CASSADAGA ROAD AND THE POINT OF BEGINNING; THENCE ALONG SAID SOUTHERLY RIGHT OF WAY LINE AND THE EASTERLY EXTENSION THEREOF N89°31'56"E, 1314.15 FEET; THENCE N00°23'02"W, 3.98 FEET TO THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 567.62 FEET, A CENTRAL ANGLE OF 10°54'08", A CHORD BEARING OF S80°02'11"E AND A CORD DISTANCE OF 107.84 FEET; THENCE ALONG THE AFORESAID SOUTHERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 108.01 FEET; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT OF WAY LINE S85°29'15"E, 356.07 FEET; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT OF WAY LINE N89°16'03"E, 313.13 FEET TO THE WESTERLY LIMITED ACCESS RIGHT OF WAY LINE OF INTERSTATE 4 (STATE ROAD 400) AS SHOWN ON FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, SECTION 79110, FINANCIAL PROJECT 242655-1; THENCE DEPARTING SAID SOUTHERLY RIGHT OF WAY LINE ALONG SAID WESTERLY RIGHT OF WAY LINE S15°45'16"W, 2426.29 FEET TO THE SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7, SAID SECTION 6; THENCE DEPARTING SAID WESTERLY LIMITED ACCESS RIGHT OF WAY LINE ALONG SAID SOUTH LINE OF THE NORTH 1/2 OF GOVERNMENT LOT 7 AND GOVERNMENT LOT 6, N89°30'43"W, 802.91 FEET TO THE SOUTHEAST CORNER OF LOT 19, YOURLANDO FARMS AND GROVES, ACCORDING TO THE MAP OF PLAT RECORDED IN MAP BOOK 10, PAGES 227-228, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE N89°50'02"W, ALONG THE SOUTH LINE OF SAID LOTS 19 AND 20, A DISTANCE OF 617.62 FEET TO THE SOUTHWEST CORNER OF SAID LOT 20, ALSO BEING THE NORTHEAST CORNER OF LOT 27 OF SAID PLAT; THENCE S00°14'30"E ALONG EAST LINE OF LOT 27, A DISTANCE OF 250.12 FEET; THENCE DEPARTING SAID EASTERLY LINE S35°50'39"W, 354.19 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472, AS SHOWN ON SAID FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, SECTION 79110; THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE N54°12'54"W, 1481.04 FEET TO THE EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY AS SHOWN ON VOLUSIA COUNTY RIGHT OF WAY MAP, PROJECT 1113-3; THENCE DEPART SAID NORTHERLY RIGHT OF WAY LINE OF STATE ROAD 472 ALONG SAID EASTERLY RIGHT OF WAY LINE OF DR. MARTIN LUTHER KING, JR BELTWAY N00°27'19"W, 703.97 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 98.09 FEET, A CENTRAL ANGLE OF 45°56'03"; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE AND ALONG THE ARC OF SAID CURVE 78.64 FEET; THENCE CONTINUE ALONG SAID EASTERLY RIGHT OF WAY LINE N45°28'45"E, 26.79 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 5629.58 FEET, A CENTRAL ANGLE OF 02°41'26", A CHORD BEARING OF N04°10'14"E AND A CHORD DISTANCE OF 264.32 FEET; THENCE CONTINUE ALONG SAID EASTERLY RIGHT OF WAY LINE AND THE ARC OF SAID CURVE 264.35 FEET; THENCE DEPART SAID EASTERLY RIGHT OF WAY LINE N89°31'31"E, 361.54 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 1440.00 FEET, A CENTRAL ANGLE OF 12°42'11", A CHORD BEARING OF S84°07'35"E AND A CHORD DISTANCE OF 318.61 FEET; THENCE CONTINUE ALONG THE ARC OF SAID CURVE 319.26 FEET; THENCE N12°13'31"E, 80.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 1519.95 FEET, A CENTRAL ANGLE OF 03°39'55", A CHORD BEARING OF S75°56'11"E AND A CHORD DISTANCE OF 97.21 FEET; THENCE ALONG THE ARC OF SAID CURVE 97.23 FEET; THENCE S74°06'12"E, 169.11 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 1000.00 FEET AND A CENTRAL ANGLE OF 15°36'56"; THENCE ALONG THE ARC OF SAID CURVE 272.54 FEET TO THE SOUTH LINE OF GOVERNMENT LOT 4, SAID SECTION 6; THENCE ALONG SAID SOUTH LINE S89°43'08"E, 118.51 FEET TO THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 4; THENCE ALONG THE EASTERLY LINE OF SAID GOVERNMENT LOT 4, N00°10'37"W, 1028.79 FEET TO THE POINT OF BEGINNING.

CONTAINING 6263726 SQ. FT., OR 143.795 ACRES MORE OR LESS.

UTILITY PROVIDERS

WATER, SEWER, AND RECLAIMED WATER :
CITY OF DELAND
1102 S AMELIA AVE
DELAND, FL 32724
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PHONE: (386) 626-7199

CABLE/TELEPHONE:
CENTURYLINK
1325 BLAIRSTONE RD RM 113
TALLAHASSEE, FL 32301
CONTACT: BILL MCCLOUD
PHONE: (850) 599-1444

POWER:
DUKE ENERGY
1150 GREENWOOD BLVD
LAKE MARY, FL 32746
CONTACT: CUSTOMER SERVICE
PHONE: (407) 629-1010

TELEPHONE
AT & T/ T
2901 W BUSCH BLVD,SUITE 711
TAMPA, FL 33618
CONTACT: KEVIN TALECKI / MIKE GAMBOA
PHONE: (610) 200-3365

TELEPHONE
AT & T/ T DISTRIBUTION
6628 LAKESIDE RD
WEST PALM BEACH, FL 33411
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EMAIL: G27896@ATT.COM

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PREPARED BY
Kimley»Horn

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WWW.KIMLEY-HORN.COM Registry No. 35106

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C0.0	COVER
C1.0-C1.1	GENERAL NOTES
C2.0	STORMWATER POLLUTION PREVENTION PLAN
C2.1	EROSION CONTROL DETAILS
C3.0	OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN
C3.1-C3.8	EXISTING CONDITIONS AND DEMOLITION PLAN
C4.0	OVERALL SITE PLAN
C5.0	OVERALL PAVING, GRADING AND DRAINAGE PLAN
C5.1 - C5.8	PAVING, GRADING AND DRAINAGE PLAN
C5.8A	DRAINAGE STRUCTURES TABLE
C5.9	TYPICAL SECTIONS
C5.10	POND SECTIONS - RETAIL
C5.11	POND SECTIONS - INDUSTRIAL
C6.0	OVERALL UTILITY PLAN
C7.0 - C7.3	PLAN AND PROFILE - ULYSSES DRIVE
C7.4 - C7-7	PLAN AND PROFILE - KIRK DRIVE
C8.0 - C8.4	CITY OF DELAND DETAILS
C9.0 - C9.2	CONSTRUCTION DETAILS
L0.50	OVERALL TREE MITIGATION PLAN
L0.51 - L0.58	TREE MITIGATION PLAN
L0.59	TREE MITIGATION CALCULATIONS
L0.60	TREE MITIGATION SPECIFICATIONS
L1.00	OVERALL LANDSCAPE PLAN
L.101 - L.108	LANDSCAPE PLAN
L1.50	LANDSCAPE DETAILS
L1.51	LANDSCAPE SPECIFICATIONS
L2.00	OVERALL IRRIGATION PLAN
L2.01 - L2.08	IRRIGATION PLAN
L2.50	IRRIGATION DETAILS
L2.51	IRRIGATION SPECIFICATIONS
L4.00	OVERALL PHOTOMETRICS PLAN
L4.01 - L4.08	PHOTOMETRICS PLAN
L4.09	PHOTOMETRICS SCHEDULE

Jeffrey R. Swisher, P.E., State of Florida, Professional Engineer, License No. 60275

This item has been digitally signed and sealed by Jeffrey R. Swisher, P.E. on the date indicated here.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

01/05/2026
JEFFREY R. SWISHER, P.E.
#60275

The above named professional engineer shall be responsible for the above sheets listed in the Index, with the exception of all L Sheets, in accordance with Rule 61G15-23.004, F.A.C.

No.	REVISIONS	DATE	BY
1	REVISED PER DESIGN	11/03/25	JOR
2	REVISED PER CITY COMMENTS	10/24/25	JOR
3	REVISED PER CITY COMMENTS	09/15/25	JOR
4	REVISED PER CITY COMMENTS	07/10/25	JOR
5	REVISED PER CITY COMMENTS	10/21/24	JOR

SHEET NUMBER
C0.0

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Drawing name: K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C0.0-COVR.dwg Layout1 Nov 03, 2025 1:25pm by: Joan.Ramirez

GENERAL

1. WATER SERVICE AND WASTEWATER SERVICE SHALL BE PROVIDED BY CITY OF DELAND. THE WATER DISTRIBUTION SYSTEM AND WASTEWATER COLLECTION SYSTEM SHOWN ON THESE PLANS SHALL BE INSTALLED BY THE CONTRACTOR AND CONSTRUCTION SHALL CONFORM TO ORANGE COUNTY STANDARDS, FOR WATER AND SEWER SERVICE. ON-SITE WATER DISTRIBUTION SYSTEM,WITHIN THE PUBLIC RIGHT-OF-WAY, SHALL BE OWNED AND MAINTAINED BY CITY OF DELAND AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). WASTEWATER COLLECTION SYSTEM, WITHIN THE PUBLIC RIGHT-OF-WAY, AND LIFT STATION SHALL BE OWNED AND MAINTAINED BY CITY OF DELAND AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). THE SANITARY FORCEMAIN SHALL BE OWNED AND MAINTAINED BY CITY OF DELAND AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. ALL OTHER UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. CONTRACTOR SHALL CALL "SUNSHINE ONE" AT 811 TO HAVE EXISTING UTILITIES LOCATED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
4. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES, STRUCTURES, STORM DRAINAGE SYSTEMS, AND TOPOGRAPHIC FEATURES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AT THE TIME OF PREPARATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY.
5. ALL DISTURBED AREAS NOT DESIGNED TO BE LANDSCAPED OR SODDED SHALL BE SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER OR LANDSCAPE ARCHITECT.
6. THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE, OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES, OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS, OR SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
7. ALL WORK AND MATERIALS FURNISHED SHALL BE REASONABLY CLOSE IN CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS, AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT PLANS OR SPECIFICATIONS.
8. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION, AS APPLICABLE AT THE TIME ALL PERMITS HAVE BEEN OBTAINED.
9. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
10. ALL UTILITY SERVICE STUB-OUTS (WATER, SANITARY SEWER, ETC.) ARE TO BE INSTALLED WITHIN 5' OF BUILDING(S), UNLESS OTHERWISE NOTED ON THE PLANS.
11. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
12. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
13. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.
14. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
15. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
16. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
17. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
18. CONTRACTOR TO COORDINATE ABANDONMENT OF ANY EXISTING MONITORING WELLS AND REMEDIATION SYSTEM WITH A LICENSED WELL DRILLER. AS SITE WORK ADVANCES, CONTRACTOR TO COORDINATE WITH THE NAVY AND FDEP FOR THE NEW MONITORING WELL LOCATIONS. MONITORING WELLS TO BE INSTALLED BY A LICENSED WELL DRILLER.
19. A MANDATORY PRECONSTRUCTION MEETING IS REQUIRED WITH CITY OF DELAND, GENERAL CONTRACTOR AND UTILITIES SUBCONTRACTOR PRIOR TO THE INITIATION OF WORK ON ANY CITY OF DELAND UTILITIES. PRIOR TO SCHEDULING PRECONSTRUCTION MEETING, SEND SUBMITTALS TO UTILITIES DEPARTMENT FOR REVIEW.
20. CONTRACTOR TO REFER TO THE FLORIDA DEPARTMENT OF TRANSPORTATION 2024 DESIGN STANDARDS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND 2024 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

SAFETY

1. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL.
2. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA.
3. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS.
4. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.
5. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
6. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

DEMOLITION

1. CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES.
2. EXTENT OF SITE CLEARING IS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL CONDUCT SITE DEMOLITION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
4. CONTRACTOR SHALL PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED ON PLAN "EXISTING TO REMAIN".
5. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
6. CONTRACTOR SHALL REMOVE WASTE MATERIALS AND UNSUITABLE AND EXCESS TOPSOIL FROM PROPERTY AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
7. CONTRACTOR SHALL DEMOLISH AND COMPLETELY REMOVE FROM SITE MATERIAL INDICATED ON PLAN OR NOTES "TO BE REMOVED".
8. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY THE DEMOLITION OPERATION.

EARTHWORK/PAVING/GRADING/DEMUCKING PROCEDURES

1. A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT HAS BEEN PREPARED FOR PURPOSES OF STORM WATER DESIGN, OF WHICH COPIES ARE AVAILABLE THROUGH THE OWNER OR THEIR SOIL TESTING COMPANY. A GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PROVIDE ON-SITE INSPECTIONS DURING EXCAVATION/FILL OPERATIONS AND TESTING OF THE COMPACTED FILL SO THAT PROPER DOCUMENTATION OF THE REQUIRED COMPACTING CRITERIA CAN BE PROVIDED.
2. ALL EXISTING DEBRIS (ABOVE OR BELOW GROUND), CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS IN A LEGAL MANNER.
3. ALL EXCESS FILL MATERIAL SHALL BE HAULED OFF SITE TO AN APPROVED DISPOSAL LOCATION.
4. FINAL GRADES SHOWN INCLUDE SOD HEIGHT.
5. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE OWNER OR THEIR SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
7. ALL ON-SITE AND OFF-SITE DEWATERING SHALL BE PERMITTED THROUGH THE WATER MANAGEMENT DISTRICT, FDEP, AND LOCAL MUNICIPALITY. DEWATERING SHALL FOLLOW THE REQUIREMENTS OF THE CITY OF DELAND'S LATEST ENGINEERING STANDARDS MANUAL.
8. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
9. THE CONTRACTOR SHALL INSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR PLACEMENT OF ALL HEADWALL/ENDWALL FOOTINGS, RETAINING WALL FOOTINGS, AND IN GENERAL, ANY FOOTING SUPPORT DESCRIBED ON THESE PLANS. IT WILL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SUFFICIENT SOILS TESTING HAS BEEN PERFORMED PRIOR TO FINAL INSTALLATION OF IMPROVEMENTS.
10. ANY UNSUITABLE ORGANIC SOIL SHALL BE EXCAVATED TO A MINIMUM MARGIN OF 6 FEET BEYOND ITS PERIPHERY EXCAVATED TO EXPOSE THE UNDERLYING NON-ORGANIC FINE SAND.
11. IF DETERMINED NECESSARY, DEWATERING DURING EXCAVATING/BACKFILLING OPERATIONS MAY BE ACCOMPLISHED BY DITCHING AND THE USE OF SUMP PUMPS AND/OR OTHER METHODS (WELL POINTS), AS NECESSARY. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR DEWATERING ACTIVITIES THAT MAY BE REQUIRED.
12. UPON APPROVAL OF THE GEOTECHNICAL ENGINEER, THE EXCAVATED AREAS MAY BE BACKFILLED WITH CLEAN FINE SAND FREE OF UNSUITABLE OR DELETERIOUS MATERIAL. HOWEVER, THE FILL SHOULD NOT BE PLACED IN MORE THAN 6 INCHES OF STANDING WATER. ONCE THE FILL IS AT LEAST 2 FEET ABOVE THE DEWATERED LEVEL, BACKFILLING MAY PROCEED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
14. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" FOR DETAILS AND SPECIFICATIONS OF ALL CURB AND GUTTERS CALLED FOR IN THESE PLANS WITHIN PUBLIC RIGHTS OF WAY.
15. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT, TOP OF CURB OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.
16. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
17. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER AND CIVIL ENGINEER FOR APPROVAL.
18. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER POURED)
19. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #17346.
20. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.
21. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.
22. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.

TREES AND VEGETATION

1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT OWNER'S APPROVAL. ALL TREES THAT ARE TO REMAIN SHALL BE PROTECTED BY TREE BARRICADES PER DETAIL ON SHEET C2.1.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.

STORM DRAINAGE SYSTEM

1. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.
2. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.
4. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
5. CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.
6. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH CITY OF DELAND CODE OF ORDINANCES.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.
8. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT "STANDARD SPECIFICATIONS".

OWNER INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FACILITIES

1. THE ENTIRE STORMWATER SYSTEM SHOULD BE INSPECTED ON AT LEAST A SEMI-ANNUAL BASIS. THIS SHOULD INCLUDE A VISUAL INSPECTION OF THE POND, POND BANKS, BLEED-DOWN ORIFICES, OTHER CONTROL STRUCTURES, AND DISCHARGE PIPES. THESE SHOULD BE KEPT FREE OF DEBRIS AND CLEANED ON A FREQUENCY AS REQUIRED TO KEEP THEM FUNCTIONAL, AS DESIGNED. MOWING/CLEARING AROUND THE STRUCTURES MAY BE REQUIRED TO PREVENT VEGETATION FROM CLOGGING THEM.
2. WETLAND PLANTS IF INTENTIONALLY INSTALLED, SHOULD BE MONITORED AND MAINTAINED AS REQUIRED ON THE APPROVED CONSTRUCTION PLANS. AREAS OF LITTORAL SHELVING, WHICH ARE REQUIRED TO BE VEGETATED BUT NOT INTENTIONALLY PLANTED, SHOULD NOT BE CLEARED OF THE WETLAND PLANTS. THESE AREAS SHOULD HAVE AS HIGH A PLANT COVERAGE AS POSSIBLE, FOR MAXIMUM WATER FILTRATION.
3. SEDIMENT SUMPS, IF DESIGNED AND INSTALLED, SHOULD HAVE SEDIMENT REMOVED AS NECESSARY TO ALLOW THEM TO EFFICIENTLY REMOVE SUSPENDED PARTICLES. THEY SHOULD BE RE-DUG TO THE ORIGINAL DESIGN SPECIFICATIONS, IF SILTED IN.
4. FOR PERCOLATION TREATMENT PONDS/SWALES, THE OWNER OF THE FACILITY SHALL INSPECT THE POND BOTTOM PERIODICALLY AFTER HEAVY RAINFALL EVENTS TO CHECK FOR PERSISTENT PONDING OR POOLING OF WATER. ALL LARGE DEBRIS SHALL BE REMOVED AND DISPOSED OF ELSEWHERE. IF PROLONGED PONDING PERSISTS, I.E., IN EXCESS OF 72 HOURS, THE OWNER SHALL RAKE OR SCARIFY THE SURFACE. IF REQUIRED, THE SOIL IN THE AREA OF PONDING SHALL BE REMOVED AND REPLACED WITH CLEAN SANDY, NON-COHESIVE SOILS.
5. PLEASE CHECK THE CONSTRUCTION PLANS TO SEE IF WRITTEN REPORTS ON MONITORING OR PLANT SURVIVAL RATES ARE REQUIRED TO BE SENT TO ANY REVIEWING AGENCIES. WRITTEN NOTES SHOULD ALWAYS BE KEPT WHICH DESCRIBE MAINTENANCE ACTIVITIES UNDERTAKEN DURING EACH INSPECTION.
6. SPECIFIC CONDITIONS OF ALL PERMITS MAY REQUIRE ADDITIONAL MAINTENANCE ACTIVITIES ABOVE AND BEYOND THOSE OUTLINED ABOVE. PLEASE BE AWARE OF ALL PERMIT CONDITIONS AS ISSUED BY REGULATORY AGENCIES TO ENSURE PERMIT COMPLIANCE.

DRAINAGE SYSTEM TESTING AND INSPECTION

1. THE STORM DRAINAGE PIPING SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
2. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE REINSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS AT THE CONTRACTORS EXPENSE AND PRIOR TO FINAL ACCEPTANCE.
3. THE CONTRACTOR SHALL LASER PROFILE AND CCTV ALL STORMWATER PIPES AND SUBMIT THAT REPORT TO THE OWNER'S ENGINEER FOR SUBMITTAL TO THE CITY OF DELAND.

DATUM

VERTICAL INFORMATION SHOWN HEREON REFERS TO A RECOVERED BRASS FDOT SURVEY DISK, NAME:91503036-1990, LOCATED AT N-1684051.255, E-571309.647, AND HAVING AN ELEVATION OF 49.32' (NAVD88)

SIGNING AND MARKING

1. ALL SIGNS WITHIN THE R/W SHALL BE 2" SQ. GALV. POLES, WITH QUICK PUNCH (NOT PRE-PUNCHED). ALL BOLTS, NUTS, AND WASHERS TO BE STAINLESS STEEL (5/16 INCH).
2. STOP SIGNS AT INTERSECTIONS SHALL BE 3" ALUMINUM ROUND POLES WITH Z-BARS AND U-BOLT ATTACHMENTS. DRILLING THROUGH THE POLE TO ATTACH THE SIGN IS NOT ALLOWED.
3. SIGNS WITHIN THE SIDEWALKS TO BE CORE BORED THROUGH THE SIDEWALK, NOT SURFACE MOUNTED.
4. SIGN BLADE SHEETING SHALL BE DIAMOND GRADE WITH EC FILM.
5. ALL STOP SIGNS SHALL BE PLACED ADJACENT TO THE 24" WHITE STOP BARS AND SHALL BE PLACED 4' BEHIND THE CROSSWALK.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

Kimley»Horn
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KHA PROJECT 245418000
DATE 09/29/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER 60275

GENERAL NOTES

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C1.0

Plotted By: Barrow, Josh Saved Set:DELAND TECH PARK Layout:C1.0 GENERAL NOTES October 29, 2025 - 03:28:16pm K:\ORL_Civil\245418000\Design\Land Team Plan\CAD\CONSTR\SheetSets\C1.0-NOTES.dwg
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SANITARY SYSTEM

1. ALL PVC PIPE SHALL BE SOLID WALL POLYVINYL CHLORIDE PIPE AND COMPLY WITH ASTM D 3034 AND ALL APPLICABLE ASTM DOCUMENTS AS COVERED IN SECTION NO. 2 OF ASTM D 3034. MAIN LINES SHALL BE A MINIMUM OF 8" DIAMETER, AND LATERALS SHALL BE A MINIMUM 6" DIAMETER.

2. ALL GRAVITY SEWERS MUST BE SDR 35 PVC, EXCEPT FOR PIPE DEEPER THAN 14 FEET, IN WHICH CASE SDR 26 PIPE SHALL BE USED. ELASTOMERIC GASKET JOINTS SHALL BE UTILIZED FOR PVC PIPE, AND SHALL COMPLY WITH ASTM F477, ASTM D3034 & ASTM F679. JOINTS SHALL COMPLY WITH ASTM D3212.

3. ALL ON-SITE PVC FORCE MAINS (IF REQUIRED) SHALL BE CLASS 200, DR 14 FOR 4" DIAMETER, AND CLASS 150 DR 18 FOR 6" TO 12" DIAMETER PIPE, IN ACCORDANCE WITH AWWA C900 STANDARDS. PVC FORCE MAIN PIPE SMALLER THAN 4" DIAMETER SHALL BE CLASS 200, SDR 21, IN ACCORDANCE WITH ASTM D 2241. FORCE MAIN SHALL BE SPIRAL WRAPPED WITH 2 INCH WIDE DARK GREEN STICK-ON VINYL TAPE. FORCE MAINS WITHIN THE RIGHT-OF-WAY SHALL BE CLASS 52 DIP, MINIMUM 4" DIAMETER.

4. ALL SANITARY MANHOLES SHALL BE LOCATED NO MORE THAN 400 FEET APART AND SHALL CONFORM TO THE DETAILS CONTAINED HEREIN, AS WELL AS WITH ASTM C478.

5. ALL SLOPES FOR GRAVITY SEWER MAINS AND SERVICE CONNECTIONS SHALL COMPLY WITH THE FOLLOWING MINIMUM GRADES: 4" @ 2.00% 6" @ 1.00% ; AND 8" @ 0.40%.

6. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE CITY OF DELAND UTILITIES DEPARTMENT STANDARDS AND SPECIFICATIONS.

7. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING PROPOSED FACILITIES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION(S) OF EXISTING CONNECTION POINT(S) AND NOTIFY THE OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.

8. SANITARY SEWER MAINS SHALL HAVE 4" DIAMETER GREEN MARKER BALLS INSTALLED AT A DEPTH BETWEEN 2 FEET AND 4 FEET DEEP ABOVE THE SANITARY SEWER MAIN EVERY 100 FEET OF LENGTH. AT LEAST 6" OF SOIL SHALL BE HAND FILLED OVER THE MARKER TO PREVENT DAMAGE DURING BACKFILL.

SANITARY TESTING AND INSPECTION

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A TELEVISED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TV INSPECTION PRODUCED ON A USB FLASH DRIVE WITH PAPERWORK BACKUP TO THE ENGINEER, THE OWNER AND THE APPLICABLE MUNICIPALITY/AGENCY.

2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATON TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.

3. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT:
   A. THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
   B. EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET
   C. AIR TESTS, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES.

4. CONTRACTOR TO PERFORM APPROPRIATE DEFLECTION TESTS FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY:
   A. NO PIPE SHALL EXCEED A DEFLECTION OF 5%
   B. USING A RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
   C. PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.

5. CONTRACTOR TO INSPECT & TEST MANHOLE FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE. AIR TESTING, IF SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.

AS BUILT

1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER AND THE CITY OF DELAND WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA. AT A MINIMUM, THIS "AS-BUILT" INFORMATION SHALL INCLUDE: TOP OF PIPE/INVERT ELEVATIONS AND HORIZONTAL LOCATIONS OF ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES INSTALLED (AS APPLICABLE); PAVEMENT GRADE BREAK LOCATIONS AND SUFFICIENT ELEVATIONS OF FINISHED GRADE SURFACES WHICH ALLOW THE ENGINEER TO DETERMINE COMPLIANCE WITH THE PROPOSED DESIGN; TOP & INVERT ELEVATIONS OF THE STORMWATER COLLECTION SYSTEM, INCLUDING THE POND GRADES, POND CONTROL STRUCTURE, & SWALES; ANY IMPROVEMENTS WITHIN THE FDOT RIGHT-OF-WAY. NO ENGINEER'S CERTIFICATIONS OF COMPLETION OR REQUESTS FOR FINAL ACCEPTANCE WILL BE SUBMITTED UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.

2. THE CONTRACTOR SHALL PROVIDE UTILITY AS-BUILT AND GRADING/DRAINAGE AS-BUILT RECORD DRAWINGS BASED ON THE CIVIL DESIGN PLAN SHEETS. ALL AS-BUILTS SHALL BE OVERLAID ON THE CIVIL DESIGN PLANS WITH THE DESIGN SHADED BACK AND THE AS-BUILT BOLD. THE AS-BUILTS SHALL BE SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.

3. THE UTILITY AS-BUILT SHALL INCLUDE ALL SANITARY SEWERS AND FORCE MAIN SYSTEMS, POTABLE AND RECLAIMED WATER MAIN SYSTEMS, METERS, VALVES, FORCE MAINS, GAS MAINS, AND IRRIGATION LINES (2-INCH AND LARGER). CONTRACTOR TO PROVIDE ALL UTILITY CROSSING INFORMATION ON THE AS-BUILT. THE UTILITY AS-BUILTS SHALL IDENTIFY ALL WATER MAIN CROSSINGS WITH STORM AND SANITARY LINES INDICATING TOP OF PIPE AND INVERTS OF THE ABOVE CROSSING PIPE ALONG WITH CLEARANCE DIMENSIONS. THIS SHALL ALSO BE DONE FOR SANITARY/STORM CROSSINGS. ALL TEMPORARY SAMPLE POINT NUMBER (TSP#) LOCATIONS SHALL ALSO BE NOTED ON THE AS-BUILT. CONTRACTOR TO ALSO PROVIDE AN AS-BUILT ASSET TABLE IDENTIFYING SIZE OF PIPE OR FITTING AS WELL AS DEPTH TO TOP OF PIPE AND NORTHING AND EASTING OF EACH FITTING/VALVE, ETC.

4. THE GRADING/DRAINAGE AS-BUILT SHALL INCLUDE ALL CONSTRUCTED IMPROVEMENTS THAT HAVE LOCATION AND/OR ELEVATION INFORMATION CALLED-OUT ON THE PLANS. THE AS-BUILT SHALL CLEARLY PROVIDE THE SAME INFORMATION IDENTIFIED ON THE DESIGN DOCUMENTS AND ALSO THE CONSTRUCTED LOCATIONS AND ELEVATIONS AS-BUILT INFORMATION.

POTABLE WATER SYSTEM

1. ALL DIP PIPE SHALL BE CLASS 50 OR HIGHER. REFER TO NOTE #4 BELOW FOR ADDITIONAL DIP SPECIFICATIONS. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.

2. ALL WATER MAIN PIPE FITTINGS AND APPURTENANCES SHALL BE INSTALLED TO COMPLY WITH CITY OF DELAND STANDARDS AND SPECIFICATIONS.

3. ALL WATER SERVICE LINES, VALVES AND METERS SHALL BE INSTALLED TO COMPLY WITH APPLICABLE MUNICIPALITY/AGENCY DEPARTMENT STANDARDS AND SPECIFICATIONS.

4. ALL DUCTILE IRON PIPE, 4" TO 24", SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C151/A21.51. PIPE SHALL BE FURNISHED IN 18 OR 20 FOOT SECTIONS, PIPE THICKNESS SHALL BE CLASS 50, UNLESS OTHERWISE SPECIFIED.

5. ALL WATER SYSTEM CONSTRUCTION, UP TO AND INCLUDING POINT OF METERING AND BACK FLOW PREVENTION (IF REQUIRED), SHALL BE BUILT ACCORDING TO CITY OF DELAND STANDARDS AND SPECIFICATIONS.

6. CONTRACTOR TO INSTALL TEMPORARY BLOWOFFS, AT THE END(S) OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BUILDING(S), TO ASSURE ADEQUATE FLUSHING AND DISINFECTION/CHLORINATION.

7. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA MANUAL M23, CONCERNING HYDROSTATIC TESTING OF PVC PIPING. OFF-SITE UTILITIES HYDROSTATIC TESTING TO BE WITNESSED BY CITY OF DELAND WATER DEPARTMENT INSPECTOR.

8. ALL WATER MAINS SHALL BE STERILIZED IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE LATEST AWWA SPECIFICATION C651 AND CITY OF DELAND WATER DEPARTMENT SPECIFICATIONS.

9. ALL PVC WATER MAIN, 4" TO 8" DIAMETER PIPING, SHALL CONFORM TO ASTM D2241 AND ASTM 1784. PIPE SHALL BE AWWA C-900 DR-18. JOINTS SHALL BE RUBBER GASKETED PUSH-ON CONFORMING TO ASTM D1869.

10. POTABLE WATER MAINS WILL BE PVC SDR 21 (200 PSI) FOR PIPES LESS THAN 4". SCHEDULE 40 AND SCHEDULE 80 PIPING MATERIAL ARE ALSO ACCEPTABLE FOR PIPES SIZES LESS THAN 4". THE ABOVE TYPE INSTALLATIONS MUST BEAR THE "NFS" STAMP FOR COMPATIBILITY WITH POTABLE WATER USE.

11. ALL POLYVINYL CHLORIDE PIPE SHALL BE LAID WITH AN INSULATED 12 GAUGE A.W.G. SOLID STRAND COPPER WIRE WOUND AROUND THE PIPE FORMING ONE COMPLETE SPIRAL PER JOINT OF PIPE. THIS WIRE IS TO BE CONTINUOUS WITH SPLICES MADE ONLY BY METHODS APPROVED BY THE ENGINEER. THIS WIRE IS TO BE SECURED TO ALL VALVES, TEES AND ELBOWS.

12. ALL POTABLE WATER MATERIALS AND INSTALLATION SHALL CONFORM WITH THE CITY OF DELAND STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL.

POTABLE WATER TESTING AND INSPECTION

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH ORANGE COUNTY UTILITIES DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE OWNER'S ENGINEER AND APPLICABLE AGENCY INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.

2. CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING, AND OBTAIN CLEARANCE OF DOMESTIC AND FIRE LINE WATER SYSTEM(S). COPIES OF ALL BACTERIOLOGICAL TEST RESULTS ARE TO BE SUBMITTED TO THE OWNER'S ENGINEER FOR CERTIFICATION PURPOSES.

CITY OF DELAND DEVELOPMENT REVIEW – STANDARD SITE PLAN NOTES

1. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH THE CITY OF DELAND STANDARDS AND SPECIFICATIONS.
2. ALL ON-SITE WATER AND SEWER FACILITIES SHALL BE OWNED AND MAINTAINED BY THE CITY OF DELAND. THIS WILL ALSO BE CONFIRMED IN THE UTILITY SERVICE AGREEMENT WITH THE CITY OF DELAND.
3. INSTALLATION OF FUEL STORAGE TANKS REQUIRES REVIEW AND APPROVAL BY THE FIRE MARSHAL AND THE ISSUANCE OF A SEPARATE BUILDING PERMIT. APPROVAL OF THE SITE PLAN DOES NOT CONSTITUTE APPROVAL OF THE LOCATION OF THE FUEL TANKS.
4. ALL PROPOSED SIGNS MUST BE APPLIED FOR, APPROVED, AND PERMITTED ON AN INDIVIDUAL BASIS APART FROM ANY ULTIMATELY APPROVED SITE PLAN. APPROVAL OF THIS SITE PLAN DOES NOT CONSTITUTE APPROVAL OF ANY SIGNAGE.
5. HANDICAP PARKING SPACES WILL BE PROPERLY SIGNED AND STRIPED IN ACCORDANCE WITH FLORIDA STATUTE 316, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, OR OTHER APPLICABLE STANDARDS.
6. THE ARCHITECT/ENGINEER CERTIFIES THAT THE SITE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT.
7. ALL ON-SITE PARKING SPACES WILL BE STRIPED AND SIGNED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. PARKING SPACES, DIRECTIONAL ARROWS, AND STOP BARS SHALL BE STRIPED IN WHITE. IT SHALL BE THE OWNER/DEVELOPER'S RESPONSIBILITY TO PROPERLY SIGN AND STRIPE IN ACCORDANCE WITH APPLICABLE STANDARDS.
8. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THIS APPROVAL DOES NOT INCLUDE ANY WORK IN THE COUNTY RIGHT-OF-WAY. ALL RIGHT-OF-WAY WORK SHALL BE A FUNCTION OF AN APPROVED CITY OF DELAND RIGHT-OF-WAY USE PERMIT.
9. ALL CLEAR-SITE AREAS SHALL BE KEPT FREE OF ANY SIGNAGE PLANTINGS, TREES, ETC. IN EXCESS OF THREE-AND-A-HALF (3-1/2) FEET IN HEIGHT.
10. NO IRRIGATION SYSTEM OR LANDSCAPING SHALL BE INSTALLED IN ANY COUNTY OR STATE RIGHT-OF-WAY WITHOUT ISSUANCE OF APPROPRIATE RIGHT-OF-WAY USE PERMIT.
11. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THE SITE AND ITS SUBSEQUENT BUILDING PERMITS SHALL COMPLY WITH ALL REZONING/MPUD/PUD CONDITIONS.
12. ALL STRUCTURES, INCLUDING BUFFER WALLS, RETAINING WALLS, SIGNAGE, ETC. REQUIRE BUILDING PERMITS.
13. IF A PROJECT SITE CONTAINS AN EASEMENT, ESPECIALLY A POWER COMPANY EASEMENT, A LETTER OF NO OBJECTION IS REQUIRED FROM THE EASEMENT HOLDER. BY SIGNING AND SEALING THIS PLAN THE ENGINEER OF RECORD IS ATTESTING THAT HE/SHE HAS IDENTIFIED AND ACCURATELY SHOWN ALL EASEMENTS OF RECORD ON THE PLANS.

RIGHT-OF-WAY MAINTENANCE OF TRAFFIC NOTES

1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION AND REVISIONS) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS (LATEST EDITION AND REVISIONS)
2. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF DELAND AND VOLUSIA COUNTY PRIOR TO THE START OF ANY PHASE OF WORK TO REQUEST STREET, LANE OR SIDEWALK CLOSURE AUTHORIZATION.
3. LOCAL RESIDENTIAL/BUSINESS ACCESS SHALL BE MAINTAINED AT ALL TIMES.
4. NO LANE CLOSURES WILL OCCUR BETWEEN THE HOURS OF 6 A.M. AND 9 A.M. OR BETWEEN THE HOURS OF 3:30 P.M. AND 6:30 P.M. MONDAY THROUGH FRIDAY.
5. THE USE OF TRAFFIC CONES WILL BE RESTRICTED TO ACTIVE WORK PERIODS ONLY. CHANNELIZING DEVICES (TYPE I, II, DRUMS) SHALL BE USED DURING INACTIVE WORK PERIODS UNLESS OTHERWISE SPECIFIED.
6. THE CITY OF DELAND AND VOLUSIA COUNTY RESERVES THE RIGHT TO REQUIRE ADDITIONAL DEVICES AND/OR CHANGES TO THE TRAFFIC CONTROL PLAN BASED UPON CHANGING TRAFFIC CONDITIONS.
7. PEDESTRIAN CONTROL SHALL BE MAINTAINED ON ONE SIDE OF THE ROAD AT ALL TIMES. IF UNABLE TO DO SO, THE CONTRACTOR SHALL PROVIDE TEMPORARY WALKWAYS, BOARDWALKS AND/OR TEMPORARY CONCRETE SIDEWALKS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING EACH EMPLOYEE SUPERVISING THE SELECTION AND PLACEMENT OF MAINTENANCE OF TRAFFIC (MOT) CONTROL DEVICES SHALL BE PROPERLY TRAINED BY ATTENDING AND SUCCESSFULLY COMPLETING A FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) APPROVED MOT COURSE. THE TRAINING SHALL BE AT A LEVEL APPLICABLE TO THE EMPLOYEE'S LEVEL OF INVOLVEMENT. COPIES OF CERTIFICATIONS SHALL BE PROVIDED TO THE CITY TRANSPORTATION ENGINEERING DIVISION PRIOR TO IMPLEMENTING ANY PHASE OF MOT.
9. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL SUPERVISOR (TCS) WHO IS RESPONSIBLE FOR INITIATING, INSTALLING AND MAINTAINING ALL TRAFFIC CONTROL DEVICES.
10. THE TCS SHALL BE AVAILABLE ON A 24-HOUR PER DAY BASIS, PARTICIPATE IN ALL CHANGES TO TRAFFIC CONTROL AND REVIEW THE PROJECT ON A DAY-TO-DAY BASIS.
11. THE TCS SHALL BE PRESENT DURING THE INITIAL SETUP OF THE TRAFFIC CONTROL PLAN AND ALL SUBSEQUENT PHASES OR CHANGES TO THE TRAFFIC CONTROL.
12. THE TCS SHALL IMMEDIATELY CORRECT ALL DEFICIENCIES.
13. THE CONTRACTOR SHALL ENSURE THE TCS BE AVAILABLE ON SITE WITHIN 45 MINUTES OF NOTIFICATION OF AN EMERGENCY SITUATION AND IS PREPARED TO RESPOND TO AND CORRECT THE TRAFFIC CONTROL OR PROVIDE ALTERNATE ARRANGEMENTS FOR CORRECTIVE ACTIONS.
14. THE TCS SHALL BE RESPONSIBLE FOR PERFORMING WEEKLY, DAYTIME AND NIGHTTIME INSPECTIONS OF ALL TRAFFIC CONTROL DEVICES, TRAFFIC FLOW, AND PEDESTRIAN, BICYCLIST MOVEMENT THROUGH THE WORK AREA AND BUSINESS ACCOMMODATIONS.
15. THE CITY OF DELAND AND VOLUSIA COUNTY MAY DISQUALIFY AND REMOVE FROM THE PROJECT A TRAFFIC CONTROL SUPERVISOR THAT FAILS TO COMPLY WITH THESE PROVISIONS. THEY MAY ALSO SUSPEND ALL WORK ACTIVITIES UNTIL CORRECTIVE ACTIONS HAVE BEEN COMPLETED.
16. PROJECT AREAS THAT ARE NOT ACTIVE CONSTRUCTION AREAS ARE TO BE KEPT FREE OF CONSTRUCTION DEBRIS AND ANY UNNECESSARY TRAFFIC CONTROL DEVICES.
17. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH CURRENT FDOT DESIGN STANDARDS INDEX 102-XXX SERIES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS A MINIMUM.
18. ALL MAINTENANCE OF TRAFFIC ITEMS REQUIRED BY THE FDOT 102-XXX SERIES INDEX SHALL BE SUPPLIED, INSTALLED, AND MAINTAINED TO PROPERLY MAINTAIN TRAFFIC AND DROP OFF CRITERIA IN THE WORK ZONE.
19. THE REGULATORY SPEED LIMIT SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A WORK ZONE SCHEDULE SO THAT ANY LOCATION UNDER CONSTRUCTION WILL NOT BE LEFT IN A HAZARDOUS CONDITION AT THE COMPLETION OF ANY WORK PERIOD.
21. ARROWS ON THE TRAFFIC CONTROL PLANS DENOTE THE DIRECTION OF TRAFFIC ONLY AND DO NOT REFLECT PAVEMENT MARKINGS UNLESS SPECIFICALLY NOTED.
22. IN THE EVENT OF A HURRICANE OR OTHER EVACUATION NEED, THE CONTRACTOR, WHEN NOTIFIED BY THE ENGINEER, SHALL COORDINATE THE SECURING OF ALL LOOSE MATERIAL, OPEN CLOSED LANES, BACKFILL EXCAVATIONS, REMOVE OBSTRUCTIONS TO DRAINAGE AND WATER FLOW, AND ANY OTHER MEASURES REQUIRED BY THE ENGINEER.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EXISTING SIGNS WITHIN THE CONSTRUCTION LIMITS. A LIST OF THE EXISTING SIGNS SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION. ANY EXISTING OR PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED PER INDEX 600 BY THE CONTRACTOR AND WHEN THE CONFLICT NO LONGER EXISTS, THE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION.
24. AT THE END OF EACH WORK PERIOD, ANY DROP OFF IN THE AREA ADJACENT TO THE TRAVEL WAY SHALL BE PROTECTED BY THE APPROPRIATE METHOD AS REQUIRED BY FDOT INDEX 600.
25. THE TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED BY THE CONTRACTOR TO CREATE A WORK ZONE UNTIL ALL LABOR, EQUIPMENT AND MATERIALS ARE AVAILABLE FOR THE CONSTRUCTION IN THE AREA.
26. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESS DRIVES IN ACCORDANCE WITH FDOT DESIGN STANDARDS, INDEX 102-XXX SERIES.
27. ANY DETOURS SHALL BE COORDINATED WITH THE CITY OF DELAND AND VOLUSIA COUNTY FOR SCHEDULING.
28. 10 DAYS PRIOR TO ROAD CLOSURE, A1 PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGNS SHALL BE IN PLACE AND THE CITY OF DELAND AND VOLUSIA COUNTY NOTIFIED.
29. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED BUSINESSES ONE WEEK PRIOR TO ROAD CLOSURE. DRIVEWAY ACCESS OUTSIDE OF THE ROAD CLOSURE LIMITS SHALL REMAIN AT ALL TIMES.
30. THE CONTRACTOR SHALL FILE A RIGHT OF WAY CONSTRUCTION PERMIT WITH CITY OF DELAND OR VOLUSIA COUNTY FOR WORK DONE WITHIN CITY OF DELAND AND VOLUSIA COUNTY RIGHT OF WAY.
31. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY MUST BE SODDED ONLY WITH COMMON BERMUDA SOD.
32. CONTRACTORS CERTIFICATE OF LIABILITY INSURANCE MUST BE ISSUED PRIOR TO STARTING CONSTRUCTION IN FDOT RIGHT-OF-WAY.
33. MAINTENANCE OF TRAFFIC TO BE SUPERVISED BY CERTIFIED PERSON. THE NAME AND NUMBER OF A CERTIFIED PERSON WILL BE PROVIDED AT TIME OF CONSTRUCTION.
34. ALL WORK PERFORMED WITHIN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE 2018 FDOT DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE UTILITY ACCOMMODATION MANUAL.
35. IT WILL BE THE RESPONSIBILITY OF THE PERMITTEE TO REPAIR ANY DAMAGE TO FDOT FACILITIES CAUSED BY CONSTRUCTION OF THE PROJECT.
36. ALL SIDEWALK CLOSURES SHALL ABIDE TO THE STANDARD PROCEDURES PER FDOT INDEX #102-075.
37. CONTRACTOR SHALL COORDINATE WITH CITY OF DELAND AND VOLUSIA COUNTY ON LANE CLOSURE TIMES.
38. THE CONTRACTOR SHALL PROVIDE PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS PER FDOT INDEX #102-075.

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No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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WWW.KIMLEY-HORN.COM CA-00000696

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

KHA PROJECT 240418000
DATE 09/29/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

DELAND TECH PARK
CITY OF DELAND FLORIDA

GENERAL NOTES

SHEET NUMBER
C1.1

Plotted By: Ramirez, Jason Sheet Set: DELAND TECH PARK Layout: C1.1 GENERAL NOTES October 29, 2025 - 03:28:40pm K:\ORL_Civil\240418000\Inland Twin Rivers\CAD\DOCS\SET\Sheets\C1.1-NOTES.dwg
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STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

PROJECT NAME AND LOCATION

DELAND TECH PARK
TAX PARCELS : 810600000090, 810600000100, 810600000110, 810600000070, 810600000071, 810600000060, 810600000124, 810604000170, 810600000091, 810600000121, 810600000122, 810600000072.
DELAND, FL 32724

*SEE COVER SHEET FOR LOCATION MAP

DEVELOPER NAME AND ADDRESS

LONGLEAF FOUR, LLC
320 N. MERIDIAN ST, SUITE 700
INDIANAPOLIS, IN 46204

PROJECT DESCRIPTION

DELAND TECH PARK IS A RETAIL AND INDUSTRIAL DEVELOPMENT ON A 143.80 AC SITE. THE SITE IS LOCATED AT THE NORTHEAST CORNER OF STATE ROAD 472 AND DR. MARTIN LUTHER KING BELTWAY IN THE CITY OF DELAND, FLORIDA.

PROJECT AREA: 143.80+/- ACRES
CONTRIBUTING DRAINAGE AREA: 143.80+/- ACRES

ACTIVITIES THAT REQUIRE EROSION CONTROL

SITE CLEARING AND GRUBBING; PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; EXCAVATION FOR THE RETENTION POND; SITE GRADING; INSTALLATION OF STORM WATER, SANITARY SEWER, AND WATER STRUCTURES; CURB, ROADWAYS, AND PARKING FACILITIES.

*SEE PLANS FOR THE LOCATION OF TEMPORARY SEDIMENT BARRIERS AND OTHER EROSION CONTROL METHODS.

SOIL PARAMETERS

SOIL TYPES:

HYDROLOGIC SOIL GROUP SUMMARY		
SOIL TYPE	SOIL NAME	SOIL RATING
1	APOPKA FINE SAND, 0 TO 5 PERCENT SLOPES	A
4	ASTATULA FINE SAND, 0 TO 8 PERCENT SLOPES	A
5	ASTATULA FINE SAND, 8 TO 17 PERCENT SLOPES	A
63	TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES	A

DEWATERING

DISCHARGE OF GROUNDWATER FROM DEWATERING OPERATIONS REQUIRES APPROVAL FROM FDEP AND THE APPLICABLE WATER MANAGEMENT DISTRICT. DISCHARGES DIRECTED TO THE COUNTY'S MS4 REQUIRES A RIGHT-OF-WAY UTILIZATION PERMIT FOR DEWATERING PRIOR TO THE START OF DISCHARGES.

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF CONSTRUCTION IS AS FOLLOWS:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND OTHER EROSION CONTROL METHODS
3. CLEAR AND GRUB FOR SEDIMENT BASIN AND EARTH DIKE
4. CONSTRUCT EARTH DIKE AND SEDIMENT BASIN
5. FINISH CLEARING AND GRUBBING
6. REMOVE AND STORE TOPSOIL
7. PROVIDE INITIAL GRADING AS REQUIRED
8. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE
9. INSTALL UTILITIES, STORM SEWER, CURB AND GUTTER
10. INSTALL BASE TO ROAD AND PARKING AREA
11. FINISH GRADING ENTIRE SITE
12. CONSTRUCT FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT
14. REMOVE ANY ITEMS THAT ARE NOT REQUIRED

NOTE : THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS

TIMING OF CONTROL MEASURES

THE INSTALLATION OF SILT FENCE (AND OTHER EROSION CONTROL MEASURES), A STABILIZED ENTRANCE AND SEDIMENT BASIN SHALL OCCUR PRIOR TO CLEARING AND GRUBBING ACTIVITY. AFTER CONSTRUCTION IS COMPLETE, THE ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE AREAS SHALL BE REGRADED AND PERMANENTLY STABILIZED AS SHOWN ON THE PLANS.

EROSION AND SEDIMENT CONTROLS

BEST MANAGEMENT PRACTICES SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN-OFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. HE/SHE SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAW.

STORM WATER MANAGEMENT

STORM WATER COLLECTION SHALL BE PROVIDED BY CATCH BASINS. THE POND SYSTEM HAS BEEN DESIGNED TO KEEP FLOW RATES FROM THE 25 YEAR/96 HOUR STORM EVENT, AND RECOVER WITHIN 14 DAYS FOR ATTENUATION.

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY.

STRUCTURAL PRACTICES:

EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

OFF-SITE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

DUST & DEBRIS CONTROL
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL WITHIN THE CONSTRUCTION LIMITS AS WELL AS ALONG HAUL ROUTES AND ROADWAYS USED BY THE EQUIPMENT AND VEHICLES. THE CONTRACTOR SHALL ENSURE THAT EXCESSIVE DUST IS NOT TRANSPORTED BEYOND THE LIMITS OF CONSTRUCTION IN POPULATED AREAS. THE CONTRACTOR MAY CONTROL DUST FOR EMBANKMENTS OR OTHER CLEARED OR UNSURFACED AREAS BY APPLYING WATER. INSTALL MULCH, SEED, SOD, OR TEMPORARY PAVING AS EARLY AS PRACTICAL. CONTROL DUST DURING STORAGE AND HANDLING OF DUSTY MATERIALS BY WETTING, COVERING, OR OTHER MEANS AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL ENFORCE REDUCED VEHICLE SPEEDS ON UNPAVED ROADS AND IF NECESSARY PROHIBIT CONSTRUCTION GRADING WHEN WIND GUSTS EXCEED 25 MPH, OR OTHERWISE DIRECTED BY E.O.R. OR COUNTY INSPECTOR.

DEBRIS AND TRASH SHALL NOT BE ALLOWED TO ACCUMULATE ON THE PROJECT SITE. CONTRACTOR SHALL COLLECT LOOSE DEBRIS & TRASH DAILY, AND DISPOSE OF IT INTO APPROPRIATE CONSTRUCTION TRASH RECEPTACLES OR CONTAINERS.

ITEMS REQUIRING POLLUTION PREVENTION

THE FOLLOWING ITEMS ARE EXPECTED TO BE PRESENT ON THE PROJECT SITE:

-ASPHALT
-CONCRETE
-FERTILIZERS
-METAL PIECES
-PETROLEUM BASED PRODUCTS
-TAR
-CLEANING SUPPLIES
-DETERGENTS
-MASONARY BLOCK/BRICKS
-PAINT
-WOOD

THE FOLLOWING ARE NON-STORM WATER SOURCES THAT WILL BE ENCOUNTERED AT THE SITE AND SHOULD BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE:

-UNCONTAMINATED GROUNDWATER EXPOSED DURING EXCAVATION
-WATER FROM WATER LINE FLUSHING
-PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

SPILL PREVENTION AND CONTROL

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

-SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.

-STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.

-ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.

-ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.

-PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.

-ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

HAZARDOUS PRODUCTS

-MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.

-PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

PRODUCT SPECIFIC PRACTICES

-PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.

-THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

-PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.

-CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

-SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

-THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

-ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

-WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

-TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

-AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

-THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

MAINTENANCE AND INSPECTION PRACTICES

THE FOLLOWING ARE MAINTENANCE AND INSPECTION PRACTICES THAT SHALL BE COMPLETED BY THE CONTRACTOR:

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE CHECKED AT A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF EACH 0.5 INCH OR GREATER RAINFALL BY THE SUPERINTENDENT OR SOMEONE UNDER HIS/HER DIRECT SUPERVISION.

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE KEPT IN GOOD CONDITION. REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

-THE SILT FENCE SHALL BE INSPECTED AT A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAIN EVENT FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE.

-THE SILT FENCE SHALL BE CLEARED OF SEDIMENT WHEN SEDIMENT MEASURES ONE-THIRD THE HEIGHT OF THE FENCE.

-THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED AT A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAIN EVENT FOR DEPTH OF SEDIMENT. THEY SHALL BE CLEANED WHEN SEDIMENT REACHES 10% OF TOTAL CAPACITY AND AFTER CONSTRUCTION IS COMPLETE.

-DIVERSION DIKES SHALL BE INSPECTED AT A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAIN EVENT. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

-ALL SEEDING SHALL BE CHECKED FOR PROPER GROWTH AND UNIFORMITY. UNSTABALIZED AREAS SHALL BE RE-SODDED.

-A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

-THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____ DATE: _____

JEFFREY R. SWISHER, P.E.
FLORIDA REGISTRATION NUMBER: 60275
PROFESSIONAL ENGINEER

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FORM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

SIGNATURE AND DATE	NAME AND TITLE, COMPANY / ADDRESS AND TELEPHONE NUMBER	RESPONSIBILITY

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

KHA PROJECT 240418000
DATE 09/26/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

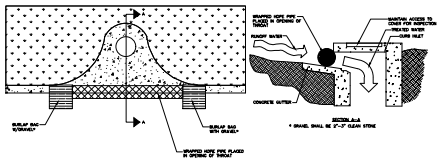
STORMWATER POLLUTION PREVENTION PLAN

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C2.0

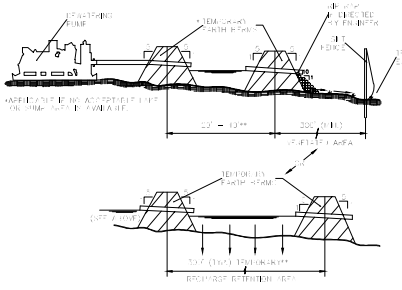
Plotted By: Spencer, Jason Sheet Set: DELAND TECH PARK Layout: C2.0 SWPPP 10:39:50pm - K:\ORL_Civil\240418000\Project Tech Files\CAD\CIVIL\SET\Plan Sheets\C2.0 SWPPP.dwg
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SOCK DRAIN INLET SEDIMENT FILTER

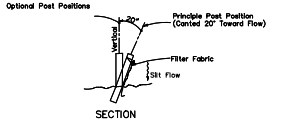
NTS

NOTE: THE PERFORATED PIPE MUST EXTEND AT LEAST 1' BEYOND THE CURB OPENING ON EACH SIDE AND BE ANCHORED WITH GRAVEL BAGS, OR SIMILAR, ON EACH END. A SPACER MUST BE PROVIDED FOR BETWEEN THE INLET OPENING AND THE PIPE TO ALLOW FOR OVERFLOW, PREVENT FLOODING AND TO PREVENT THE PIPE FROM FALLING INTO THE INLET.

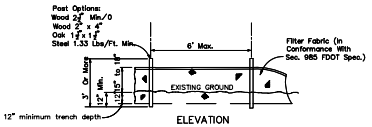


TYPICAL DEWATERING DISCHARGE PLAN

N.T.S.



SECTION



ELEVATION

TYPE III SILT FENCE

NTS



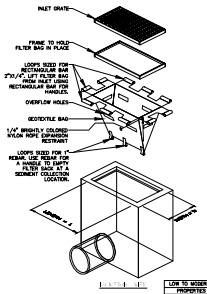
CONTRACTOR TO PLACE FILTER FABRIC UNDER GRATE DURING CONSTRUCTION.

Type III Silt Fence Protection Around Ditch Bottom Inlets.

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

SILT FENCE APPLICATIONS

NTS



INLET PROTECTION FILTER SACK

NTS

FOR USE ONLY IN PAVED AREAS WHERE SEDIMENT LOADS ARE EXPECTED TO BE VERY LOW. FILTER SACK MUST HAVE OVERFLOW HOLES TO PREVENT PONDING

NOTES:

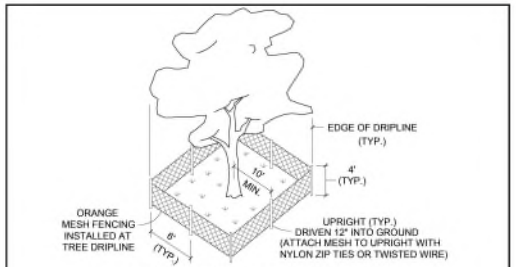
1. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
2. PLACE JIN OIL ABSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
3. THE WIDTH, "B", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
4. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 24 INCHES.
5. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

MAINTENANCE NOTES:

1. INLET PROTECTION DEVICES MUST BE INSPECTED FOR SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. REMOVAL OF SEDIMENT ACCUMULATED IN OR ADJACENT TO A STORM DRAIN INLET MUST BEGIN IMMEDIATELY UPON DISCOVERY, AND BE COMPLETED WITHIN 24 HOURS OF DISCOVERY UNLESS PRECIPITATION PREVENTS SAFE ACCESS.
3. INLET PROTECTION DEVICES SHALL BE INSPECTED FOR STRUCTURAL FAILURE (TEARS, COLLAPSE) THAT MAY CAUSE DOWNSTREAM FLOODING.
4. CONTACT THE CEO FOR ULTIMATE INLET PROTECTION IF THE DESIGNED PROTECTION MAY IMPACT DOWNSTREAM WAYS, ADJACENT SLOPES, ETC., DUE TO PONDING ISSUES. ENSURE THAT NO UNDERMINING OF INLET PROTECTION DEVICES HAS OCCURRED.
5. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	15 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	600 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC $^{-1}$

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	15 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	400 PSI
TRAPEZOID TEAR	ASTM D-4533	95 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC $^{-1}$



TYP. CITY TREE BARRICADE DETAIL

N.T.S.

TREE BARRICADES ARE REQUIRED AROUND ALL TREES WHICH HAVE BEEN DESIGNATED ON THE SITE PLAN TO BE RETAINED AND PROTECTED. PRIOR TO ANY CLEARING OR CONSTRUCTION ACTIVITY OCCURRING ON THE SITE, TREE BARRICADES SHALL BE CONSTRUCTED BY THE CONTRACTOR AND APPROVED BY THE CITY. TREE BARRICADES SHALL BE PLACED AT THE EDGE OF THE DRIPLINE OR A MINIMUM OF 10' FROM THE TRUNK OF THE TREE, WHICH EVER IS GREATER.

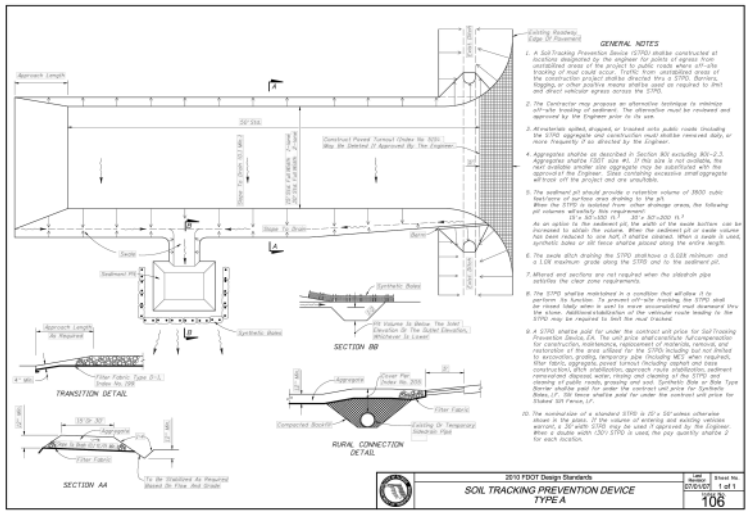
FOR THE BARRIER THE CITY RECOMMENDS SAFETY BARRICADE FENCING.

NOTE: EXISTING TREES IN LANDSCAPE BUFFER SHALL ALSO BE PROTECTED.

DATE: JANUARY 31, 2023	TREE BARRICADE DETAIL	M112
City of DeLand - Standard Details		

NOTE:

SILT FENCE AND TREE BARRICADES WILL NEED TO BE INSTALLED PRIOR TO ANY LAND DISTURBANCE

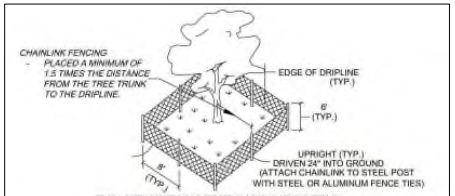


SOIL TRACKING PREVENTION DEVICE TYPE A

2010 FDOT Design Standards

Sheet No. 1 of 1

106



TYP. CITY HISTORIC TREE BARRICADE DETAIL

N.T.S.

HISTORIC TREE BARRICADE REQUIREMENTS:

1. *Existing historic trees to remain shall be protected during construction. Chain link fencing (Min. 6'-0" Height) shall be installed at a distance of 1 ½ times the dripline unless modifications have been approved by the City Forester. Tree barricade shall remain for the duration of construction. All other non-historic protected trees to remain shall be protected in accordance with the City's standards and ordinances.*
2. *Disposal of waste material, of any kind, shall not be allowed within the barricade area.*
3. *No attachments or wires of any kind, other than those of a protective nature, shall be attached to any historic tree.*
4. *No fill or excavation of any nature shall occur within the barricade area unless it has been approved by the City Forester.*
5. *No tools, equipment, or materials shall be stored within the barricade area.*
6. *Fencing shall be maintained and repaired as needed during construction.*
7. *All roots from historic trees beyond the barricade, that will be damaged during the construction process, shall be severed with a clean cut under the supervision of an ISA certified arborist.*

DATE: AUGUST 25, 2023	HISTORIC TREE BARRICADE DETAIL	M113
City of DeLand - Standard Details		

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR

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JEFFREY R. SWISHER, P.E.

FLORIDA LICENSE NUMBER 80275

KHA PROJECT 240418000

DATE 07/9/202585

SCALE AS SHOWN

DESIGNED BY —

DRAWN BY —

CHECKED BY —

DELAND TECH PARK

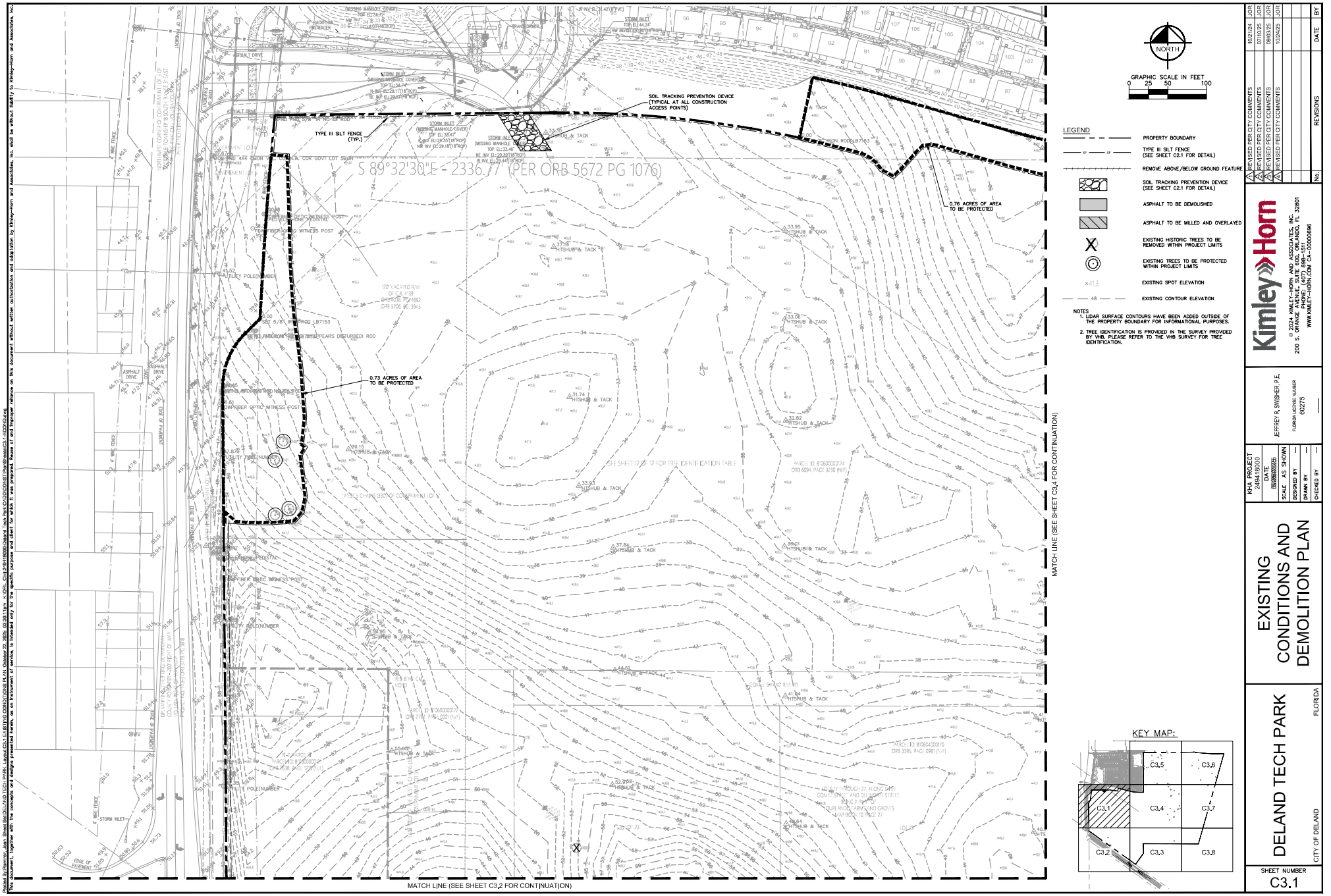
CITY OF DELAND FLORIDA

EROSION CONTROL DETAILS

SHEET NUMBER C2.1

Plotted By: Spencer, Jason Saved Set: DELAND TECH PARK - Layout: C2.1 EROSION CONTROL DETAILS - July 10, 2025 - 09:17:59am - K:\ORL_Civil\240418000\Dataset Tech Park\CADD\CONSTRUCTION\Sheets\C2.1 EROSION.dwg
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NORTH
GRAPHIC SCALE IN FEET
0 75 150 300
LEGEND
PROPERTY BOUNDARY
TYPE III SILT FENCE (SEE SHEET C2.1 FOR DETAIL)
REMOVE ABOVE/BELOW GROUND FEATURE
SOIL TRACKING PREVENTION DEVICE (SEE SHEET C2.1 FOR DETAIL)
ASPHALT TO BE DEMOLISHED
ASPHALT TO BE MILLED AND OVERLAYED
EXISTING HISTORIC TREES TO BE REMOVED WITHIN PROJECT LIMITS
EXISTING TREES TO BE PROTECTED WITHIN PROJECT LIMITS
EXISTING SPOT ELEVATION
EXISTING CONTOUR ELEVATION
NOTES
1. LIDAR SURFACE CONTOURS HAVE BEEN ADDED OUTSIDE OF THE PROPERTY BOUNDARY FOR INFORMATIONAL PURPOSES.
2. TREE IDENTIFICATION IS PROVIDED IN THE SURVEY PROVIDED BY VHB. PLEASE REFER TO THE VHB SURVEY FOR TREE IDENTIFICATION.
SITE DATA:
TOTAL AREA OF NON-DISTURBANCE ±6.98 ACRES
TOTAL AREA OF DISTURBANCE ±136.82 ACRES
TOTAL PROJECT AREA: ±6,263,726 SF/±143.80 ACRES
GENERAL DEMOLITION NOTES:
1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY SLIGER & ASSOCIATES AS WELL AS UTILITY MAPS PROVIDED BY THE LOCAL MUNICIPALITIES. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS AREA PRIOR TO CONSTRUCTION WORK.
2. ELEVATIONS SHOWN ON THIS PLAN ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON THE FOLLOWING: FDOT SURVEY DISK, NAME: 9150306-1990, LOCATED AT N-1684051.255, E-571309.647, AND HAVING AN ELEVATION OF 49.32'
3. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING, BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER MAINS, NATURAL GAS LINES, ELECTRIC, TELEPHONE, AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR, PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
4. IF EXISTING UTILITIES ARE DISCOVERED THAT ARE NOT IDENTIFIED BY THE CONSTRUCTION DOCUMENTS, AND WILL BE IMPACTED BY THE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR DEMOLITION REQUIREMENTS OF ELECTRICAL SYSTEMS.
6. CONTRACTOR SHALL REVIEW THE ENVIRONMENTAL SITE ASSESSMENT AND GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION.
7. REFER TO SWPPP SHEET C2.0 FOR ADDITIONAL NOTES AND DETAILS
8. THE CONTRACTOR SHALL INSPECT EROSION & SEDIMENT CONTROL EFFORTS DAILY TO DETERMINE EFFECTIVENESS. ANY NECESSARY REMEDIES SHALL BE PERFORMED IMMEDIATELY.
9. INSTALL AND MAINTAIN SILT FENCE PER FDOT INDEX #102 AT LIMITS OF CONSTRUCTION. SEE DETAIL ON SHEET C2.1.
10. PROVIDE SOIL TRACKING PREVENTION DEVICE AT ALL CONSTRUCTION ACCESS POINTS. SEE DETAIL ON SHEET C2.1.
11. UTILIZE SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED INLETS ADJACENT TO THE CONSTRUCTION ACTIVITIES. SEE DETAIL ON SHEET C2.1.
12. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF EXISTING/PROPOSED INLETS. SEE DETAIL ON SHEET C2.1.
13. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER THE EXISTING UTILITIES.
14. ALL UNDERGROUND UTILITIES SHALL BE CUT AND CAPPED AT THE PROPERTY BOUNDARY, UNLESS OTHERWISE NOTED.
15. ENTIRE SITE IS TO BE CLEARED, GRUBBED AND/OR DEMOLISHED UNLESS OTHERWISE NOTED.
16. CONTRACTOR TO CLEAR AND STRIP THE TOP 6" OF EXISTING TOPSOIL ON THE SITE.
17. ALL EXCESS FILL MATERIAL SHALL BE HAULED OFF SITE.
18. NO EXCAVATING MATERIAL SHALL BE STOCKPILED IN A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY, WETLAND OR STORMWATER COLLECTION FACILITY.
19. DEWATERING SHALL BE DONE IN ACCORDANCE WITH THE CITY OF DELAND AND ST. JOHN'S RIVER WATER MANAGEMENT CRITERIA.
20. DEWATERING ACTIVITIES SHALL NOT RESULT IN ANY DISCHARGE OF WATER WITH TURBIDITY GREATER THAN 29 NTU'S FROM THE SITE.
21. SHOULD ANALYTICAL RESULTS FROM GROUNDWATER SAMPLES DETERMINE THAT THE SITE IS CONTAMINATED, A CITY WASTEWATER INDUSTRIAL WASTE PRE-TREATMENT GROUNDWATER PERMIT MUST BE OBTAINED FOR PROPER DISPOSAL INTO THE CITY SANITARY SYSTEM.
22. IF DEWATERING ACTIVITIES ARE REQUIRED, THE CONTRACTOR SHALL FILE A WATER MANAGEMENT DISTRICT DEWATERING PERMIT. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEWATERING PERMIT APPROVAL UPON RECEIPT.
23. IF SEPTIC TANKS ARE NOT COMPLETELY REMOVED, BREAK OR CORE BOTTOM TO PREVENT LIQUID RETENTION.
24. THE CONTRACTOR SHALL INSTALL A CONSTRUCTION FENCE AROUND THE PERIMETER OF THE SITE, ADJACENT TO THE SILT FENCE, AS NEEDED.
25. 23. A TEMPORARY FENCE NOT EXCEEDING 8 FEET IN HEIGHT MAY BE ERECTED DURING CONSTRUCTION. SUCH FENCE SHALL BE REMOVED PRIOR TO ANY CERTIFICATE OF OCCUPANCY OR CERTIFICATE OF COMPLETION BEING APPROVED.
SOIL TRACKING PREVENTION DEVICE (TYPICAL AT ALL CONSTRUCTION ACCESS POINTS)
TYPE III SILT FENCE (TYP.)
0.73 ACRES OF AREA TO BE PROTECTED
0.76 ACRES OF AREA TO BE PROTECTED
4.95 ACRES OF AREA TO BE PROTECTED
0.64 ACRES OF AREA TO BE PROTECTED
STATE ROAD 15A (STATE ROAD 472)
200' WIDTH PUBLIC RIGHT OF WAY
STATE OF FLORIDA STATE ROAD DEPARTMENT MAP OF STATE ROAD NO. 15A (SR 472) STATE ROAD NO. 400 (I-4) F.P. PROJECT NO. 4220-05-2010 VOLUSIA COUNTY, FLORIDA
INTERSTATE 4 STATE ROAD 400
200' WIDTH PUBLIC RIGHT OF WAY
STATE OF FLORIDA STATE ROAD DEPARTMENT MAP OF STATE ROAD NO. 15A (SR 472) STATE ROAD NO. 400 (I-4) F.P. PROJECT NO. 4220-05-2010 VOLUSIA COUNTY, FLORIDA
COSSEKA ROAD COUNTY ROAD 139 (PORTION TO BE ADMINISTERED BY CITY OF DELAND)
ZONING: PUD
USE: MULTI-FAMILY RESIDENTIAL
MAX DENSITY: 12 DU/AC
MAX HEIGHT: 3 STORIES / 42'
MIN. LIVABILITY: 30%
MIN. PARKING: 2.0 SPACES/UNIT



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1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
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KHA PROJECT 240418000
DATE 09/29/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER 60275

EXISTING CONDITIONS AND DEMOLITION PLAN

DELAND TECH PARK

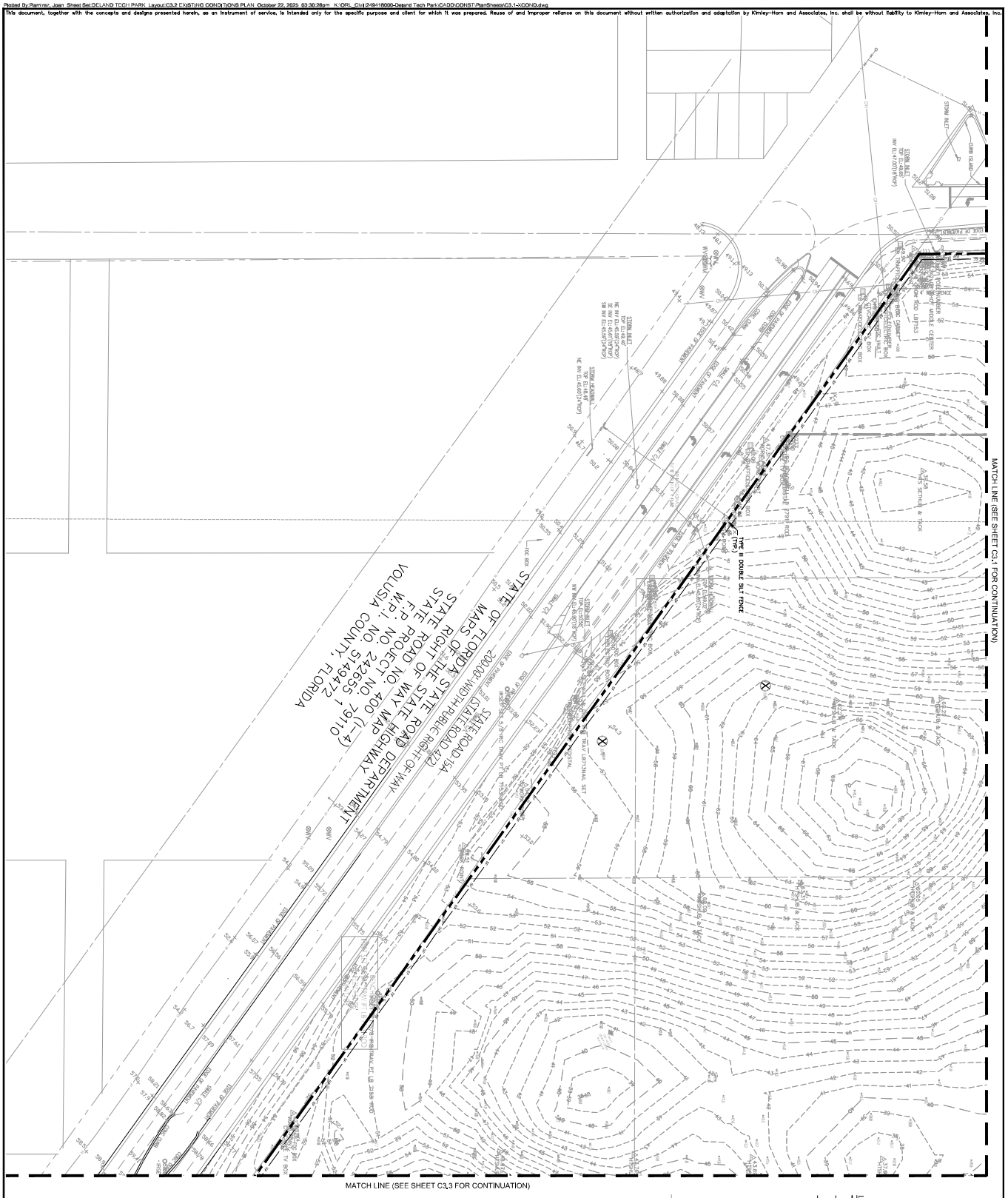
CITY OF DELAND FLORIDA

SHEET NUMBER C3.1

Posted By Reviewer: Jason Shoaf Set:DELAND TECH PARK Layout:C3.1 EXISTING CONDITIONS PLAN October 29, 2025 - 03:36:13pm K:\ORL_Civil\240418000\Design\Tech Park\CAD\CONSTR\SheetSheets\C3.1-xCONX.dwg
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SHEET NUMBER	SHEET TITLE	CITY OF DELAND	FLORIDA
C3.2	DELAND TECH PARK	EXISTING CONDITIONS AND DEMOLITION PLAN	

KHA PROJECT	249418000
DATE	10/22/2025
SCALE	AS SHOWN
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DRAWN BY	—
CHECKED BY	—

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

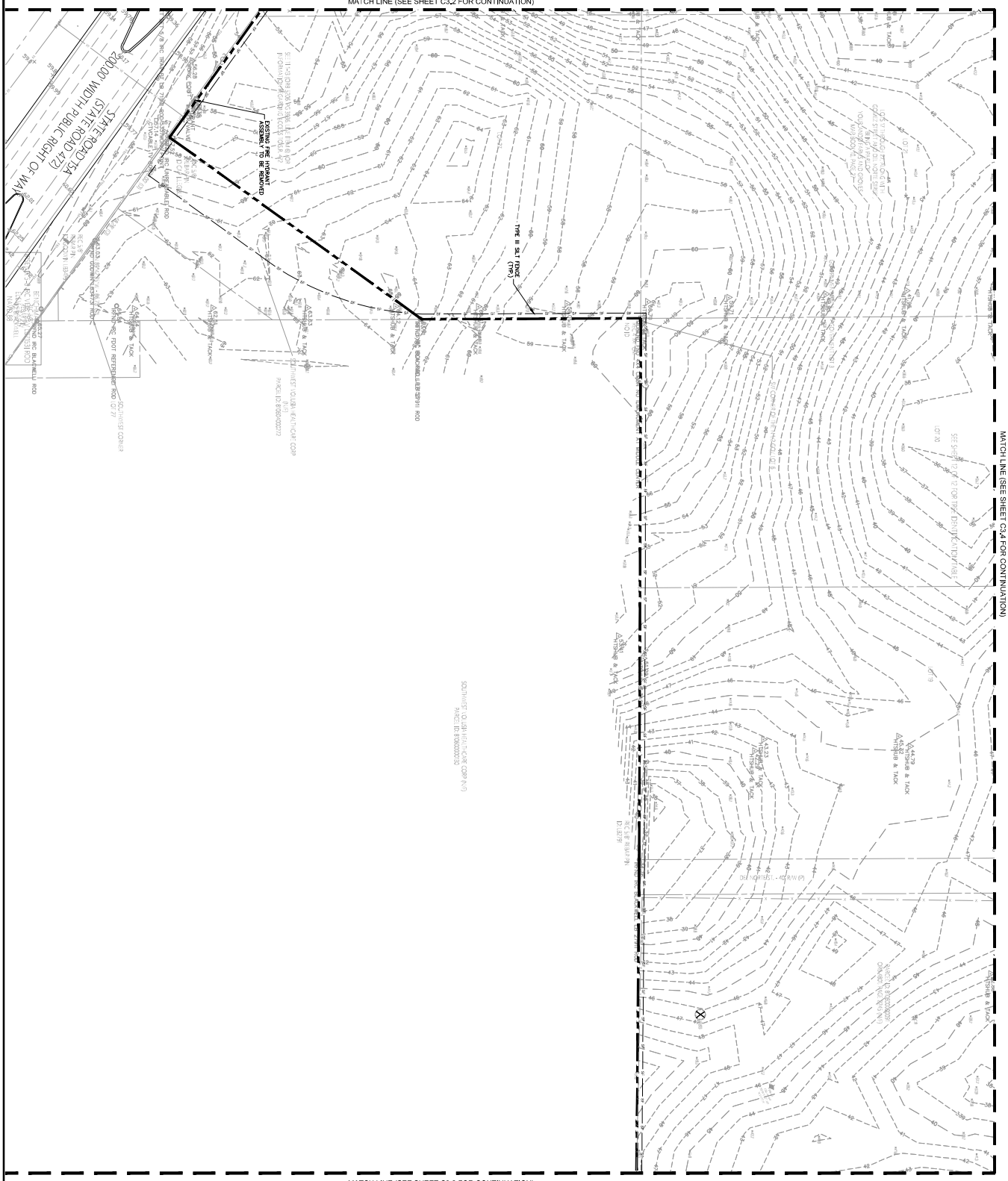
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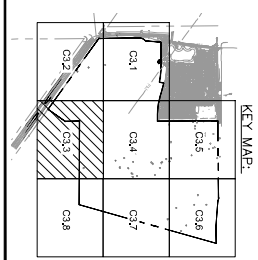
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No.	REVISIONS	DATE	BY
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2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:C3.3 EXISTING CONDITIONS PLAN October 22, 2025 03:30:42pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C3.1-XCOND.dwg
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MATCH LINE (SEE SHEET C3.2 FOR CONTINUATION)





NOTES
1. LIDAR SURFACE CONTOURS HAVE BEEN ADDED OUTSIDE OF THE PROPERTY BOUNDARY FOR INFORMATIONAL PURPOSES.
2. FOR TREE PRESERVATION, THE SURVEY WAS PROVIDED BY VHB. PLEASE REFER TO THE VHB SURVEY FOR TREE IDENTIFICATION.

LEGEND
- PROPERTY BOUNDARY
- TYPE III SILT FENCE (SEE SHEET C2.1 FOR DETAIL)
- REMOVE ABOVE/BELOW GROUND FEATURE
- SOIL TRACKING PREVENTION DEVICE (SEE SHEET C2.1 FOR DETAIL)
- ASPHALT TO BE DEMOLISHED
- ASPHALT TO BE MILLED AND OVERLAYED
- EXISTING HISTORIC TREES TO BE REMOVED WITHIN PROJECT LIMITS
- EXISTING TREES TO BE PROTECTED WITHIN PROJECT LIMITS
- 48 — EXISTING CONTOUR ELEVATION
- X 43.3 EXISTING SPOT ELEVATION

GRAPHIC SCALE IN FEET 0 25 50 100
NORTH

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

SHEET NUMBER C3.3

DELAND TECH PARK
CITY OF DELAND FLORIDA

EXISTING CONDITIONS AND DEMOLITION PLAN

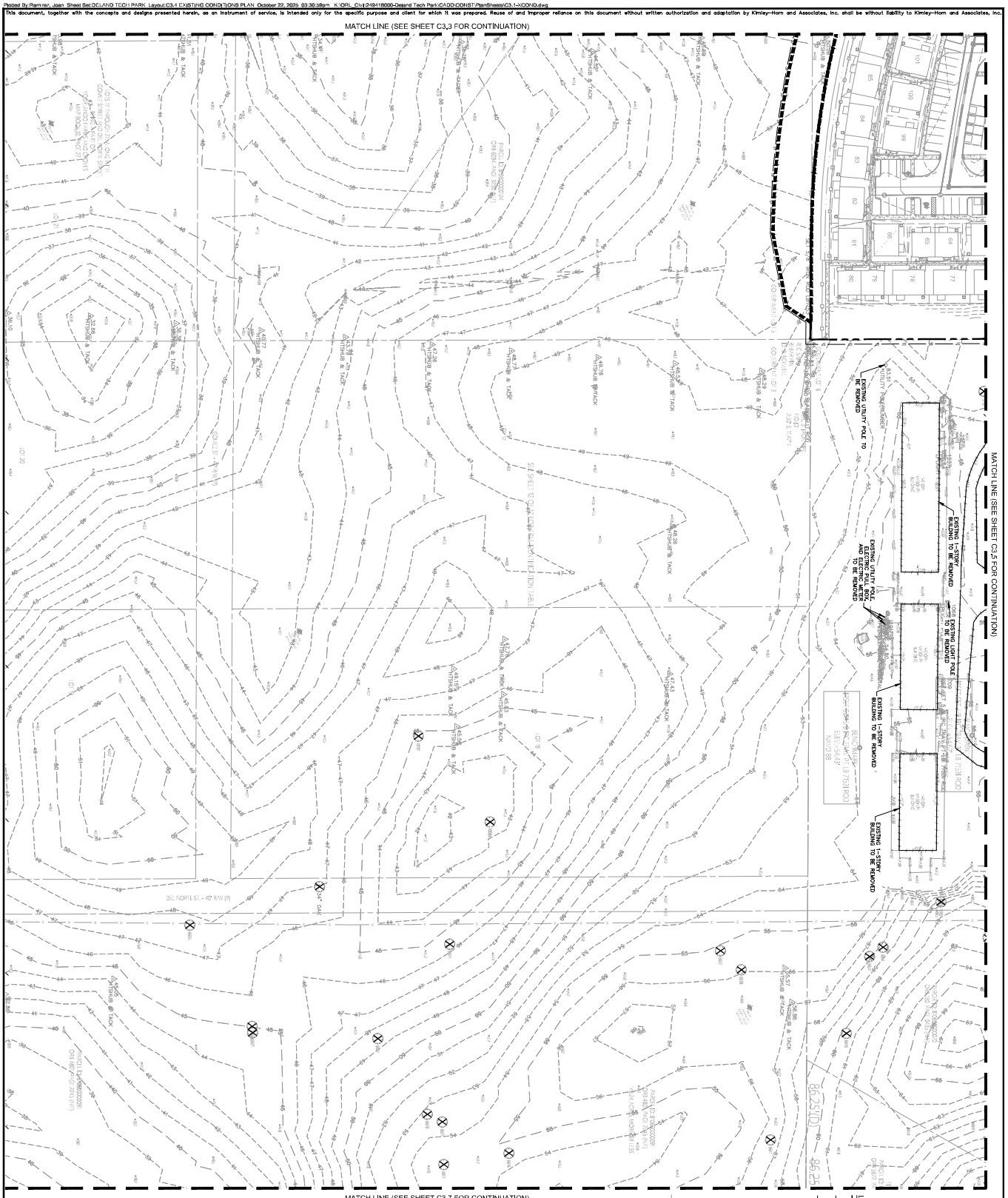
KHA PROJECT 249418000
DATE 10/22/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER 60275

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Plotted By: Ramirez, Joan Sheet Set: DELAND TECH PARK Layout: C3.4 EXISTING CONDITIONS PLAN October 22, 2025 03:30:58pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C3.1-XCOND.dwg
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NOTES
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2. FOR PROPERTY BOUNDARY, EASEMENTS AND OTHER SURVEY INFORMATION PROVIDED BY VHB, PLEASE REFER TO THE VHB SURVEY FOR TREE IDENTIFICATION.

LEGEND

- PROPERTY BOUNDARY
- TYPE III SILT FENCE (SEE SHEET C2.1 FOR DETAIL)
- REMOVE ABOVE/BELOW GROUND FEATURE
- SOIL TRACKING PREVENTION DEVICE (SEE SHEET C2.1 FOR DETAIL)
- ASPHALT TO BE DEMOLISHED
- ASPHALT TO BE MILLED AND OVERLAYED
- EXISTING HISTORIC TREES TO BE REMOVED WITHIN PROJECT LIMITS
- EXISTING TREES TO BE PROTECTED WITHIN PROJECT LIMITS
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR ELEVATION

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

SHEET NUMBER	SHEET TITLE	KHA PROJECT	DESIGNED BY	DRAWN BY	CHECKED BY
C3.4	EXISTING CONDITIONS AND DEMOLITION PLAN	249418000	—	—	—

DELAND TECH PARK
CITY OF DELAND FLORIDA

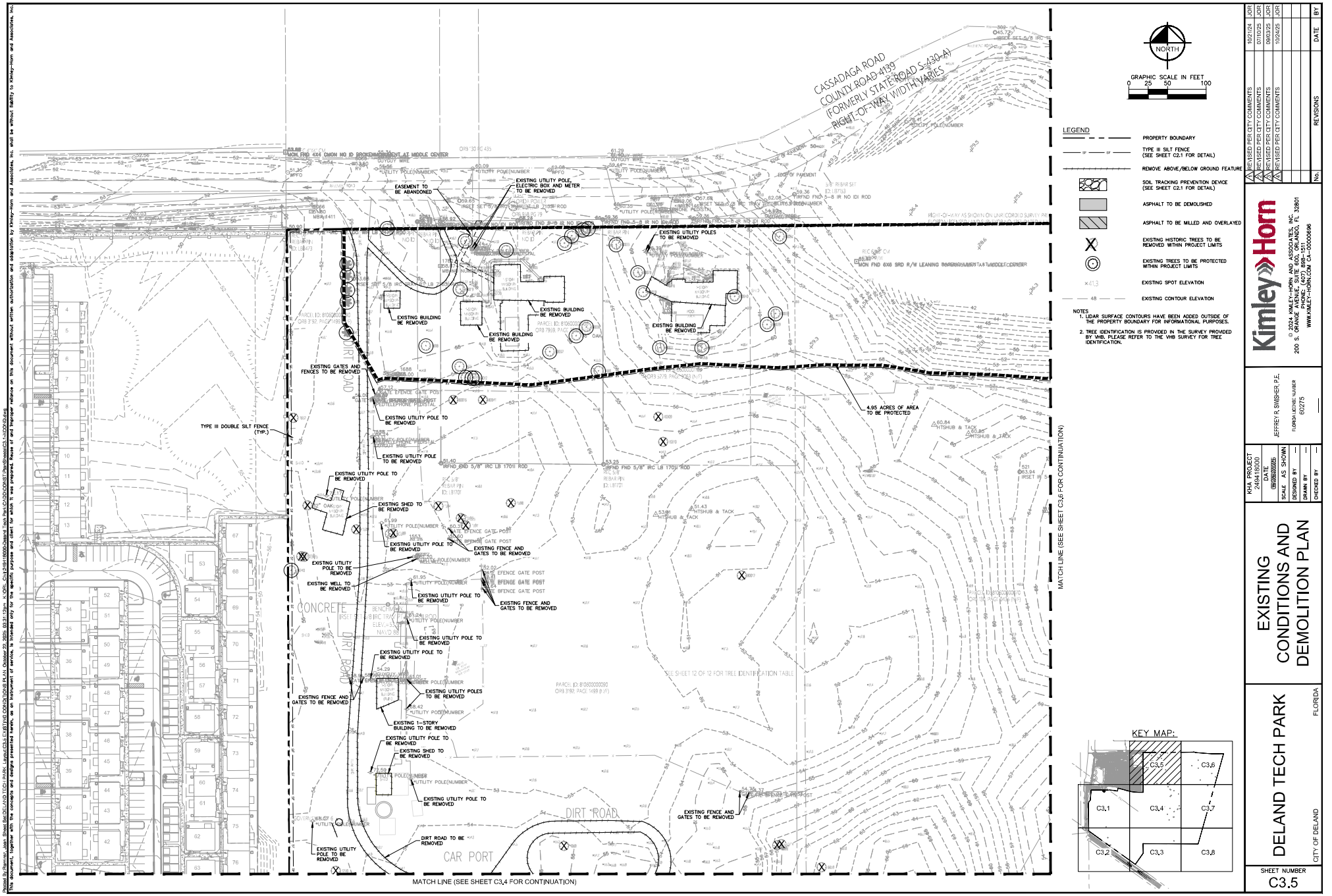
DATE: 10/22/2025
SCALE: AS SHOWN

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2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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SCALE AS SHOWN
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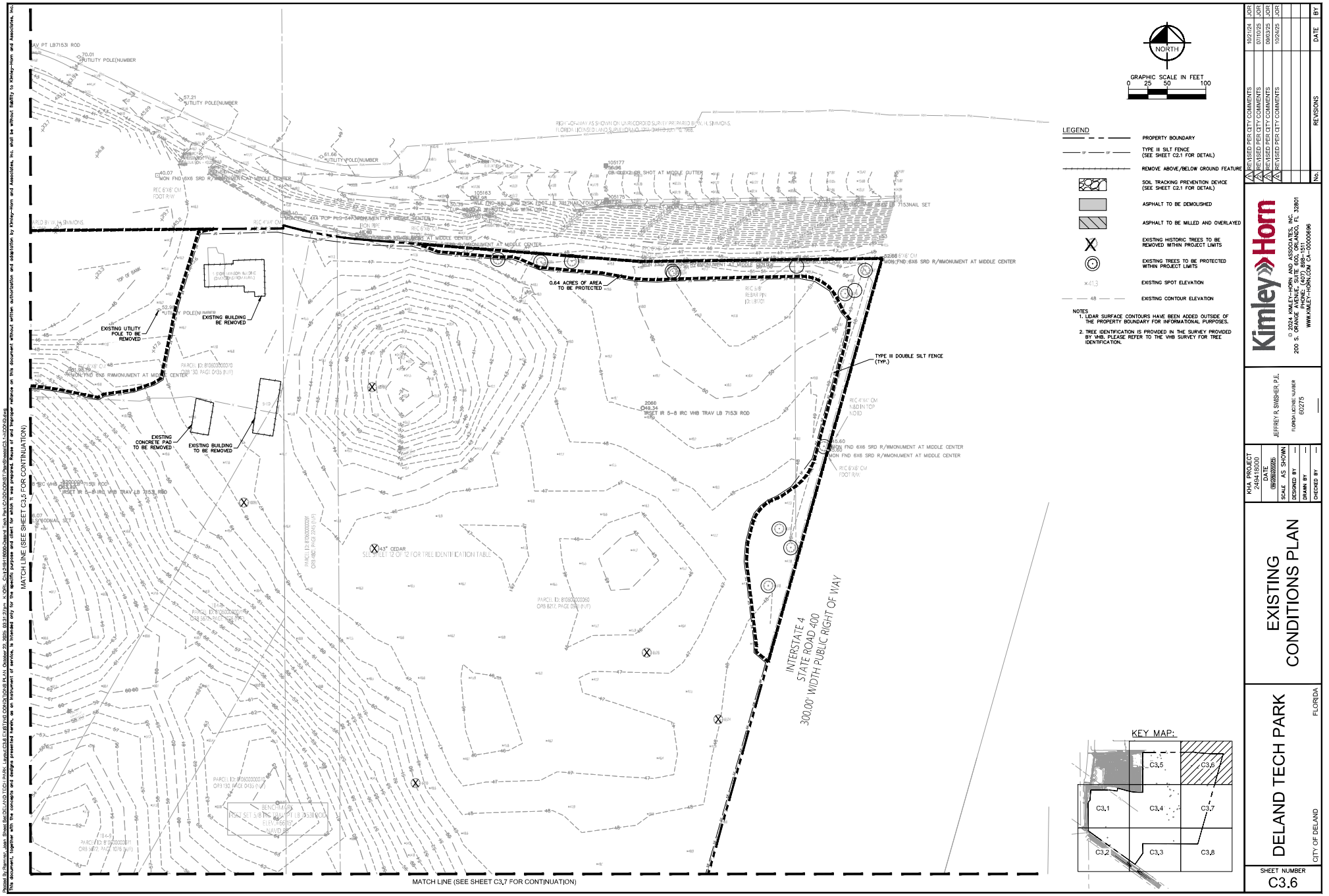
EXISTING CONDITIONS AND DEMOLITION PLAN

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C3.5

Plotted By: Raymond Jones Sheet Set: DELAND TECH PARK Layout: C3.5 EXISTING CONDITIONS PLAN October 29, 2025 - 03:31:12pm K:\ORL_Civil\240418000\Design\Tech Park\CIVIL\CONSTRUCTION\Sheets\C3.1-xCONX.dwg
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2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	06/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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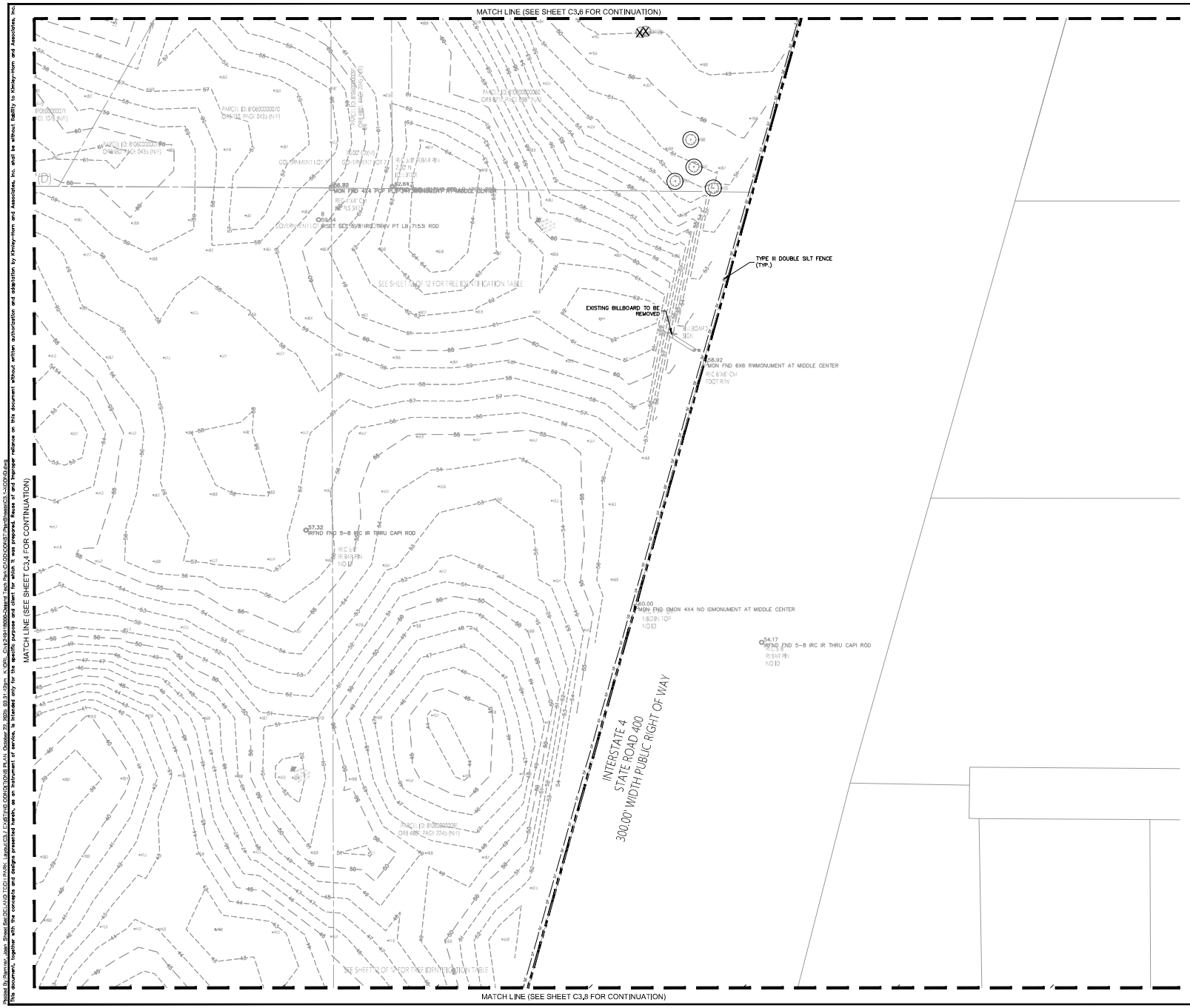
EXISTING CONDITIONS PLAN

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C3.6

Plotted By: Spencer, Jason Sheet Set: DELAND TECH PARK Layout: C3.6 EXISTING CONDITIONS PLAN October 22, 2025 - 03:31:27pm K:\ORL_Civil\240418000-Deland Tech Park\CAD\CONDIST\SheetSheets\C3.1-xCONX.dwg
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2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	06/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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KHA PROJECT
240418000
DATE
09/29/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

EXISTING CONDITIONS PLAN

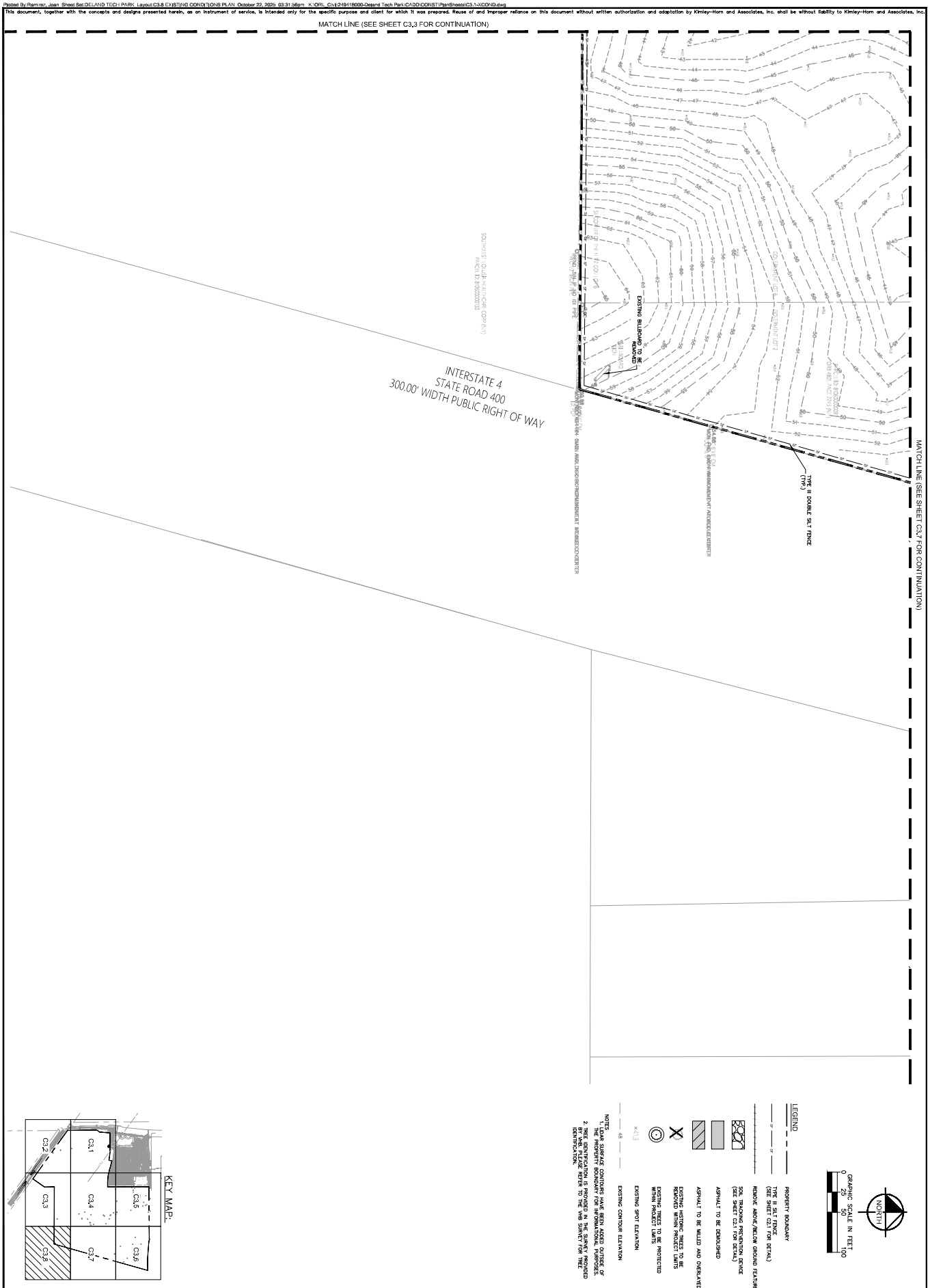
DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C3.7

Plotted By: Spencer Jones Sheet Set: DELAND TECH PARK Layout: C3.4 EXISTING CONDITIONS PLAN October 29, 2025 - 03:31:42pm K:\ORL_Civil\240418000-Deland Tech Park\CIVIL\DOCS\SET Plans\Sheets\C3.1-xCONX.dwg
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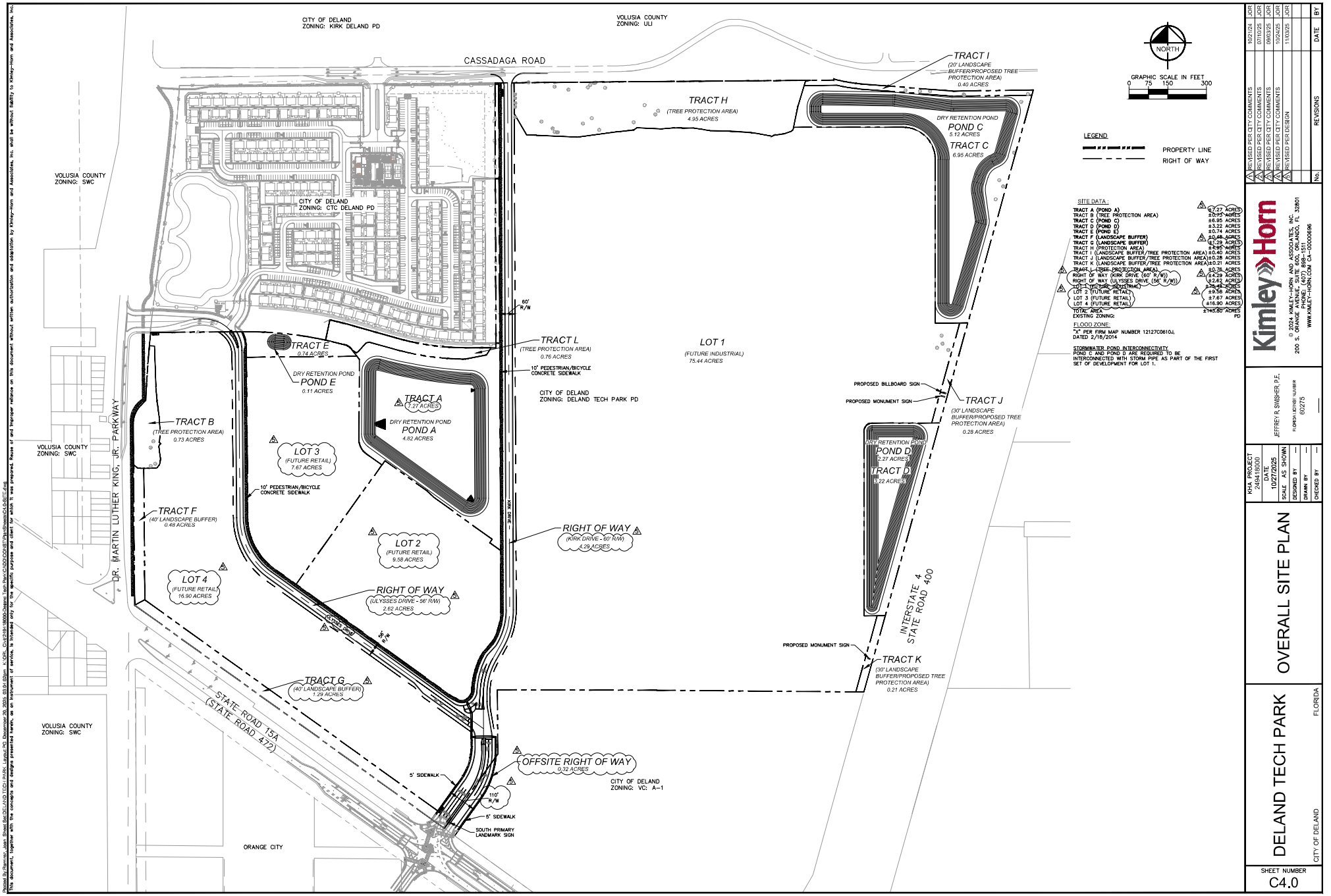
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C3.8	CITY OF DELAND FLORIDA		DATE 10/22/2025
			SCALE AS SHOWN
			DESIGNED BY —
			DRAWN BY —
			CHECKED BY —

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No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/27/25	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	06/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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KHA PROJECT 240418000
DATE 10/27/2025
SCALE AS SHOWN
DESIGNED BY —
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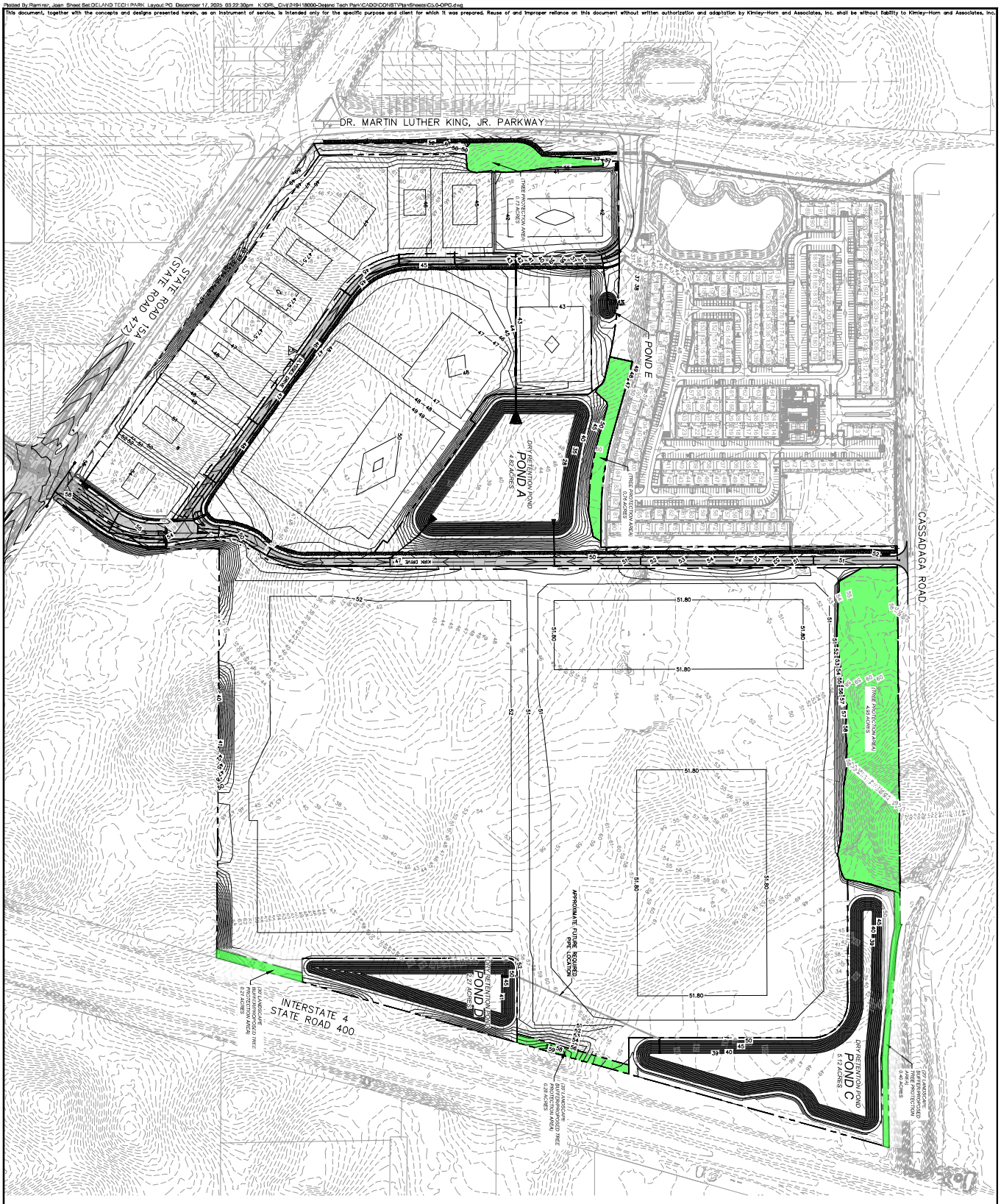
DELAND TECH PARK
FLORIDA
CITY OF DELAND

OVERALL SITE PLAN

SHEET NUMBER
C4.0

Plotted By: Barrows, Jason Saved Set: DELAND TECH PARK Layout: P0 Dezember 29, 2025 - 8:59:04pm K:\ORL_Civil\240418000-Deltech Tech Park\CAD\CONSTR\SheetSet\CLADATC.dwg
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Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:PD December 17, 2025 03:22:30pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C5.0-OPG.dwg
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LEGEND

PROPERTY LINE PROPOSED
CONTOURS PROPOSED
CONTOURS EXISTING
PROPOSED HEAVY DUTY ASPHALT
PROPOSED CONCRETE SIDEWALK
TREE PROTECTION AREA
STORM PIPE PROPOSED
STORM MANHOLE PROPOSED
STORM INLET PROPOSED
CURB INLET PROPOSED
STORM MES PROPOSED

NOTE
1. SURFACE CONTOURS HAVE BEEN ADDED OUTSIDE OF THE PROPERTY BOUNDARY FOR INFORMATIONAL PURPOSES.
STORMWATER POND INTERCONNECTIVITY
POND A AND POND B ARE INTERCONNECTED WITH STORM PIPE AS PART OF THE FIRST SET OF DEVELOPMENT FOR LOT 1.

GRAPHIC SCALE IN FEET
0 75 150 300

NORTH

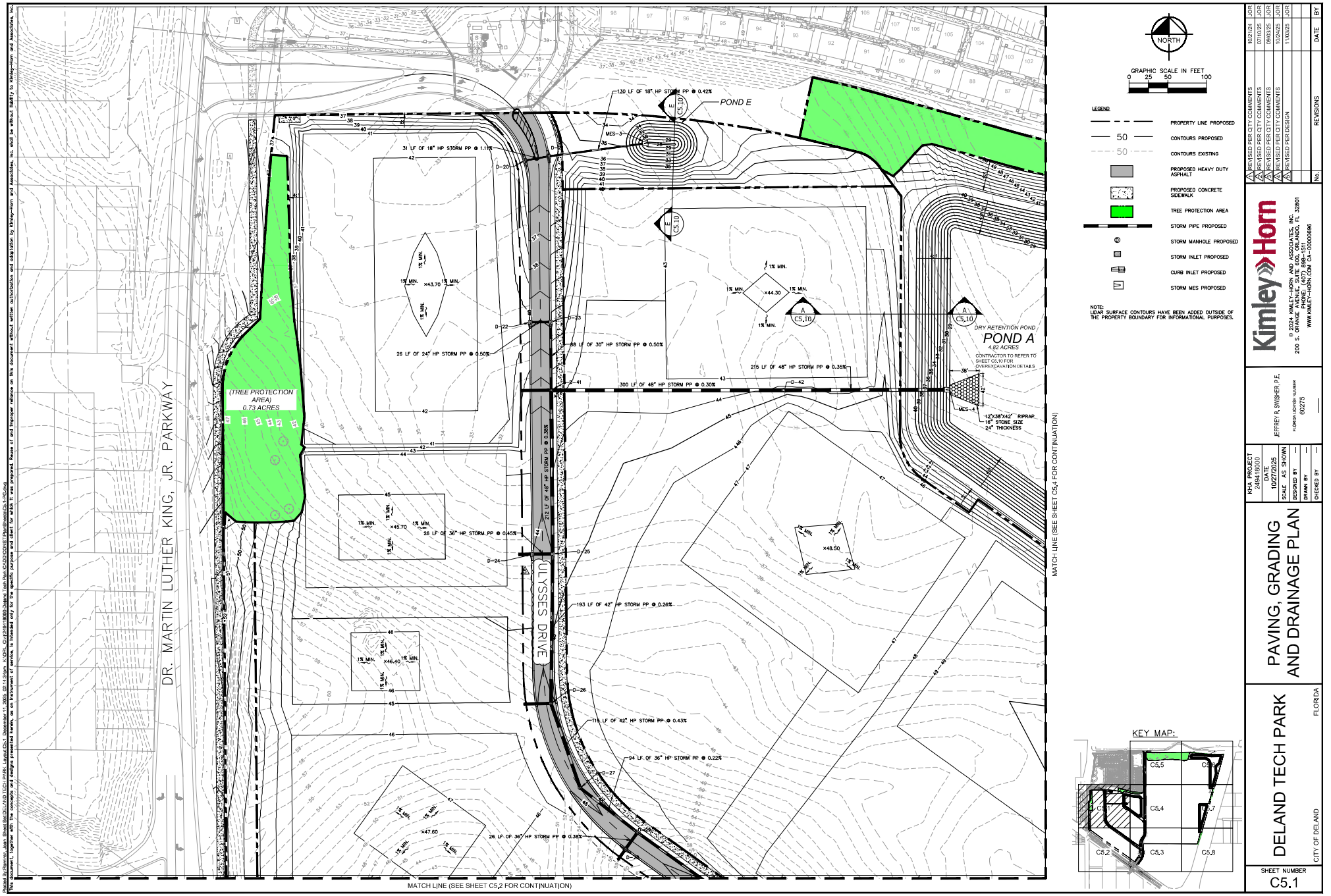
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C5.0	CITY OF DELAND FLORIDA		DATE 10/27/2025
			SCALE AS SHOWN
			DESIGNED BY —
			DRAWN BY —
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1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	08/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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FLORIDA LICENSE NUMBER
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KHA PROJECT
240418000
DATE
10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

PAVING, GRADING AND DRAINAGE PLAN

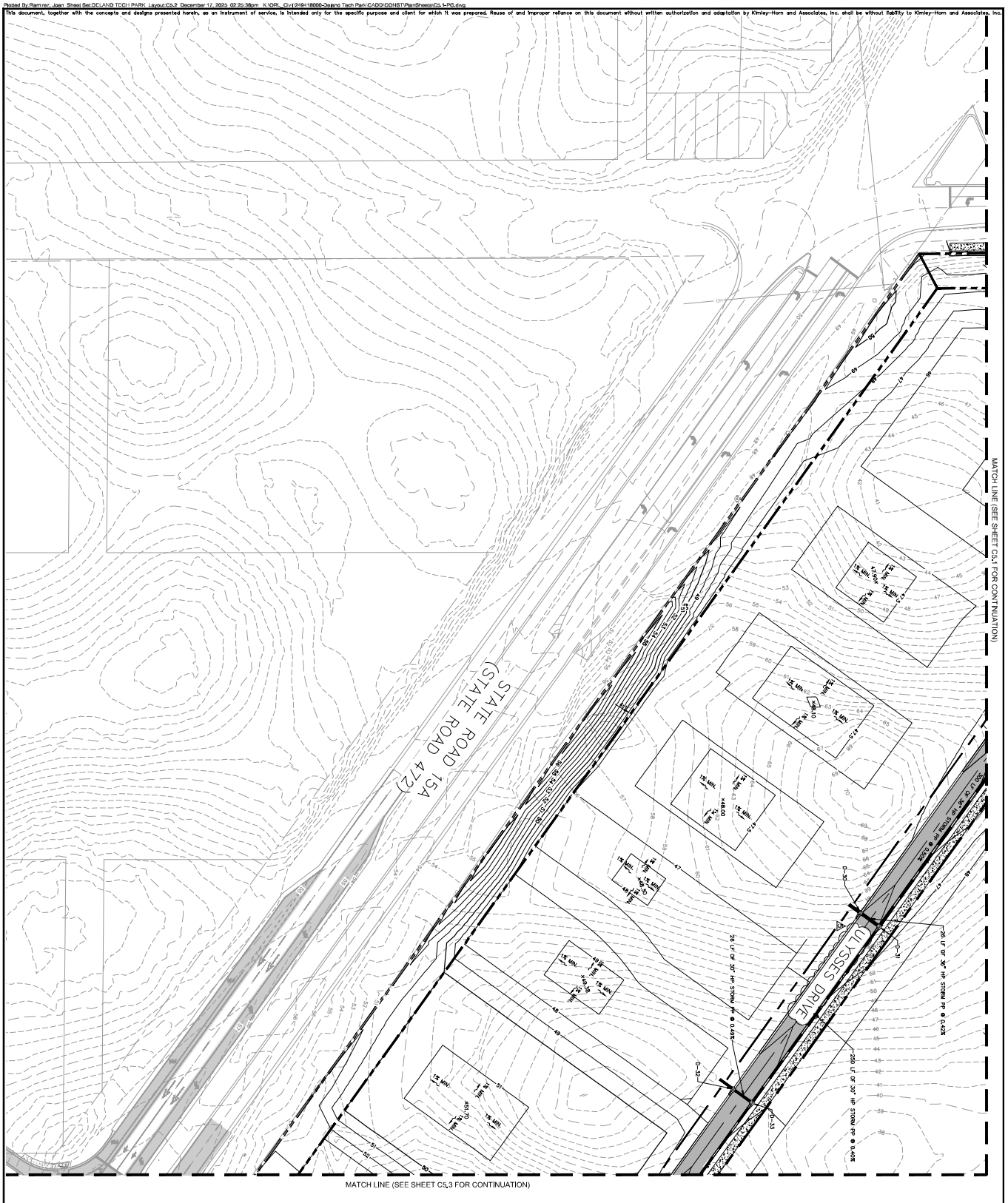
DELAND TECH PARK

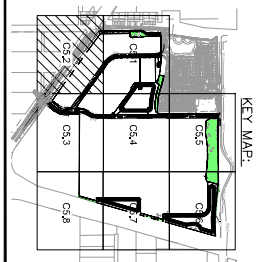
CITY OF DELAND FLORIDA

SHEET NUMBER
C5.1

Plotted By: Ramirez, Jason Sheet Set: DELAND TECH PARK Layout: C5.1 December 11, 2025 - 09:14:34am K:\ORL_Civil\240418000-Orlando Tech Park\CADD\CONSTR\Plans\Sheets\C5.1.dwg
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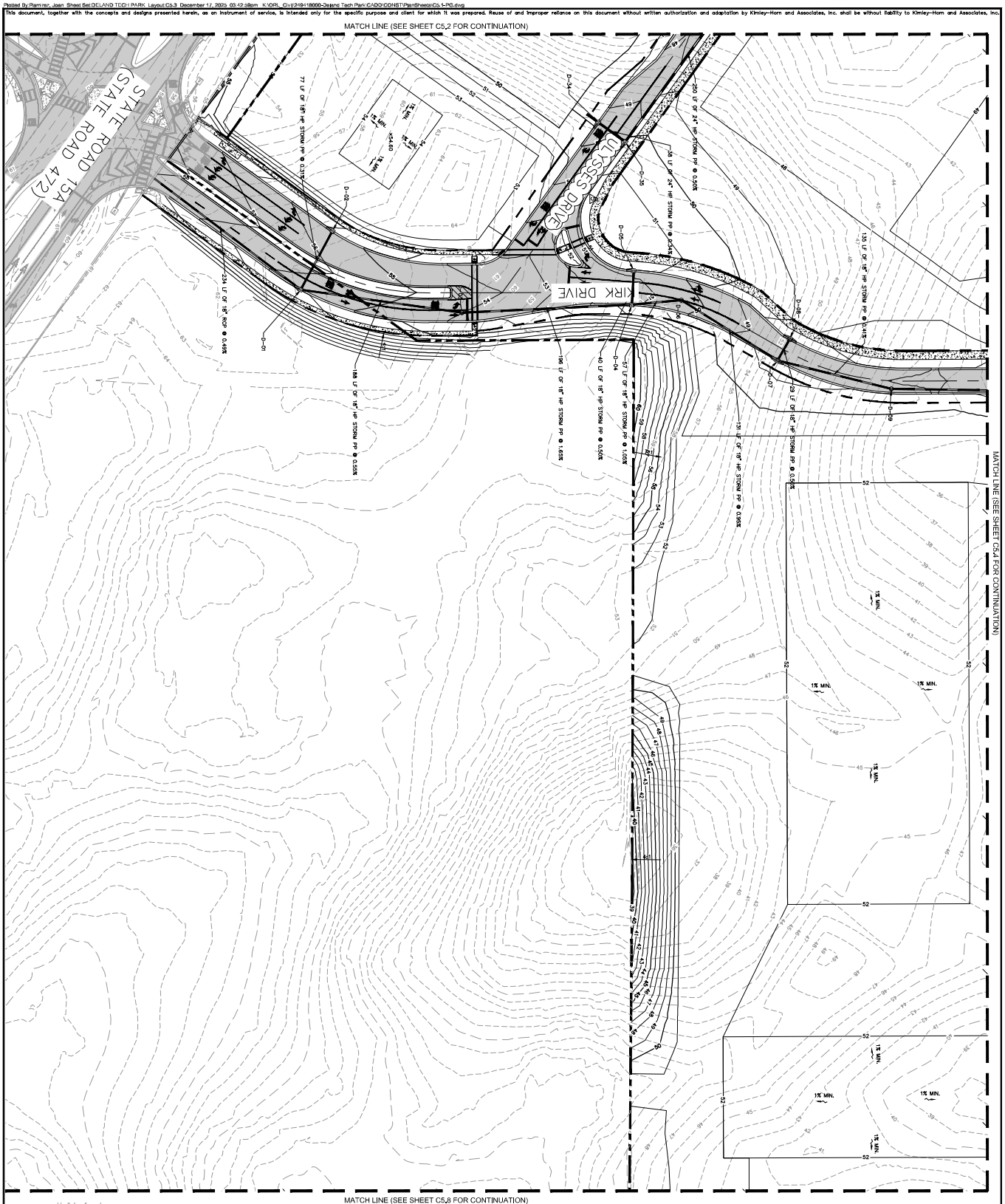




SHEET NUMBER C5.2	DELAND TECH PARK CITY OF DELAND FLORIDA	PAVING, GRADING AND DRAINAGE PLAN	KHA PROJECT 249418000 DATE 10/27/2025 SCALE AS SHOWN DESIGNED BY — DRAWN BY — CHECKED BY —	JEFFREY R. SWISHER, P.E. FLORIDA LICENSE NUMBER 60275	Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL 32801 PHONE: (407) 898-1511 WWW.KIMLEY-HORN.COM CA-00000696

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1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR

Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:C5.3 December 17, 2025 03:42:39pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\Plan Sheets\C5.1-PG.dwg
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SHEET NUMBER C5.3

DELAND TECH PARK

CITY OF DELAND FLORIDA

PAVING, GRADING AND DRAINAGE PLAN

KHA PROJECT 249418000

DATE 10/27/2025

SCALE AS SHOWN

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DRAWN BY —

CHECKED BY —

JEFFREY R. SWISHER, P.E.

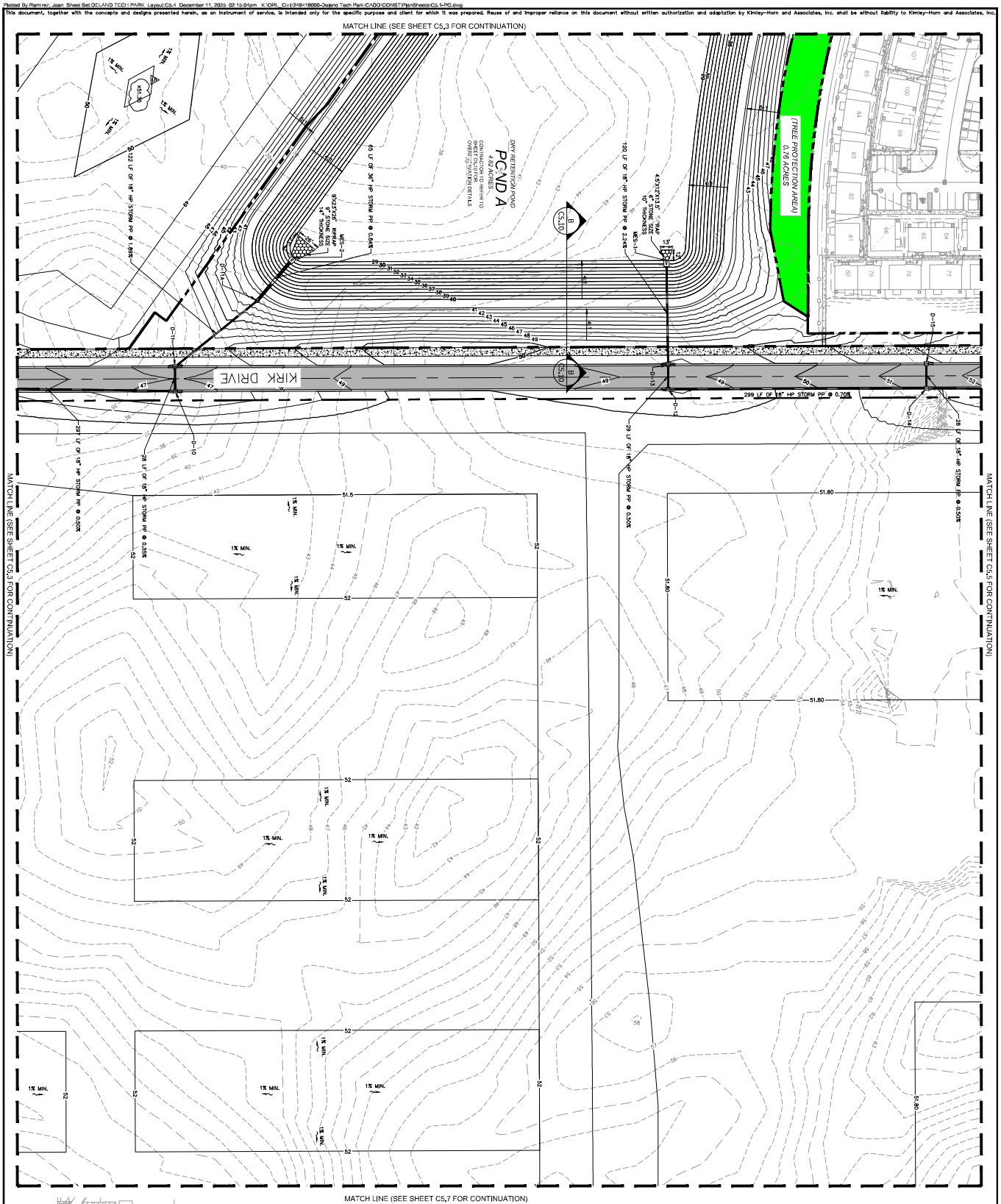
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No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR

Plotted By: Ramirez, Joan Sheet Set: DELAND TECH PARK Layout: C5.4 December 11, 2025 02:15:04pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\Plan Sheets\C5.4-PG.dwg
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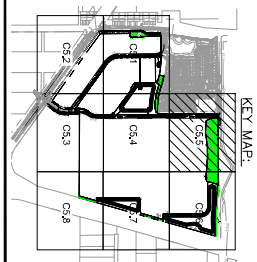


SHEET NUMBER C5.4	DELAND TECH PARK CITY OF DELAND FLORIDA	PAVING, GRADING AND DRAINAGE PLAN	KHA PROJECT 249418000 DATE 10/27/2025 SCALE AS SHOWN DESIGNED BY — DRAWN BY — CHECKED BY —	JEFFREY R. SWISHER, P.E. FLORIDA LICENSE NUMBER 60275	Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL 32801 PHONE: (407) 898-1511 WWW.KIMLEY-HORN.COM CA-00000696	

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR

Plotted By: Ramirez, Joan Sheet Set: DELAND TECH PARK Layout: C5.5 December 11, 2025 02:15:14pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\Plan Sheets\C5.5-PG.dwg
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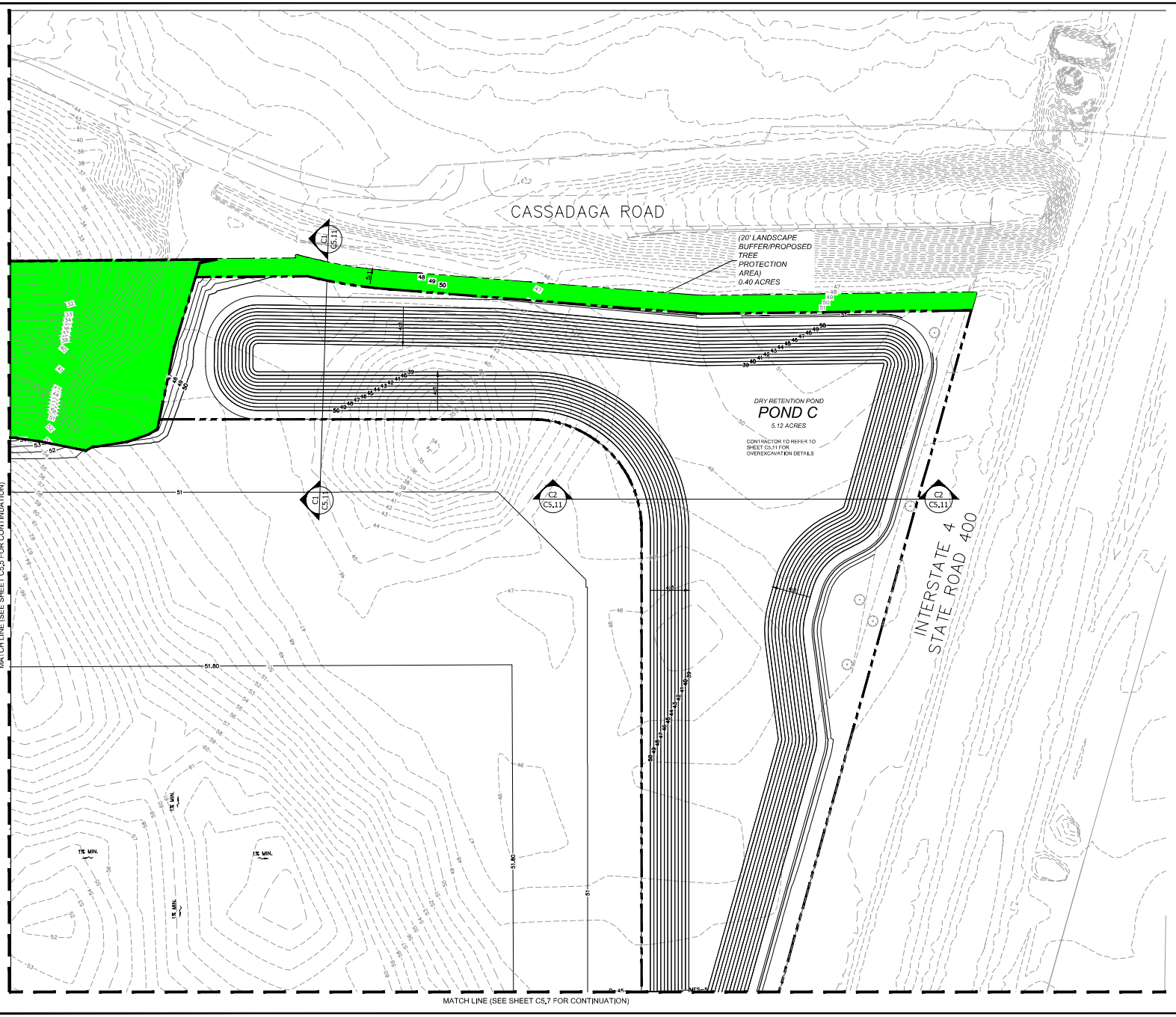
LEGEND
- PROPERTY LINE PROPOSED
- CONTOURS PROPOSED
- CONTOURS EXISTING
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED CONCRETE SIDEWALK
- TREE PROTECTION AREA
- STORM PIPE PROPOSED
- STORM MANHOLE PROPOSED
- STORM INLET PROPOSED
- CURB INLET PROPOSED
- STORM MES PROPOSED

GRAPHIC SCALE IN FEET 0 25 50 100

NORTH

SHEET NUMBER						
C5.5	DELAND TECH PARK CITY OF DELAND FLORIDA	PAVING, GRADING AND DRAINAGE PLAN	KHA PROJECT 249418000 DATE 10/27/2025 SCALE AS SHOWN DESIGNED BY — DRAWN BY — CHECKED BY —	JEFFREY R. SWISHER, P.E. FLORIDA LICENSE NUMBER 60275	Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL 32801 PHONE: (407) 898-1511 WWW.KIMLEY-HORN.COM CA-00000696	

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4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR



No.	REVISIONS	DATE	BY
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3	REVISED PER CITY COMMENTS	06/03/25	JDR
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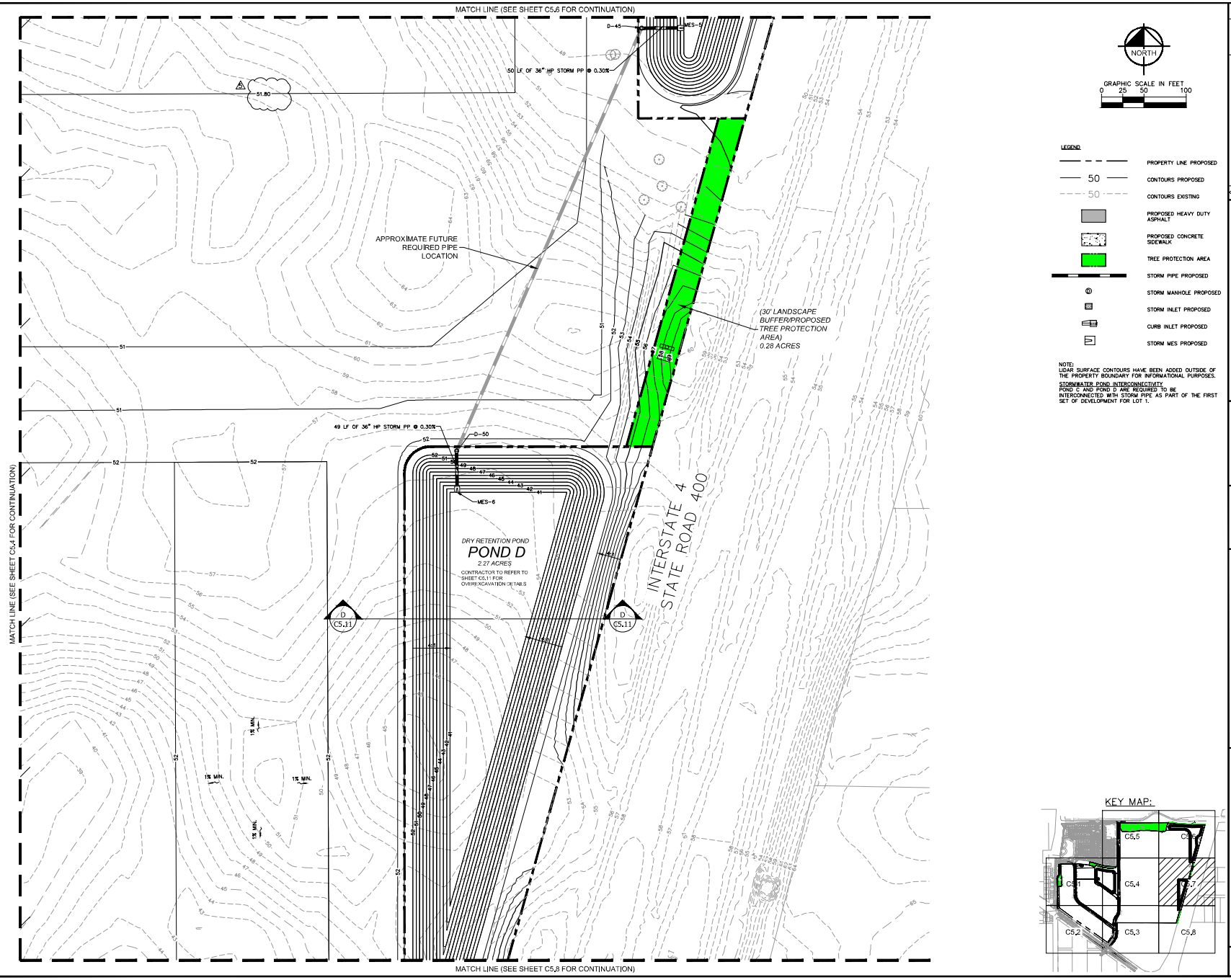
PAVING, GRADING AND DRAINAGE PLAN

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C5.6

Plotted By: Raymond Jones Sheet Set: DELAND TECH PARK Layout: C5.6 December 11, 2025 - 09:15:24am K:\ORL_Civil\246418000-Orlando Tech Park-CAD\DOCS\SET\Plan Sheets\C5.1-5.8.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

LEGEND

- PROPERTY LINE PROPOSED
- 50 CONTOURS PROPOSED
- 50 CONTOURS EXISTING
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED CONCRETE SIDEWALK
- TREE PROTECTION AREA
- STORM PIPE PROPOSED
- STORM MANHOLE PROPOSED
- STORM INLET PROPOSED
- CURB INLET PROPOSED
- STORM MES PROPOSED

NOTE:
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STORMWATER POND INTERCONNECTIVITY
POND C AND POND D ARE REQUIRED TO BE INTERCONNECTED WITH STORM PIPE AS PART OF THE FIRST SET OF DEVELOPMENT FOR LOT 1.

KEY MAP:

No.	REVISIONS	DATE	BY
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PAVING, GRADING AND DRAINAGE PLAN

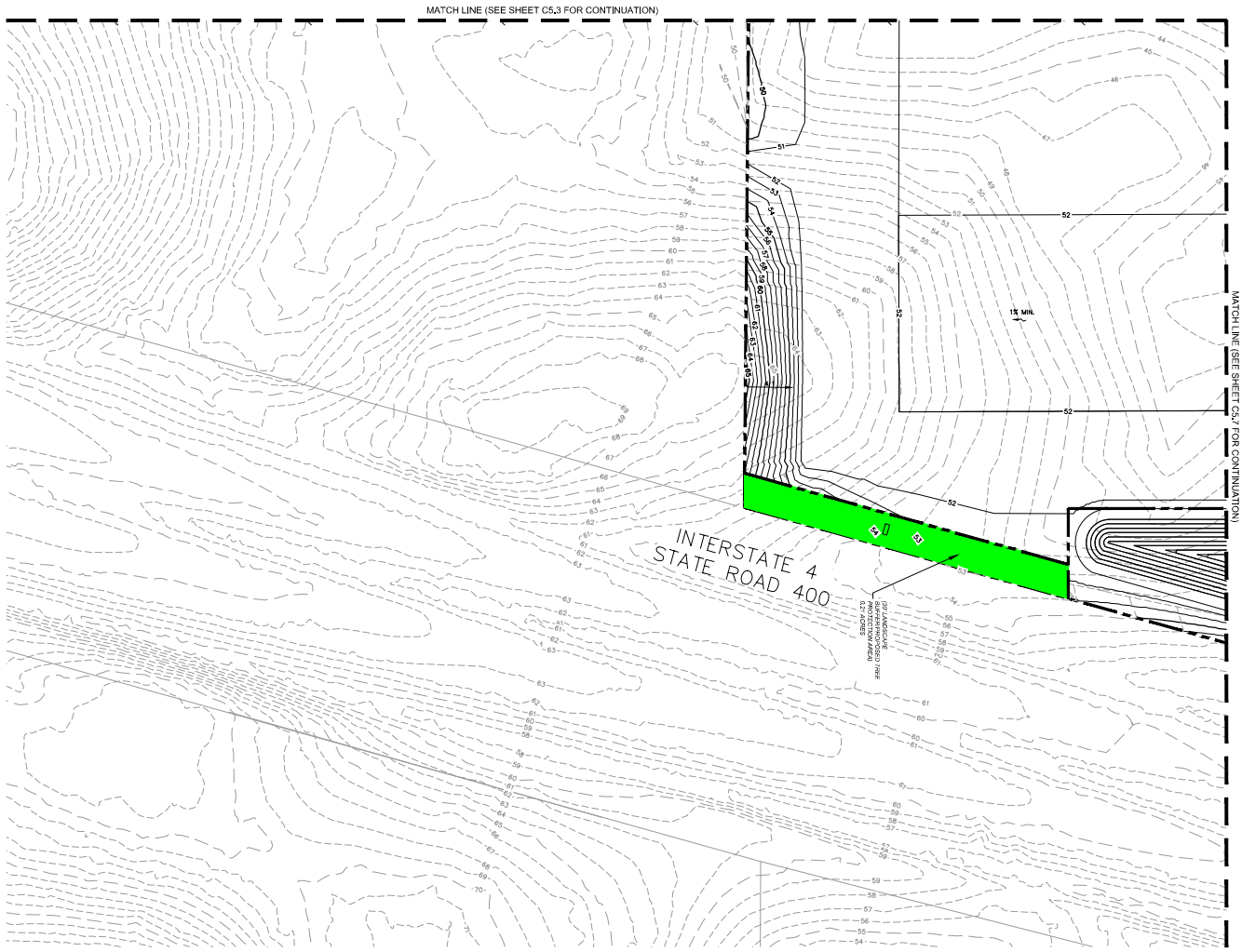
DELAND TECH PARK

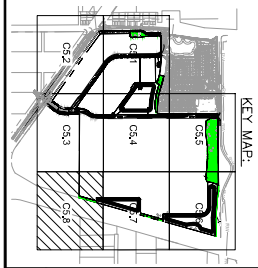
CITY OF DELAND FLORIDA

SHEET NUMBER C5.7

Plotted By: Spencer Jones Sheet Set: DELAND TECH PARK Layout: C5.7 December 11, 2025 - 09:15:34am K:\ORL_Civil\240418000-Orlando Tech Park\CADD\CONSET\PlanSheets\C5.7-PD.dwg
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Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:C5.8 December 11, 2025, 02:15:44pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\Plan Sheets\C5.1-PG.dwg
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LEGEND

PROPERTY LINE PROPOSED
CONTOURS PROPOSED
CONTOURS EXISTING
PROPOSED HEAVY DUTY ASPHALT
PROPOSED CONCRETE SIDEWALK
TREE PROTECTION AREA
STORM PIPE PROPOSED
STORM MANHOLE PROPOSED
STORM INLET PROPOSED
CURB INLET PROPOSED
STORM MES PROPOSED

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

SHEET NUMBER C5.8	DELAND TECH PARK CITY OF DELAND FLORIDA	PAVING, GRADING AND DRAINAGE PLAN	KHA PROJECT 249418000 DATE 10/27/2025 SCALE AS SHOWN DESIGNED BY — DRAWN BY — CHECKED BY —

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3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR

ULYSSES DRIVE STRUCTURES

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-20	STA: 2+26.59 (16.33 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 35.13 E. INV OUT: 28.89 (18" HP STORM PP)
D-21	STA: 2+26.57 (-14.24 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 35.28 W. INV IN: 28.55 (18" HP STORM PP) E. INV OUT: 28.55 (18" HP STORM PP)
D-22	STA: 4+38.56 (13.22 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 39.84 E. INV OUT: 34.35 (24" HP STORM PP)
D-23	STA: 4+38.58 (-13.26 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 39.84 W. INV IN: 34.22 (24" HP STORM PP) S. INV OUT: 33.03 (30" HP STORM PP)
D-24	STA: 7+38.61 (13.22 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 44.02 W. INV IN: 35.80 (36" HP STORM PP) E. INV OUT: 35.80 (36" HP STORM PP)
D-25	STA: 7+38.63 (-13.25 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 44.02 W. INV IN: 35.68 (36" HP STORM PP) S. INV IN: 34.50 (42" HP STORM PP) N. INV OUT: 33.80 (48" HP STORM PP)
D-26	STA: 9+32.97 (-5.96 LT) TYPE "J/" MANHOLE PER FDOT INDEX #425-010 EOP: 45.12 S. INV IN: 35.00 (42" HP STORM PP) W. INV IN: 35.00 (36" HP STORM PP) N. INV OUT: 35.00 (42" HP STORM PP)
D-27	STA: 10+50.00 (0.00) TYPE "J/" MANHOLE PER FDOT INDEX #425-010 EOP: 45.23 SE. INV IN: 36.19 (36" HP STORM PP) N. INV OUT: 35.50 (42" HP STORM PP)
D-28	STA: 11+46.10 (13.25 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 44.62 SW. INV IN: 36.60 (36" HP STORM PP) NE. INV OUT: 36.60 (36" HP STORM PP)
D-29	STA: 11+46.10 (-13.25 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 44.62 SW. INV IN: 36.50 (36" HP STORM PP) SE. INV IN: 36.40 (36" HP STORM PP) NW. INV OUT: 36.40 (36" HP STORM PP)

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-30	STA: 14+46.10 (13.24 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 46.01 SW. INV IN: 38.20 (36" HP STORM PP) NE. INV OUT: 38.10 (36" HP STORM PP)
D-31	STA: 14+46.10 (-13.25 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 46.01 SE. INV IN: 38.13 (30" HP STORM PP) SW. INV IN: 37.99 (36" HP STORM PP) NW. INV OUT: 37.90 (36" HP STORM PP)
D-32	STA: 16+96.10 (13.25 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 47.26 SW. INV IN: 39.62 (30" HP STORM PP) NE. INV OUT: 39.62 (30" HP STORM PP)
D-33	STA: 16+96.10 (-13.23 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 47.26 SE. INV IN: 40.38 (24" HP STORM PP) SW. INV IN: 39.49 (30" HP STORM PP) NW. INV OUT: 39.12 (30" HP STORM PP)
D-34	STA: 19+46.10 (25.25 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 49.39 SW. INV IN: 42.00 (24" HP STORM PP) NE. INV OUT: 42.00 (24" HP STORM PP)
D-35	STA: 19+46.10 (-13.23 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 49.63 SW. INV IN: 41.87 (24" HP STORM PP) NW. INV OUT: 41.63 (24" HP STORM PP)
D-41	STA: 5+26.54 (-13.25 LT) TYPE "J/" MANHOLE PER FDOT INDEX #425-010 EOP: 42.20 S. INV IN: 33.00 (48" HP STORM PP) N. INV IN: 32.59 (30" HP STORM PP) W. INV IN: 31.00 (36" HP STORM PP) E. INV OUT: 31.00 (48" HP STORM PP)
D-42	STA: 5+29.18 (-313.34 LT) TYPE "J/" MANHOLE PER FDOT INDEX #425-010 EOP: 44.49 W. INV IN: 30.10 (48" HP STORM PP) E. INV OUT: 29.75 (48" HP STORM PP)

NOTE:
TOP OF INLET STRUCTURES ARE 4.5" ABOVE EOP

KIRK DRIVE STRUCTURES

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-01	STA: 3+06.80 (33.25 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 55.60 NW. INV IN: 50.36 (18" HP STORM PP) SW. INV IN: 50.36 (18" RCP) N. INV OUT: 50.36 (18" HP STORM PP)
D-02	STA: 3+06.97 (-43.54 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 55.42 SE. INV OUT: 50.60 (18" HP STORM PP)
D-03	STA: 4+82.18 (22.99 RT) TYPE "P/" MANHOLE PER FDOT INDEX #425-010 EOP: 54.01 S. INV IN: 49.33 (18" HP STORM PP) N. INV OUT: 49.33 (18" HP STORM PP)
D-04	STA: 6+78.79 (14.29 RT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 51.19 W. INV IN: 45.60 (18" HP STORM PP) S. INV IN: 46.10 (18" HP STORM PP) N. INV OUT: 45.60 (18" HP STORM PP)
D-05	STA: 6+78.77 (-25.37 LT) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 50.84 E. INV OUT: 45.80 (18" HP STORM PP)
D-06	STA: 7+35.95 (0.00) TYPE "P/" MANHOLE PER FDOT INDEX #425-010 EOP: 50.48 S. INV IN: 45.00 (18" HP STORM PP) NE. INV OUT: 44.00 (18" HP STORM PP)
D-07	STA: 8+67.47 (14.28 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 47.98 NW. INV IN: 42.76 (18" HP STORM PP) SW. INV IN: 42.76 (18" HP STORM PP) N. INV OUT: 40.20 (18" HP STORM PP)

NOTE:
TOP OF INLET STRUCTURES ARE 4.5" ABOVE EOP

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-08	STA: 8+67.49 (-14.27 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 47.98 SE. INV OUT: 42.90 (18" HP STORM PP)
D-09	STA: 9+98.29 (9.12 RT) TYPE "P/" MANHOLE PER FDOT INDEX #425-010 EOP: 48.84 S. INV IN: 39.65 (18" HP STORM PP) N. INV OUT: 39.65 (18" HP STORM PP)
D-10	STA: 12+94.52 (14.18 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.51 S. INV IN: 38.18 (18" HP STORM PP) W. INV OUT: 38.00 (18" HP STORM PP)
D-11	STA: 12+94.52 (-14.25 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.51 E. INV IN: 37.90 (18" HP STORM PP) NW. INV OUT: 36.00 (18" HP STORM PP)
D-11A	STA: 13+90.01 (-90.03 LT) TYPE "P/" MANHOLE PER FDOT INDEX #425-010 EOP: 42.00 SE. INV IN: 33.70 (18" HP STORM PP) NW. INV OUT: 29.55 (36" HP STORM PP)
D-12	STA: 18+65.14 (14.23 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 48.46 N. INV IN: 39.28 (18" HP STORM PP) W. INV OUT: 36.00 (18" HP STORM PP)
D-13	STA: 18+65.14 (-14.28 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 48.46 E. INV IN: 35.86 (18" HP STORM PP) W. INV OUT: 31.70 (18" HP STORM PP)

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-14	STA: 21+64.14 (14.23 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 51.31 W. INV IN: 44.24 (18" HP STORM PP) N. INV IN: 41.38 (18" HP STORM PP) S. INV OUT: 41.38 (18" HP STORM PP)
D-15	STA: 21+64.09 (-14.23 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 51.31 E. INV OUT: 44.38 (18" HP STORM PP)
D-16	STA: 24+64.32 (18.12 RT) TYPE "P/" MANHOLE PER FDOT INDEX #425-010 EOP: 54.90 N. INV IN: 43.48 (18" HP STORM PP) S. INV OUT: 43.48 (18" HP STORM PP)
D-17	STA: 27+64.35 (-14.24 LT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 50.25 E. INV IN: 45.40 (18" HP STORM PP)
D-18	STA: 27+64.35 (14.24 RT) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 50.25 W. INV IN: 45.30 (18" HP STORM PP) S. INV OUT: 45.00 (18" HP STORM PP)

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
MES-1	MITERED END SECTION PER FDOT INDEX #430-021 E. INV IN: 29.00 (18" HP STORM PP)
MES-2	MITERED END SECTION PER FDOT INDEX #430-022 SE. INV IN: 29.00 (36" HP STORM PP)
MES-3	MITERED END SECTION PER FDOT INDEX #430-021 W. INV IN: 28.00 (18" HP STORM PP)
MES-4	MITERED END SECTION PER FDOT INDEX #430-022 W. INV IN: 29.00 (48" HP STORM PP)
MES-5	MITERED END SECTION PER FDOT INDEX #430-022 W. INV IN: 39.00 (36" HP STORM PP)
MES-6	MITERED END SECTION PER FDOT INDEX #430-022 N. INV IN: 41.00 (36" HP STORM PP)

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-45	TYPE "J/" MANHOLE PER FDOT INDEX #425-010 RIM: 50.30
D-50	TYPE "J/" MANHOLE PER FDOT INDEX #425-010 RIM: 52.10

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3	REVISED PER CITY COMMENTS	08/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
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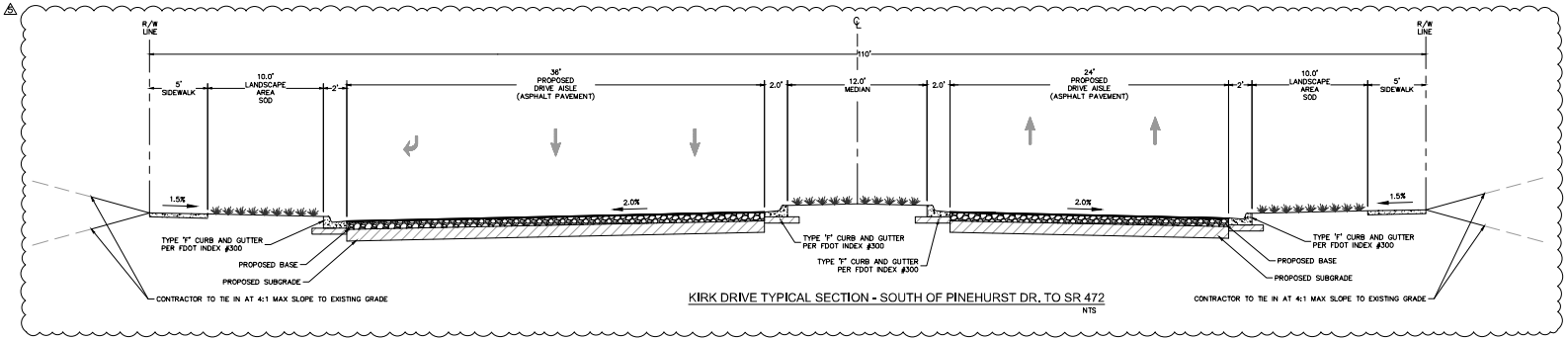
DRAINAGE STRUCTURES TABLE

DELAND TECH PARK

CITY OF DELAND FLORIDA

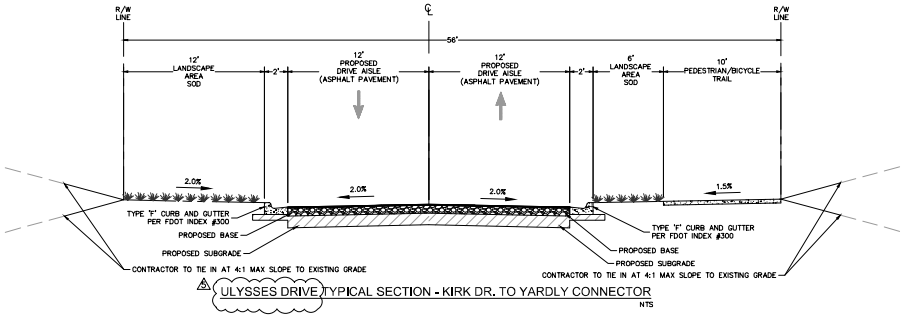
SHEET NUMBER C5.8A

Plotted By: Ramirez, Jason Sheet Set: DELAND TECH PARK Layout: C5.8A December 12, 2025, 10:29:01am K:\ORL_Civil\240418000-Deland Tech Park\CAD\CONSTR\pwSheets\C5.8A.dwg
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KIRK DRIVE TYPICAL SECTION - SOUTH OF PINEHURST DR. TO SR 472

NTS



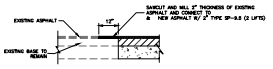
ULYSSES DRIVE TYPICAL SECTION - KIRK DR. TO YARDLY CONNECTOR

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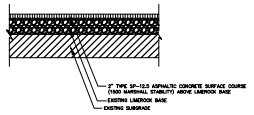
TYPICAL ASPHALT PAVEMENT SECTION FOR PINEHURST AND KIRK DRIVE

NTS



PAVEMENT CONNECTION

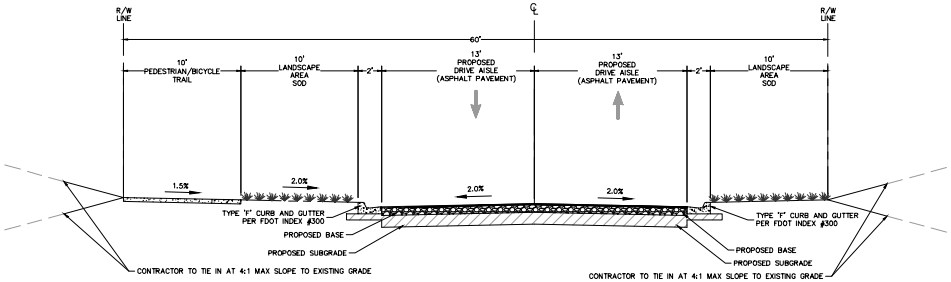
NTS



NOTES:
- MILL EXISTING ASPHALT PAVEMENT 1 1/2-INCH AVERAGE DEPTH
- RESURFACE 1 1/2-INCH ASPHALT SURFACE COURSE (FDOT SUPERPAVE 9.5 TL-C)

TYP. MILL & RESURFACE SECTION

NTS



KIRK DRIVE TYPICAL SECTION - NORTH OF PINEHURST DR. TO CASSADAGA RD.

NTS

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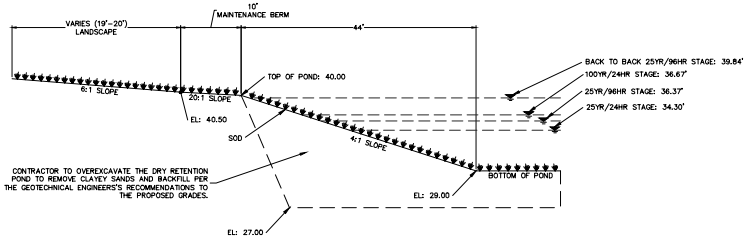
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DELAND TECH PARK
TYPICAL SECTIONS

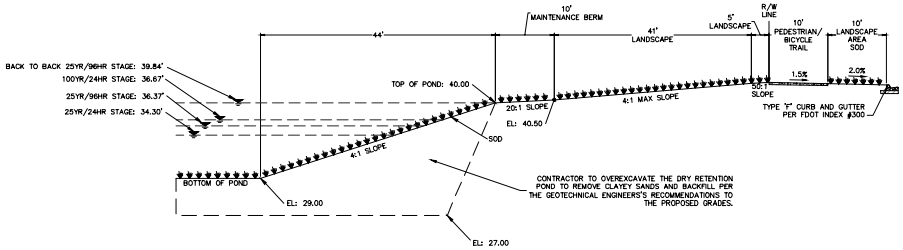
CITY OF DELAND FLORIDA

SHEET NUMBER C5.9

Plotted By: Ramirez, Jason Sheet Set: DELAND TECH PARK Layout: SECTIONS November 03, 2025 - 12:58:27 pm K:\ORL_Civil\240418000-Deland Tech Park\CAD\CIVIL\SheetSet\C5.x-SECT.dwg
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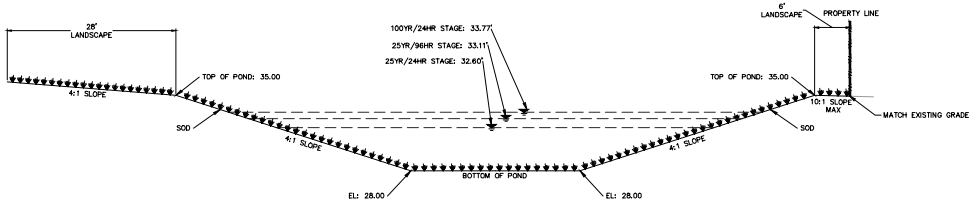


TYPICAL POND SECTION A-A
NTS



TYPICAL POND SECTION B-B
NTS

POND A



TYPICAL POND SECTION E-E
NTS

POND E

Plotted By: Ramirez, Jose; Sheet Set: DELAND TECH PARK; Layout: SECTIONS-SET1; October 22, 2025 - 03:39:14pm; K:\ORL_Civil\249418000-Deland Tech Park\CADD\CIVIL\SET\Sheets\C5.XX-POND-SEC.dwg
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No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

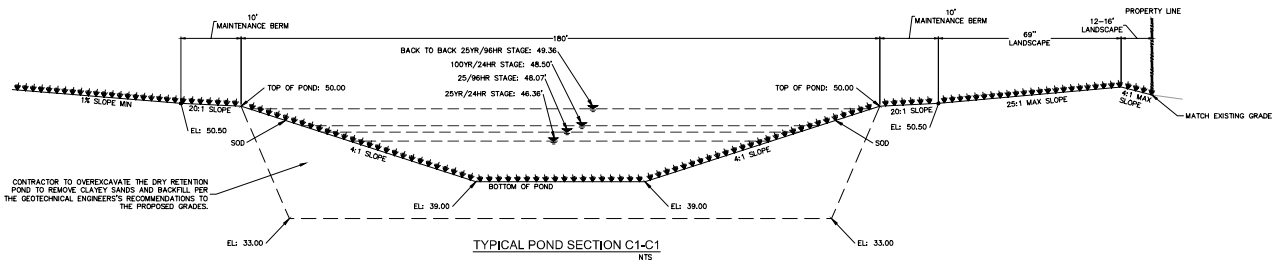
KHA PROJECT
249418000
DATE
10/23/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

POND SECTIONS - RETAIL

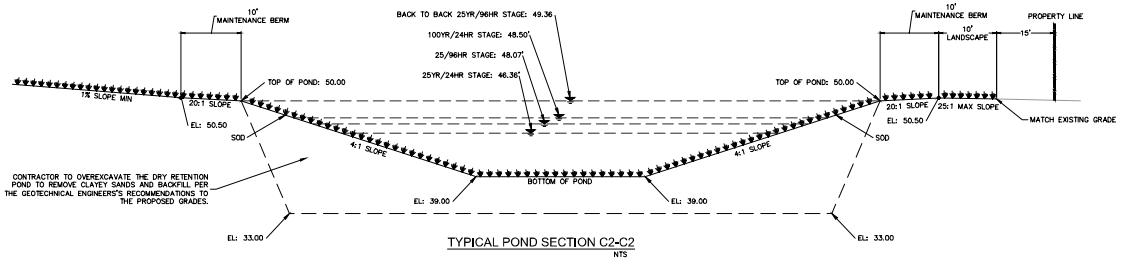
DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C5.10

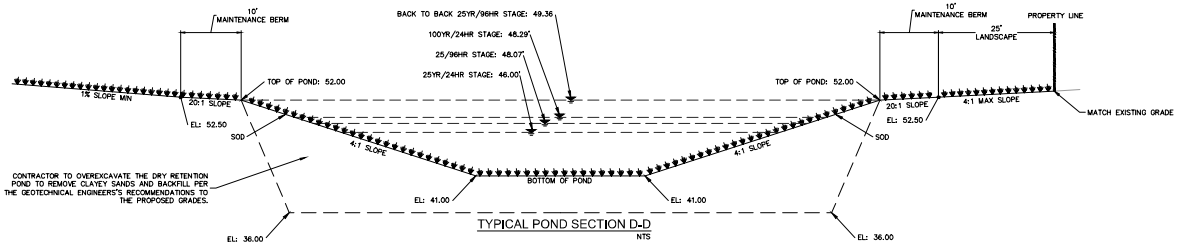


TYPICAL POND SECTION C1-C1
NTS



TYPICAL POND SECTION C2-C2
NTS

POND C



TYPICAL POND SECTION D-D
NTS

POND D

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	08/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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FLORIDA LICENSE NUMBER
60275

KHA PROJECT
240418000
DATE
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

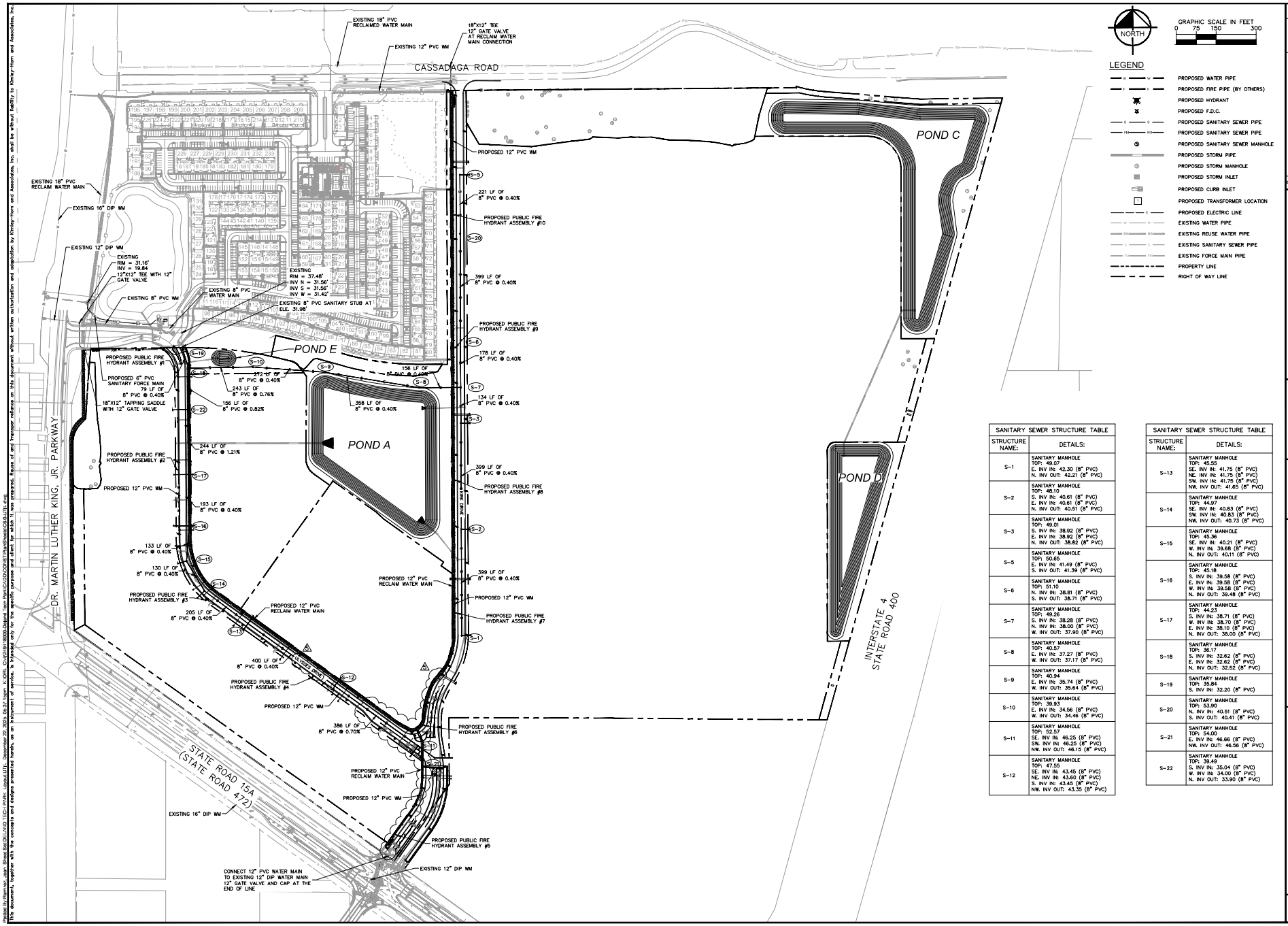
POND SECTIONS - INDUSTRIAL

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C5.11

Plotted By: Spencer Jones Sheet Set: DELAND TECH PARK Layout: SECTIONS-INDUSTRIAL October 22, 2025, 03:39:58pm K:\ORL_Civil\240418000-Deland Tech Park\CAD\CONSTR\SheetSheets\C5.4-POND-INDSEC.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

LEGEND

- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM PIPE
- PROPOSED STORM MANHOLE
- PROPOSED STORM INLET
- PROPOSED CURB INLET
- PROPOSED TRANSFORMER LOCATION
- PROPOSED ELECTRIC LINE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE
- EXISTING FORCE MAIN PIPE
- PROPERTY LINE
- RIGHT OF WAY LINE

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
S-1	SANITARY MANHOLE TOP: 49.07 E. INV IN: 42.30 (8" PVC) N. INV OUT: 42.21 (8" PVC)
S-2	SANITARY MANHOLE TOP: 48.10 S. INV IN: 40.61 (8" PVC) E. INV IN: 40.61 (8" PVC) N. INV OUT: 40.51 (8" PVC)
S-3	SANITARY MANHOLE TOP: 49.01 S. INV IN: 38.92 (8" PVC) E. INV IN: 38.92 (8" PVC) N. INV OUT: 38.82 (8" PVC)
S-5	SANITARY MANHOLE TOP: 50.65 E. INV IN: 41.49 (8" PVC) S. INV OUT: 41.39 (8" PVC)
S-6	SANITARY MANHOLE TOP: 51.10 N. INV IN: 38.81 (8" PVC) S. INV OUT: 38.71 (8" PVC)
S-7	SANITARY MANHOLE TOP: 49.26 N. INV IN: 38.28 (8" PVC) W. INV IN: 38.00 (8" PVC) W. INV OUT: 37.90 (8" PVC)
S-8	SANITARY MANHOLE TOP: 40.57 E. INV IN: 37.27 (8" PVC) W. INV OUT: 37.17 (8" PVC)
S-9	SANITARY MANHOLE TOP: 40.94 E. INV IN: 35.74 (8" PVC) W. INV OUT: 35.64 (8" PVC)
S-10	SANITARY MANHOLE TOP: 39.93 E. INV IN: 34.56 (8" PVC) W. INV OUT: 34.46 (8" PVC)
S-11	SANITARY MANHOLE TOP: 52.57 SE. INV IN: 46.25 (6" PVC) SW. INV IN: 46.25 (8" PVC) NW. INV OUT: 46.15 (8" PVC)
S-12	SANITARY MANHOLE TOP: 47.55 SE. INV IN: 43.45 (6" PVC) NE. INV IN: 43.60 (8" PVC) S. INV IN: 43.45 (8" PVC) NW. INV OUT: 43.35 (8" PVC)

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
S-13	SANITARY MANHOLE TOP: 45.55 SE. INV IN: 41.75 (8" PVC) NE. INV IN: 41.75 (8" PVC) SW. INV IN: 41.75 (8" PVC) NW. INV OUT: 41.65 (8" PVC)
S-14	SANITARY MANHOLE TOP: 44.97 SE. INV IN: 40.83 (8" PVC) SW. INV IN: 40.83 (8" PVC) NW. INV OUT: 40.73 (8" PVC)
S-15	SANITARY MANHOLE TOP: 45.36 SE. INV IN: 40.21 (8" PVC) W. INV IN: 39.68 (8" PVC) N. INV OUT: 40.11 (8" PVC)
S-16	SANITARY MANHOLE TOP: 45.18 S. INV IN: 39.58 (8" PVC) E. INV IN: 39.58 (8" PVC) W. INV IN: 39.58 (8" PVC) N. INV OUT: 39.48 (8" PVC)
S-17	SANITARY MANHOLE TOP: 44.23 S. INV IN: 38.71 (8" PVC) W. INV IN: 38.70 (8" PVC) E. INV IN: 38.10 (8" PVC) N. INV OUT: 38.00 (8" PVC)
S-18	SANITARY MANHOLE TOP: 36.17 S. INV IN: 32.62 (8" PVC) E. INV IN: 32.62 (8" PVC) N. INV OUT: 32.52 (8" PVC)
S-19	SANITARY MANHOLE TOP: 35.84 S. INV IN: 32.20 (8" PVC)
S-20	SANITARY MANHOLE TOP: 53.90 N. INV IN: 40.51 (8" PVC) S. INV OUT: 40.41 (8" PVC)
S-21	SANITARY MANHOLE TOP: 54.00 E. INV IN: 46.66 (8" PVC) NW. INV OUT: 46.56 (8" PVC)
S-22	SANITARY MANHOLE TOP: 39.49 S. INV IN: 35.04 (6" PVC) W. INV IN: 34.00 (8" PVC) N. INV OUT: 33.90 (8" PVC)

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER 80275

KHA PROJECT 240418000
DATE 10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

OVERALL UTILITY PLAN

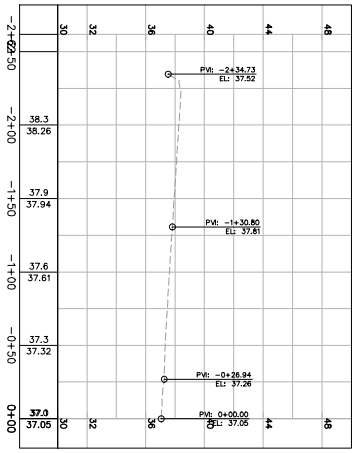
DELAND TECH PARK

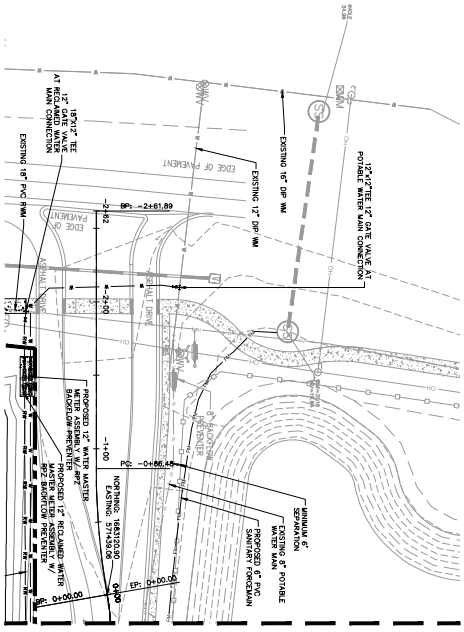
CITY OF DELAND FLORIDA

SHEET NUMBER C6.0

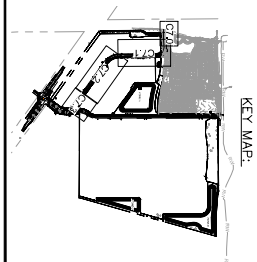
Plotted By: Raymond Jones Sheet Set: DELAND TECH PARK Layout: UTL December 29, 2025 - 05:32:10pm K:\ORL_Civil\240418000\Design\Team Shell\CADD\DOCSET\Shell Sheets\C6.0UTL.dwg
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Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:C7.0 PINCHURST November 03, 2025 01:00:17pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C7.0-PLAN-PROF.dwg
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NOTE:
FOR ALL WATER AND REDRAIN WATER CROSSING SEE DETAIL ON SHEET C8.1. PROVIDE AS-BUILTS FOR EACH CROSSING.

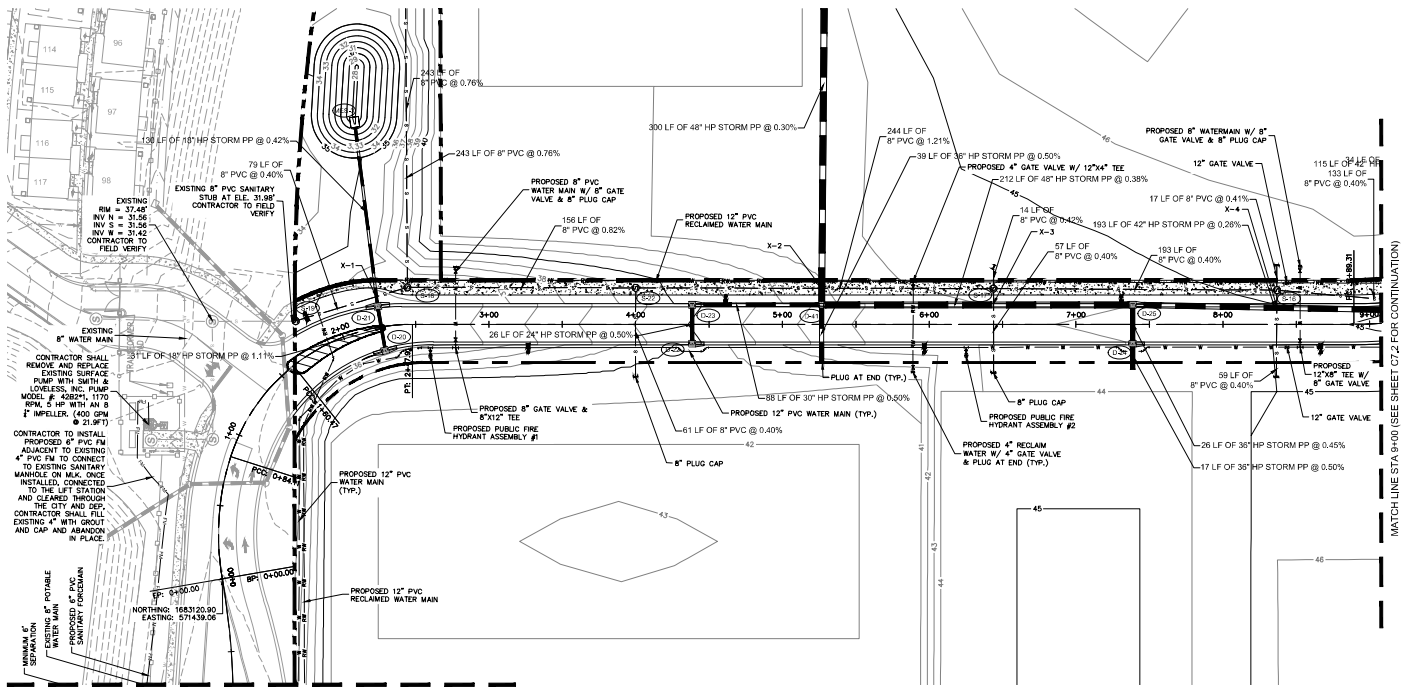


LEGEND
- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE

GRAPHIC SCALE IN FEET
0 20 40 80
NORTH

SHEET NUMBER						
C7.0	DELAND TECH PARK CITY OF DELAND FLORIDA	PLAN AND PROFILE - ULYSSES DRIVE	KHA PROJECT 249418000 DATE 10/27/2025 SCALE AS SHOWN DESIGNED BY — DRAWN BY — CHECKED BY —	JEFFREY R. SWISHER, P.E. FLORIDA LICENSE NUMBER 60275	Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL 32801 PHONE: (407) 898-1511 WWW.KIMLEY-HORN.COM CA-00000696	

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR
5	REVISED PER DESIGN	11/03/25	JOR



LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE
- EXISTING FORCE MAIN PIPE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

SANITARY CROSSING TABLE

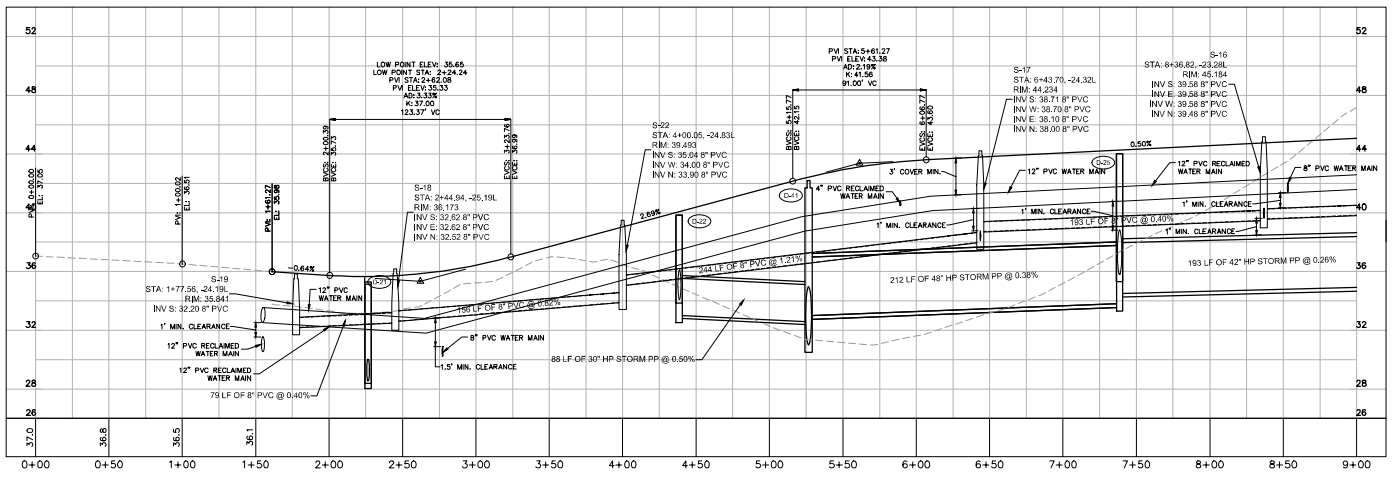
X-1	BOTTOM OF SANITARY: 32.94' TOP OF 18" HP STORM: 30.16' CLEARANCE: 2.78'
X-2	BOTTOM OF SANITARY: 36.55' TOP OF 48" HP STORM: 35.18' CLEARANCE: 1.37'
X-3	BOTTOM OF SANITARY: 38.73' TOP OF 48" HP STORM: 37.66' CLEARANCE: 1.06'
X-4	BOTTOM OF SANITARY: 39.61' TOP OF 48" HP STORM: 38.48' CLEARANCE: 1.13'

NOTE:
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL W420 ON SHEET C8.1. CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

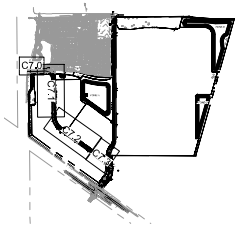
STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D-20	STA: 2+26.59 (16.33 R) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 35.13 E. INV OUT: 28.89 (18" HP STORM PP)
D-21	STA: 2+26.57 (--14.24 L) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 35.28 W. INV IN: 28.55 (18" HP STORM PP) E. INV OUT: 28.55 (18" HP STORM PP)
D-22	STA: 4+38.56 (13.22 R) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 39.84 E. INV OUT: 34.35 (24" HP STORM PP)
D-23	STA: 4+38.58 (--13.26 L) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 39.84 W. INV IN: 34.22 (24" HP STORM PP) S. INV OUT: 33.03 (30" HP STORM PP)
D-24	STA: 7+38.61 (13.22 R) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 44.02 W. INV IN: 35.80 (36" HP STORM PP) E. INV OUT: 35.80 (36" HP STORM PP)
D-25	STA: 7+38.63 (--13.25 L) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 44.02 W. INV IN: 35.68 (36" HP STORM PP) S. INV IN: 34.50 (42" HP STORM PP) N. INV OUT: 33.80 (48" HP STORM PP)
D-41	STA: 5+26.54 (--13.25 L) TYPE "J7" MANHOLE PER FDOT INDEX #425-010 EOP: 42.20 S. INV IN: 33.00 (48" HP STORM PP) N. INV IN: 32.59 (30" HP STORM PP) W. INV IN: 31.00 (36" HP STORM PP) E. INV OUT: 31.00 (48" HP STORM PP)
MES-3	STA: 2+28.99 (--143.96 L) MITERED END SECTION PER FDOT INDEX #430-021 EOP: 29.63 W. INV IN: 28.00 (18" HP STORM PP)

NOTE:
TOP OF STRUCTURES ARE 4.5' ABOVE THE EOP.



KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

KHA PROJECT 240418000
DATE 10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

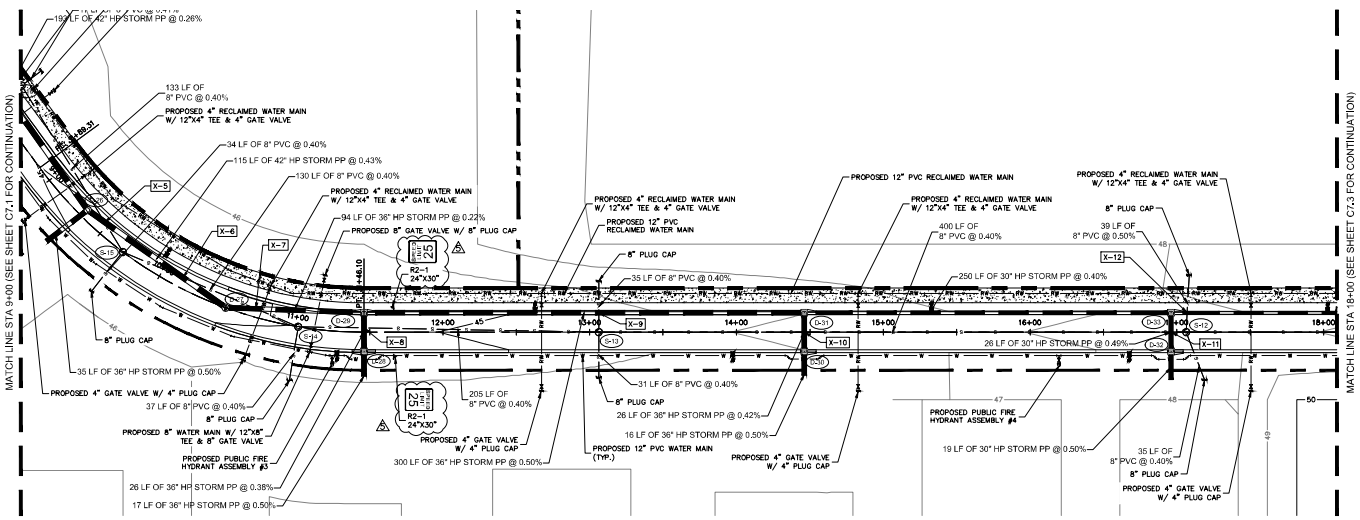
PLAN AND PROFILE - ULYSSES DRIVE

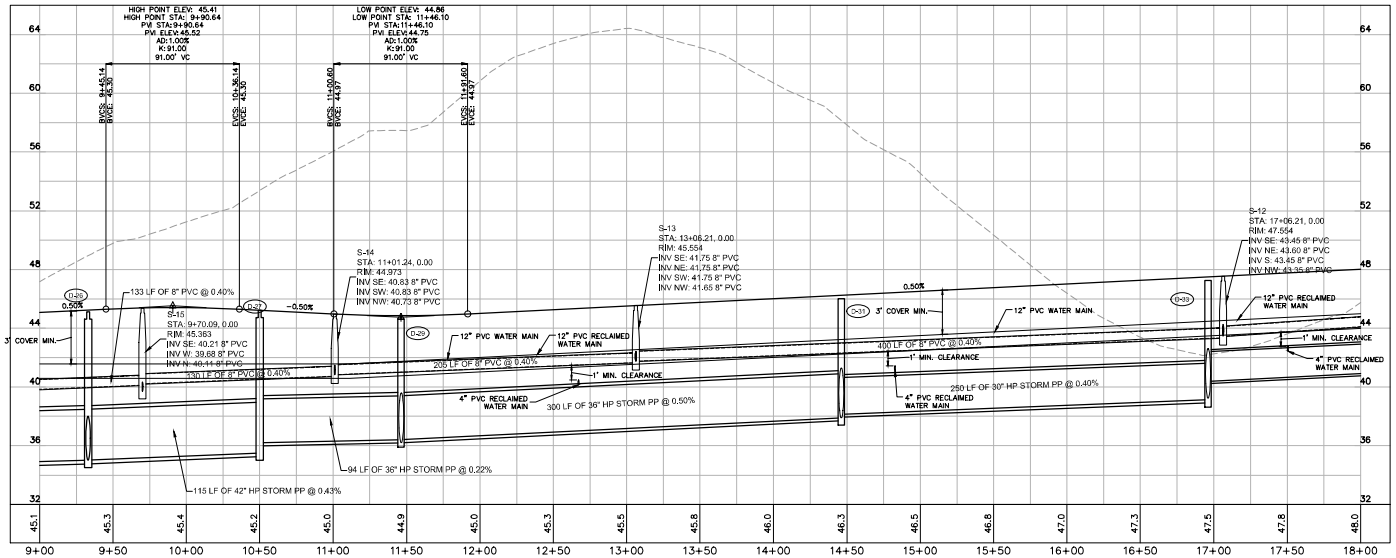
DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C7.1

Plotted By: Spencer Jones Sheet Set: DELAND TECH PARK Layout: C7.1 PAVEMENT LIMIT Date: December 22, 2025 - 09:42:38am K:\ORL_Civil\240418000-Orchard Trails Park\CAD\CONSTR\SheetSheets\C7.0x24_ALL-SHOC.dwg
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LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

SANITARY CROSSING TABLE

X-5	BOTTOM OF SANITARY: 39.99' TOP OF 42" HP STORM: 38.78' CLEARANCE: 1.21'
X-6	BOTTOM OF SANITARY: 40.37' TOP OF 42" HP STORM: 39.07' CLEARANCE: 1.30'
X-7	BOTTOM OF SANITARY: 40.58' TOP OF 36" HP STORM: 39.45' CLEARANCE: 1.13'
X-8	BOTTOM OF SANITARY: 40.99' TOP OF 36" HP STORM: 39.75' CLEARANCE: 1.24'
X-9	BOTTOM OF SANITARY: 41.78' TOP OF 18" HP STORM: 40.42' CLEARANCE: 1.36'
X-10	BOTTOM OF SANITARY: 42.29' TOP OF 36" HP STORM: 41.26' CLEARANCE: 1.03'
X-11	BOTTOM OF SANITARY: 43.29' TOP OF 30" HP STORM: 42.26' CLEARANCE: 1.03'
X-12	BOTTOM OF SANITARY: 43.64' TOP OF 30" HP STORM: 42.60' CLEARANCE: 1.05'

NOTE:

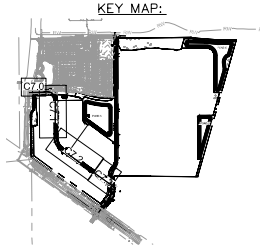
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL W&DO ON SHEET C8.1. CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D-26	STA: 9+32.97 (-5.96 L) TYPE "J7" MANHOLE PER FDOT INDEX #425-010 EOP: 45.12 S. INV IN: 35.00 (42" HP STORM PP) W. INV IN: 35.00 (36" HP STORM PP) N. INV OUT: 35.00 (42" HP STORM PP)
D-27	STA: 10+50.00 (0.00) TYPE "J7" MANHOLE PER FDOT INDEX #425-010 EOP: 45.23 SE. INV IN: 36.19 (36" HP STORM PP) N. INV OUT: 35.50 (42" HP STORM PP)
D-28	STA: 11+46.10 (13.25 R) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 44.62 SW. INV IN: 36.60 (36" HP STORM PP) NE. INV OUT: 36.60 (36" HP STORM PP)
D-29	STA: 11+46.10 (-13.25 L) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 44.62 SW. INV IN: 36.50 (36" HP STORM PP) SE. INV IN: 36.40 (36" HP STORM PP) NW. INV OUT: 36.40 (36" HP STORM PP)
D-30	STA: 14+46.10 (13.24 R) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 46.01 SW. INV IN: 38.20 (36" HP STORM PP) NE. INV OUT: 38.10 (36" HP STORM PP)
D-31	STA: 14+46.10 (-13.25 L) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 46.01 SE. INV IN: 38.13 (30" HP STORM PP) SW. INV IN: 37.99 (36" HP STORM PP) NW. INV OUT: 37.90 (36" HP STORM PP)
D-32	STA: 16+96.10 (13.25 R) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 47.26 SW. INV IN: 39.62 (30" HP STORM PP) NE. INV OUT: 39.62 (30" HP STORM PP)
D-33	STA: 16+96.10 (-13.23 L) TYPE "5" CURB INLET PER FDOT INDEX #425-021 EOP: 47.26 SE. INV IN: 40.38 (24" HP STORM PP) SW. INV IN: 39.49 (30" HP STORM PP) NW. INV OUT: 39.12 (30" HP STORM PP)

NOTE:
TOP OF STRUCTURES ARE 4.5" ABOVE THE EOP.

KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

KHA PROJECT
240418000
DATE
10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

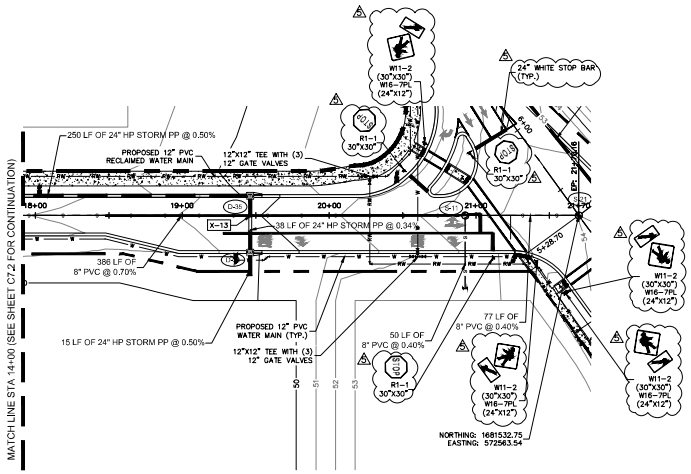
PLAN AND PROFILE - ULYSSES DRIVE

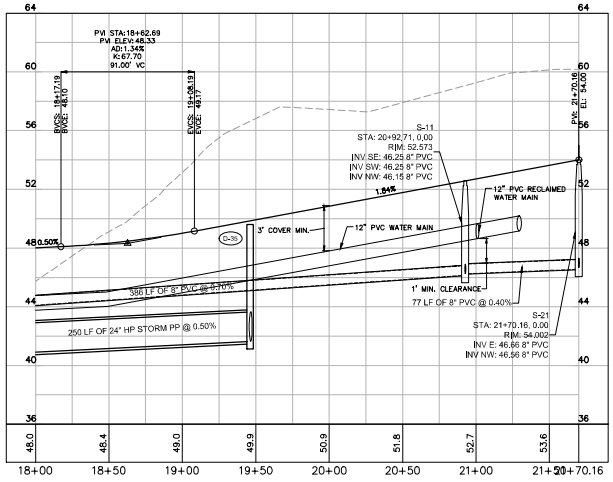
DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C7.2

Plotted By: Brennan, Jason Sheet Set: DELAND TECH PARK Layout: C7.2 PHOTOLABEL December 22, 2025 - 8:43:58am K:\ORL_Civil\240418000-Orland Tech Park\CADD\CONST\SheetSheets\C7.0x24.44x30DC.dwg
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LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE
- EXISTING FORCE MAIN PIPE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

SANITARY CROSSING TABLE

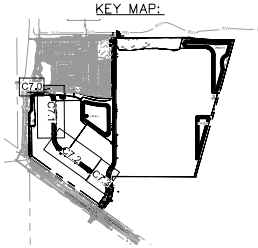
X-13 BOTTOM OF SANITARY: 45.10'
TOP OF 16" HP STORM: 44.10'
CLEARANCE: 1.00'

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-34	STA: 19+46.10 (25.25 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 49.39 SW. INV IN: 42.00 (24" HP STORM PP) NE. INV OUT: 42.00 (24" HP STORM PP)
D-35	STA: 19+46.10 (-13.23 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 49.63 SW. INV IN: 41.87 (24" HP STORM PP) NW. INV OUT: 41.63 (24" HP STORM PP)

NOTE:
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL W420 ON SHEET CB.1. CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

NOTE:
TOP OF STRUCTURES ARE 4.5" ABOVE THE EOP.

KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/09/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR
5	REVISED PER DESIGN	11/03/25	JDR

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WWW.KIMLEY-HORN.COM CA-00000696

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
80275

KHA PROJECT
240418000
DATE
10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

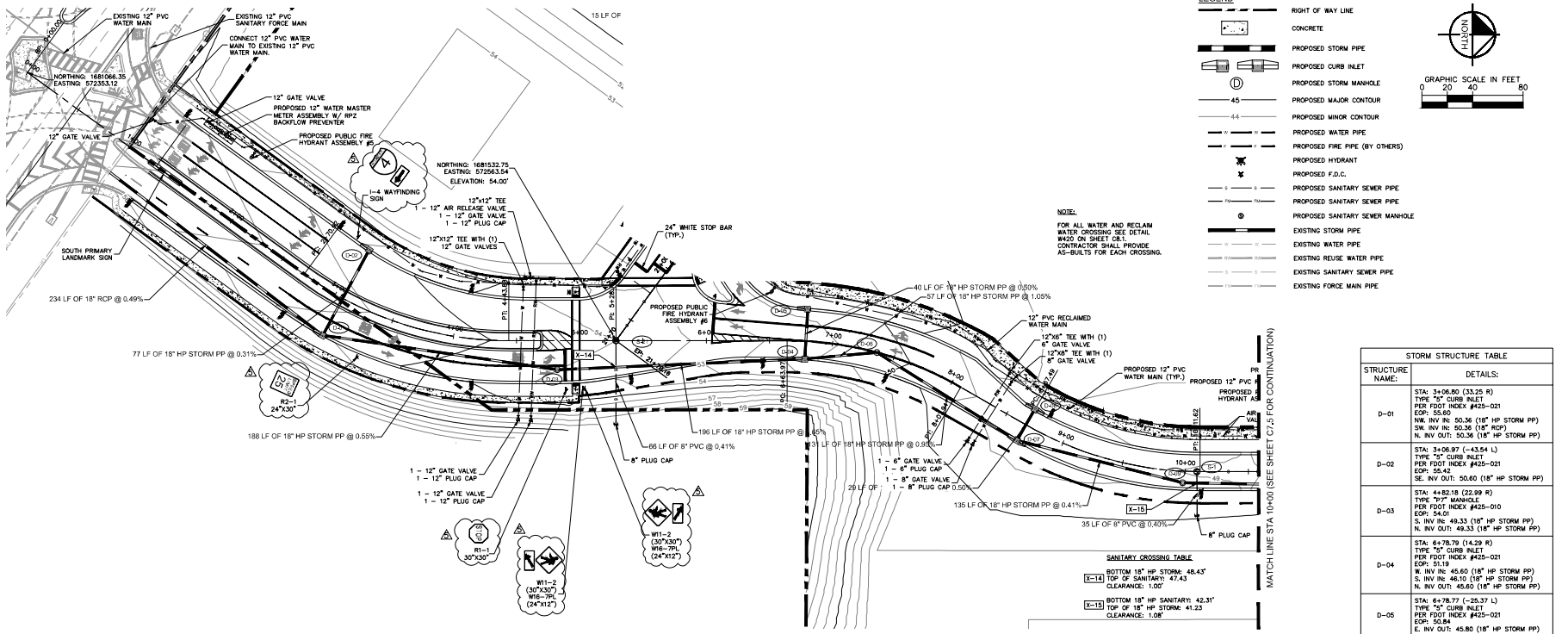
PLAN AND PROFILE - ULYSSES DRIVE

DELAND TECH PARK

CITY OF DELAND FLORIDA

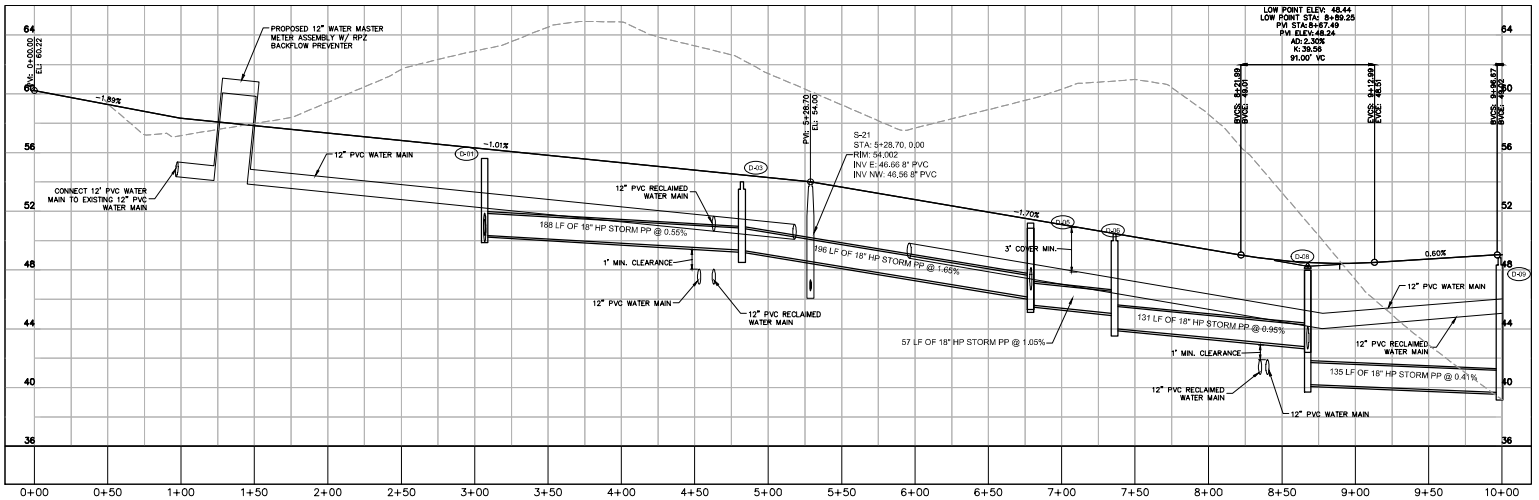
SHEET NUMBER
C7.3

Plotted By: Raynes, Jason Sheet Set: DELAND TECH PARK Layout: C7.3 PHASE1.LAST Date: December 22, 2025 - 8:43:53am K:\ORL_Civil\240418000-Orland Tech Park\CADD\CONSTR\SheetSet\C7.0-7.4 ALIGNDC.dwg
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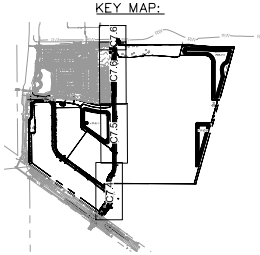


STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D-01	STA: 3+06.80 (33.25 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 55.60 NW. INV IN: 50.36 (18" HP STORM PP) SW. INV IN: 50.36 (18" RCP) N. INV OUT: 50.36 (18" HP STORM PP)
D-02	STA: 3+06.97 (-43.54 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 55.42 SE. INV OUT: 50.60 (18" HP STORM PP)
D-03	STA: 4+82.18 (22.99 R) TYPE "P7" MANHOLE PER FDOT INDEX #425-010 EOP: 54.01 S. INV IN: 49.33 (18" HP STORM PP) N. INV OUT: 49.33 (18" HP STORM PP)
D-04	STA: 6+78.79 (14.29 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 51.19 W. INV IN: 45.60 (18" HP STORM PP) S. INV IN: 46.10 (18" HP STORM PP) N. INV OUT: 45.60 (18" HP STORM PP)
D-05	STA: 6+78.77 (-25.37 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 50.84 E. INV OUT: 45.80 (18" HP STORM PP)
D-06	STA: 7+35.95 (0.00) TYPE "P7" MANHOLE PER FDOT INDEX #425-010 EOP: 50.48 S. INV IN: 45.00 (18" HP STORM PP) NE. INV OUT: 44.00 (18" HP STORM PP)
D-07	STA: 8+67.47 (14.28 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 47.98 NW. INV IN: 42.76 (18" HP STORM PP) SW. INV IN: 42.76 (18" HP STORM PP) N. INV OUT: 40.20 (18" HP STORM PP)
D-08	STA: 8+67.49 (-14.27 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 47.98 SE. INV OUT: 42.90 (18" HP STORM PP)
D-09	STA: 9+98.29 (9.12 R) TYPE "P7" MANHOLE PER FDOT INDEX #425-010 EOP: 48.84 S. INV IN: 39.65 (18" HP STORM PP) N. INV OUT: 39.65 (18" HP STORM PP)

NOTE:
TOP OF STRUCTURES ARE 4.5' ABOVE THE EOP.



KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER 80275

KHA PROJECT 240418000
DATE 10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

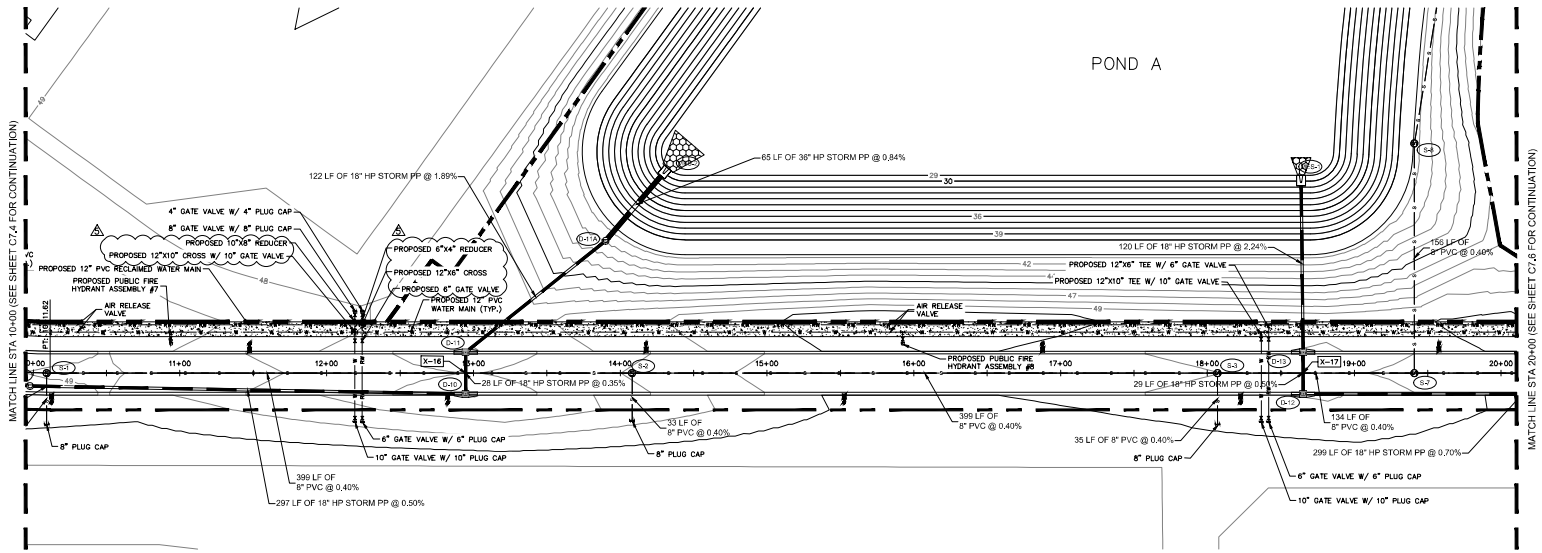
PLAN AND PROFILE - KIRK DRIVE

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C7.4

Plotted By: Spencer Jones Sheet Set: DELAND TECH PARK Layout: C7.4 KIRK (December 23, 2025 - 09:43:42am) K:\ORL_Civil\240418000\Deland Tech Park\CAD\CONSTR\engSheets\C7.4 KIRK.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE

SANITARY CROSSING TABLE

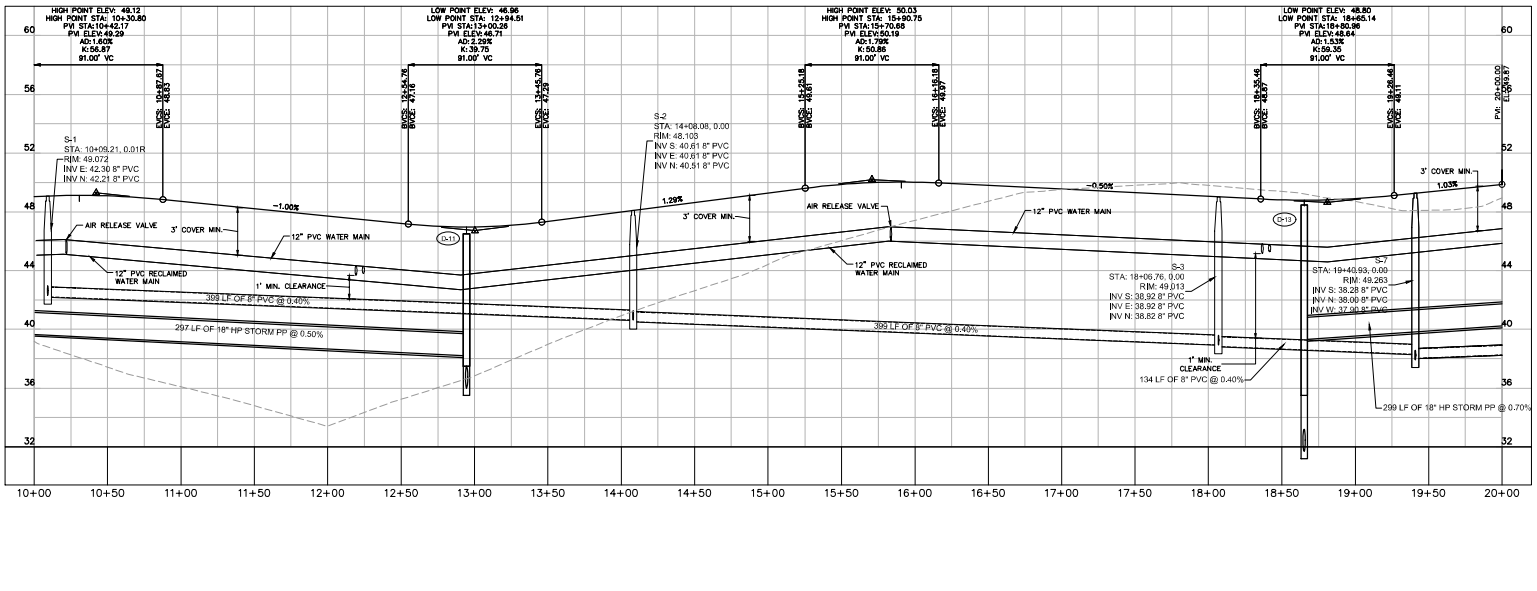
X-16	BOTTOM OF SANITARY: 41.04' TOP OF 18" HP STORM: 39.58' CLEARANCE: 1.46'
X-17	BOTTOM OF SANITARY: 38.56' TOP OF 18" HP STORM: 37.56' CLEARANCE: 1.00'

NOTE:
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL #420 ON SHEET C8.1. CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

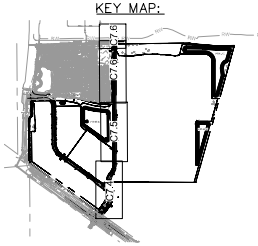
STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D-10	STA: 12+94.52 (14.18 R) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.51 S. INV IN: 38.18 (18" HP STORM PP) W. INV OUT: 38.00 (18" HP STORM PP)
D-11	STA: 12+94.52 (−14.25 L) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.51 E. INV IN: 37.90 (18" HP STORM PP) NW. INV OUT: 36.00 (18" HP STORM PP)
D-11A	STA: 13+90.01 (−90.03 L) TYPE "P7" MANHOLE PER FDOT INDEX #425-010 EOP: 42.00 SE. INV IN: 33.70 (18" HP STORM PP) W. INV OUT: 29.55 (36" HP STORM PP)
D-12	STA: 18+65.14 (14.23 R) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.46 N. INV IN: 39.28 (18" HP STORM PP) W. INV OUT: 36.00 (18" HP STORM PP)
D-13	STA: 18+65.14 (−14.28 L) TYPE "6" CURB INLET PER FDOT INDEX #425-021 EOP: 46.46 E. INV IN: 35.86 (18" HP STORM PP) W. INV OUT: 31.70 (18" HP STORM PP)
MES-1	STA: 18+63.68 (−134.64 L) MITERED END SECTION PER FDOT INDEX #430-021 EOP: 30.63 E. INV IN: 29.00 (18" HP STORM PP)
MES-2	STA: 14+32.44 (−139.62 L) MITERED END SECTION PER FDOT INDEX #430-022 EOP: 32.22 SE. INV IN: 29.00 (36" HP STORM PP)

NOTE:
TOP OF STRUCTURES ARE 4.5' ABOVE THE EOP.



KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/7/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/09/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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PHONE: 407 898-1511
WWW.KIMLEY-HORN.COM CA-00000696

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
80275

KHA PROJECT
240418000
DATE
10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

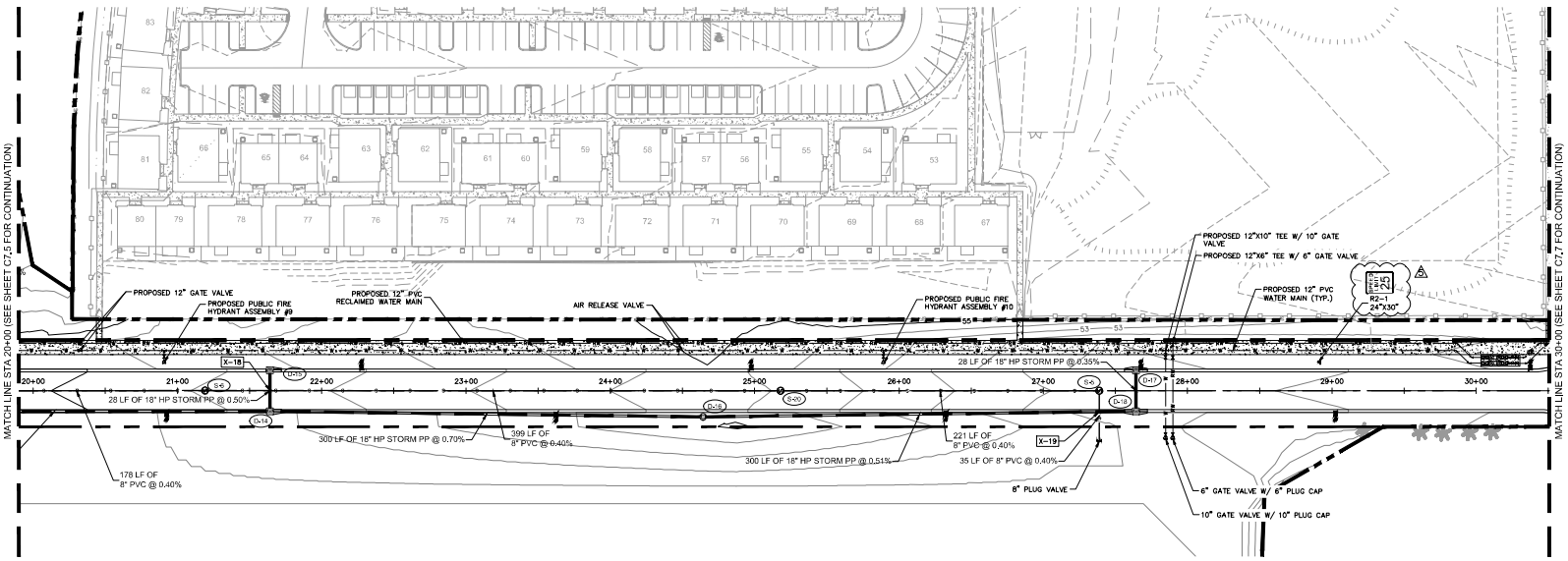
PLAN AND PROFILE - KIRK DRIVE

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER
C7.5

Plotted By: Barrows, Jason Sheet Set: DELAND TECH PARK Layout: C7.5 KIRK Drawing: K:\ORL_Civil\240418000\Deland Tech Park\CAD\CONSTR\dwg\Sheets\C7.5 PLAN AND PROF.dwg
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NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

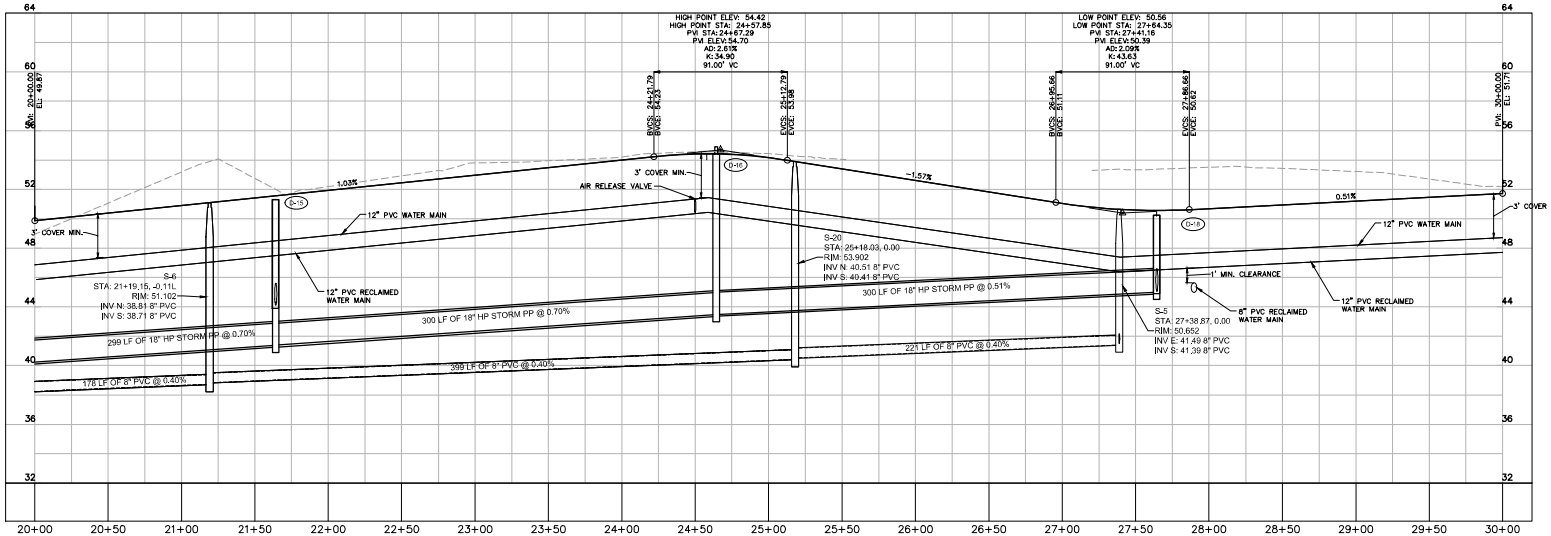
LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED STORM PIPE
- PROPOSED CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING REUSE WATER PIPE
- EXISTING SANITARY SEWER PIPE

NOTE:
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL WA20 ON SHEET C8.1. CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

SANITARY CROSSING TABLE

X-18	BOTTOM OF 18" STORM: 44.18' TOP OF SANITARY: 39.68' CLEARANCE: 4.50'
X-19	BOTTOM OF 18 HP STORM: 44.74' TOP OF SANITARY: 42.24' CLEARANCE: 2.50'

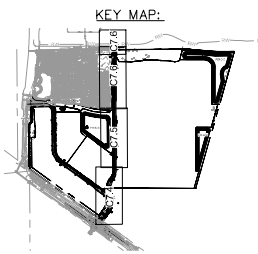


STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D-14	STA: 21+64.14 (14.23 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 51.31 W. INV IN: 44.24 (18" HP STORM PP) N. INV IN: 41.38 (18" HP STORM PP) S. INV OUT: 41.38 (18" HP STORM PP)
D-15	STA: 21+64.09 (-14.23 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 51.31 E. INV OUT: 44.38 (18" HP STORM PP)
D-16	STA: 24+64.32 (18.12 R) TYPE "P-7" MANHOLE PER FDOT INDEX #425-010 EOP: 54.90 N. INV IN: 43.46 (18" HP STORM PP) S. INV OUT: 43.46 (18" HP STORM PP)
D-17	STA: 27+64.35 (-14.24 L) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 50.25 E. INV OUT: 45.40 (18" HP STORM PP)
D-18	STA: 27+64.35 (14.24 R) TYPE "S" CURB INLET PER FDOT INDEX #425-021 EOP: 50.25 W. INV IN: 45.30 (18" HP STORM PP) S. INV OUT: 45.00 (18" HP STORM PP)

NOTE:
TOP OF STRUCTURES ARE 4.5" ABOVE THE EOP.

KEY MAP:



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/27/25	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	06/05/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
80275

KHA PROJECT
240418000
DATE
10/27/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

PLAN AND PROFILE - KIRK DRIVE

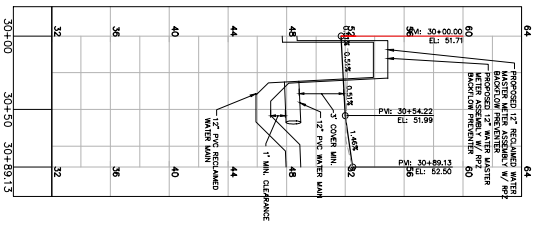
DELAND TECH PARK

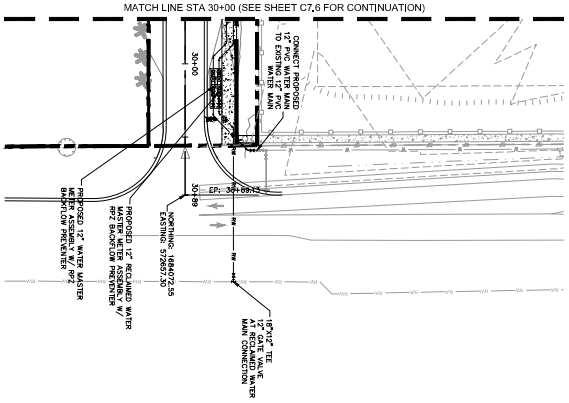
CITY OF DELAND FLORIDA

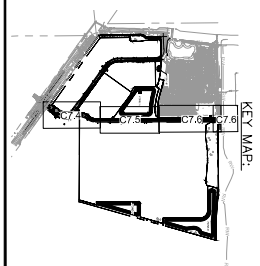
SHEET NUMBER
C7.6

Plotted By: Brennan, Jason Sheet Set: DELAND TECH PARK Layout: C7.6 KIRK (December 23, 2025 - 04:43:28pm) K:\ORL_Civil\240418000\Deland Tech Park\CAD\CONSTR\dgn\Sheets\C7.6-PLAN-PROF.dwg
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Plotted By:Ramirez, Joan Sheet Set:DELAND TECH PARK Layout:C7.7 KIRK December 22, 2025 09:44:46pm K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONST\PlanSheets\C7.0-PLAN-PROF.dwg
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NOTE:
FOR ALL WATER AND RECLAIM WATER CROSSING SEE DETAIL MANUAL, CONTRACTOR SHALL PROVIDE AS-BUILTS FOR EACH CROSSING.

LEGEND

- RIGHT OF WAY LINE
- CONCRETE
- PROPOSED CURB INLET
- PROPOSED STORM PIPE
- PROPOSED STORM MANHOLE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER PIPE
- PROPOSED FIRE PIPE (BY OTHERS)
- PROPOSED HYDRANT
- PROPOSED F.D.C.
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING STORM PIPE
- EXISTING WATER PIPE
- EXISTING RECLAIM WATER PIPE
- EXISTING SANITARY SEWER PIPE

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

SHEET NUMBER	DELAND TECH PARK	PLAN AND PROFILE - KIRK DRIVE	KHA PROJECT 249418000
C7.7	CITY OF DELAND FLORIDA		DATE 10/27/2025
			SCALE AS SHOWN
			DESIGNED BY —
			DRAWN BY —
			CHECKED BY —

JEFFREY R. SWISHER, P.E.
FLORIDA LICENSE NUMBER
60275

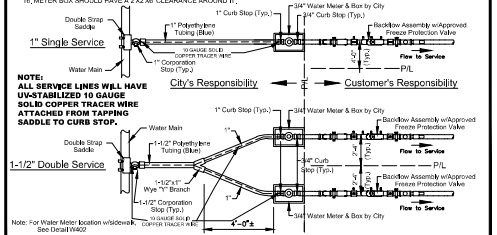
Kimley»Horn

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200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL 32801
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM CA-00000696

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

Plotted By: Ramirez, Jose Street Set: DELAND TECH PARK Layout: C8.0 CITY OF DELAND DETAILS October 22, 2025 - 09:43:40am K:\ORL_Civil\249418000\Design\Detail Tech Park\CAD\CONST\SheetSheets\C8.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT, AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER PVC MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO ANY MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. FREEZE PROTECTION VALVE, SHALL BE "COMBRACO" 4XLF000PPVGF.
12. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
13. ALL BRASS FITTINGS SHALL BE LEAD FREE.
14. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
15. PLAYINGS AND OBSTRUCTIONS SHOULD BE AVOIDED WITHIN 3 FT. RADIUS FOR SERVICE ACTIVITY.
16. METER BOX SHOULD HAVE A 2'X2'X6" CLEARANCE AROUND IT.



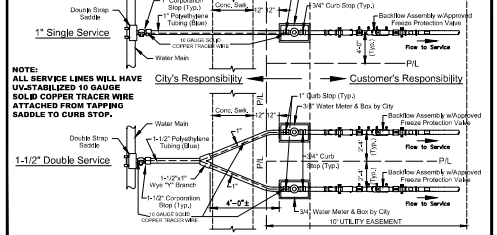
NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE SOLID COPPER TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

City's Responsibility — Customer's Responsibility

DATE: 12/30/2024 **WATER MAIN SERVICE CONNECTION (BACKFLOW)** W401

City of DeLand - Standard Details

NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT, AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER PVC MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO ANY MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. FREEZE PROTECTION VALVE, SHALL BE "COMBRACO" 6XLF000PPVGF.
12. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
13. ALL BRASS FITTINGS SHALL BE LEAD FREE.
14. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS
15. METER BOX SHOULD HAVE A 2'x2'x6" CLEARANCE AROUND IT.

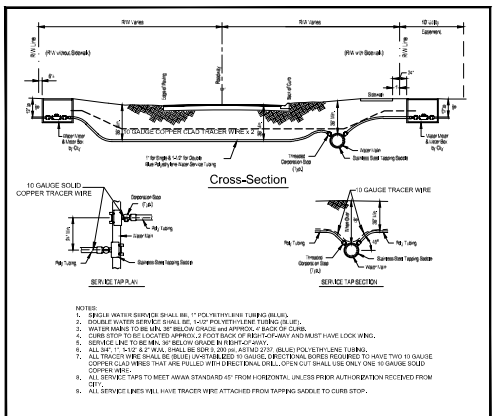


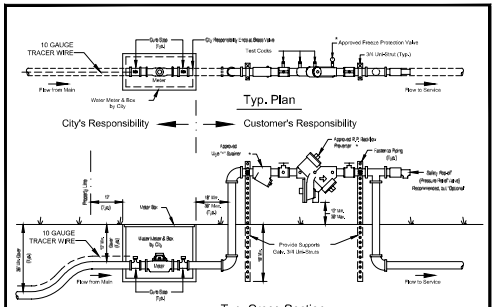
NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE SOLID COPPER TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

City's Responsibility — Customer's Responsibility

DATE: 12/30/2024 **WATER MAIN SERVICE CONNECTION WITH SIDEWALK (BACKFLOW)** W402

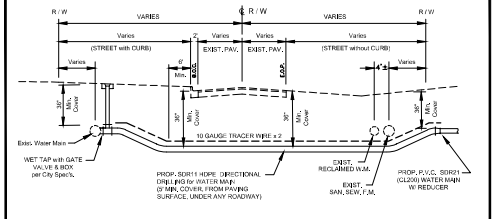
City of DeLand - Standard Details


R/W Varies
R/W Line
(R/W w/out Sidewalk)
(R/W w/in Side-walk)
10 Utility Easement
Sidewalk
Roadway
Gutter Pan
Curb & Gutter
Edge of Pavement
Back of Curb
Finished Grade
Top of Curb
Flow Line
Subgrade
Base
Type S Asphalt
Type B Asphalt
Type III Asphalt
Type SP Asphalt
Type SP Asphalt
Type SP



DATE: 12/30/2024 **WATER METER & BACKFLOW ASSEMBLY - 1" THRU 2-1/2" MODELS** W411

City of DeLand - Standard Details



Notes:
1. Directional bores from 1-3 inches diameter must be a minimum of 36 inches in depth below edge of pavement.
2. Directional bores, 4 inches or greater, must be 10 times the diameter of the bore/backreamer, whichever diameter is greater, in depth, below edge of pavement and to extend a minimum of 6 feet beyond the edge of pavement, either side.
3. Any/All directional bore affiliated drill mud/slurry must be cleaned/reclaimed from right of way/bore pits and disposed of an approved off-site location.
4. All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two copper clad 10 gauge wires that are pulled with directional drill. Open cut shall use only one 10 gauge solid copper wire.
5. No directional bores on Fridays, Weekends or Holidays. Pull backs are allowed.
6. Steel clad copper wire for main lines only: transition to solid copper wire with water proof connector pulled into valve can.

NOTE: Tie Exist. Water Service Lines into New Water Main as per City Specifications.

DATE: 12/30/2024 **DIRECTIONAL BORE** W415

City of DeLand - Standard Details

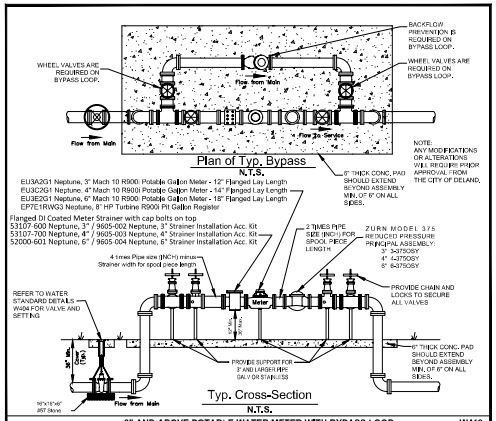
LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossing (Full Joint Centered)
Storm Sewer Stormwater Force Main, Reclaimed Water (2)	WATER MAIN — 3 ft. minimum	WATER MAIN — 12 Inches is the minimum except for storm sewer,then 6 Inches is the minimum and 12 Inches is preferred	Alternate 3' ft. minimum — WATER MAIN
Vacuum Sanitary Sewer	WATER MAIN — 10 ft. preferred 3 ft. minimum	WATER MAIN — 12 Inches preferred 6 Inches minimum	Alternate 3' ft. minimum — WATER MAIN
Gravity Sewer Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	WATER MAIN — 10 ft. preferred 6 ft. minimum (3)	WATER MAIN — 12 Inches is the minimum except for gravity sewer,then 6 Inches is the minimum and 12 Inches is preferred	Alternate 6' ft. minimum — WATER MAIN
On-Site Sewage Treatment & Disposal System(4)	10 ft minimum	---	---

(1) Water Main Should Cross Above other pipe. When Water Main Must Be Below Other Pipe,the Minimum Separation Is 12" Inches.
(2) Reclaimed Water Regulated Under Part II of chapter 62-610, F.A.C.
(3) 3 Ft. for Gravity Sanitary sewer where the Bottom of the Water Main Is laid at least 6 Inches above the top of gravity sanitary sewer.
(4) Reclaimed water not regulated under Part II of Chapter 62-160, F.A.C.

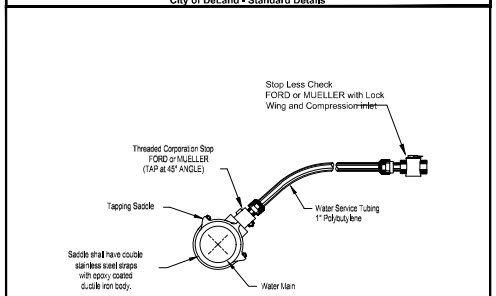
DATE: 12/30/2024 **WATER PIPE SEPERATION REQUIREMENTS** W420

City of DeLand - Standard Details



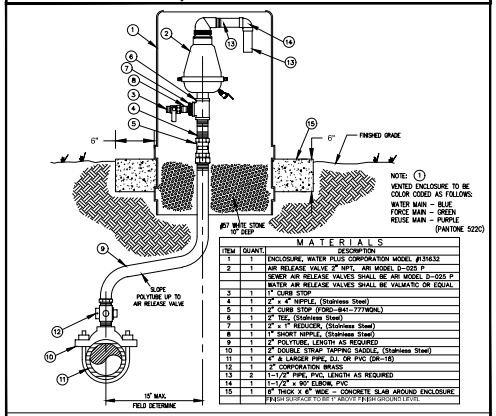
DATE: 12/30/2024 **3" AND ABOVE POTABLE WATER METER WITH BYPASS LOOP** W412

City of DeLand - Standard Details



DATE: 12/30/2024 **CHLORINATION TAP** W416

City of DeLand - Standard Details



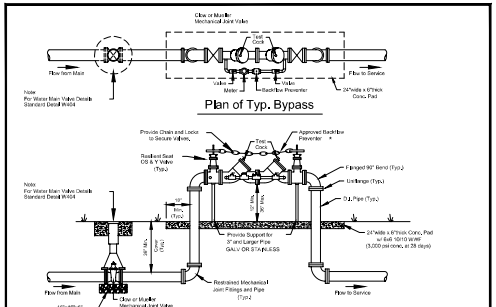
NOTE: (1) VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS: WATER MAIN – BLUE FORCE MAIN – GREEN REUSE MAIN – PURPLE (PANTONE 522C)

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #13632
2	1	AIR RELEASE VALVE 2" NPT, AIR MODEL D-025 P SEWER AIR RELEASE VALVES SHALL BE AIR MODEL D-025 P WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD--844--777WHL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, (Stainless Steel)
11	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
12	1	2" CORPORATION BRASS
13	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1-1/2" x 90° ELBOW, PVC
15	1	6" THICK X 6' WIDE – CONCRETE SLAB AROUND ENCLOSURE FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL

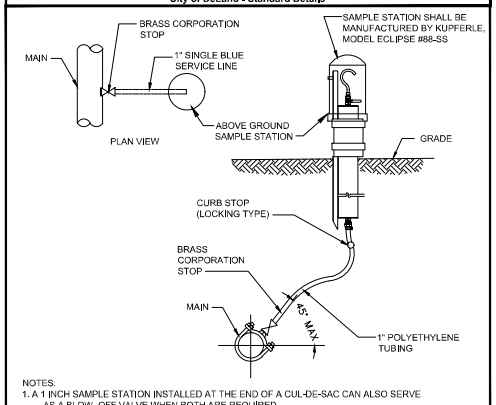
DATE: 12/30/2024 **OFFSET AIR RELEASE VALVE** W421

City of DeLand - Standard Details



DATE: 12/30/2024 **DOUBLE DETECTOR CHECK VALVE ASSEMBLY - 4" THRU 12"** W413

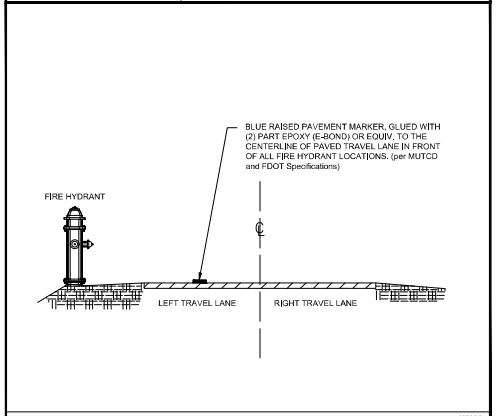
City of DeLand - Standard Details



NOTES:
1. A 1 INCH SAMPLE STATION INSTALLED AT THE END OF A CUL-DE-SAC CAN ALSO SERVE AS A BLOW-OFF VALVE WHEN BOTH ARE REQUIRED.

DATE: 12/30/2024 **WATER SAMPLE STATION** W419

City of DeLand - Standard Details



DATE: 12/30/2024 **REFLECTIVE PAVEMENT MARKER FOR FIRE HYDRANT LOCATION** W423

City of DeLand - Standard Details

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/7/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

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KHA PROJECT 240418000
DATE 09/29/2025
SCALE AS SHOWN
DESIGNED BY ---
DRAWN BY ---
CHECKED BY ---

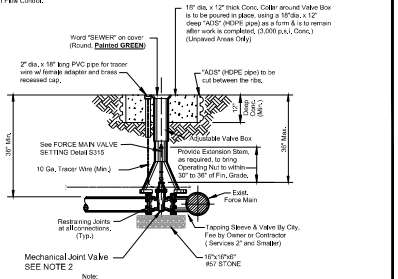
CITY OF DELAND DETAILS

DELAND TECH PARK

CITY OF DELAND FLORIDA

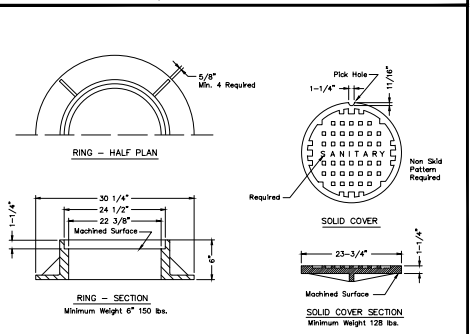
SHEET NUMBER C8.1

Plotted By: Raymond Jones Sheet Set: DELAND TECH PARK Layout: C8.1 CITY OF DELAND DETAILS October 22, 2025 - 09:43:48am K:\ORL_Civil\240418000-Deland Tech Park\CAD\CONSTR\SheetSheets\C8.0-DETAILS.dwg
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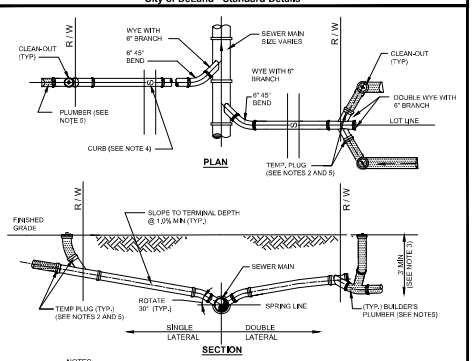
DATE: 12/30/2024 **FORCE MAIN TAPPING SLEEVE & VALVE** S407

City of DeLand - Standard Details



DATE: 12/30/2024 **SANITARY MANHOLE COVER - USF 170-E** S301

City of DeLand - Standard Details



NOTES:
1. INVERT OF SERVICE LATERAL MUST BE ABOVE SPRING LINE.
2. SERVICE LATERAL SHALL BE CAPPED BY THE CONTRACTOR.
3. WYE SHALL BE NO SHALLOWER THAN 3.FEET AND NO DEEPER THAN 5.FEET.
4. CUT OR CAST "S" IN CONCRETE CURB AT SEWER LATERAL LOCATION AND PAINT GREEN.
5. PLUMBER SHALL REMOVE PLUG, INSTALL CLEAN-OUT, AND CONNECT SERVICE LATERAL TO HOUSE.

DATE: 12/30/2024 **SANITARY SERVICE LATERALS** S305

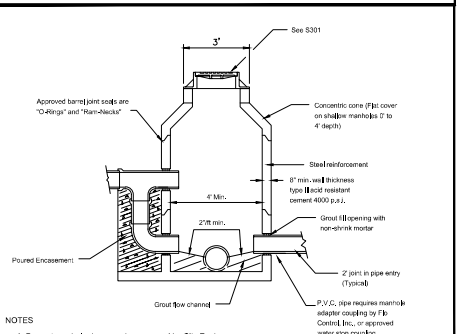
City of DeLand - Standard Details

Gravity Sewer Video Inspection Notes:

Sewer and Stormwater Pipe Installations: All gravity piping shall be flushed, cleaned and checked for line and grade and air tested according to sewer air testing specifications. No section of pipe shall have more than $^1/_2$" of standing water at any time during the video inspection. Jet vac trucks are not allowed to be used in the pipe while the pipe is being video inspected. *For all gravity sewer mains installed a video inspection is to be conducted when backfill reaches a minimum of 3 feet above the pipe crown or upon completion of placement of the stabilized subgrade. After conducting the video inspections, a thumb drive containing all the video recordings and sewer inspection reports shall be submitted to the City's Utilities Department. The thumb drive shall contain all video recording of installed gravity wastewater pipes including video of the insides of all sewer manholes and manhole channels. Submit pipe videoing and sewer inspection reports to Scott Zender at the Utilities Department for review prior to the start of road paving.*

DATE: 12/30/2024 **GRAVITY SEWER VIDEO REQUIREMENTS** S408

City of DeLand - Standard Details

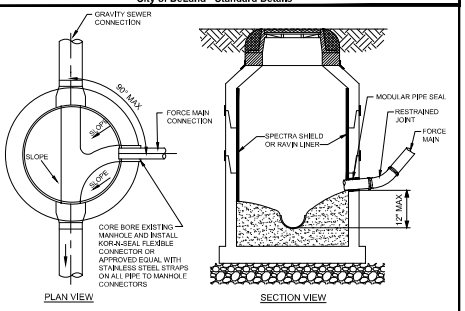


NOTES
1. Precast manhole drop may be approved by City Engineer. Shop drawing submittal required.
2. Drop required when 2' or over.
3. Manholes shall have an interior and exterior coating of at least 15 mils dry thickness PROLO EP214-351 Epoxi-Mastic
4. Polymer concrete manholes are accepted upon review and approval by the City of DeLand Engineering Dept.

SEE S303 FOR PLAN VIEW

DATE: 12/30/2024 **SANITARY MANHOLE** S302

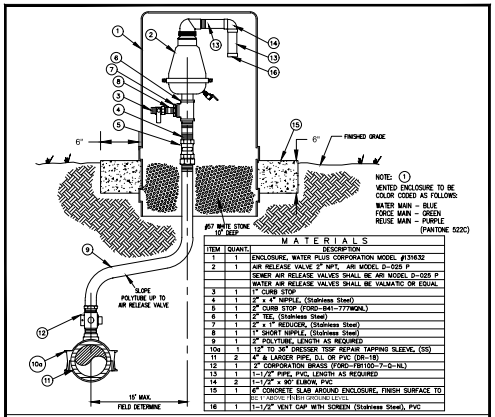
City of DeLand - Standard Details



NOTES:
1. FORCE MAIN ORIENTED TO FACILITATE FLOW AND SHALL ENTER MANHOLE WITHIN 1' ABOVE INVERT OF THE EFFLUENT PIPE.
2. BENCH AS REQUIRED FOR NEW FORCE MAIN.
3. MANHOLE RECEIVING FORCE MAIN AND NEXT MANHOLE SHALL BE LINED. EXISTING MANHOLES RECEIVING FORCE MAIN SHALL BE LINED WITH SPECTRA SHIELD OR RAVIN.
4. CONTRACTOR TO COORDINATE THE PRESENCE OF UTILITIES INSPECTOR DURING CORING AND CONNECTIONS TO EXISTING MANHOLES.

DATE: 12/30/2024 **FORCE MAIN TO GRAVITY SEWER CONNECTION** S306

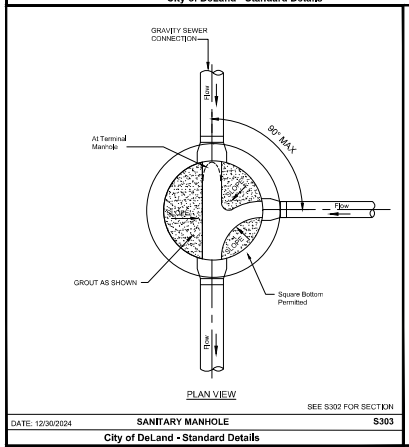
City of DeLand - Standard Details



ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #13632
2	1	AIR RELEASE VALVE 2" NPT, ARI MODEL D-025 P
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD-B41-777WQNL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10a	1	1/2" TO 30" DRESSER TFSF REPAIR TAPPING SLEEVE, (SS)
11	2	4" & LARGER PIPE, D.I. OR PVC (DR-18)
12	1	2" CORPORATION BRASS (FORD-FB1100-7-Q-NL)
13	1	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	2	1-1/2" x 90° ELBOW, PVC
15	1	6" CONCRETE SLAB AROUND ENCLOSURE, FINISH SURFACE TO BE 1' ABOVE FINISH GROUND LEVEL
16	1	1-1/2" VENT CAP WITH SCREEN (Stainless Steel), PVC

DATE: 12/30/2024 **OFFSET AIR RELEASE VALVE** S311A

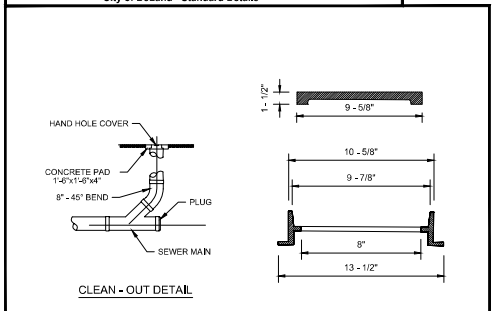
City of DeLand - Standard Details



SEE S302 FOR SECTION

DATE: 12/30/2024 **SANITARY MANHOLE** S303

City of DeLand - Standard Details



NOTE: HAND HOLE COVER TO BE U.S. FOUNDRY 7621 OR EQUAL

DATE: 12/30/2024 **CLEAN - OUT** S308

City of DeLand - Standard Details

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

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PHONE: 407-898-1511
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KHA PROJECT 245418000
DATE 09/26/2025
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

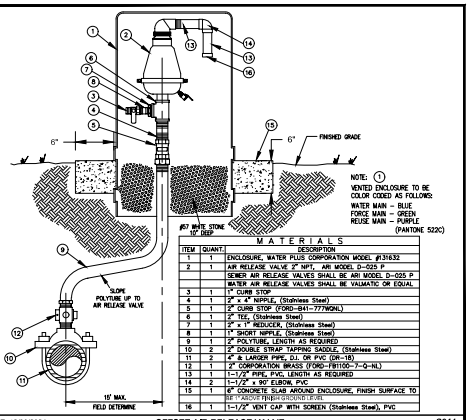
CITY OF DELAND DETAILS

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C8.2

Plotted By: Ramirez, Jason Sheet Set: DELAND TECH PARK Layout: C8.2 CITY OF DELAND DETAILS October 22, 2025, 09:43:14am K:\ORL_Civil\245418000\Deland Tech Park\CADD\CONSTR\SheetSheets\C8.2-DETAILS.dwg
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M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT, AIR MODEL D-025 P
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD–B41–777WQNL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10	2	2" DOUBLE STRAP TAPPING SADDLE, (Stainless Steel)
11	2	4" & LARGER PIPE, D.I. OR PVC (DR–18)
12	1	2" CORPORATION BRASS (FORD–FB1100–7–Q–NL)
13	1	1–1/2" PIPE, PVC, LENGTH AS REQUIRED
14	2	1–1/2" x 90° ELBOW, PVC
15	1	6" CONCRETE SLAB AROUND ENCLOSURE, FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL
16	1	1–1/2" VENT CAP WITH SCREEN (Stainless Steel), PVC

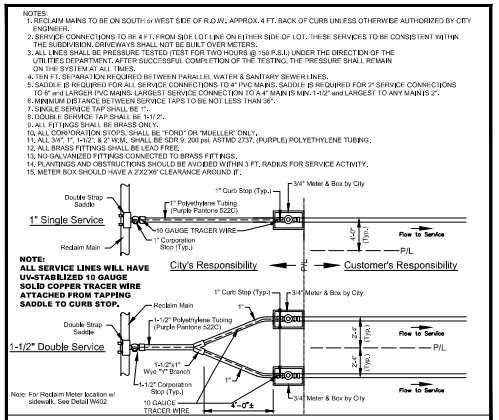
DATE: 12/30/2024 **OFFSET AIR RELEASE VALVE** S311

City of DeLand - Standard Details

Notes:
1.All tracer wire shall be 10 gauge. Directional bores require to have two 10 gauge copper clad wires that are pulled with directional drill. Open cut shall use only one 10 gauge solid copper wire. Wire length must have enough slack to be extended a minimum of 12" above grade for use.
2. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

DATE: 12/30/2024 **FORCE MAIN VALVE SETTING** S315

City of DeLand - Standard Details

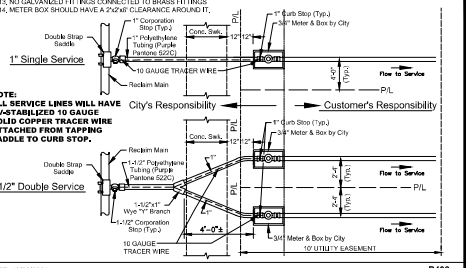


NOTES:
1. RECLAIM MAINS TO BE ON SOUTH OR WEST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 8" AND LARGER PVC MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" AND LARGEST TO ANY MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/ 2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (PURPLE) POLYETHYLENE TUBING.
12. ALL BRASS FITTINGS SHALL BE LEAD FREE.
13. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
14. PLANTINGS AND OBSTRUCTIONS SHOULD BE AVOIDED WITHIN 3 FT. RADIUS FOR SERVICE ACTIVITY.
15. METER BOX SHOULD HAVE A 2'X2'W' CLEARANCE AROUND IT.

NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE SOLID COPPER TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 12/30/2024 **RECLAIM MAIN SERVICE CONNECTION** R401

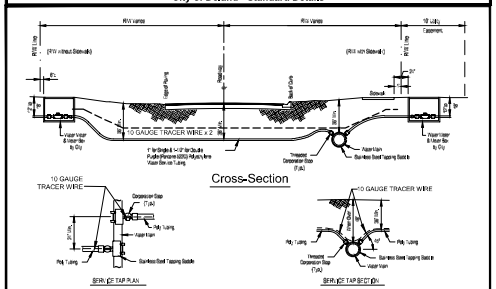
City of DeLand - Standard Details



NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE SOLID COPPER TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 12/30/2024 **RECLAIM MAIN SERVICE CONN. WITH SIDEWALK** R402

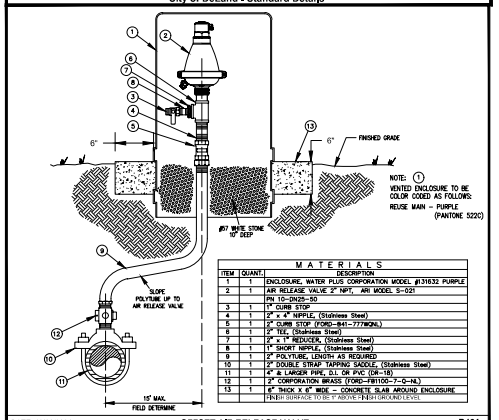
City of DeLand - Standard Details



NOTES:
1. SINGLE RECLAIM SERVICE SHALL BE 1" POLYETHYLENE TUBING (PURPLE PANTONE 522C).
2. DOUBLE RECLAIM SERVICE SHALL BE 1-1/2" POLYETHYLENE TUBING (PURPLE PANTONE 522C).
3. RECLAIM MAINS TO BE MIN. 36" BELOW GRADE and APPROX. 4' BACK OF CURB.
4. CURB STOP TO BE LOCATED APPROX. 2 FOOT BACK OF RIGHT-OF-WAY AND MUST HAVE LOCK WING.
5. SERVICE LINE TO BE MIN. 30" BELOW GRADE IN RIGHT-OF-WAY.
6. ALL 3/4", 1", 1-1/2" & 2" TUM., SHALL BE SDR 9, 200 psi, ASTMD 2737, (PURPLE PANTONE 522C) POLYETHYLENE TUBING.
7. ALL LOCATE WIRE SHALL BE (PURPLE) 10 GAUGE, DIRECTIONAL BORES REQUIRED TO HAVE TWO 10 GAUGE COPPER CLAD WIRES THAT ARE PULLED WITH DIRECTIONAL DRILL, OPEN CUT SHALL USE ONLY ONE 10 GAUGE SOLID COPPER WIRE.
8. ALL SERVICE TAPS TO MEET AWWA STANDARD 45° FROM HORIZONTAL UNLESS PRIOR AUTHORIZATION RECEIVED FROM CITY.
9. ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 12/30/2024 **RECLAIM MAIN SERVICE LINES** R403

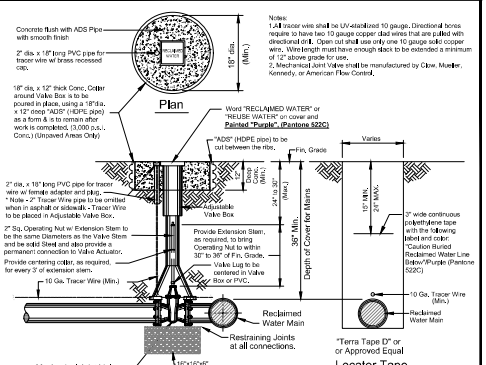
City of DeLand - Standard Details



M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632 PURPLE
2	1	AIR RELEASE VALVE 2" NPT, AIR MODEL S–021
		PN 10–0429–50
3	1	1" CURB STOP
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD–B41–777WQNL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, (Stainless Steel)
11	1	4" & LARGER PIPE, D.I. OR PVC (DR–18)
12	1	2" CORPORATION BRASS (FORD–FB1100–7–Q–NL)
13	1	6" THICK X 6" WIDE – CONCRETE SLAB AROUND ENCLOSURE
		FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL

DATE: 12/30/2024 **OFFSET AIR RELEASE VALVE** R421

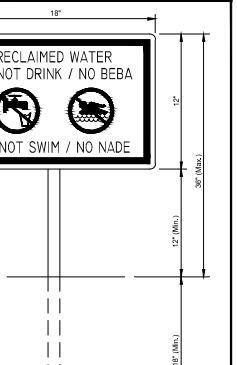
City of DeLand - Standard Details



Notes:
1.All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two 10 gauge copper clad wires that are pulled with directional drill. Open cut shall use only one 10 gauge solid copper wire. Wire length must have enough slack to be extended a minimum of 12" above grade for use.
2. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

DATE: 12/30/2024 **RECLAIMED WATER VALVE SETTING** R450

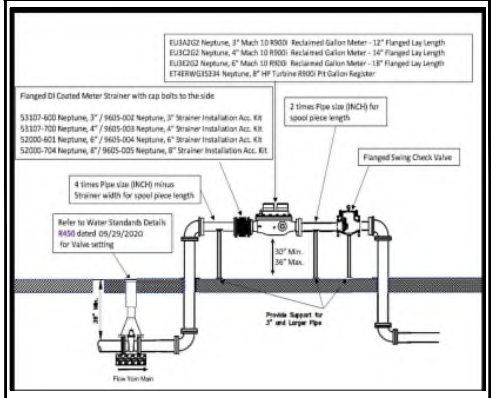
City of DeLand - Standard Details



NOTES:
1. Sign background shall be white, letters shall be black (Helvetica, Swiss 721, corel, or acceptable equal) and border shall be Pantone Purple 522C.
2. Height of sign will depend on location and surrounding landscape plant types. In all cases, the sign shall visable to the public.
3. Engineering grade refective materials shall be used for sign.
4. Sign materials shall be of 0.040 gauge metal.
5. Sign post shall be 2-3/8" OD steel pipe, hot dip galvanized per ASTM A-123, post to be provided by customer.
6. Mounting hardware shall be stainless steel.
7. Signs shall be place by the contractor in accordance with the City approved plans and/ or as approved by the City. (e.g.) Sign should be posted by entrance to subdivision, storage ponds, irrigation pumps, gate entrances to school facility or game fields, and first and ninth Tees at Golf courses,
8. Public notification should occur in HOA document and City Reclaimed Water Brochure with meter application.

DATE: 12/30/2024 **RECLAIMED WATER SIGNAGE** R451

City of DeLand - Standard Details



DATE: 12/30/2024 **3" AND ABOVE RECLAIMED METER SET** R453

City of DeLand - Standard Details

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JOR
2	REVISED PER CITY COMMENTS	07/10/25	JOR
3	REVISED PER CITY COMMENTS	09/03/25	JOR
4	REVISED PER CITY COMMENTS	10/24/25	JOR

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WWW.KIMLEY-HORN.COM CA- 00000696

KHA PROJECT 240416000
DATE 09/29/2023
SCALE AS SHOWN
DESIGNED BY —
DRAWN BY —
CHECKED BY —

CITY OF DELAND DETAILS

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C8.3

Plotted By: Brennan, Jason Saved Set: DELAND TECH PARK Layout: C8.3 CITY OF DELAND DETAILS October 22, 2025 - 09:43:18pm K:\ORL_Civil\240416000\Deland Tech Park\CAD\CONSTR\Sheets\C8.3 DETAILS.dwg
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1. THE CITY OF DeLand's UTILITIES DEPARTMENT (386-626-7250) SHALL BE GIVEN A MINIMUM OF 48 HOURS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO the BEGINNING OF ANY RECLAIMED WATER SYSTEM CONSTRUCTION.
2. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW PROPSED RECLAIMED WATER MAIN.
3. ALL RECLAIMED WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 95% IN UNPAVED AREAS AND 98% IN PAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS ARE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET
6. 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIPS AS WELL.
7. ALL SINGLE RESIDENTIAL RECLAIMED WATER SERVICES SHALL BE 1" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 1-1/2". SERVICES SHALL BE CTS 3408 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MINIMUM OF 200 PSI WITH SDR 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE "PURPLE" (PANTONE) IN COLOR AND SHALL HAVE THE WORDS "RECLAIMED WATER" PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE U.V. PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.D.M. D1248, D3350, D2239, D2737, N.S.F.-14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. APPROVED SIZES: 1", 1-1/2" AND 2" DIAMETERS. ACCEPTABLE MANUFACTURERS: ENDOT ENDOCORE RWT OR APPROVED EQUAL
8. REFER TO "NEW POTABLE AND REUSE SERVICE WHIP" R426.
9. RECLAIMED WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACING OF 1,000 FEET.
10. AT ALL RECLAIMED WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
11. APPROVED WATER VALVE TYPES MUELLER OR CLOW:
    A. STANDARD GATE VALVES EQUAL TO OR LESS THAN 24" DIAMETER (AWWA C-500) OR RESILIENT SEAT GATE VALVES (AWWA C-509)
    B. TAPPING VALVES WITH MECHANICAL OR STAINLESS STEEL TAPPING SLEEVE.
12. ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS SHALL BE PAINTED PURPLE (PANTONE 522C) TO MAKE THEM PLAINLY DISTINGUISHABLE.
13. AS STANDARD PRACTICE RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER LINES OR AS APPROVED BY THE CITY.

DATE: 12/30/2024 | **RECLAIMED WATER NOTES - 1 OF 3** | R460

City of DeLand - Standard Details

14. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES. IN SPECIAL CASES WHERE IT IS IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY.
15. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 48 HOURS PRIOR TO BEGINNING OF ANY FULL-DIAMETER FLUSH OF MAINS. THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA POTABLE WATER STANDARDS. THE RECLAIMED LINES WILL THEN BE DISINFECTED WITH CHLORINE, FLUSHED CLEAR AGAIN.
16. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL RECLAIMED MAINS IN EXCESS OF 4" IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR CITY UTILITY INSPECTOR.
17. RECLAIMED WATER MAINS SHALL BE PVC AWWA CLASS C-900 OR C-905, CL 150 (COLOR: "PURPLE" PANTONE 522C) OR DIP PRESSURE CLASS 350, STANDARD CEMENT LINED UNLESS APPROVED OTHERWISE BY THE CITY.
18. ALL RECLAIMED WATER MAINS SHALL USE A THRUST RESTRAINED JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC FITTINGS ARE SPECIFIED, THE RESTRAINED JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINED LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.
19. MEGALUGS, BOLTLESS RESTRAINED JOINTS, OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES. SEE DETAILS W408 AND W409.
20. GRIPPER RING GASKETS BY ROMAC MAY BE USED AS APPROPRIATE FOR RESTRAINING PRESSURE PIPE TO FITTINGS, VALVES, ETC.
21. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE CITY OF DeLand UTILITIES AND "AS-BUILTS" ARE PROVIDED TO THE CITY, PRIOR TO ANY USE OF THIS SYSTEM.
22. ALL RECLAIMED WATER MAINS AND SERVICE LINES SHALL BE READILY DISTINGUISHABLE BY THEIR "PURPLE" (PANTONE 522C) COLOR OR TAPE MARKINGS. DUCTILE IRON PIPE SHALL BE WRAPPED WITH PURPLE PANTONE 522C POLYETHYLENE.
23. ALL RECLAIMED WATER SERVICES SHALL BE MARKED ALONG THE OUTSIDE EDGE OF CURB WITH AN "R". VALVES AND BLOW-OFFS FOR RECLAIMED WATER MAINS SHALL BE MARKED BY AN "X" SET INTO THE CURB.
24. RECLAIM WATER SERVICES SHALL BE NORMALLY DOUBLE 1-1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIMED WATER SERVICES NEED TO BE OFFSET, DUE TO SEWER LATERAL CONNECTION, 1" SINGLE SERVICES SHALL BE SPECIFIED, THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 4.0'.

DATE: 12/30/2024 | **RECLAIMED WATER NOTES - 2 OF 3** | R461

City of DeLand - Standard Details

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/21/24	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
4	REVISED PER CITY COMMENTS	10/24/25	JDR

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KHA PROJECT 240418000
DATE 09/03/2025
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DESIGNED BY —
DRAWN BY —
CHECKED BY —

CITY OF DELAND DETAILS

DELAND TECH PARK

CITY OF DELAND FLORIDA

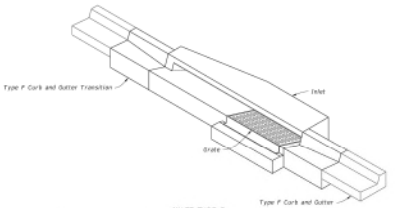
SHEET NUMBER C8.4

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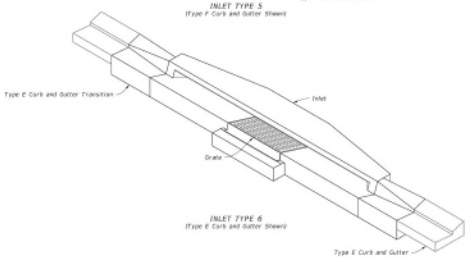
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GENERAL NOTES:

1. Work this Index with Index 425-001 and Index 425-030.
2. Conform the finished grade and slope of the inlet tops with the finished cross slope and grade of the proposed sidewalk and/or border.
3. For inlets constructed on a curve, refer to the plans to determine the radius. Bend steel when necessary.
4. Use Grade 60 reinforcing bars with 1½" minimum cover unless otherwise shown, see Sheet 6 for equivalent area Welded Wire Reinforcement details.
5. Inlet tops may be either cast-in-place or precast concrete. Conform precast units to the dimensions shown or in accordance with approved shop drawings.
6. Corner fillets are required at inlet opening for precast units or C-I-P units used in conjunction with circular inlet bottoms or skewed rectangular inlet boxes. Finish top of fillets flush with grate throat bottom and match slope.
7. For Type E curb and gutter, transition the shape of the curb over the gutter transition length to match the face of the inlet (Type F1).
8. Meet the requirements of ASTM A36/A36M with steel used for frames and grates.
9. Use either cast iron grates or steel grates.



INLET TYPE 5
(Type F Curb and Gutter Sheets)



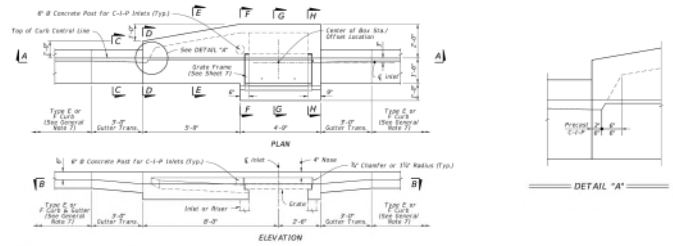
INLET TYPE 6
(Type E Curb and Gutter Sheets)

CURB INLETS TOPS

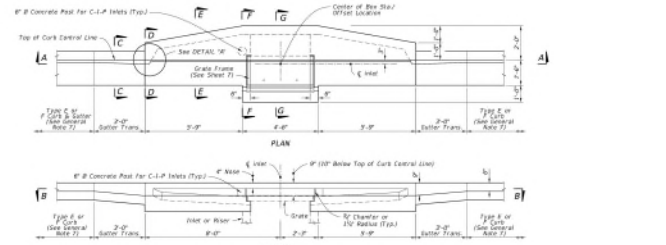
TABLE OF CONTENTS:

Sheet	Description
1	General Notes and Contents
2	Type 5 and 6 Dimensional Details
3	Type 5 and 6 Reinforcing and Bar Bending Details
4	Precast Dimensional and Reinforcing Details
5	Cast-In-Place Dimensional and Reinforcing Details
6	Alternate Welded Wire Reinforcing (WWR) Details
7	Grate, Anchor, and Grouting Details

LAST REVISION	DESCRIPTION:		INDEX	SHEET
11/01/20		FY 2023-24 STANDARD PLANS — CURB INLET TOP TYPES 5 AND 6	425-021	1 of 7



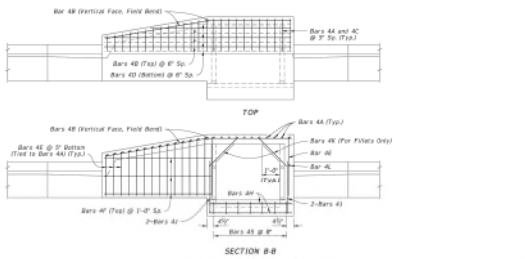
TYPE 5 DIMENSIONAL DETAILS



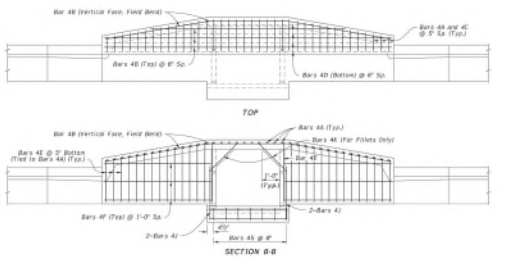
TYPE 6 DIMENSIONAL DETAILS

TYPE 5 AND 6 DIMENSIONAL DETAILS

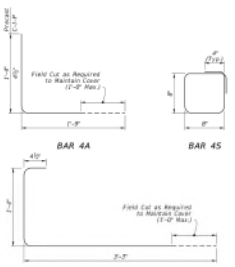
LAST REVISION	DESCRIPTION:		INDEX	SHEET
11/01/20		FY 2023-24 STANDARD PLANS — CURB INLET TOP TYPES 5 AND 6	425-021	2 of 7



TYPE 5 REINFORCING DETAILS



TYPE 6 REINFORCING DETAILS



BILL OF REINFORCING STEEL

MARK	SIZE	TYPE 5 INLET NO.	TYPE 5 INLET LENGTH	TYPE 6 INLET NO.	TYPE 6 INLET LENGTH
A (Precast)	4	25	3'-3"	38	3'-3"
A (C-I-P)	4	25	2'-11½"	38	2'-11½"
B	4	6	10'-3"	6	13'-0"
C	4	25	13" to 1'-11"	38	13" to 1'-11"
D	4	4	10'-3"	4	13'-0"
E	4	16	4'-11½"	30	6'-11½"
F	4	3	9'-0"	6	11'-0"
H	3	4	8'-8"	4	9'-8"
J	4	4	5'-0"	4	5'-0"
K (Fillet)	4	2	2'-3"	2	2'-3"
L (Precast)	4	1	1'-4"	0	---
L (C-I-P)	4	10	1'-4"	9	1'-4"
S	8	7	3'-2"	7	3'-2"

NOTES:
1. All bar dimensions in the bending diagrams are out to out.
2. Bars 4A and 4S may be combined into a single bar.
3. Welded Wire Reinforcement consists of smooth or deformed wire meeting the requirements of Specification 931.

TYPE 5 AND 6 REINFORCING AND BAR BENDING DETAILS

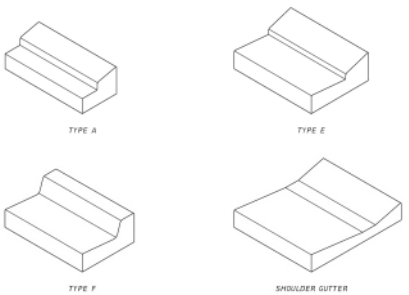
LAST REVISION	DESCRIPTION:		INDEX	SHEET
11/01/20		FY 2023-24 STANDARD PLANS — CURB INLET TOP TYPES 5 AND 6	425-021	3 of 7

GENERAL NOTES:

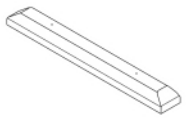
1. For curb, gutter and curb & gutter provide ⅜" - ½" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.
2. Locate expansion joints for curb, gutter and curb & gutter in accordance with Specification 520.

TABLE OF CONTENTS:

Sheet	Description
1	General Notes and Contents
2	Concrete Curb and Gutter
3	Curb and Gutter Joints and Eddings, Concrete Bumper Guard, and Asphaltic Concrete Curb



TYPE A, TYPE E, TYPE F, AND SHOULDER GUTTER
(Other Types Similar)



CONCRETE BUMPER GUARD

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No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	10/7/25	JDR
2	REVISED PER CITY COMMENTS	07/10/25	JDR
3	REVISED PER CITY COMMENTS	09/03/25	JDR
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KHA PROJECT 240418000
DATE 09/26/2025
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DESIGNED BY —
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CONSTRUCTION DETAILS

DELAND TECH PARK

CITY OF DELAND — FLORIDA

SHEET NUMBER C9.0

Plotted By: Ramirez, Jose | Sheet Set: DELAND TECH PARK | Layout: C9.1_CONSTRUCTION DETAILS | October 22, 2025 - 03:43:53pm | K:\ORL_Civil\249418000-Deland Tech Park\CADD\CONSTR\ReadSheets\C9.1_CONSTR DETAILS.dwg
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TYPE A

TYPE B

TYPE D

NOTES:
1. For Type A, Type B, and Type D Curb: Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 3.
2. For Type E, Type F, Drop Curb, and Valley Gutter: When used on high side of roadway, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 8", unless otherwise shown on Plans.
3. For Type RA, rotate entire section so that gutter cross slope matches slope of adjacent circulating roadway pavement.
4. For details resulting slope of Type A Curb adjacent to flexible pavement see Sheet 3.

TYPE E

TYPE F

TYPE RA

DROP CURB

TOLL HEADER CURB

PLAN VIEW

SECTION A-A

SECTION B-B

SECTION C-C

VALLEY GUTTER

SHOULDER GUTTER

CONCRETE CURB AND GUTTER

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11/01/21					520-001	2 of 3

TYPE A

TYPE B

TYPE D

TYPE E

TYPE F

SHOULDER GUTTER

CONTRACTION JOINTS IN CURB

CONTRACTION JOINTS IN CURB & GUTTER

NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

PLAN

ELEVATION

FLARED END

STRAIGHT END

CURB TYPE A

CURB AND GUTTER TYPE E AND TYPE F

NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS

CONCRETE BUMPER GUARD

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

NOTE: Joint Seal application applies to both high and low sides of pavement, low side shown.

NOTES:
1. Surface on Low Side of Pavement to be ½" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

ASPHALTIC CONCRETE CURB

CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CURB AND GUTTER	INDEX	SHEET
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GENERAL NOTES:
1. Construct sidewalks in accordance with Specification 522. Use 8" concrete for Sidewalks and Curb Ramps located within Curb Returns (See Plan View). Install all other concrete with thickness as shown, unless otherwise detailed in the Plans.
2. Include detectable warnings on sidewalk curb ramps in accordance with Index 522-002.
3. For Driveways see Index 522-003.
4. Bond breaker material can be any impermeable coated or sheet membrane or preformed material having a thickness of not less than 6 mils and not more than ½".
5. Construct sidewalks with Edge Beam through the limits of any surface mounted Pedestrian/Bicycle Railing or Pipe Guiderail shown in the plans. (See RAILING DETAIL)

OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:
A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and; driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).
B- ½" Dummy Joints, Tooled
C- ½" Formed Open Joints
D- ¾" Saw Cut Joints, 1¼" Deep (within 96 hours) Max. 5' Centers
E- ¾" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers Joints) Required When Length Exceeds 30'
F- ½" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
G- Cold Joint With Bond Breaker, Tooled

SIDEWALK JOINTS

SIDEWALK WITH UTILITY STRIP

SIDEWALK WITHOUT UTILITY STRIP

SECTION A-A

SECTION B-B

RAILING DETAIL

GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

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OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:
A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).
B- ½" Dummy Joints, Tooled
C- ½" Formed Open Joints
D- ¾" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers
E- ¾" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers Joints) Required When Length Exceeds 30'
F- ½" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

SIDEWALK JOINTS

CONTINUOUS SIDEWALK

DISCONTINUOUS SIDEWALK

SECTION C-C

CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

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DELAND TECH PARK

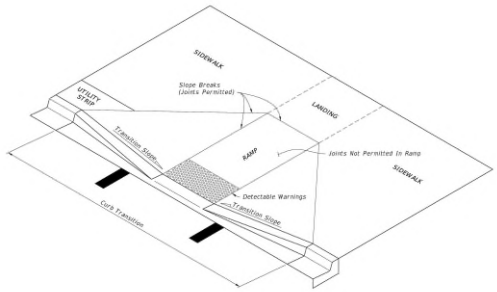
CITY OF DELAND FLORIDA

SHEET NUMBER C9.1

Plotted By: Ramirez, Jose; Sheet Set: DELAND TECH PARK; Layout: C9.3 CONSTRUCTION DETAILS; October 22, 2025; 03:14:07pm; K:\ORL_Civil\249618000-Zoland Tech Park\CAD\CONSTR\Sheets\C9.3-CONSTR-DETAILS.dwg
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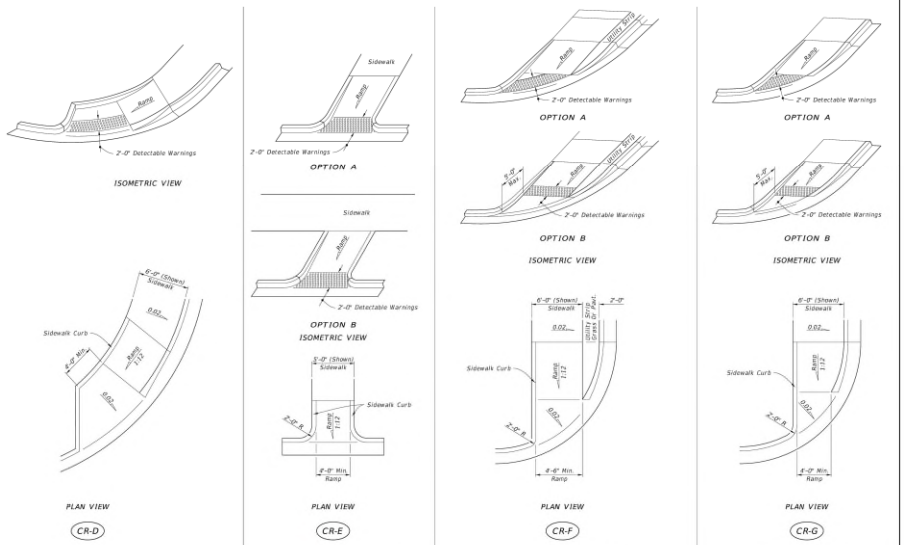
GENERAL NOTES:

1. Cross Slopes and Grades:
   - A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.
   - B. Landings must have cross-slopes less than or equal to 0.02 in any direction.
   - C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.
   - D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.
2. Curb, Curb and Gutter and/or Sidewalk:
   - A. Refer to Index 522-001 for concrete thickness and sidewalk details.
   - B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.
   - C. Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.
3. Curb Ramp Alpha-Identification:
   - A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.
   - B. Alpha-identifications CR-I and CR-J are intentionally omitted.
4. Detectable Warnings:
   - A. Install detectable warnings in accordance with Specification 527.
   - B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
   - C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.



CURB RAMP NOMENCLATURE

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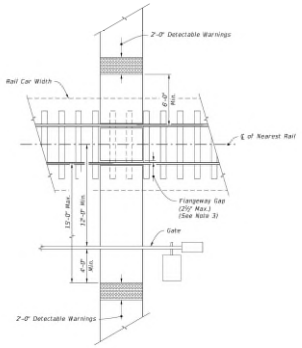


SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

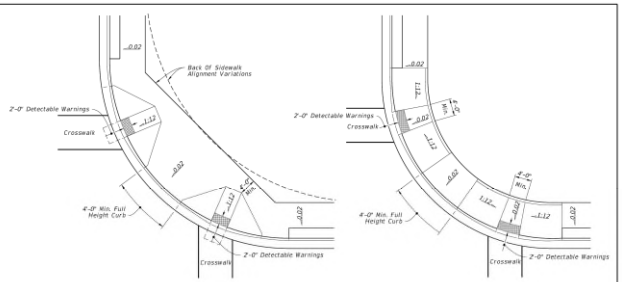
LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX	SHEET
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NOTES:

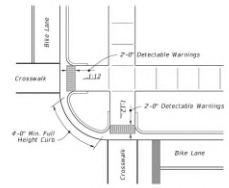
1. Where crosswalk markings are used, ramps must fall within the crosswalk limits. A clear space of 48" minimum is required at the bottom of the ramp within a marked crosswalk. If crosswalk markings are not present, a clear space of 48" minimum is required at the bottom of the ramp outside of active travel lanes.
2. Crosswalk widths and configurations vary; must conform to Index 711-001.
3. Flangeway Gap may be up to 3" for Freight-only Railways.



RAILROAD CROSSING



CURB RAMPS WITHIN RADIAL RETURN



CURB RAMPS OUTSIDE RADIAL RETURN



LINEAR SIDEWALK RAMPS

PLACEMENT OF SIDEWALK CURB RAMPS AT CURBED RETURNS (TYP.)

RAILROAD CROSSING AND CURB RAMPS AT CURBED RETURNS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX	SHEET
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3	REVISED PER CITY COMMENTS	09/03/25	JOR
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CONSTRUCTION DETAILS

DELAND TECH PARK

CITY OF DELAND FLORIDA

SHEET NUMBER C9.2

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

December 10, 2025

A. **APPLICATION NO.**: PSB24-150 (DeLand Tech Park Preliminary Plat)
APPLICANT: Harry McNaught, Longleaf Four LLC
OWNER: Longleaf Four LLC
STAFF PLANNER: Kendall Story, *Senior Planner*
REQUEST: Preliminary plat approval for DeLand Tech Park, to include grading, stormwater ponds, roads and other infrastructure.

B. **APPLICABLE REGULATIONS:**

Article XIII **SUBDIVISION OF LAND**
Sec. 33-146 – Procedures for Subdivision Plat Approval

C. **SITE FACTORS:**

PARCEL NUMBER*:* 810604000170+
LOCATION: 1445 Cassadaga Rd.
SIZE OF PROPERTY: ±143 acres

D. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

Future Land Use: Southwest Activity Center (SWAC)
Existing Zoning: DeLand Tech Park Planned Development (PD)
Existing Use: Mostly vacant, undeveloped

E. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	VC: ULI; SWAC Community	Kirk DeLand PD (Canopy Terrace); R-4
South:	Orange City	Orange City
East:	VC: ULI	VC: RR
West:	VC: Unincorporated	VC: Unincorporated

F. **Applicable Regulations:**

Sec. 33-146.05. *Subdivision of Land.*
DeLand Tech Park Planned Development Agreement

G. **Physical Characteristics:**

The proposed development consists of ± 143.2 acres at the northwest quadrant of SR 472 and Interstate 4. The property is wooded and consists of a tree farm, open cattle pasture, former poultry/egg production buildings, construction company office and vacant residences. The site lies outside of the 100-year floodplain and does not contain any wetlands.

H. Public Utilities and Service:

Water: The proposed development will be served by City potable water facilities.
Sewer: The proposed development will be served by City sanitary sewer facilities.

I. Analysis:

The applicant seeks to subdivide the subject property into three developable lots, along with tracts for stormwater ponds, tree protection areas landscape buffers, and other site infrastructure. As described in the original Planned Development, the applicant seeks to develop the eastern side of the subject property as industrial space and the western side of the property as commercial/neighborhood retail. This is the first of three phases of development for the DeLand Tech Park PD.

Phase I (current preliminary plat) includes the construction of Kirk and Pinehurst Drive to provide site access and transportation circulation, associated infrastructure improvements, and mass clearing and grading of the property. Pinehurst Drive will connect to Martin Luther King Jr. Beltway to the west of the property, and Kirk Drive will connect Cassadaga Road to SR 472. The preliminary plat shows this right of way in tracts. However, staff has requested it to be shown as right of way on the preliminary plat. A condition of approval to revise the preliminary plat to relabel the right of way has been added. Both roads are being dedicated to the city. The right-of-way will include landscaping, a pedestrian/bicycle trail, three stormwater ponds, and other associated infrastructure.

The ponds are part of a master stormwater system that are designed to retain the 100-year/24 hr. storm event for the entire site at full buildout, which includes up to 70% impervious area for the eastern Industrial area and up to 60% impervious area for the western Retail area set forth by the DeLand Tech Park PD. The stormwater design will use Low Impact Development (LID) stormwater strategies, such as the utilization of Florida-friendly vegetation and swale channel lines.

The applicant intends to mass grade the entire site and install infrastructure, roadways, and stormwater ponds for the entire development. However, since individual sites and lots will be developed in multiple phases, over many years staff is including a condition of approval to address the need for site stabilization to help mitigate off-site impacts.

The development is consistent with the Comprehensive Plan, lying within the Southwest Activity Center (SWAC) and shall comply with the policies identified within the Local Plan as “Commerce” and “West Central”. According to the vision of the SWAC, the ultimate goal is to develop a key employment area for the City of DeLand and the rest of Southwest Volusia County.

J. Environmental Report:

An environmental report dated March 25, 2022, was submitted as part of the application. Per the report, the project falls within the USFWS consultation area for several species in which consultation and/or species-specific surveys may be recommended by the U.S. Florida Fish & Wildlife Service (FWC). No wetlands were located on the property.

K. School Concurrency:

A School Concurrency Determination Letter was not required, as this project does not include any residential development.

L. Previous Approvals:

City Commission approved the request for rezoning of the subject property to the DeLand Tech Park Planned Development on October 3, 2022. An amendment to Planned Development Agreement was approved on January 22, 2025, to allow off-site tree protection area. A second PD amendment to allow one additional use is currently under review and tentatively scheduled for City Commission in January of 2026.

M. Staff Summary:

The proposed preliminary plat includes the approved civil construction plans for the infrastructure improvements, roadway, stormwater ponds, landscape buffering, and tree protection areas. The plans are consistent with the adopted PD agreement, concept plan, phasing plan and applicable land development regulations. All future retail and industrial buildings and improvements will require a separate site plan for review.

At the Technical Review Committee (TRC) meeting on September 19, 2024, the Technical Review Committee members recommended the Preliminary Plat be forwarded on to the Planning Board, pending comments from staff are addressed. The comments have since been addressed.

N. Recommendation:

Staff recommends that the Planning Board forward the preliminary plat to the City Commission recommending approval of the request for preliminary plat approval for the development of DeLand Tech Park, subject to two conditions of approval:

1. The applicant shall revise the preliminary plat to show all public roadway as right-of-way, rather than tracts. The tract tables and site data tables shall also be revised to reflect the right of way designation.

2. To minimize stormwater impacts and ensure the site is stabilized for the duration of the development, all areas disturbed by construction, and soil stockpiles, shall be stabilized as soon as possible to reduce the duration of soil exposure to runoff events and the potential for erosion. All stockpiles shall be encompassed by silt fence. All disturbed areas which are either final graded or will remain inactive for a period of more than 7 days, shall be required to be stabilized within 7 days of the completion of the grading activities.

Longleaf Four, LLC
320 N. Meridian Street, Suite 700
Indianapolis, IN 46204
(317) 439-4577

July 15, 2024

DeLand Tech Park
Project Narrative

The proposed project is approximately 144 acres located on the northeast corner of State Road 472 and Martin Luther King, Jr. Beltway (County Road 4101). It is also bound on the east by I-4 and on the north by Cassadaga Rd (County Road 4139). The project site consists of the following thirteen parcel IDs: 810600000060, 810600000070, 810600000071, 810600000072, 810600000090, 810600000091, 810600000100, 810600000110, 810600000121, 810600000122, 810600000124, 810600000170, 810600000272. Each of these parcels lie within the City of DeLand limits as well as part of the DeLand Tech Park PD. Parcel 810600000272 is 0.65 acres and is outside of the property limits but will be impacted during construction. Therefore, the total parcels impacted by this project will be 144.88 acres.

The site consists of woods, tree farm as well as open cattle pasture, three former poultry/egg production buildings, construction company office and a vacant residence.

The planned road and infrastructure improvements will consist of proposed Kirk Drive connecting State Road 474 to Cassadaga Road and proposed Pinehurst Drive connecting Kirk Drive to Martin Luther King, Jr. Beltway. North of the intersection of Pinehurst and Kirk, Kirk Drive is designed as a 26’ wide asphalt road section with a two-foot (2’) curb and gutter on each side, a 10’ landscape area off of each curb, and a 10’ wide pedestrian/bicycle trail along the western side of the Right-of-Way. Pinehurst Drive is designed as a 24’ wide asphalt road section with two-foot (2’) curb and gutter on both sides, a 12’ landscape area along the southerly and then westerly side of the Right-of-Way as the drive bends north, and a 6’ landscape area and a 10’ pedestrian/bicycle trail along the northerly and easterly sides of the Right-of Way. Landscaping, Irrigation and Street Lighting will also be added to the roads. Both roads will be platted and the roads will be dedicated as public right-of-way to the City of DeLand.

In addition to the roads, the site will be cleared and mass graded, subject to certain tree presentation and buffer areas. Four dry retention ponds will be constructed to serve the site. Pond A will serve Kirk Drive and Pinehurst Drive along with the mass graded area and future improvements west of Kirk Drive for the planned retail area. Ponds C and D will serve the eastern portion of the site east of Kirk Drive as planned for industrial uses. Pond E is a small pond that serves just a small portion of the northernly section of Pinehurst Drive. The ponds are designed to handle the maximum 70% impervious area for the eastern industrial area and 60% impervious for the western retail area. All ponds are also designed to attenuate and recover the required storm events set forth by the St. John’s River Water Management District and the City of DeLand’s criteria.

There will be certain areas of the site that will not be impacted or cleared. The non-impacted areas include a small area fronting the northern part of the site along Martin Luther King, Jr. Beltway, along the northern side of Pond A bordering The Yardly project, a buffer along Cassadaga Road, and a buffer area along I-4. These areas are defined in the Existing Conditions/Demolition Plans provided in the package.

Stormwater pipes and inlets serving Pinehurst Drive and Kirk Drive are also proposed in this project that will convey the stormwater to Pond A and Pond E. The pipes have been sized to accommodate future buildout of the retail area along the western side of the site.

A new proposed 12" PVC water main and a 12" PVC reclaimed water main are also proposed along both Kirk Drive and Pinehurst Drive. These mains will provide potable water and reclaimed water for irrigation for the future retail and industrial tracts. A gravity sanitary sewer system is also proposed under both roads which will connect into the stub out provided at the northern end of Pinehurst Drive where the flow will connect to the new sanitary lift station that is currently under construction at the Yardly. In order to handle the future flows from the retail and industrial site, the pumps are to be switched out with larger capacity pumps and a new 6" PVC sanitary forcemain is proposed to be installed.

This set of construction plans is for the above improvements. As future retail and industrial buildings and improvements are developed, specific plans for those improvements will be submitted to the City for review and approval.

The construction plans follow the guidelines and requirements set forth by the DeLand Tech Park PD.

LONGLEAF FOUR
DeLand, Volusia County, FL

Biological Site Assessment Report

VHB Project No. 64054.00

Submitted to:

Mr. Harry "Mac" McNaught
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Submitted By:



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March 25, 2022

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INTRODUCTION

VHB conducted a biological site assessment on January 26 and March 15, 2022, to evaluate an approximately 141.16-acre property located along the east side of Dr. Martin Luther King Jr. Beltway, south of Cassadaga Road, west of Interstate 4, and north of CR 472 (**Exhibit 1**). More specifically, the site address is 1445 Cassadaga Road, Deland, Volusia County, Florida. The overall Project Area includes all or portions of Parcel ID Numbers listed below:

810600000060	810600000070	810600000071
810600000090	810600000100	810600000110
810600000091	810604000170	810600000122
	810600000124	

The approximate center of the project is located at longitude -81.153514°W, latitude 28.575182°N. The project comprises low density residential development, improved pastures and related agricultural activities, and undeveloped forested lands. Surrounding land uses include low density residential development and undeveloped forested lands. (**Exhibit 2**). The Client proposes to develop the property as light industrial/warehouse space with commercial/retail outparcels along SR 472. The overall purpose of the site assessment was to determine if wetlands occur on site and to evaluate the site for the occurrence or the potential for occurrence of protected species.

EXISTING ECOLOGICAL CONDITIONS

Soils

Based on the Natural Resources Conservation Service (NRCS) Soil Survey of Volusia County, four (4) soil types are mapped within the project as shown on **Exhibit 3**.

1- Apopka fine sand, 0 to 5 percent slopes (non-hydric)
4- Astatula fine sand, 0 to 8 percent slopes (non-hydric)
5- Astatula fine sand, 8 to 17 percent slopes (non-hydric)
63- Tavares fine sand, 0 to 5 percent slopes (non-hydric)

Hydric soil designations are based on the Hydric Soils of Florida Handbook (2007). Hydric soils are generally associated with wetlands while non-hydric soils are typically indicative of uplands.

Land Use

The project is characterized by a mixture of low density residential and rural structures, improved pastures, woodland pastures, and undeveloped forested areas (**Exhibit 4**). Designated land uses are classified and described using the Florida Department of Transportation (FDOT) Land Use, Cover and Forms Classification System (FLUCFCS), January 1999, and the Florida Natural Areas Inventory (FNAI) Natural Communities Guide, 2010. There are seven (7) FLUCFCS/FNAI classifications identified within the project. A description of each classification type is provided below.

Uplands

Low Density Residential (FLUCFCS 110) / Residential, Low Density (FNAI) (7.39 acres) – This land use includes several single-family homes that lie along Cassadaga Road. The area consists of maintained grass and gravel driveways with scattered hardwood trees.

Light Industrial (FLUCFCS 155) / Rural Structures (FNAI) (4.39 acres) – This land use includes rural structures containing heavy machinery and various construction supplies consistent with agricultural use. The structures are associated with a company that specializes in bridge rehabilitation and other marine construction. As such, industrial spoil piles were also visually observed. The remaining area consists of maintained grasses and gravel surfaces.

Improved Pasture (FLUCFCS 211) / Cropland/Pasture (FNAI) (48.04 acres) – The majority of the project is comprised of open pastures used for livestock grazing. Cattle and other livestock were observed throughout the area. This land use is dominated by bahiagrass (*Paspalum notatum*), with scattered slash pine (*Pinus elliottii*) and live oak (*Quercus virginiana*).

Woodland Pasture (FLUCFCS 213) / Mesic Flatwoods (FNAI) (11.86 acres) – This land use is associated with livestock grazing. The area has a canopy that is dominated by slash pine and live oak, with scattered laurel oak (*Quercus laurifolia*), red cedar (*Juniperus virginiana*), and black cherry (*Prunus serotina*). The understory includes bahiagrass, blackberry (*Rubus pensilvanicus*), muscadine (*Vitis rotundifolia*), and beggar-ticks (*Bidens laevis*).

Pine-Mesic Oak (FLUCFCS 414) / Mesic Hammock (FNAI) (11.12 acres) – This land use consists of undeveloped historical pine plantation that has been overtaken by laurel oak,

turkey oak (*Quercus laevis*), and cabbage palm (*Sabal palmetto*) with scattered hardwood species such as sweetgum (*Liquidambar styraciflua*) and red maple (*Acer rubrum*). The understory consists of saw palmetto (*Serenoa repens)* and muscadine.

Xeric Oak (FLUCFCS 421) / Xeric Hammock (FNAI) (32.75 acres) – This land use is undeveloped forested land which found on the west side of the property near CR 427. The area is dominated by scrub oak (*Quercus inopina*), but also contains live oak, laurel oak, and scattered slash pine in the canopy. The understory consists of turkey oak, saw palmetto, and reindeer moss (*Cladonia rangiferina*). The ground cover is sparse or covered with leaf litter.

Hardwood – Conifer Mixed (FLUCFCS 434) / Mixed Hardwood – Coniferous (FNAI) (25.61 acres) – This land use consists of undeveloped forested land with a mature canopy consisting of mature slash pine, with scattered laurel oak and cabbage palm. The understory consists of American holly (*Ilex opaca*), saw palmetto, muscadine, and toothpetal false reinorchid (*Habenaria floribunda*).

Protected Wildlife and Plant Species

The intent of the site assessment was to record any direct or indirect observations of protected species and record any habitats that could potentially be utilized by protected species. A review of publicly available GIS data was conducted to determine the potential for, or the occurrence of protected species listed by the Florida Fish and Wildlife Conservation Commission (FWC) or the US Fish and Wildlife Service (USFWS). **Exhibit 5** depicts the publicly available GIS data for several protected species in this region. The potential for site utilization of each protected species is provided below. Not all protected species are covered in this report. If there was no habitat or potential for occurrence, specific species may not be mentioned. Two protected species were observed within the project limits; potentially occupied gopher tortoise burrows and a sandhill crane were observed.

Federally Protected Species

The Everglade snail kite (*Rostrhamus sociabilis plumbeus*) is listed as Endangered by the USFWS, and the project falls within the consultation area for this species. The Everglade snail kite is primarily found in lowland freshwater marshes and in the shallow vegetated edges of lakes (natural and man-made) where they feed almost entirely on apple snails *(Pomacea* spp.). Freshwater marshes and shallow vegetated lakes are not present and therefore, impacts to Everglade snail kites are not anticipated.

The red cockaded woodpecker (*Picoides borealis*) is listed as Endangered, and the site falls within the USFWS consultation area for this species. This species depends on specialized habitat composed of mature longleaf, slash, and loblolly pine flatwoods. Slash pine communities located within the project contain trees that are associated with this species. Red cockaded woodpeckers typically prefer mature pine trees aged 30 years or greater with a typical size of 10 inches at Diameter Breast Height (DBH). During the site assessment, it was determined that the pines are mature and have an estimated age of 60 to 80 years old and an average of 20 to 23 inches at DBH. However, no red cockaded woodpeckers or cavities were observed during the site assessment and public records show no previous sightings in the surrounding areas. The likelihood of the species to occur is low but there is suitable foraging habitat present. Given that the project falls within the consultation area for the species, further consultation with USFWS is recommended to determine if additional species-specific surveys will be required to determine the presence or absence of the species on site.

The Florida scrub jay (*Aphelocoma coerulescens*) is listed as Threatened by USFWS. The site falls within the consultation area for this species and contains habitat types preferred by the Florida scrub jay, including improved pastures, woodland pastures, and xeric oak. According to USFWS's 2019 Draft Revised Recovery Plan for the Florida Scrub-Jay, optimal habitat requires oaks that are between four (4) and six (6) feet high, interspersed with numerous patches of bare sand or sparse herbaceous vegetation, a sand pine canopy of less the 15 percent and it must be greater than 984 ft from a forest edge. Currently, no optimal habitat exists onsite as oak trees currently exceed eight (8) feet with no open sandy areas. However, there is scrub jay habitat found on site that is considered sub-optimal since the canopy has grown dense due to fire suppression, and the pastures lack the presence of scrub oaks. In addition, Volusia County has classified the site as potential habitat. During the biological assessment, scrub jay calls were played, but no Florida scrub jays were documented or identified. This initial review does not constitute an official survey, however based on observations, the potential for scrub jays to inhabit this site is moderate to low, as scrub jays were previously known to inhabit property to the southeast (2005), with multiple sightings a mile south of the site ranging from 2015 to 2021. Due to the potential suitable habitat and the fact that the site is located within the consultation area, agency consultation and a species-specific survey using the required methodology will be required to determine the presence or absence of the species. According to USFWS, surveys may be conducted between March 1 through October 31 with ideal periods occurring in March, July, September, and October. Surveys should be carried out for a minimum of five (5) days on calm and clear

days one hour after sunrise before midday heat. If scrub jays are found, there are mitigation options available to meet agency requirements.

The wood stork (*Mycteria americana*) is listed as Threatened and consultation with the USFWS is required for any proposed work that impacts wood stork core foraging habitat (primarily shallow, non-forested wetlands and surface waters) within defined Core Foraging Areas (CFA). The project is located within the designated CFA and the closest known colony (Hontoon Island) is approximately 6.3 miles to the west. No wood storks were observed on or adjacent to the property. Additionally, there are no wetlands or suitable habitat for foraging or nesting by this species. Therefore, this project should have no effect on this species.

The eastern indigo snake (*Drymarchon corais couperi*) is listed as Threatened by the USFWS. No indigo snakes were detected during the site visit. Indigo snakes prefer xeric habitats, utilizing tortoise burrows and tree cavities for refuge. The project contains some xeric habitat, and several gopher tortoise burrows were observed. However, due to the inactivity of the burrows and limited size of surrounding xeric habitats, the likelihood of this species utilizing the site is low. In order to avoid impacts to this species the USFWS's Standard Protection Measures for the Eastern Indigo Snake should be followed during construction activities. By following these protection measures, according to the Eastern Indigo Snake Effect Determination Key established in a January 25, 2010, letter from USFWS, updated August 1, 2017, this project would have a "not likely to adversely affect" determination, and no further action will be required.

No federally protected plant species were observed during the assessment.

State Protected Species

The Florida sandhill crane (*Grus canadensis*) is listed as Threatened by the FWC. The sandhill crane prefers freshwater marshes, prairies, and pastures. Several sandhill cranes were observed foraging on site during the biological assessment; however, no nests were observed, and the site lacks nesting habitat (**Exhibit 6**). Additional surveys of the project should be conducted prior to construction to ensure that no sandhill cranes are utilizing the site for nesting. Nesting surveys are conducted between January and July. If an active sandhill crane nest is found, a 400-foot buffer from development activities must be maintained until the eggs have hatched and the chicks have vacated the area. Due to the absence of wetlands or surface waters, the likelihood of sandhill cranes nesting and occupying the area is low, however the likelihood of this species utilizing

the area for intermediate foraging is moderate to high. No adverse impacts to the sandhill crane are anticipated.

The Southeastern American kestrel (*Falco sparverius paulus*) is listed as Threatened by the FWC and potential, but sub-optimal, habitat exists onsite. While kestrels are known to utilize a wide range of habitat types, preferred habitat includes open pastures, fields, mesic flatwoods, and sandy flatwoods. These birds utilize open areas for foraging and often nest in abandoned woodpecker cavities, tree snags, or utility poles. No kestrels or suitable cavities/snags were observed onsite. However, the open pasture and maintained/low growing vegetation areas found in the woodland pasture may provide potential foraging and nesting habitat. Typically, if a project site contains less than 125 acres of defined potential habitat and kestrels are not observed, no additional surveys are required. As less than 125 acres of suitable habitat currently exists within the project, limited to the pasture areas, the project is not expected to adversely impact the kestrel. However, in the event that kestrels are observed on site in the future, transects surveys would be required. These surveys should be conducted from April to August to avoid observations of the non-protected, migratory subspecies. Surveys are to be conducted for six to eight days with four to seven days between each survey. If kestrels are found foraging but not nesting onsite, habitat protection and nest boxes are recommended. However, if kestrels are also nesting on site and the nest cannot be avoided, consultation with, and a permit from, FWC will be required.

According to FWC data, no wading bird rookeries are located within or immediately adjacent to the project. The closest recorded location of a breeding bird colony is mapped approximately 7.5 miles south. Due to this distance, and the lack of wetlands, no wading bird rookeries or breeding bird areas should be adversely affected.

The gopher tortoise (*Gopherus polyphemus*) is listed as Threatened by the FWC. Gopher tortoises prefer well-drained, sandy soils found in habitats such as longleaf pine, sandhills, xeric oak hammocks, scrub, pine flatwoods, dry prairies, and coastal dunes but are also found in urban areas, pastures, and abandoned orange groves. Four potentially occupied and one abandoned gopher tortoise burrow were identified within project limits (**Exhibit 6**). Gopher tortoise surveys are valid for 90 days and an additional 100% species specific survey should be conducted prior to construction to ensure that all tortoises have been accounted for. Any burrows that cannot be avoided by a 25-foot buffer, will require a permit from FWC to relocate the tortoises to an approved offsite recipient area or undeveloped and preserved onsite established recipient site area prior to any construction activities. Based on preliminary surveys, the population density is

not expected to exceed ten (10) burrows, therefore a 10 or Fewer Burrow Relocation permit from the FWC is anticipated. If all FWC guidelines are followed and the gopher tortoises are relocated, there should be no further impacts to the species.

No state protected plant species were observed during the assessment. There are no restrictions to the landowner due to the presence of any state-listed plant species unless sale of the plants is involved.

Other Protected Species

The southern bald eagle is not a listed species but is protected under the federal Bald and Golden Eagle Protection Act. Onsite and adjacent areas were visually scanned for the presence of bald eagle nest trees and no eagle nests were observed. In addition, the FWC Eagle Nest Locator and the Audubon Florida EagleWatch databases of known bald eagle nests were reviewed to determine if any active bald eagle nests are mapped in the vicinity. According to these databases, the nearest bald eagle nest (VO083) is mapped 2.6 miles east-southeast of project and was reported active in 2021. The USFWS indicates that all projects greater than 660 feet from a bald eagle nest tree do not need USFWS review. Given the distance of the mapped nest from the project area and provided no new nests are constructed closer to the project in the future, there should be no need for USFWS consultation as development will have no effect on the bald eagle.

The Florida black bear (*Ursus americanus floridanus*) has been de-listed from Florida's imperiled species list, though it still receives protection under the state's Florida Black Bear Conservation Rule; 68A- 4.009, F.A.C. This rule protects bears from intentional "take", which includes pursuing, hunting, molesting, capturing, or killing, or attempting those actions, whether or not such actions result in possession of the bear. The project does fall within the black bear's primary home range, which means bears are abundant in this area. According to FWC descriptions, the primary range is defined as an area that contains a core bear population, important habitat for bear movement, and evidence of reproduction. Long-term records for nuisance black bear reporting identify bears throughout the region (**Exhibit 5**). There are no FWC-established black bear best management practices for construction areas, but recommendations include temporarily halting operations until the bear has left the area and providing regular gaps in safety fences or other barriers to travel. Daily removal of trash from the site is also recommended. Intentional "take" should not occur as a result of this proposed project.

Thus, no adverse impacts to Florida black bears are anticipated and no further consultation with FWC is anticipated.

WETLANDS AND SURFACE WATERS

There are no wetlands or surface waters located within the project, and therefore this project will not require wetland permitting, though an Environmental Resource Permit (ERP) will be required from the St. Johns River Water Management District (SJRWMD) to ensure that the designed stormwater systems will comply with water quality standards.

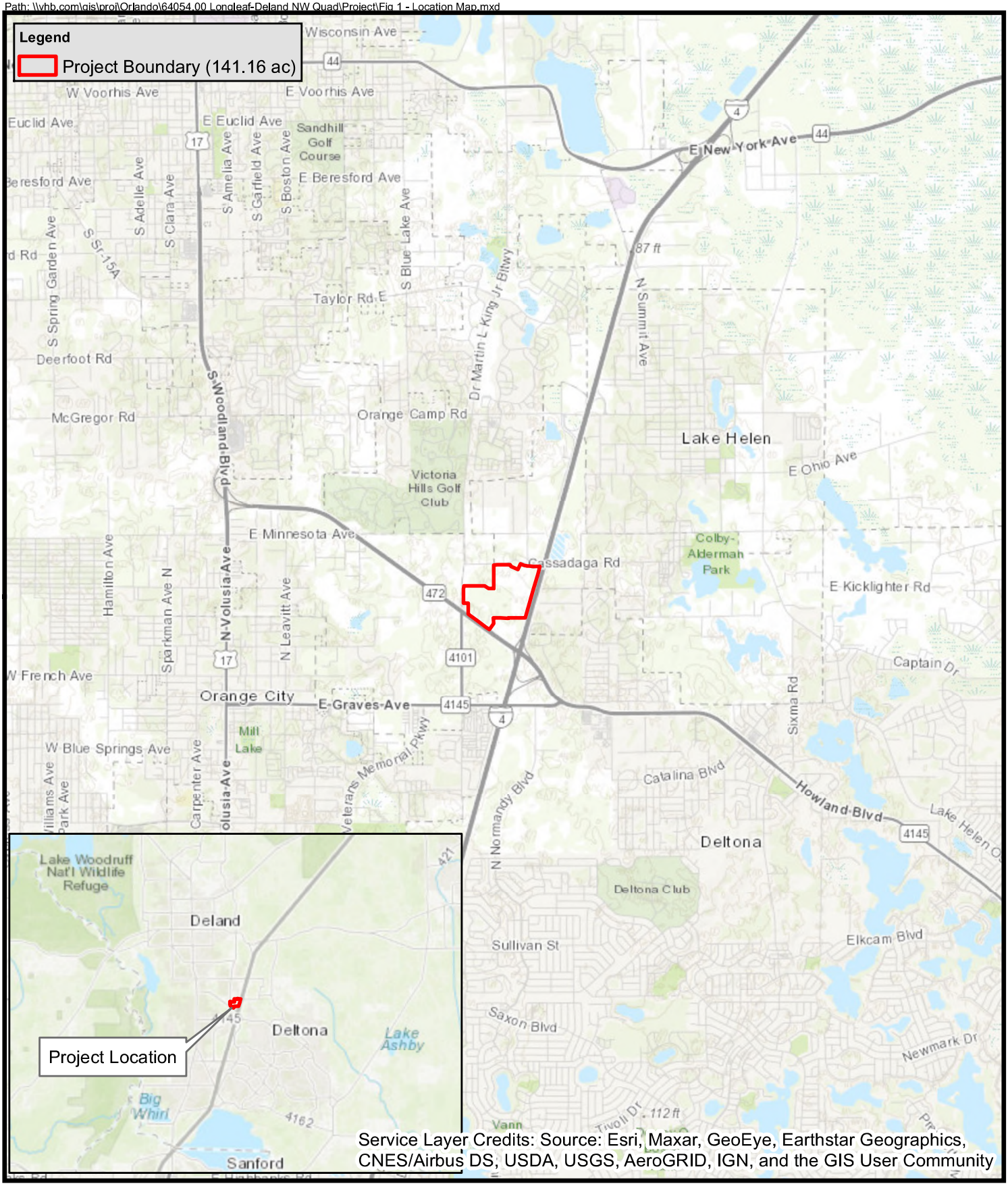
SUMMARY

This biological site assessment report provides an overview of site conditions and outlines sensitive natural resources/protected species which should be considered prior to project implementation. Protected species have been evaluated and the project falls within the USFWS consultation area for several species in which additional consultation and/or species-specific surveys are required or recommended:

- Florida scrub jay
- Red cockaded woodpecker
- Gopher tortoise

In addition, to comply with federal regulations, the Eastern Indigo Snake Standard Protection Measures should be followed during construction to alleviate the need for formal consultation with USFWS with respect to eastern indigo snakes. An additional nest survey for sandhill cranes should also be conducted prior to construction, if construction is to commence during the nesting season. In addition, if sandhill cranes are observed foraging in the area during construction, the contractors should cease work until the cranes have vacated the area. A 100% survey for gopher tortoises should be conducted prior to construction and a FWC 10 or Fewer Burrow Relocation permit should be obtained for relocation efforts to ensure there are no impacts to this species. In addition, recommendations for dealing with bears should also be considered. No federal or state protected plant species were observed during the field assessment. Wetland permitting is not required given that wetlands are not present onsite. However, the project will require an ERP permit from the SJRWMD for stormwater and water quality compliance.

Path: \\vhb.com\gis\proj\Orlando\64054.00 Longleaf-Deland NW Quad\Project\Fig 1 - Location Map.mxd



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EXHIBIT 1: LOCATION MAP

Longleaf Four

DeLand, Volusia County

Date: March 2022

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Source:
2019 Aerial

EXHIBIT 2: AERIAL MAP

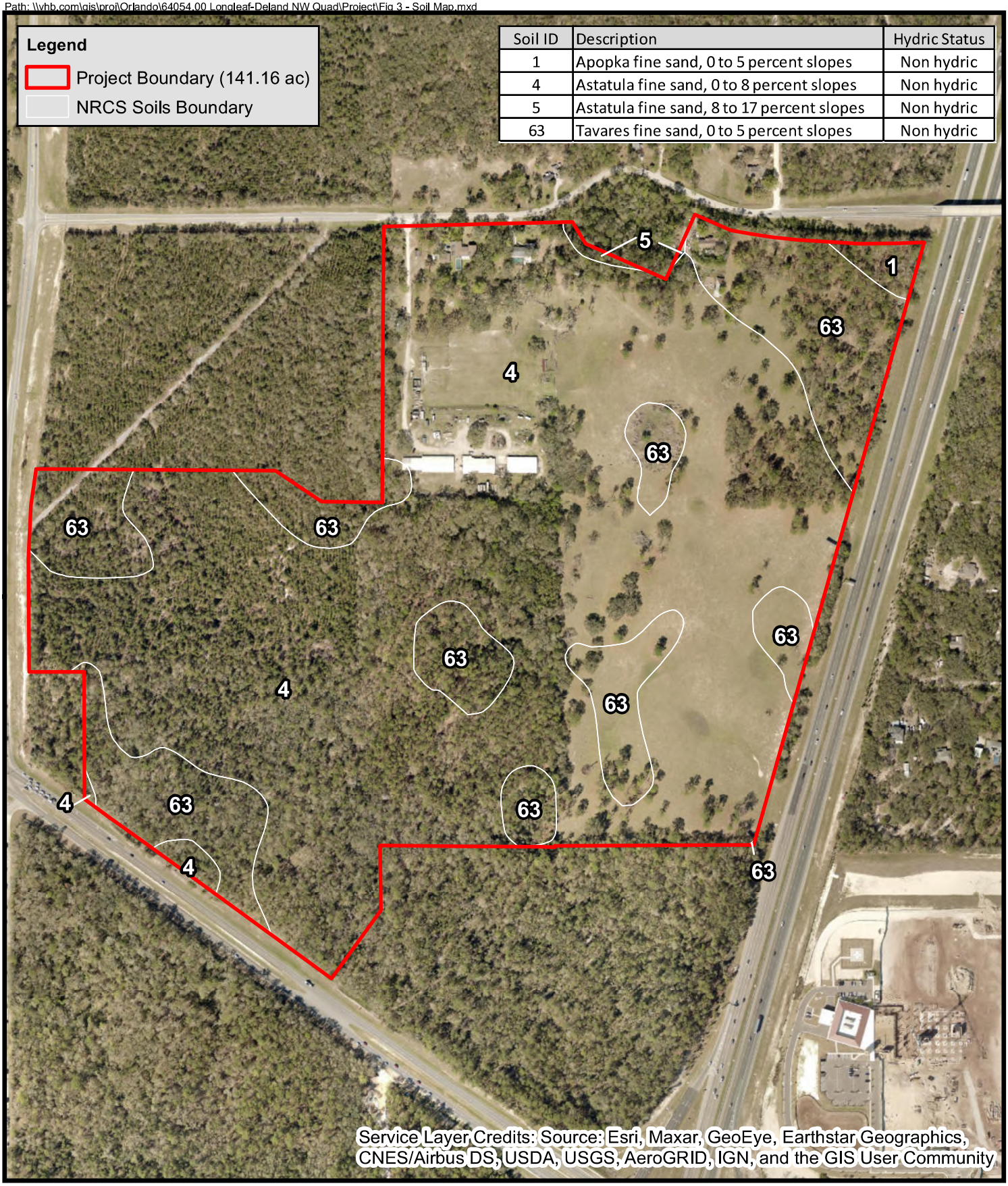
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DeLand, Volusia County

Date: March 2022

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Source:
Natural Resources Conservation Service GIS Data.

EXHIBIT 3: NRCS SOIL MAP

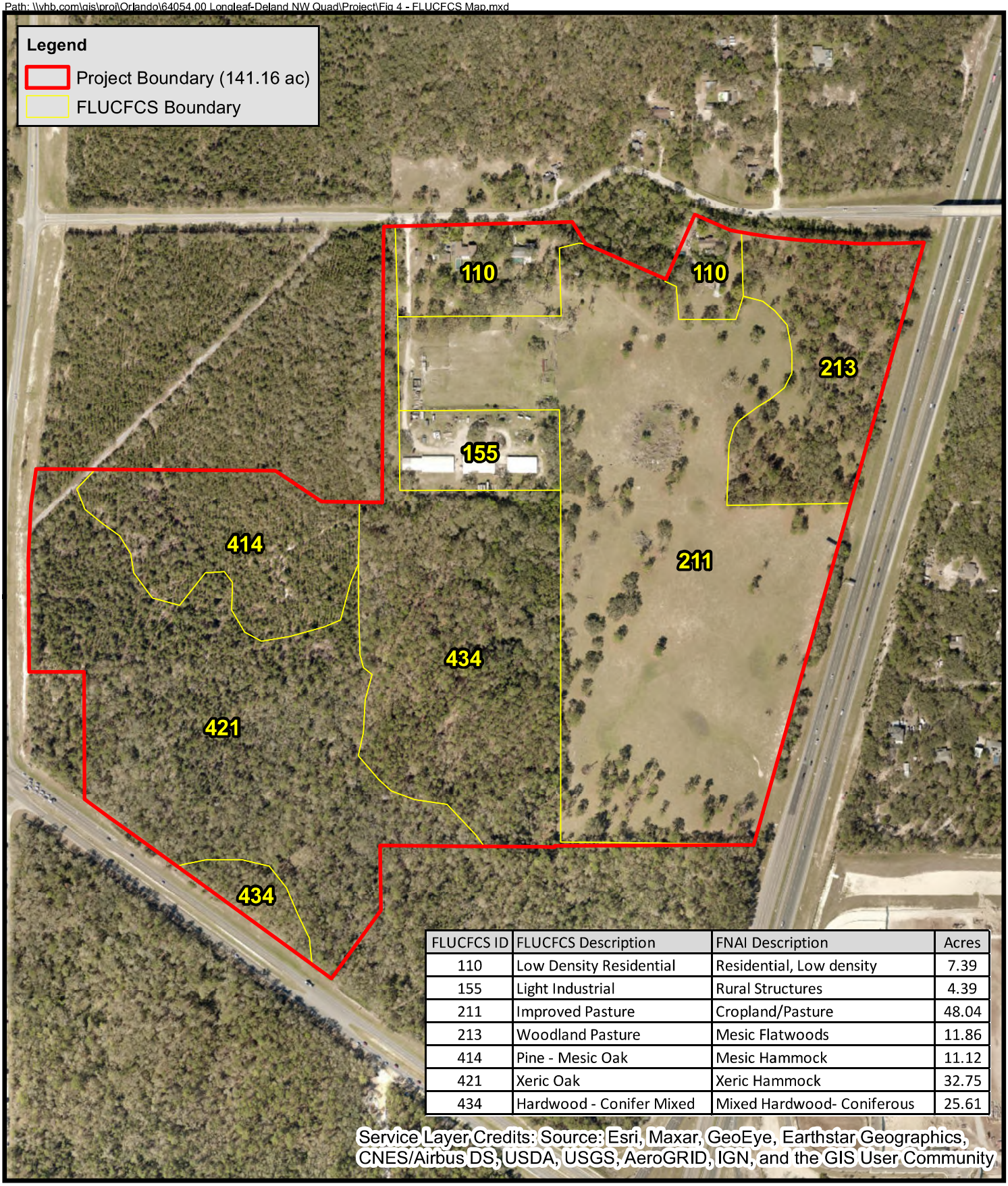
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FLUCFCS ID	FLUCFCS Description	FNAI Description	Acres
110	Low Density Residential	Residential, Low density	7.39
155	Light Industrial	Rural Structures	4.39
211	Improved Pasture	Cropland/Pasture	48.04
213	Woodland Pasture	Mesic Flatwoods	11.86
414	Pine - Mesic Oak	Mesic Hammock	11.12
421	Xeric Oak	Xeric Hammock	32.75
434	Hardwood - Conifer Mixed	Mixed Hardwood- Coniferous	25.61

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Source:
FLUCFCS Boundary based on site visit by VHB Scientists (1/26/2022)

EXHIBIT 4: FLUCFCS MAP

Longleaf Four

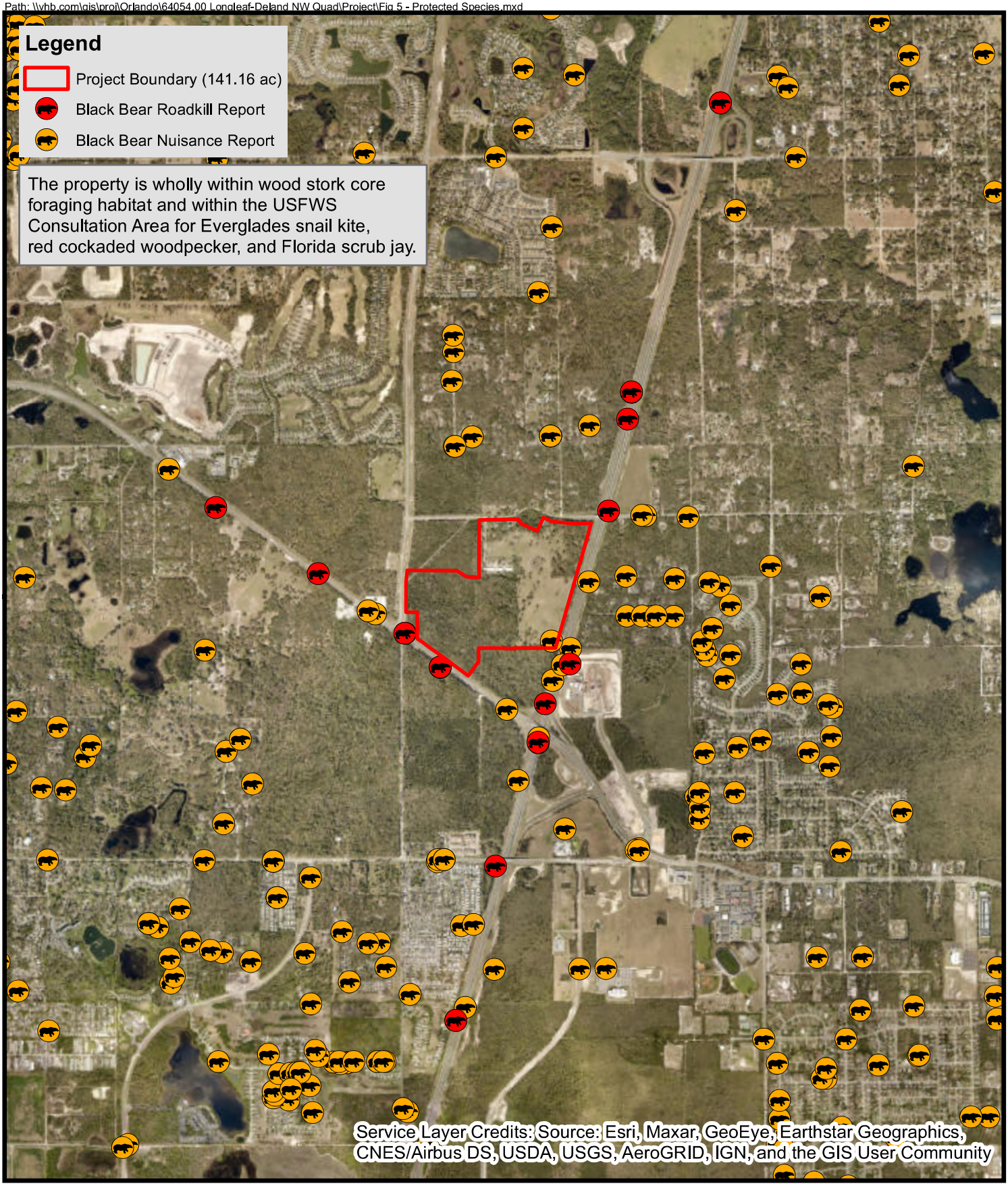
DeLand, Volusia County

Date: March 2022

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Source:
USFWS GIS Data: Consultation Areas, Wood Stork CFA.
FWC GIS Data: Black Bear Reports

EXHIBIT 5: PROTECTED SPECIES MAP

Longleaf Four

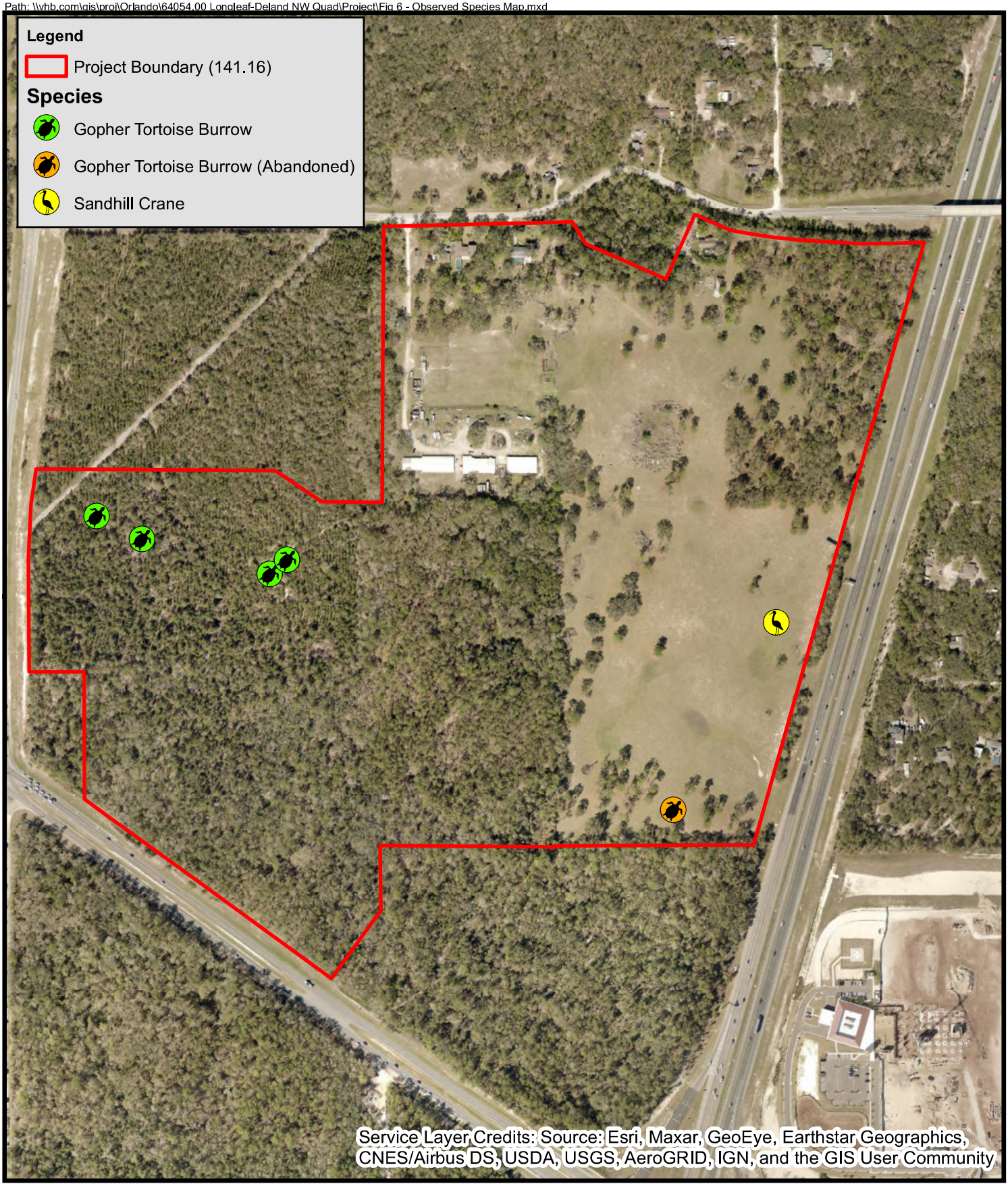
DeLand, Volusia County

Date: March 2022

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EXHIBIT 6: OBSERVED SPECIES MAP

Longleaf Four

DeLand, Volusia County

Date: March 2022

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KITTELSON & ASSOCIATES

DELAND TECH PARK TRAFFIC IMPACT ANALYSIS

DELAND, FLORIDA

July 2023

PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida, practicing with Kittelson & Associates, a corporation authorized to operate as a Professional Engineering business by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have approved the Traffic Impact Study for DeLand Tech Park in DeLand, Florida, dated July 2023.

PROJECT:	DeLand Tech Park
LOCATION:	DeLand, Florida
CLIENT:	Longleaf Four

I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

NAME:	Kok Wan Mah
P.E. NUMBER:	56739
DATE:	7/5/2023



Kok Wan Mah

Digitally signed by Kok Wan Mah
Date: 2023.07.06 09:56:07 -04'00'

The item has been digitally signed and sealed by Kok Wan Mah on the date adjacent to the seal.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DeLand Tech Park Traffic Impact Analysis

DeLand, Florida

Prepared for:
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Prepared by:
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Project Principal:
Stephanie Shealey, P.E., PTOE, PTP
Senior Engineer

Project Number 28629

July 2023

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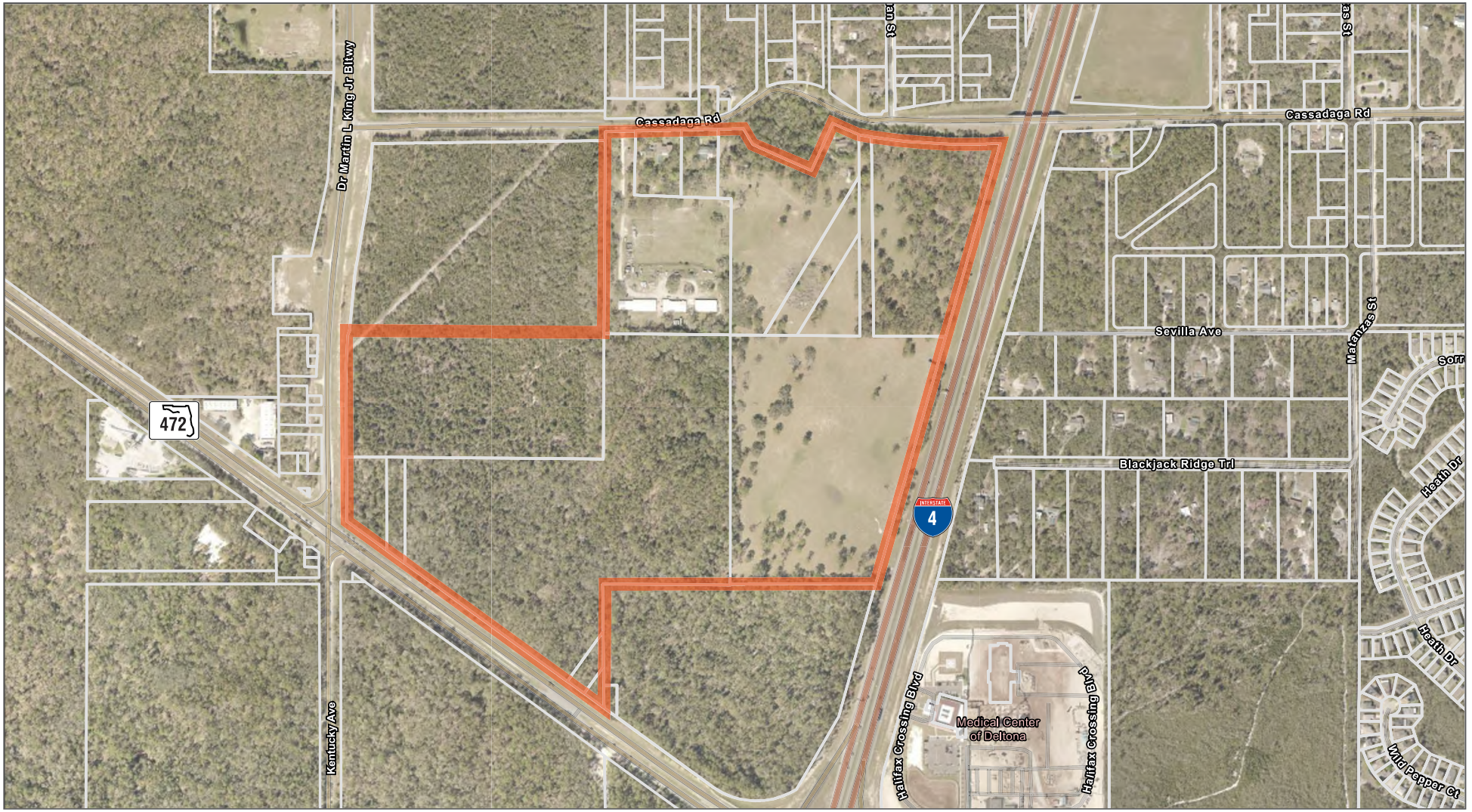
Section 1
Introduction

INTRODUCTION

Kittelson & Associates, Inc. has been retained by Longleaf Four, LLC to conduct a Traffic Impact Analysis (TIA) for the proposed DeLand Tech Park mixed-use commercial development. The project is located on the northwest quadrant of Interstate 4 and SR 472 in DeLand, Volusia County, Florida. The project location is illustrated on **Figure 1**. The site will have two full access driveways; one on Cassadaga Road and one on Dr Martin Luther King Jr Beltway. There will be one access driveway that will allow left-in, right-in, and right-out access on SR 472. Finally, there will be three right-in/right-out access driveways; two on SR 472, and one on Dr Martin Luther King Jr Beltway.The preliminary site plan is shown in **Figure 2**.

The purpose of this study is to evaluate the roadway capacity and operating conditions on the roadways and intersections likely to be impacted by traffic generated by the development to determine how impacts should be mitigated. The following analysis was prepared in accordance with the River to Sea Transportation Planning Organization (R2CTPO) TIA Guidelines and is consistent with the guidelines for the City of DeLand.

The analysis quantifies the trip generation for the expected trips for the proposed land uses, and analyzes the existing traffic conditions along area roadways surrounding the parcel and the projected future traffic conditions expected for the build condition. This document provides a detailed description of the study analysis and key findings. The TIA methodology can be found in **Appendix A**.



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Deland Tech Park | Traffic Impact Analysis

Longleaf Four, LLC | Mac McNaught (c) 317-439-4577

FIGURE 1 **| Location Map**

PROJECT DESCRIPTION

The proposed development is located on the northwest quadrant of Interstate 4 and SR 472 in DeLand, Volusia County, Florida. The property consists of approximately 142.8 acres and will include 750 KSF of Industrial Park, 750 KSF of Warehouse, 240 KSF of General Retail, and a 16 fueling position Gas Station with Convenience Store. The site will have two full access driveways; one on Cassadaga Road and one on Dr Martin Luther King Jr Beltway. There will be one access driveway that will allow left-in, right-in, and right-out access on SR 472. Finally, there will be three right-in/right-out access driveways; two on SR 472, and one on Dr Martin Luther King Jr Beltway. A preliminary site plan is shown in **Figure 2**. Project build-out is anticipated for year 2027, and therefore the analysis in this study assumes a build-out year 2027 scenario.

TRIP GENERATION

Table 1 summarizes the Daily, AM, and PM peak hour trip generation for the proposed development based on equations contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. The proposed development will consist of 750 KSF of Industrial Park, (ITE code 130), 750 KSF of Warehouse (ITE code 150), 240 KSF of General Retail, (ITE code 820), and a 16 fueling position Gas Station with Convenience Store, (ITE code 945). This represents a change from the original TIA that was submitted by VHB dated September 26, 2022, which included 1.5 million square feet of industrial park for the industrial use. Pass-by trips were calculated using the pass-by rate, given as 34% (PM) for General Retail land use, and 62% (AM) and 56% (PM) for Convenience Store/Gas Station land use as determined in the ITE Trip Generation Handbook, 3rd Edition. As shown in **Table 1**, the proposed development is expected to generate 16,191 new daily trips, 683 new AM peak hour trips, and 1,220 new PM peak hour trips for the buildout condition. This represents a reduction in trip generation due to the change in the type of industrial use being proposed for the site. The ITE Trip Generation summary sheets can be found in **Appendix B**.



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FIGURE 2 | **Preliminary Site Plan**

Table 1: Project Trip Generation

Land Use	ITE Code	Intensity		Daily		AM Peak Period						PM Peak Period						Pass-by %	
				Rate	Trip Ends	In		Out		Total		In		Out		Total			
						%	Trips	%	Trips	Rate	Trips	%	Trips	%	Trips	Rate	Trips	AM	PM
Industrial Park	130	750	KSF	3.37	2,528	81%	207	19%	48	0.34	255	22%	56	78%	199	0.34	255	0%	0%
Warehouse	150	750	KSF	1.63	1,223	77%	99	23%	29	0.17	128	28%	38	72%	97	0.18	135	0%	0%
Shopping Center (>150KSF)	820	240	KSF	37.01	8,882	62%	125	38%	77	0.84	202	48%	509	52%	551	4.42	1,060	0%	34%
Gas/Conv	945	16	Pumps	265.13	4,242	50%	129	50%	128	16.06	257	50%	147	50%	148	18.44	295	62%	56%
Internal Capture		Sub Total		-	16,875		560		282		842		750		995		1,745		
		0%	0%	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0		
		Total Passby		-	684	-	80	-	80	-	159	-	263	-	262	-	525		
Total				-	**16,191**		**481**		**203**		**683**		**487**		**733**		**1,220**		

TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of site generated traffic is a function of population in surrounding areas, competing shopping opportunities, existing travel patterns, ease of access to the site, and traffic conditions on area roadways. The primary project traffic to and from the site will be distributed to the adjacent roadways and intersections based on the existing plus committed Central Florida Regional Planning Model (CFRPMv7) results, utilizing the existing and committed network. The model output is provided in **Figure 3** and **Appendix C**. It should be noted that the model distribution at the I-4 eastbound on ramps at SR 472 and Orange Camp Road were adjusted based on engineering judgment, as shown in **Appendix C**.

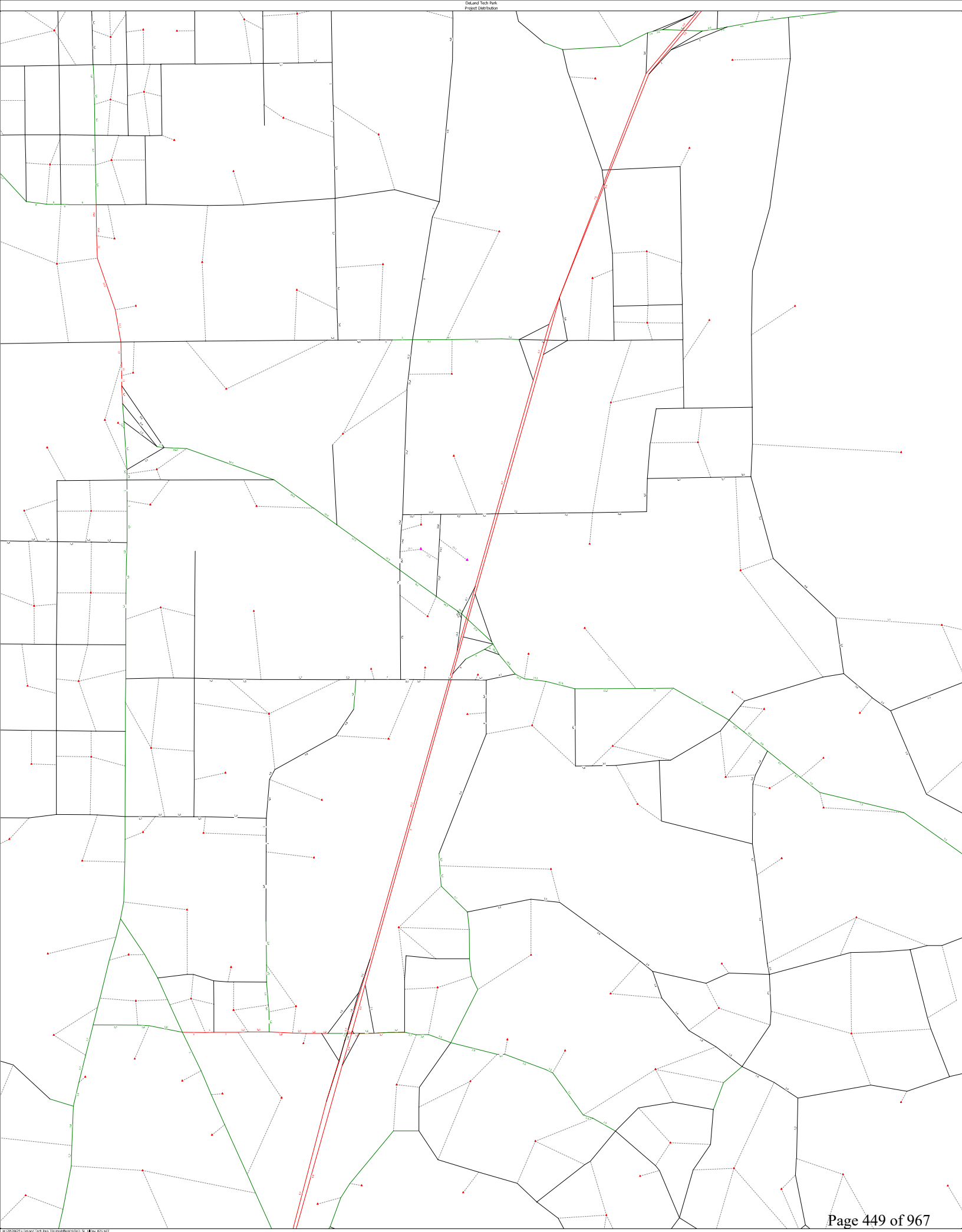


Figure 3: Project Distribution

(Licensed to Kittelson & Associates Inc)



Section 2
Existing Conditions

EXISTING CONDITIONS

Evaluation of the traffic impacts associated with the proposed development first requires an assessment of the existing roadway conditions in the vicinity of the site. The existing conditions section summarizes the existing transportation conditions including geometry and existing traffic control observed in the study area, collection of existing peak hour traffic volumes, and an assessment of the study area roadways and intersections.

STUDY AREA

The study area was determined using a test for significance similar to the one conducted in the methodology document (provided as **Appendix A**) The significance test was updated based on changes in the land uses on the site and model distribution used in the updated TIA. The updated significance test determined the candidate roadways and intersections to be analyzed within this study, with project trips included as representing the full buildout of the development.

Per the R2CTPO TIA Guidelines, the project's primary study area includes those roadway segments that provide direct access to the project, are within a 3-mile radius, and/or impacted by the project where the project's peak hour trips consume three percent (3%) or more of a roadway's two-way peak hour generalized service volume based on the adopted LOS and committed number of lanes. Major intersections along the significant segments, and roadway segments that have been designated as Critical and Near-Critical Roadway segments within a three (3) mile radius of the project shall be considered in the primary impact area. A more detailed table showing the project significance calculations is provided in **Appendix D**. The following roadway segments and intersections are included in the analysis:

Roadway Segments:

- W Volusia Beltway (Dr Martin Luther King Jr Beltway)
  - from SR 472 to Cassadaga Road
  - from Cassadaga Road to Orange Camp Road (Vested Near Critical roadway segment)
  - from Orange Camp Road to Taylor Road (Vested Near Critical roadway segment)
  - from Taylor Road to Beresford Avenue (Vested Near Critical roadway segment)
- W Volusia Beltway (Kentucky Avenue)
  - from Graves Avenue to SR 472
- W Volusia Beltway (Veteran's Memorial Parkway)
  - from Rhode Island Avenue to Graves Avenue (Vested Near Critical roadway segment)
- SR 472
  - from US 17/92 to CR 4101/ Dr Martin Luther King Jr Beltway
  - from CR 4101/ Dr Martin Luther King Jr Beltway to I-4
- Howland Boulevard
  - from I-4/SR 472 to Wolf Pack Run (Vested Critical roadway segment)
  - from Wolf Pack Run to Catalina Boulevard (Vested Critical roadway segment)
  - from Catalina Boulevard to Providence Boulevard (Vested Critical roadway segment)
- Cassadaga Road
  - from W Volusia Beltway to Macy Avenue
- Orange Camp Road
  - from Blue Lake Avenue to W Volusia Beltway (Dr Martin Luther King Jr Beltway) (Vested Near Critical roadway segment)
- Graves Avenue/CR 4145
  - from Veteran's Memorial Parkway to Kentucky Avenue (Critical roadway segment)
- Normandy Boulevard
  - from Graves Avenue to Rhode Island Avenue (Vested Critical roadway segment)

- Macy Avenue
    - from Ohio Street to Cassadaga Road
- Kicklighter Road
    - from Macy Avenue to Lake Helen-Osteen Road/Prevatt Avenue

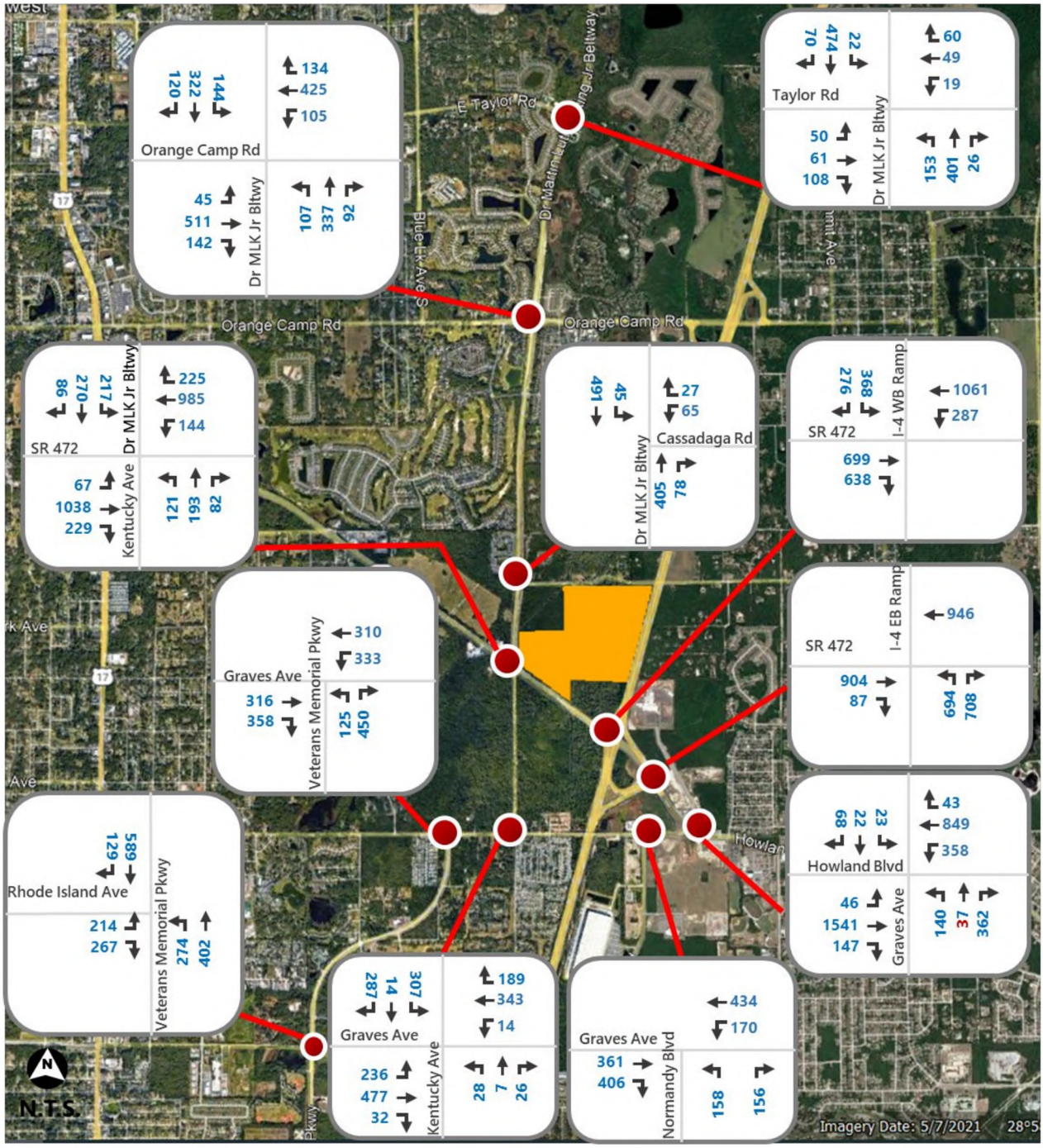
Intersections:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway (July 26, 2022)
- Dr Martin Luther King Jr Beltway at Cassadaga Road (July 26, 2022)
- Dr Martin Luther King Jr Beltway at Orange Camp Road (July 26, 2022)
- Dr Martin Luther King Jr Beltway at Taylor Road (July 26, 2022)
- Kentucky Avenue at Graves Avenue (July 26, 2022)
- Veterans Memorial Parkway at Graves Avenue (July 26, 2022)
- Veterans Memorial Parkway at Rhode Island Avenue (July 26, 2022)
- SR 472 at I-4 WB Ramps (July 26, 2022)
- SR 472 at I-4 EB Ramps (July 26, 2022)
- Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard (January 18, 2023)
- Normandy Boulevard at Graves Avenue (January 18, 2023)

Existing turning movement counts (TMCs) were collected on the dates listed above for the AM (7:00 to 9:00) and PM (4:00 to 6:00) peak hour periods at the 11) study intersections. A review of the collected peak hour traffic volumes indicated that the AM peak hour volumes are about 7 percent less than the PM peak hour volumes. Due to the retail nature of the proposed development, the site generated traffic volumes during the AM peak hour are 40 percent less than the PM peak hour. Since the PM peak hour is the critical time period, the PM peak hour traffic volumes are being evaluated in this study.

The existing TMCs were adjusted using the corresponding seasonal factor of 1.05 based on the 2021 data from FDOT's Florida Traffic Online (FTO) Web Application. Raw turning movement counts along with FDOT Peak Season Category Report are provided in **Appendix E**. **Figure 4** illustrates the seasonal factor adjusted existing PM peak hour traffic volumes. Heavy truck percentages were also calculated from the turning movement volumes and applied to each study intersection in each study period.

Figure 4: Existing PM Traffic Volumes



XX PM (Peak)

EXISTING ROADWAY CAPACITY ANALYSIS

To determine the operational conditions along the study area roadway segments, Kittelson conducted a roadway capacity analysis to help quantify the existing level of service (LOS) of the study roadways for the critical PM peak hour conditions. The LOS of a given roadway is related to prevailing traffic volumes and to capacity, which is defined as the maximum number of vehicles that can pass through a roadway section during a specific period of time. The capacity of a roadway is determined by a number of factors including composition of traffic (cars, buses, and trucks); roadway alignment; width and number of lanes; posted travel speeds and other variables.

The level of service and remaining capacity for each of the study roadways were determined based on Florida Traffic Online (FTO) 2021 counts for the growth rates and the Volusia County 2021 Average Annual Daily Traffic & Historical Counts for base year volumes. A comparison of the AADT roadway traffic volumes were made against the roadway capacities to determine the existing level of service. The existing roadway capacity analysis was performed for all roadways within the study area as shown in **Table 2**. The two-way peak-hour volumes for three roadway segments could not be determined using the Volusia County Average Annual Daily Traffic & Historical Counts database. Therefore, the AADT values were obtained using FTO for their respective years, and the K-factor was applied to obtain two-way peak-hour volumes.

In summary, most study roadway segments operate acceptably and are shown to have sufficient capacity under existing conditions. The only exception is Graves Avenue from Veteran's Memorial Parkway to Kentucky Avenue, which is designated as a Critical roadway with a volume to capacity (v/c) ratio of 1.01.

Table 2: Existing Roadway Capacity Analysis

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2021 2-Way PM Volume	2021 PM V/C Ratio	Remaining PM Capacity	Over Capacity?
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	2	None	E	1,540	1,050	0.68	490	No
	Cassadaga Rd. to Orange Camp Rd.	2	Vested Near Critical	E	1,540	1,000	0.65	540	No
	Orange Camp Rd. to Taylor Rd.	2	Vested Near Critical	E	1,540	1,050	0.68	490	No
	Taylor Rd. to Beresford Ave.	2	Vested Near Critical	E	1,540	770	0.50	770	No
Kentucky Avenue	Graves Ave. to SR 472	2	None	E	1,540	910	0.59	630	No
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	2	Vested Near Critical	E	1,620	1,200	0.74	420	No
Cassadaga Road	W Volusia Beltway to Macy Ave	2	None	E	1020	260	0.25	760	No
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	2	Vested Near Critical	E	1,540	1,220	0.79	320	No
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	2	Critical	E	1,620	1,640	1.01	-20	Yes
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	4	Vested Near Critical	E	3,410	2,500	0.73	910	No
	Wolf Pack Rn. to Catalina Blvd.	4	Vested Near Critical	E	3,410	2,310	0.68	1,100	No
	Catalina Blvd. to Providence Blvd.	4	Vested Near Critical	E	3,410	1,670	0.49	1,740	No

Table 2: Existing Roadway Capacity Analysis (Continued)

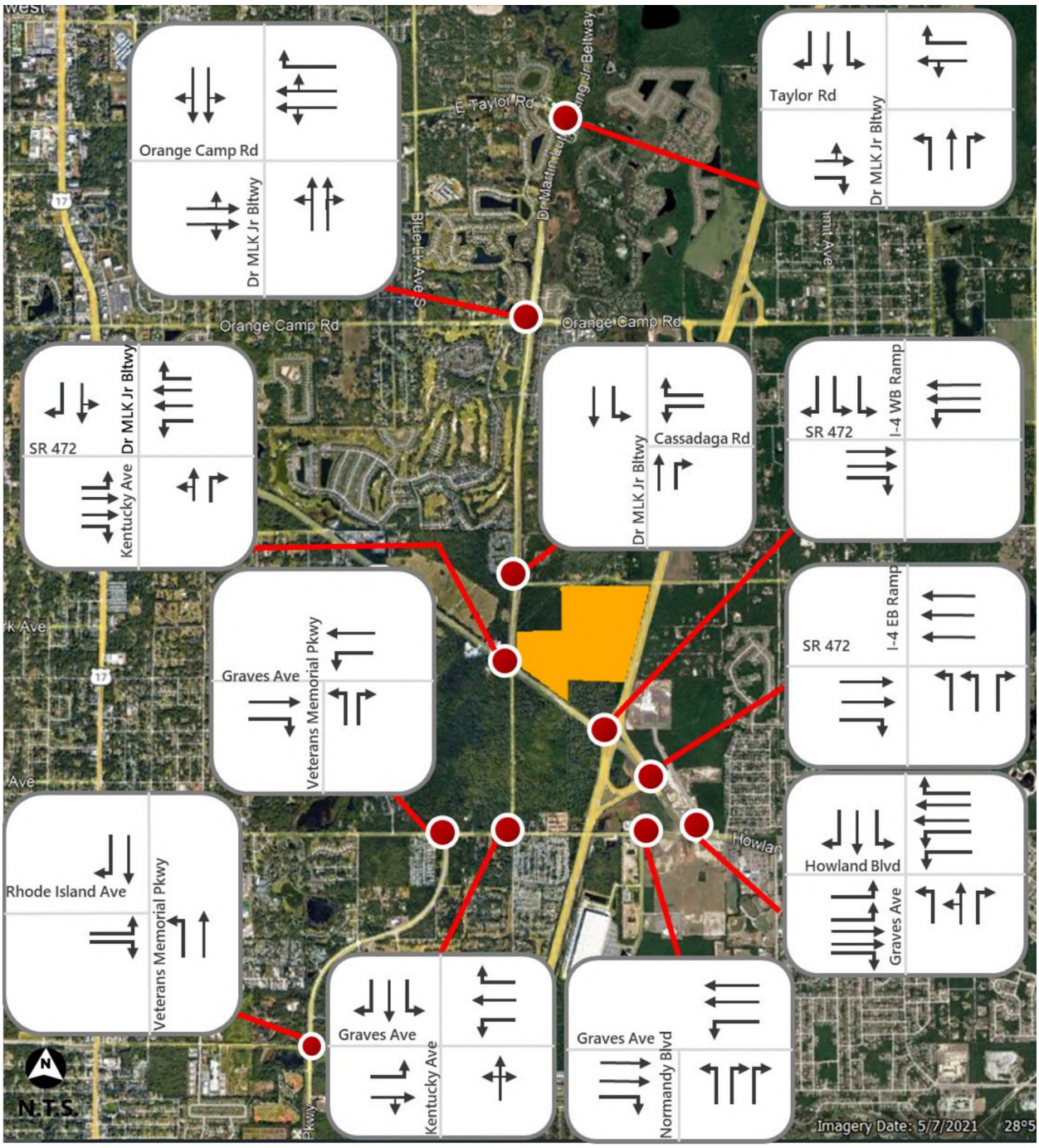
Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2021 2-Way PM Volume	2021 PM V/C Ratio	Remaining 2021 PM Capacity	Over Capacity?
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	4	None	D	5,960	2,160	0.36	3,800	No
	Martin Luther King Jr Bltwy. to I-4	4	None	D	3,580	2,710	0.76	870	No
Macy Avenue	Ohio St. to Cassadaga Rd.	2	None	C	1,020	170	0.17	850	No
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	2	None	E	1,020	200	0.20	820	No
Normandy Blvd.	Graves Ave to Rhode Island Ave	2	Vested Critical	E	1,540	783	0.51	757	No

EXISTING INTERSECTION CAPACITY ANALYSIS

The existing intersections were evaluated using the methodology outlined in the Highway Capacity Manual and using Synchro 11 Software. The existing lane configurations are shown in **Figure 5**. Signal timings were provided by Volusia County and are shown in **Appendix F**. The intersection of Dr Martin Luther King Jr Beltway at Orange Camp Road was recently converted to a roundabout from a traffic signal and therefore this intersection was analyzed utilizing Sidra 9 Software. Due to HCM 6th Edition (HCM6) analysis limitations (expecting strict NEMA phasing), three of the 11 study intersections (SR 472 at Dr Martin Luther King Jr Beltway, Dr Martin Luther King Jr Beltway at Taylor Road, and Kentucky Ave at Graves Ave) were reported utilizing HCM 2000 instead of HCM6 in order to quantify the operational performance at the intersections. The results of the study area existing conditions intersection capacity analysis for the PM peak hour are shown in **Table 3**. The Synchro and Sidra analysis printouts can be found in **Appendix G**.

As shown in **Table 3**, all study area intersections are operating at an overall LOS of E or better. However, there were movements at the intersections of SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway, SR 472 at I-4 WB Ramps, and Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard that operate at LOS F. The Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard intersection also operates with two overcapacity movements.

Figure 5: Existing Lane Configurations



Existing Lane Configurations

Table 3: Existing Conditions Intersection Capacity Analysis

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	0.99	71.0	E
Dr Martin Luther King Jr Bltwy.at Cassadaga Rd.	Signalized	0.54	10.0	A
Dr Martin Luther King Jr Bltwy.at Orange Camp Rd.	Roundabout	0.53	10.9	B
SR 472 at Taylor Rd.	Signalized	0.85	22.6	C
Kentucky Ave. at Graves Ave.	Signalized	0.73	31.5	C
Veteran's Memorial Pkwy. at Graves Ave.	Signalized	0.90	25.2	C
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	0.96	37.8	D
SR 472 at I-4 WB Ramps	Signalized	0.94	41.4	D
SR 472 at I-4 EB Ramps	Signalized	0.89	20.9	C
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	1.02	38.9	D
Normandy Blvd. at Graves Ave.	Signalized	0.70	12.4	B

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS.



Section 3
Future Conditions

FUTURE CONDITIONS

To determine the impacts of the site-generated traffic volumes on the surrounding roadways and study intersections, future traffic conditions were analyzed. The future background volumes were determined based on an application of the Volusia County growth methodology provided in **Appendix H**.

Historical growth rates were determined by considering linear, exponential, and decaying exponential traffic volume growth on each study segment. The vested trips in the Volusia County and Orange City databases were accounted for (when a roadway segment was in both databases, whichever database had the higher volume was used). Several TIAs were obtained for nearby developments and the vested trips in those TIAs were used instead of what was shown in the vested trip databases. TIAs for the following approved or committed developments were included for background traffic:

- BTR DeLand
- Kirk Subdivision/Canopy Terrace
- The Crossings
- North Kentucky Distribution Center
- Parc Hill
- Park Lake Estates

The historical growth rate and vested trips for each segment are shown in **Table 4**, which were then used to calculate 2027 future background PM segment volumes. These sources were also used to calculate the 2027 future background PM peak hour turning movement volumes, as illustrated in **Figure 6**. The FDOT traffic trends analysis worksheets are attached in **Appendix H.** Vested trip information is attached as **Appendix I**. The intersection volume derivation is documented in **Appendix J**.

Additionally, the anticipated number of trips generated from the proposed DeLand Tech Park development were calculated based on the trip generation rates/equations obtained from the ITE Trip Generation Manual, 11th Edition (see **Table 1**) and distributed to the roadways and intersections based on the site layout and model distribution. The 2027 buildout future roadway volumes are shown in **Table 5**. The project trip turning movements are illustrated in **Figure 7** and **Figure 8** and 2027 future buildout PM peak hour turning movement volumes are illustrated in **Figure 9** and **Figure 10**.

Table 4: Historical Growth Rates and Vested Traffic

Roadway	Segment	2021 2-Way PM Volume	Historical Growth Rate Selected	Historical Growth Rate Type	Historical Volume Growth	Vested Trips	Volume Growth Method	Reason	Total Background Growth	2027 2-Way PM Background Volume
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	1,050	3.27%	Linear	206	474	Vested Only	See note[1]	474	1,524
	Cassadaga Rd. to Orange Camp Rd.	1,000	2.53%	Linear	152	533	Historical + Vested	Default growth method	685	1,685
	Orange Camp Rd. to Taylor Rd.	1,050	2.00%	Exponential	132	452	Historical + Vested	Default growth method	584	1,634
	Taylor Rd. to Beresford Ave.	770	1.00%	Linear	46	609	Historical + Vested	Default growth method	655	1,425
Kentucky Avenue	Graves Ave. to SR 472	910	3.27%	Linear	179	579	Vested Only	See note[1]	579	1,489
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	1,200	4.91%	Linear	354	366	Vested Only	See note[1]	366	1,566
Cassadaga Road	W Volusia Beltway to Macy Ave	260	2.00%	Linear	31	17	Historical + Vested	Default growth method	48	308
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	1,220	5.37%	Exponential	450	237	Historical Only	See note[2]	450	1,670

[1] Historical growth rate>3%. Vested trips are higher than historical growth rate volume.
[2] Historical growth rate>3%. Historical growth rate volume is higher than vested trips.

Table 4: Historical Growth Rates and Vested Traffic (Continued)

Roadway	Segment	2021 2-Way PM Volume	Historical Growth Rate Selected	Historical Growth Rate Type	Historical Volume Growth	Vested Trips	Volume Growth Method	Reason	Total Background Growth	2027 2-Way PM Background Volume
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	1,640	3.22%	Exponential	343	563	Vested Only	See note[1]	563	2,203
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	2,500	1.00%	Decaying Exponential	154	926	Historical + Vested	Default growth method	1,080	3,580
	Wolf Pack Rn. to Catalina Blvd.	2,310	2.00%	Linear	277	720	Historical + Vested	Default growth method	997	3,307
	Catalina Blvd. to Providence Blvd.	1,670	2.00%	Linear	200	466	Historical + Vested	Default growth method	666	2,336
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	2,160	6.73%	Exponential	1033	129	Historical Only	See note[2]	1033	3,193
	Martin Luther King Jr Bltwy. to I-4	2,710	1.00%	Decaying Exponential	167	589	Historical + Vested	Default growth method	756	3,466
Macy Avenue	Ohio St. to Cassadaga Rd.	170	2.00%	Linear	20	3	Historical + Vested	Default growth method	23	193
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	200	5.14%	Decaying Exponential	70	0	Historical Only	See note[2]	70	270

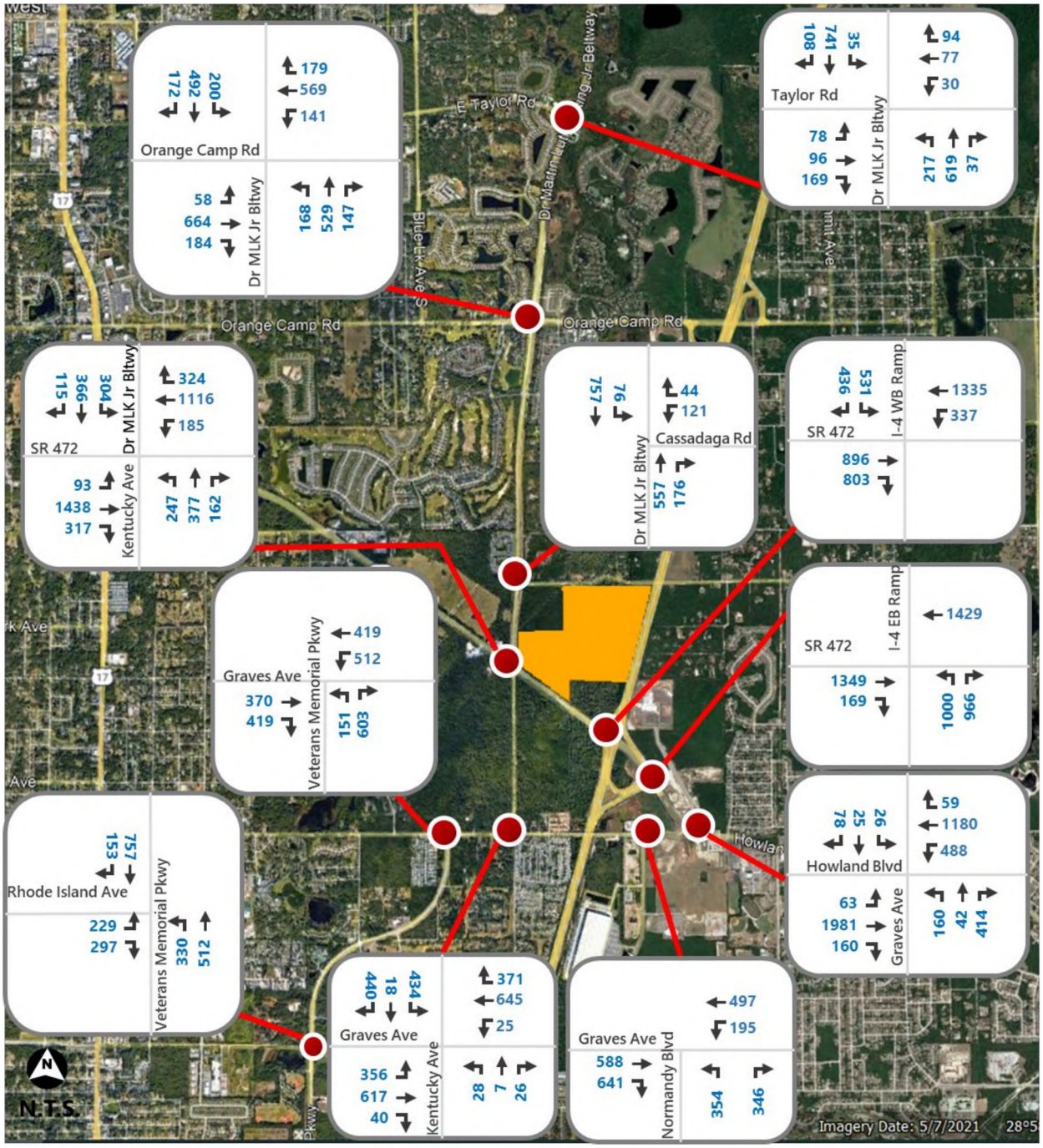
[1] Historical growth rate>3%. Vested trips are higher than historical growth rate volume.
[2] Historical growth rate>3%. Historical growth rate volume is higher than vested trips.

Table 4: Historical Growth Rates and Vested Traffic (Continued)

Roadway	Segment	2021 2-Way PM Volume	Historical Growth Rate Selected	Historical Growth Rate Type	Historical Volume Growth	Vested Trips	Volume Growth Method	Reason	Total Background Growth	2027 2-Way PM Background Volume
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	783	10.52%	Decaying Exponential	644	764	Vested Only	See note[1]	764	1,547

[1] Historical growth rate>3%. Vested trips are higher than historical growth rate volume.
[2] Historical growth rate>3%. Historical growth rate volume is higher than vested trips.

Figure 6: Background Year 2027 Traffic Volumes

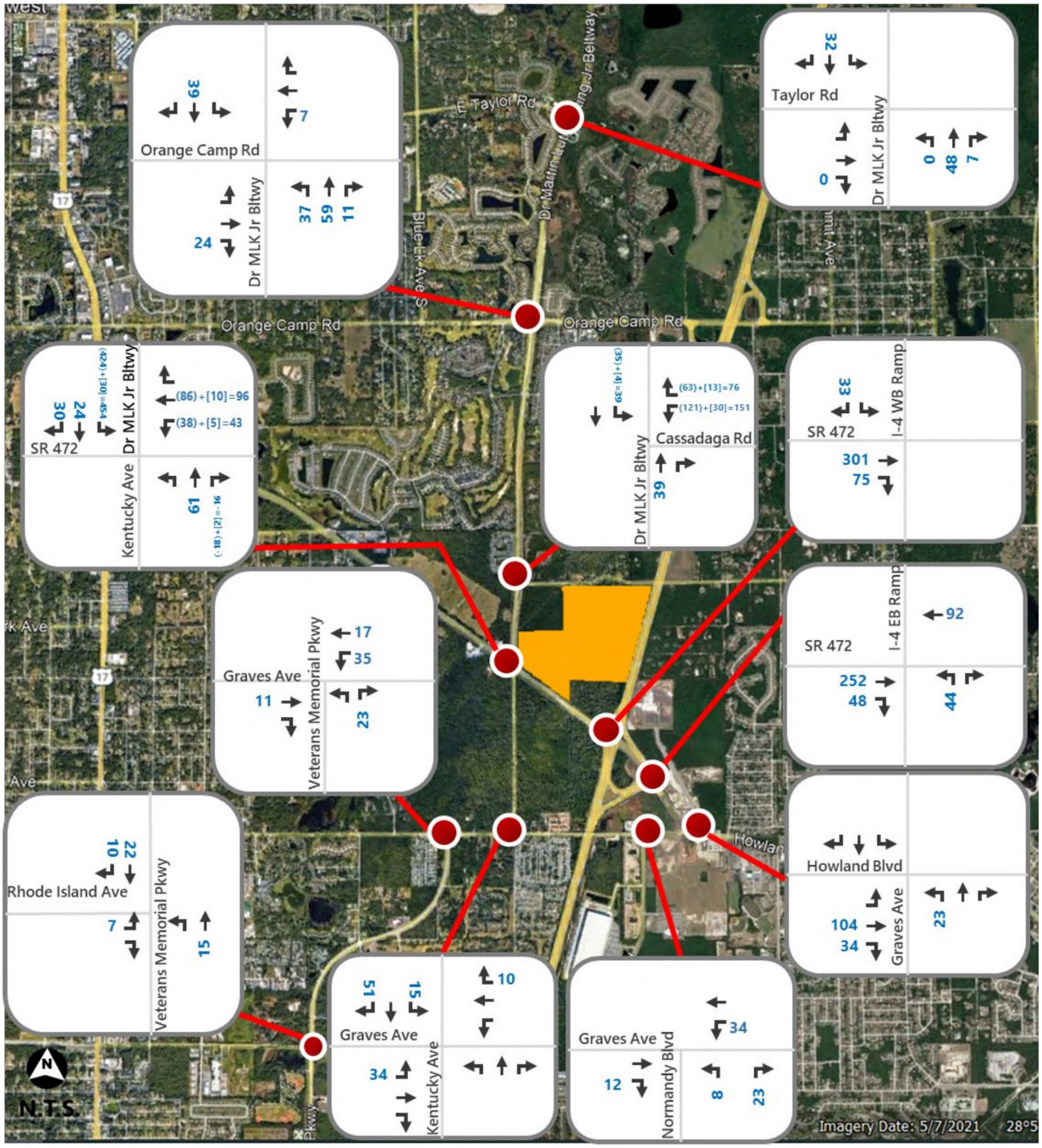


XX PM (Peak)

Table 5: Future Buildout Roadway Volumes

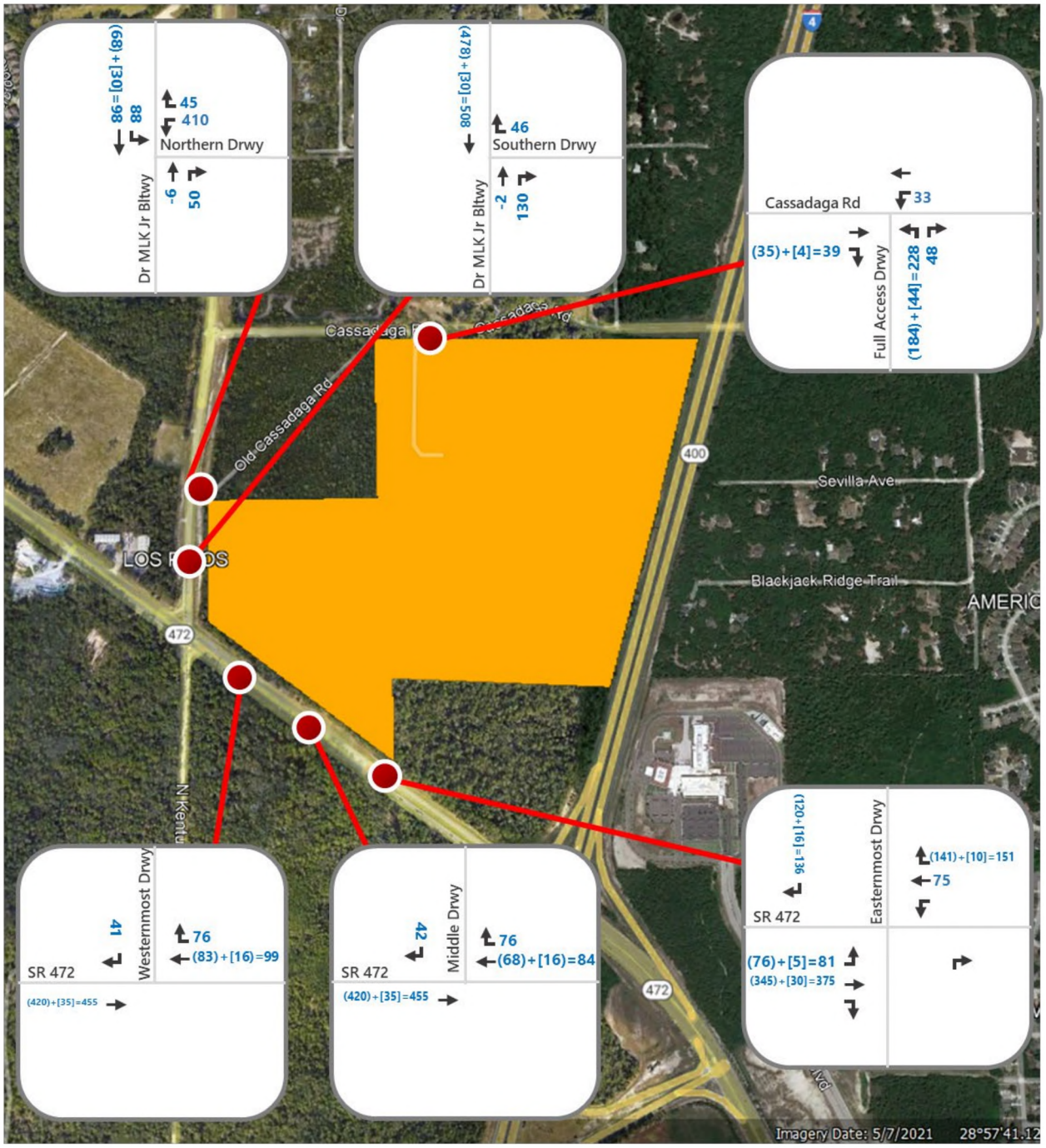
Roadway	Segment	2027 2-Way PM Background Volume	Model Distribution	Buildout Trips	2027 2-Way PM Buildout Volume
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	1,524	16.25%	198	1,722
	Cassadaga Rd. to Orange Camp Rd.	1,685	21.30%	260	1,945
	Orange Camp Rd. to Taylor Rd.	1,634	7.50%	92	1,726
	Taylor Rd. to Beresford Ave.	1,425	6.60%	81	1,506
Kentucky Avenue	Graves Ave. to SR 472	1,489	9.10%	111	1,600
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	1,566	4.60%	56	1,622
Cassadaga Road	Dr. Martin Luther King Jr Bltwy. to Macy Ave.	308	9.80%	120	428
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	1,670	4.80%	59	1,729
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	2,203	7.00%	85	2,288
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	3,580	15.28%	186	3,766
	Wolf Pack Rn. to Catalina Blvd.	3,307	11.60%	142	3,449
	Catalina Blvd. to Providence Blvd.	2,336	10.07%	123	2,459
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	3,193	16.74%	204	3,397
	Martin Luther King Jr Bltwy. to I-4	3,466	26.40%	322	3,788
Macy Avenue	Ohio St. to Cassadaga Rd.	193	6.60%	81	274
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	270	5.60%	68	338
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	1,547	5.65%	69	1,616

Figure 7: Project Traffic Volumes at Study Area Intersections



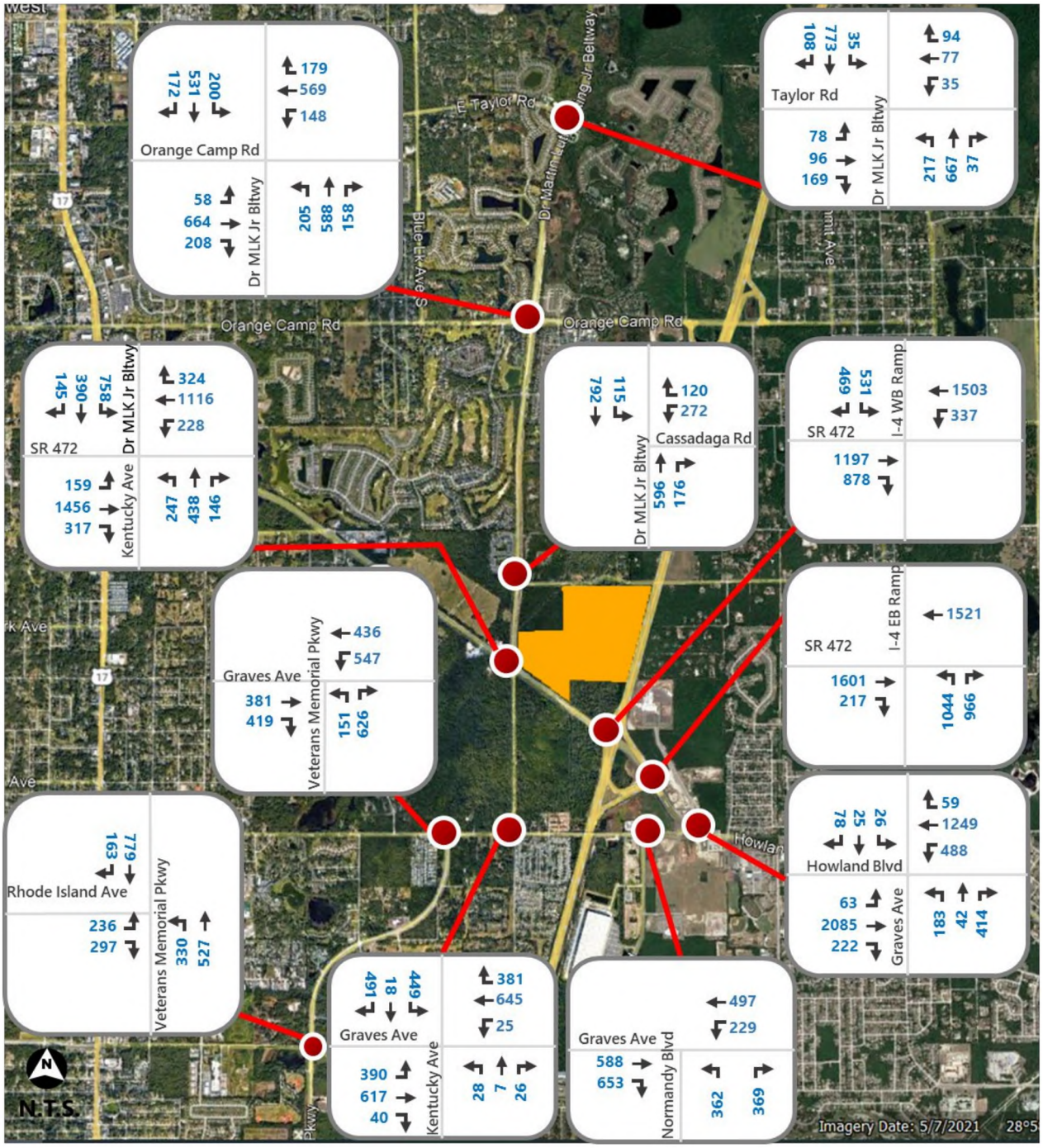
(XX) Passenger Vehicle Trips
[XX] Truck Trips
XX Total Trips

Figure 8: Project Traffic Driveway Volumes



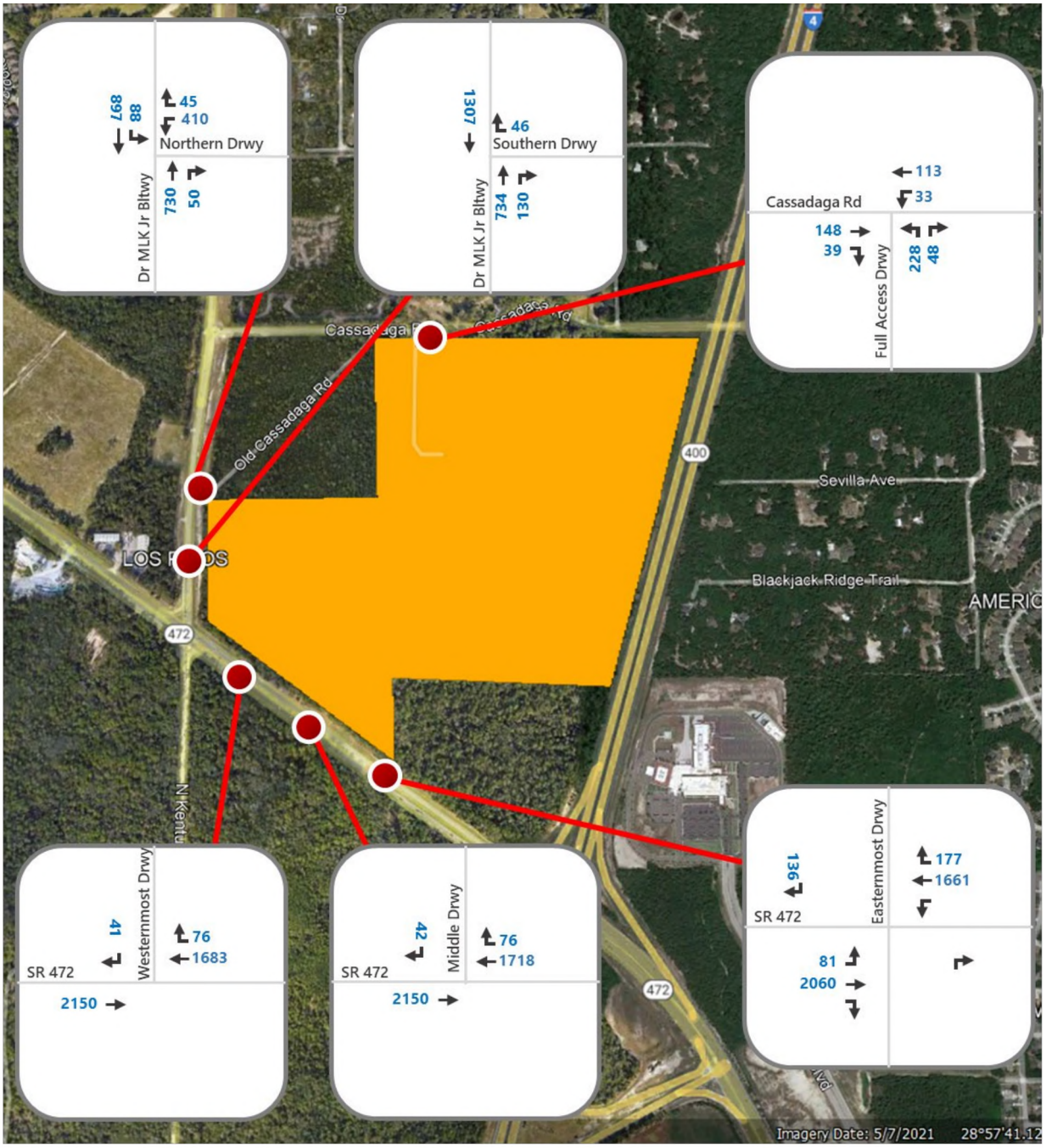
(XX) Passenger Vehicle Trips
[XX] Truck Trips
XX Total Trips

Figure 9: 2027 Future Buildout Traffic Volumes at Study Area Intersections



XX PM (Peak)

Figure 10: 2027 Future Buildout Driveway Volumes



XX PM (Peak)

YEAR 2027 FUTURE BACKGROUND ROADWAY CAPACITY ANALYSIS

The PM peak hour 2027 future background capacity analysis for the study area roadways is shown in **Table 6**. This scenario includes planned, programmed, and/or committed roadway capacity improvements within the area of influence of the project scheduled for construction as identified in the Volusia County and FDOT Five Year Work Program. Documentation of these improvements is provided in **Appendix K**. The following are those improvements:

- Graves Avenue from Veteran's Memorial Parkway to Kentucky Avenue – Add a left-turn lane onto Graves Avenue and a second westbound left turn lane at the Graves Avenue at Veteran's Memorial Parkway intersection
- Dr Martin Luther King Jr Beltway and Cassadaga Road intersection - Install traffic signal

There is also an ongoing study regarding potential improvements at the I-4 & SR 472 interchange. The study recommendations have not yet been finalized but further coordination may be needed to address any roadway changes associated with the results of the interchange study.

As seen in **Table 6**, the analysis concludes that several roadway segments for future conditions operate over capacity as a result from background traffic conditions. These segments include:

- Dr Martin Luther King Jr Beltway
    - From Cassadaga Road to Orange Camp Road
    - From Orange Camp Road to Taylor Road
- Orange Camp Road
    - From Blue Lake Avenue to Dr Martin Luther King Jr Beltway
- Graves Avenue
    - From Veteran's Memorial Parkway to Kentucky Avenue
- Howland Boulevard
    - From I-4/SR 472 to Wolf Pack Run
- Normandy Boulevard
    - From Graves Avenue to Rhode Island Avenue

Table 6: Year 2027 Future Background Roadway Capacity Analysis

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	2	None	E	1,540	1,524	0.99	16	No
	Cassadaga Rd. to Orange Camp Rd.	2	Vested Near Critical	E	1,540	1,685	1.09	-145	Yes
	Orange Camp Rd. to Taylor Rd.	2	Vested Near Critical	E	1,540	1,634	1.06	-94	Yes
	Taylor Rd. to Beresford Ave.	2	Vested Near Critical	E	1,540	1,425	0.93	115	No
Kentucky Avenue	Graves Ave. to SR 472	2	None	E	1,540	1,489	0.97	51	No
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	2	Vested Near Critical	E	1,620	1,566	0.97	54	No
Cassadaga Road	W Volusia Beltway to Macy Ave	2	None	E	1,020	308	0.30	712	No
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	2	Vested Near Critical	E	1,540	1,670	1.08	-130	Yes
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	2	Critical	E	1,620	2,203	1.36	-583	Yes
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	4	Vested Near Critical	E	3,410	3,580	1.05	-170	Yes
	Wolf Pack Rn. to Catalina Blvd.	4	Vested Near Critical	E	3,410	3,307	0.97	103	No
	Catalina Blvd. to Providence Blvd.	4	Vested Near Critical	E	3,410	2,336	0.69	1,074	No

Table 6: Year 2027 Future Background Roadway Capacity Analysis (Continued)

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	4	None	D	5,960	3,193	0.54	2,767	No
	Martin Luther King Jr Bltwy. to I-4	4	None	D	3,580	3,466	0.97	114	No
Macy Avenue	Ohio St. to Cassadaga Rd.	2	None	C	1,020	193	0.19	827	No
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	2	None	E	1,020	270	0.26	750	No
Normandy Blvd.	Graves Ave to Rhode Island Ave	2	Vested Critical	E	1,540	1,547	1.00	-7	Yes

YEAR 2027 FUTURE BACKGROUND INTERSECTION CAPACITY ANALYSIS

The background intersection lane configurations are shown in **Figure 11**. The results of the intersection capacity analysis for the PM peak hour are shown in **Table 7**. The analysis reflects the v/c ratios, delays per turning movement (in seconds), and the operating LOS. shows that under future background conditions (does not include project traffic), the study intersections are projected to operate with an overall LOS of E or better with the exception of:

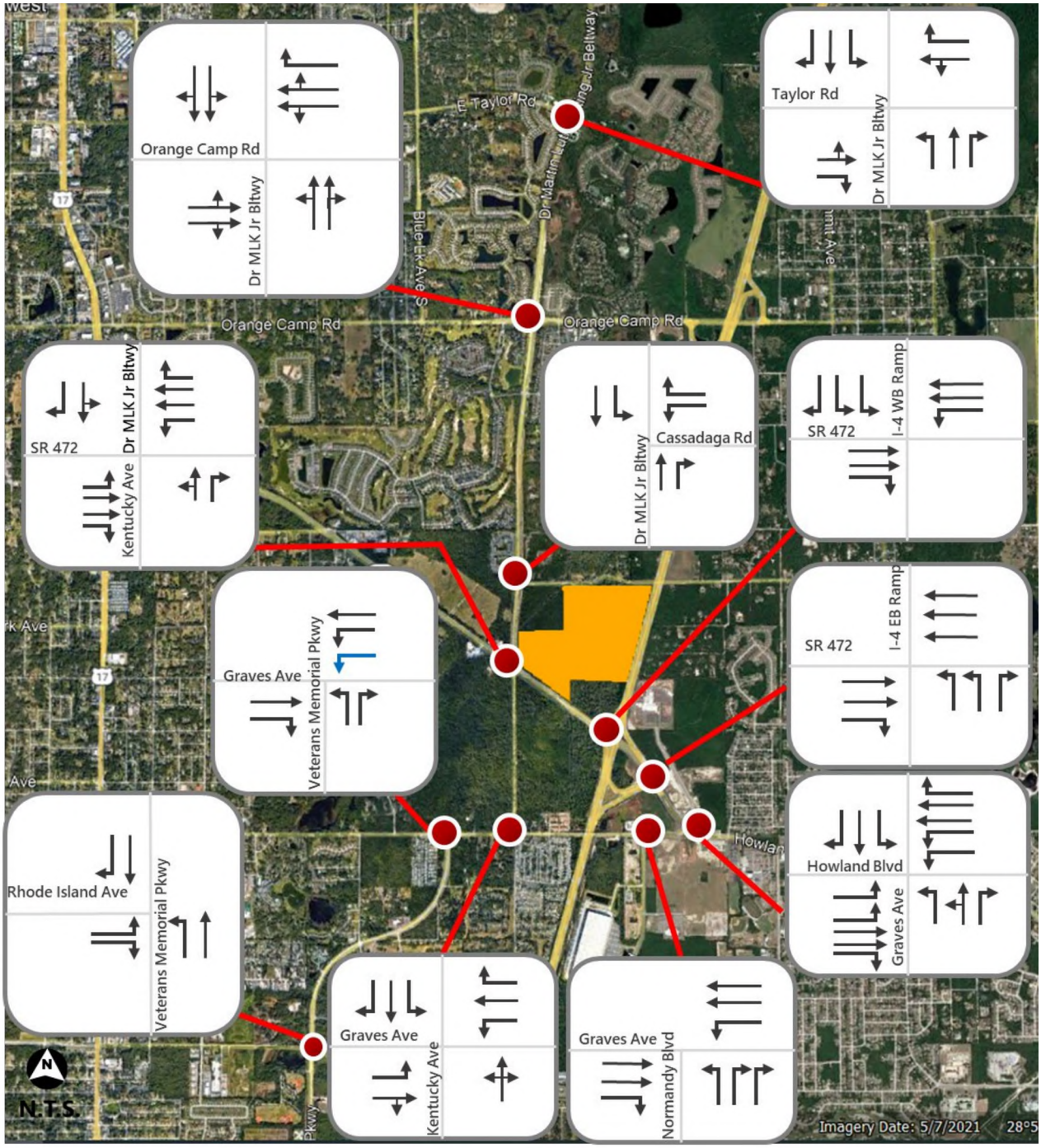
- SR 472 at Dr Martin Luther King Jr Beltway

In addition, the following intersections operate with overcapacity movements:

- SR 472 at Dr Martin Luther King Jr Beltway
- Kentucky Avenue at Graves Avenue
- Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard

Additional background improvements will be further evaluated and analyzed in the following sections to determine the potential improvements to accommodate the projected future background traffic volumes. The future background conditions Synchro and Sidra intersection report printouts are provided in **Appendix L**.

Figure 11: Background Lane Configurations



Existing Lane Configurations

Background Lane Configurations

Table 7: Year 2027 Future Background Intersection Capacity Analysis

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	1.93	170.6	F
Dr Martin Luther King Jr Bltwy.at Cassadaga Rd.	Signalized	0.73	15.8	B
Dr Martin Luther King Jr Bltwy.at Orange Camp Rd.	Roundabout	0.92	36.5	D
SR 472 at Taylor Rd.	Signalized	0.99	44.7	D
Kentucky Ave. at Graves Ave.	Signalized	1.28	75.8	E
Veteran's Memorial Pkwy. at Graves Ave.	Signalized	0.98	36.2	D
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	1.42	85.3	F
SR 472 at I-4 WB Ramps	Signalized	0.90	38.4	D
SR 472 at I-4 EB Ramps	Signalized	0.94	24.5	C
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	1.17	71.7	E
Normandy Blvd. at Graves Ave.	Signalized	0.92	26.8	C

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS.

YEAR 2027 FUTURE BACKGROUND ROADWAY CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVEMENTS)

Based on the future background roadway capacity analysis, it is recommended that the following roadway segments be widened to enhance operations and increase capacity to better accommodate future background traffic volumes:

- Widen the following roadway segments from two to four lanes:
  - Dr Martin Luther King Kr Beltway:
    - From Cassadaga Road to Orange Camp Road
    - From Orange Camp Road to Taylor Road
  - Orange Camp Road:
    - From Blue Lake Avenue to Martin Luther King Jr Beltway
  - Graves Avenue
    - From Veteran's Memorial Parkway to Kentucky Avenue
- Widen the following roadway segments from four to six lanes:
  - Normandy Boulevard
    - From Graves Avenue to Rhode Island Avenue

The PM peak hour 2027 future background capacity analysis for the study area roadways with addition of the background related improvements can be found in **Table 8**. As seen in the table all study area roadways are anticipated to operate acceptable conditions under the year 2027 future background PM peak hour conditions with the addition of background related improvements.

Table 8: Year 2027 Future Background Roadway Capacity Analysis (With Background Improvements)

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
Dr Martin Luther King Jr Beltway	Cassadaga Rd. to Orange Camp Rd.	4	Vested Near Critical	E	3,410	1,685	0.49	1,725	No
Dr Martin Luther King Jr Beltway	Orange Camp Rd. to Taylor Rd.	4	Vested Near Critical	E	3,410	1,634	0.48	1,776	No
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	4	Vested Near Critical	E	3,410	1,670	0.49	1,740	No
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	4	Critical	E	3,410	2,203	0.65	1,207	No
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	6	Vested Near Critical	E	5,390	3,580	0.66	1,810	No
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	4	Vested Critical	E	3,410	1,547	0.45	1,863	No

YEAR 2027 FUTURE BACKGROUND INTERSECTION CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVMENTS)

The background intersection lane configurations are shown in **Figure 12**. To help improve operations at the intersections showing an overall LOS F or overcapacity movements under the year 2027 PM peak hour future background conditions, the following background related improvements are recommended:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
  - Add one additional eastbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add one additional westbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add exclusive northbound left turn lane
  - Use protected/permitted phasing for northbound/southbound left turn movements
  - Optimize signal timings/splits (eliminate the split phase operation)
- Kentucky Avenue at Graves Avenue
  - Add one additional eastbound through lane (v/c ratio is 1.36 on west leg of intersection in background condition)
  - Add one additional southbound left turn lane
  - Add overlap phasing on the southbound right turn movement
  - Optimize signal timings/splits)
- Veteran's Memorial Parkway at Rhode Island Avenue
  - Add southbound shared through-right lane and remove exclusive southbound right turn lane. There is an acceleration lane on the south leg of this intersection that can be converted to a second receiving lane.
- Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard
  - Add one additional eastbound through lane (v/c ratio is 1.05 on both legs of intersection)
  - Add one additional westbound through lane (v/c ratio is 1.05 on both legs of intersection)

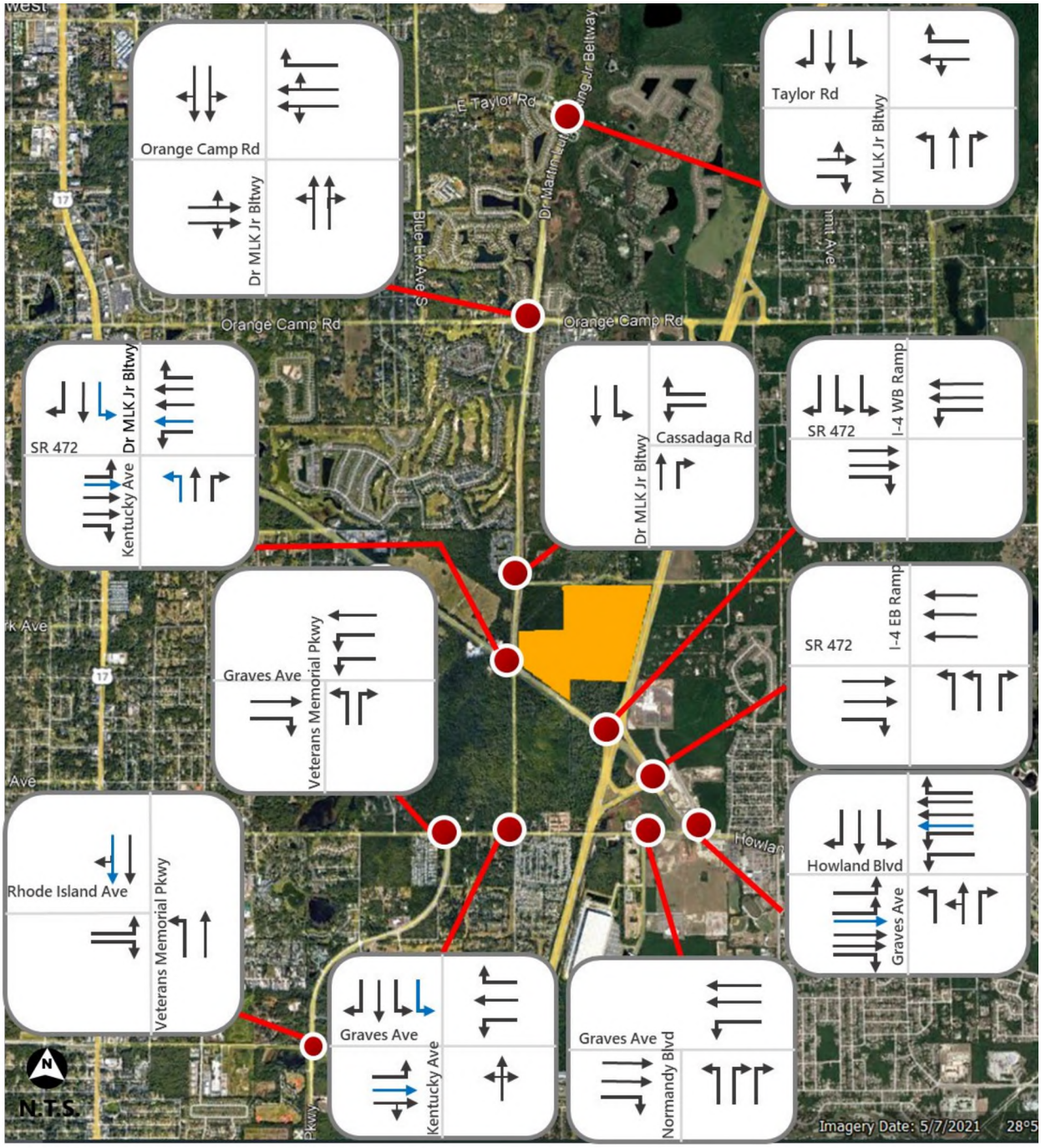
With the above recommended improvements, these intersections are expected to operate at an overall LOS E or better and no overcapacity movements. The results of the improved background conditions are presented in **Table 9** and the Synchro intersection report printouts are provided in **Appendix M**.

Table 9: Year 2027 Future Background Intersection Capacity Analysis (With Background Improvements)

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	0.98	58.2	E
Kentucky Ave. at Graves Ave.	Signalized	0.93	42.0	D
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	0.92	38.2	D
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	0.94	39.6	D

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS.

Figure 12: Background Improvements Lane Configurations



Background Lane Configurations

Improvement Lane Configurations

YEAR 2027 BUILDOUT ROADWAY CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVEMENTS)

The PM peak hour 2027 future buildout (background + project traffic) capacity analysis for the study area roadways with addition of the background related improvements can be found in **Table 10.** The analysis concludes that several roadway segments operate over capacity because of buildout traffic conditions. These segments include:

Dr Martin Luther King Jr Beltway:
  - From SR472 to Cassadaga Road
- Kentucky Avenue:
  - From Graves Avenue to SR 472
- Howland Boulevard:
  - From Wolf Pack Run to Catalina Boulevard
- SR 472:
  - From Martin Luther King Jr Beltway to I-4

Table 10: Year 2027 Buildout Roadway Capacity Analysis (With Background Improvements)

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	2	None	E	1,540	1,722	1.12	-182	Yes
	Cassadaga Rd. to Orange Camp Rd.	4	Vested Near Critical	E	3,410	1,945	0.57	1,465	No
	Orange Camp Rd. to Taylor Rd.	4	Vested Near Critical	E	3,410	1,726	0.51	1,684	No
	Taylor Rd. to Beresford Ave.	2	Vested Near Critical	E	1,540	1,506	0.98	34	No
Kentucky Avenue	Graves Ave. to SR 472	2	None	E	1,540	1,600	1.04	-60	Yes
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	2	Vested Near Critical	E	1,620	1,622	1.00	-2	No
Cassadaga Road	W Volusia Beltway to Macy Ave	2	None	E	1,020	428	0.42	592	No
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	4	Vested Near Critical	E	3,410	1,787	0.52	1,623	No
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	4	Vested Critical	E	3,410	2,288	0.67	1,122	No
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	6	None	D	5,390	3,766	0.70	1,624	No
	Wolf Pack Rn. to Catalina Blvd.	4	Critical	E	3,410	3,449	1.01	-39	Yes
	Catalina Blvd. to Providence Blvd.	6	Vested Near Critical	E	3,410	2,459	0.72	951	No

Table 10: Year 2027 Buildout Roadway Capacity Analysis (With Background Improvements) (Continued)

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	4	None	D	5,960	3,397	0.57	2,563	No
	Martin Luther King Jr Bltwy. to I-4	4	None	D	3,580	3,788	1.06	-208	Yes
Macy Avenue	Ohio St. to Cassadaga Rd.	2	None	C	1,020	274	0.27	746	No
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	2	None	E	1,020	338	0.33	682	No
Normandy Blvd.	Graves Ave to Rhode Island Ave	4	Vested Critical	E	3,410	1,616	0.47	1,794	No

YEAR 2027 BUILDOUT INTERSECTION CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVEMENTS)

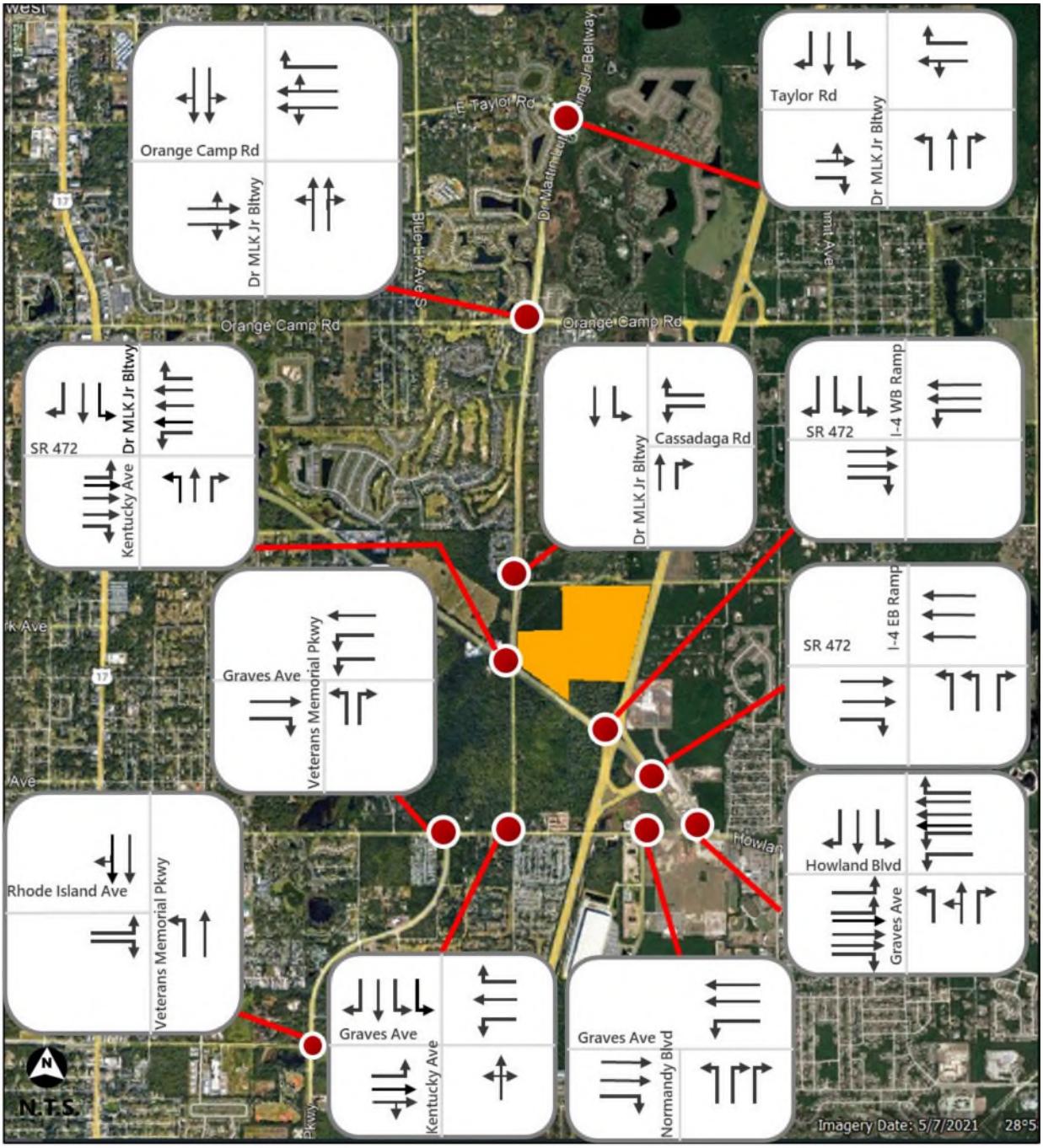
The buildout intersection lane configurations are shown in **Figure 13** and **Figure 14**. The results of the intersection capacity analysis for the PM peak hour under buildout future conditions with background improvements are shown in **Table 11**. The analysis reflects the v/c ratios, delays per turning movement (in seconds), and the operating LOS. Several new intersections were analyzed in the buildout condition including:

- SR 472
    - One stop controlled directional opening intersection
    - Two stop-controlled right-in right-out intersections
- Dr Martin Luther King Jr Beltway
    - One stop-controlled right-in right-out intersection
    - One signalized intersection
- Cassadaga Road
    - One stop-controlled full access intersection

A shown in **Table 11**, SR 472 at Dr Martin Luther King Jr Beltway is expected to operate with an overall intersection LOS of F and overcapacity movements. The remaining intersections operate at LOS E or better and without overcapacity movements.

Additional buildout improvements will be further evaluated and analyzed in the following sections to determine the potential improvements to accommodate the projected buildout traffic volumes. The future buildout conditions Synchro and Sidra intersection report printouts are provided in **Appendix N**.

Figure 13: Buildout Lane Configurations



Background with Improvements Lane Configurations

Figure 14: Buildout Lane Configurations at Site Driveways

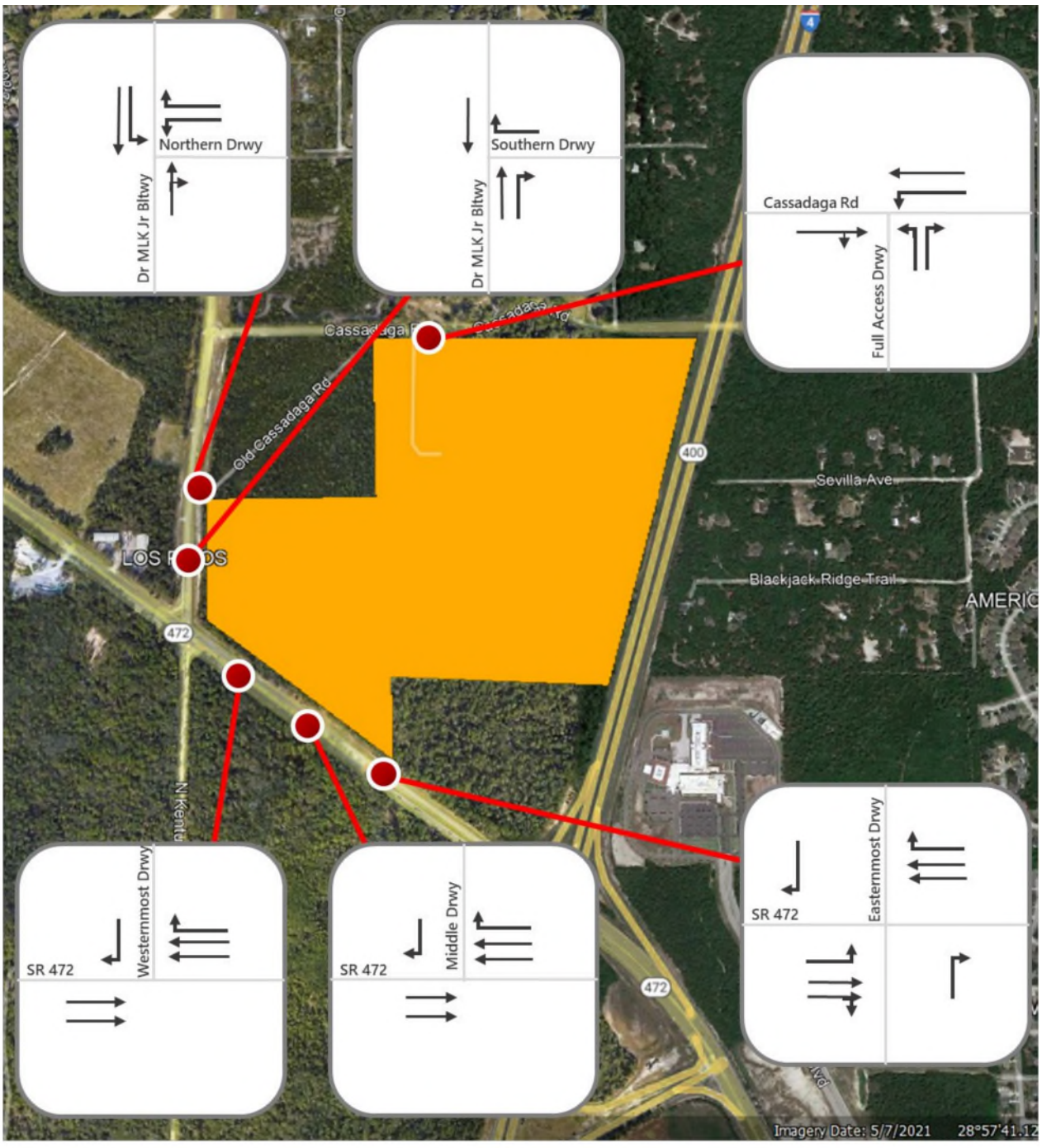


Table 11: Year 2027 Build Intersection Capacity Analysis (With Background Improvements)

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	1.55	171.9	F
Dr Martin Luther King Jr Bltwy.at Cassadaga Rd.	Signalized	0.81	25.0	C
Dr Martin Luther King Jr Bltwy.at Orange Camp Rd.	Signalized	0.99	51.5	D
SR 472 at Taylor Rd.	Signalized	0.96	44.8	D
Kentucky Ave. at Graves Ave.	Signalized	0.95	46.4	D
Veteran's Memorial Pkwy. at Graves Ave.	Signalized	0.99	41.7	D
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	0.92	40.7	D
SR 472 at I-4 WB Ramps	Signalized	0.93	39.9	D
SR 472 at I-4 EB Ramps	Signalized	0.95	24.6	C
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	0.94	38.9	D
Normandy Blvd. at Graves Ave.	Signalized	0.93	29.4	C
SR 472 at Eastern Driveway	Unsignalized	0.48	27.9	D
SR 472 at Middle Driveway	Unsignalized	0.16	20.0	C
SR 472 at Western Driveway	Unsignalized	0.15	19.5	C
Dr. Martin Luther Jr Bltwy. at Southern Driveway	Unsignalized	0.12	15.2	C
Dr. Martin Luther Jr Bltwy. at Northern Driveway	Signalized	0.85	15.2	B
Cassadaga Rd. at Project Driveway	Unsignalized	0.38	14.0	B

Note: The operational results presented for signalized intersections and roundabouts represent the worst movement v/c ratio and overall intersection delay and LOS. The operational results presented for unsignalized intersections represented the worst movement v/c ratio, delay, and LOS.

YEAR 2027 BUILDOUT ROADWAY CAPACITY ANALYSIS (WITH BACKGROUND AND PROJECT IMPROVEMENTS)

Based on the future buildout roadway capacity analysis, it is recommended that the following roadway segments be widened to enhance operations and increase capacity to better accommodate future buildout traffic volumes:

- Widen the following roadway segments from two to four lanes:
  - Dr Martin Luther King Kr Beltway:
    - From SR 472 to Cassadaga Road
  - Kentucky Avenue:
    - From Graves Avenue to SR 472
- Widen the following roadway segments from four to six lanes:
  - Howland Boulevard:
    - From Wolf Pack Run to Catalina Boulevard
  - SR 472:
    - From Martin Luther King Jr Beltway to I-4

The PM peak hour 2027 future buildout capacity analysis for the study area roadways with addition of the buildout related improvements can be found in **Table 12**. As seen in the table all study area roadways are anticipated to operate acceptable conditions under the year 2027 future buildout PM peak hour conditions with the addition of buildout related improvements.

Table 12: Year 2027 Future Buildout Roadway Capacity Analysis (With Buildout Improvements)

Roadway	Segment	No. of Lanes	Critical/Near Critical	Adopted LOS	2-Way PM Capacity	2027 2-Way PM Volume	2027 PM V/C Ratio	Remaining 2027 PM Capacity	Over Capacity?
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	4	None	E	3,410	1,722	0.50	1,688	No
Kentucky Avenue	Graves Ave. to SR 472	4	None	E	3,410	1,600	0.47	1,810	No
Howland Boulevard	Wolf Pack Rn. to Catalina Blvd.	6	Vested Near Critical	E	5,390	3,449	0.64	1,941	No
SR 472	Martin Luther King Jr Bltwy. to I-4	6	None	D	5,390	3,788	0.70	1,602	No

YEAR 2027 BUILDOUT INTERSECTION CAPACITY ANALYSIS (WITH BACKGROUND AND PROJECT IMPROVEMENTS)

The buildout intersection lane configurations are shown with associated improvements in **Figure 15** and **Figure 16**. To help improve operations at the intersections showing an overall LOS F or overcapacity movements under the year 2027 PM peak hour future buildout conditions, the following buildout related improvements are recommended:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
  - Add one additional northbound through lane (this is also a proposed roadway improvement for Kentucky Avenue)
  - Add one additional southbound through lane (this is also a proposed roadway improvement for Dr Martin Luther King Jr Beltway)
  - Add a second southbound left turn lane
  - Add a second westbound left turn lane
  - Add protected phasing on northbound and southbound left turn movements
  - Add permitted-protected phasing on eastbound and westbound right turn movements
  - Optimize signal timings/splits
- Dr. Martin Luther Jr Beltway at Southern Driveway
  - Add one northbound and southbound through lane
- Dr. Martin Luther Jr Beltway at Northern Driveway
  - Add one northbound and southbound through lane
- Dr. Martin Luther Jr Beltway at Cassadaga Road
  - The exclusive northbound right turn lane will now be served directly by the second northbound lane.
  - The second southbound through lane will start on the south side of this intersection.

With the above recommended improvements, these intersections are expected to operate at an overall LOS E or better and no overcapacity movements. The results of the improved buildout conditions are presented in **Table 13** and the Synchro intersection report printouts are provided in **Appendix O**.

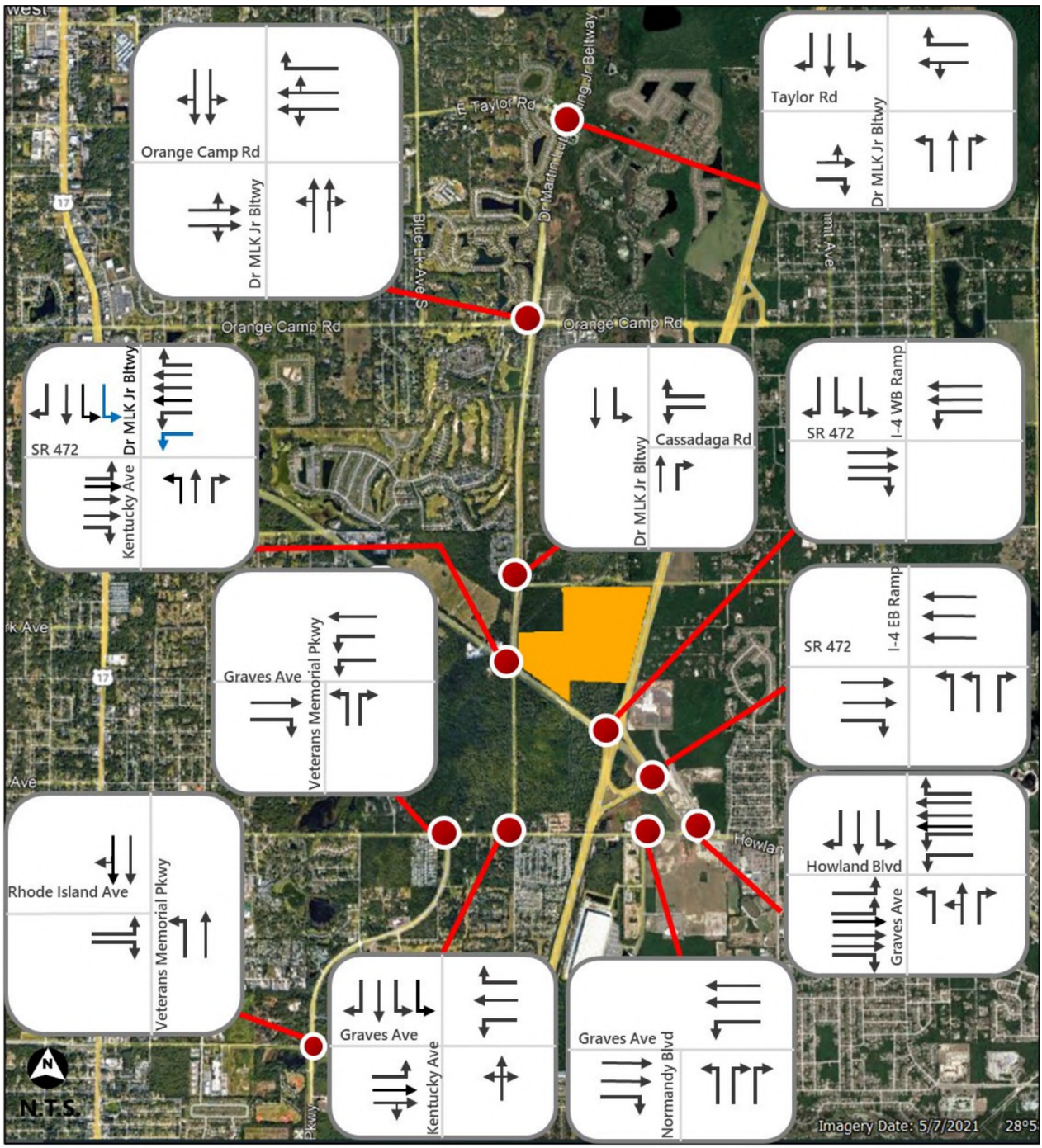
It should be noted that the SR 472 intersection improvements are needed under the assumption that the main driveway for the site on SR 472 has restricted access, not allowing for left turns out of the site. This results in all traffic exiting the project and desiring to head east on SR 472 to be stacked in the southbound left turn at the intersection of SR 472 and Dr Martin Luther King Jr Beltway. An ICE analysis and signal warrant analysis are being conducted to support a full access connection on SR 472.

Table 13: Year 2027 Buildout Intersection Capacity Analysis (With Buildout Improvements)

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	0.96	70.3	E
Dr. Martin Luther Jr Bltwy. at Southern Driveway	Unsignalized	0.08	11.3	B
Dr. Martin Luther Jr Bltwy. at Northern Driveway	Signalized	0.79	9.5	A
Dr. Martin Luther Jr Bltwy. at Cassadaga Road	Signalized	0.76	24.1	C

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS. The operational results presented for unsignalized intersections represented the worst movement v/c ratio, delay, and LOS.

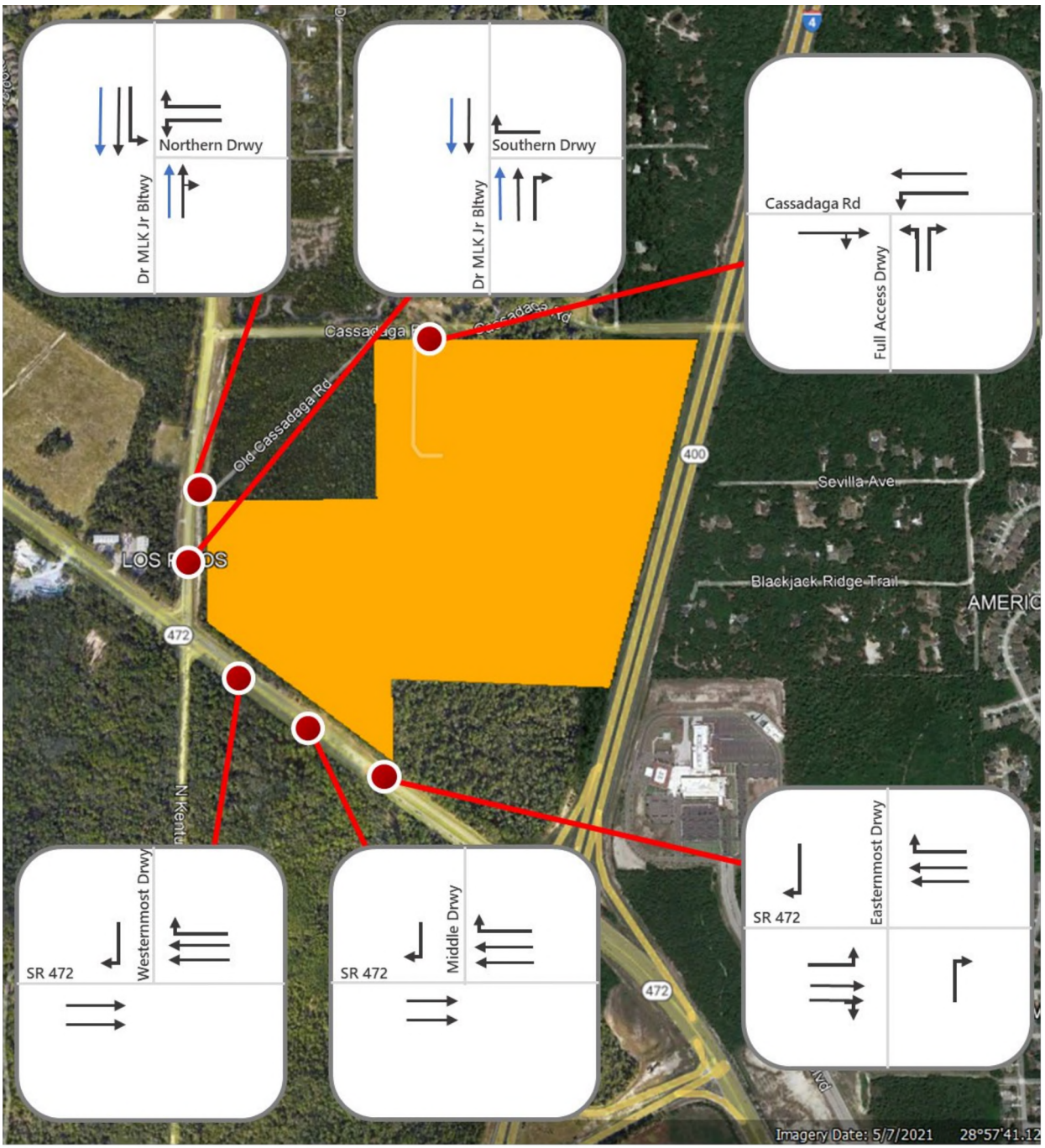
Figure 15: Buildout Improvements Lane Configurations



Buildout Lane Configurations

Buildout with Improvements Lane Configurations

Figure 16: Buildout Improvements Lane Configurations at Site Driveways



Buildout Lane Configurations

Buildout with Improvements Lane Configurations

INTERSECTION TURN LANE AND QUEUE ANALYSIS

As previously indicated, the site will have two full access driveways: one on Cassadaga Road and one on Dr Martin Luther King Jr Beltway. There will be one directional opening on SR 472 and three right-in/right-out access driveways: two on SR 472 and one on Dr Martin Luther King Jr Beltway.

Table 14 shows the project driveways where an exclusive turn lane is needed per the Volusia County Land Development Code (LDC), as shown in Section 72-619 (e) (5) a. 2. This portion of the Volusia County Land Development Code states that a right turn lane shall be provided when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Since each of the right turn movements considered in **Table 14** are located on roadways meeting the speed threshold, an exclusive right-turn lane is warranted in each location.

Table 14: Turn Lane Analysis

Intersection	Turning Movement	Exclusive Lane Needed?	Reason
SR 472 at East Driveway	Westbound Right	Yes	LDC speed threshold met.
SR 472 at Middle Driveway	Westbound Right	Yes	LDC speed threshold met.
SR 472 at West Driveway	Westbound Right	Yes	LDC speed threshold met.
Dr Martin Luther King Jr Beltway at South Driveway	Northbound Right	Yes	LDC speed threshold met.
Dr Martin Luther King Jr Beltway at North Driveway	Northbound Right	Yes	LDC speed threshold met.
Cassadaga Road at Project Driveway	Eastbound Right	Yes	LDC speed threshold met.

A queueing analysis was also conducted for the existing study intersections to determine the impacts of the project development on intersection queueing in the study area. **Table 15** shows the queueing results for the existing, background, and buildout conditions at these intersections. An indication is provided for whether the lane length is exceeded in the existing, background, or buildout condition. Only two intersections have a turning movement where a turn lane deficiency is caused by the buildout condition:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway: Eastbound right turn lane
- Veteran's Memorial Parkway at Rhode Island Avenue: Eastbound left turn lane

The required deceleration length is determined from the FDOT Design Manual Exhibit 212-1for State roads and the Volusia County LDC for County roads. **Appendix P** shows these deceleration length standards. Design speed (posted speed plus five) was used for FDOT intersections, while posted speed was used for the Volusia County standards.

Table 15: Intersection Queue Analysis

Intersection	Movement	Speed	Total Existing Lane Length (ft)	Required Deceleration (ft)	Existing Conditions Analysis			2027 Future Background Conditions Analysis			2027 Future Buildout Conditions Analysis			Cause for Deficiency
					95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Def (ft)	95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	EBL	55	510	405	125	630	120	200	605	95	475	880	370	Existing
	EBR	55	535	405	75	480	0	100	505	0	425	830	295	Buildout
	WBL	55	530	405	325	730	200	400	805	275	675	1080	550	Existing
	WBR	55	535	405	150	555	20	125	530	0	450	855	320	Existing
	NBL	45	715[1]	290	0	0	0	0	0	0	425	715	0	N/A
	NBR	45	515	290	0	0	0	0	290	0	0	290	0	N/A
	SBL	55	270	405	350	755	485	550	955	685	2100	2505	2235	Existing
	SBR	55	370	405	0	405	35	0	405	35	0	405	35	Existing
Dr Martin Luther King Jr Bltwy. at Cassadaga Rd.	WBL	35	285	155	75	230	0	150	305	20	350	505	220	Background
	WBR	35	285	155	25	180	0	50	205	0	75	230	0	N/A
	NBR	55	250	455	50	505	255	100	555	305	125	580	330	Existing
	SBL	55	265	455	25	480	215	50	505	240	75	530	265	Existing
Dr Martin Luther King Jr Bltwy. at Taylor Rd.	EBR	50	305	385	75	460	155	200	585	280	225	610	305	Existing
	NBL	55	485	455	75	530	45	200	655	170	250	705	220	Existing
	NBR	55	485	455	25	480	0	25	480	0	25	480	0	N/A
	SBL	55	485	455	25	480	0	25	480	0	25	480	0	N/A
	SBR	55	525	455	50	505	0	75	530	5	75	530	5	Background
Kentucky Ave. at Graves Ave.	EBL	45	200	240	225	465	265	700	940	740	650	890	690	Existing
	WBL	45	235	240	50	290	55	50	290	55	50	290	55	Existing
	WBR	45	450	240	75	315	0	250	490	40	425	665	215	Background
	SBL	45	340	240	400	640	300	625	865	525	350	590	250	Existing
	SBR	45	195	240	75	315	120	125	365	170	600	840	645	Existing
Veteran's Memorial Pkwy. at Graves Ave.	EBR	45	525	240	225	465	0	350	590	65	350	590	65	Background
	WBL	45	285	240	175	415	130	200	440	155	225	465	180	Existing
	NBR	50	1110	385	325	710	0	575	960	0	600	985	0	N/A

[1] This turn lane is added in the background improvements section. The total length was determined by adding the required deceleration length to the buildout 95th percentile queue length.

Table 15: Intersection Queue Analysis (Continued)

Intersection	Movement	Speed	Total Existing Lane Length (ft)	Required Deceleration (ft)	Existing Conditions Analysis			2027 Future Background Conditions Analysis			2027 Future Buildout Conditions Analysis			Cause for Deficiency
					95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Def (ft)	95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	
Veteran's Memorial Pkwy. at Rhode Island Ave.	EBL	40	440	185	225	410	0	250	435	0	375	560	120	Buildout
	NBL	50	400	385	275	660	260	725	1110	710	325	710	310	Existing
	SBR	50	385	385	100	485	100	125	510	125	0	385	0	Existing
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	EBL	50	340	350	25	375	35	25	375	35	25	375	35	Existing
	EBR	50	390	350	125	475	85	175	525	135	225	575	185	Existing
	WBL	45	555	290	300	590	35	425	715	160	425	715	160	Existing
	WBR	45	735	290	25	315	0	50	340	0	50	340	0	N/A
	NBL	35	280	155	225	380	100	275	430	150	200	355	75	Existing
	SBL	35	185	155	50	205	20	50	205	20	50	205	20	Existing
Normandy Blvd. at Graves Ave.	EBR	45	555	240	175	415	0	550	790	235	600	840	285	Background
	WBL	35	760	155	50	205	0	100	255	0	125	280	0	N/A
	NBL	45	575	240	100	340	0	375	615	40	425	665	90	Background
	NBR	45	575	240	100	340	0	350	590	15	375	615	40	Background

Table 16 shows the queueing results for the buildout condition at the project driveways. The total lane lengths were determined based on the queueing results determined in the buildout condition.

Table 16: Driveway Queue Analysis

Intersection	Movement	Speed	Total Lane Length	Required Deceleration (ft)	95th % Queue (ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)
SR 472 at Eastern Driveway	EBL	55	475	405	50	455	0
	WBR	55	475	405	0	405	0
SR 472 at Middle Driveway	WBR	55	475	405	0	405	0
SR 472 at Western Driveway	WBR	55	475	405	0	405	0
Dr. Martin Luther Jr Bltwy. at Southern Driveway	NBR	55	475	455	0	455	0
Dr. Martin Luther Jr Bltwy. at Northern Driveway	SBL	55	530	455	50	530	0
	NBR	55	500	455	25	480	0
Cassadaga Rd. at Project Driveway	WBL	35	200	155	25	180	0
	EBR	55	200	155	0	155	0

PROPORTIONATE SHARE CALCULATIONS

As part of the buildout condition, several improvements were recommended. Proportionate share calculations were made for each project-related improvements and are shown in **Table 17** and **Table 18**. The total proportionate share amount including roadway and intersection improvements is approximately $4.1 million. Additional details are provided in **Appendix Q**.

Table 17: Proportionate Share Calculations -Roadways

Roadway	Segment	Improvement	Total Improvement Cost	Proportionate Share
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Road	Widen 2 to 4 lanes, rural	$1,303,851.78	$138,054.89
Kentucky Avenue	Graves Ave. to SR 472	Widen 2 to 4 lanes, rural	$2,575,107.27	$152,853.96
Howland Boulevard	Wolf Pack Rn. to Catalina Blvd.	Widen 4 to 6 lanes, rural	$4,415,149.06	$316,642.00
SR 472	Martin Luther King Jr Bltwy. to I-4	Widen 4 to 6 lanes, urban	$3,930,971.28	$699,321.96
Total				**$1,306,872.82**

Table 18: Proportionate Share Calculations -Intersections

Intersection	Improvement	Total Improvement Cost/ Proportionate Share
SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway	Add second southbound left turn lane	$705,520.49
	Add second westbound left turn lane	$565,118.40
	Extend eastbound left turn lane	$193,052.87
	Extend eastbound right turn lane	$202,547.08
	Extend westbound left turn lane	$193,052.87
	Extend westbound right turn lane	$219,712.09
	Optimize signal timings	$4,000.00
Dr Martin Luther King Jr Beltway at Cassadaga Road	Extend northbound right turn lane	$17,165.01
	Extend southbound left turn lane	$17,550.26
Dr Martin Luther King Jr Beltway at Taylor Road	Extend eastbound right turn lane	$17,165.01
	Extend northbound left turn lane	$35,100.52
Kentucky Avenue at Graves Avenue	Extend westbound right turn lane	$120,155.05
	Extend southbound right turn lane	$326,135.13
Veteran's Memorial Parkway at Graves Avenue	Extend westbound left turn lane	$17,550.26
Veteran's Memorial Parkway at Rhode Island Avenue	Extend eastbound left turn lane	$84,241.25
Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard	Extend eastbound right turn lane	$34,330.01
Normandy Boulevard at Graves Avenue	Extend eastbound right turn lane	$34,330.01
	Extend northbound left turn lane	$35,100.52
	Extend northbound right turn lane	$17,165.01
Total		**$2,838,991.82**

MULTIMODAL ASSESSMENT

A multimodal assessment was conducted to determine existing and proposed alternate modes of transportation within the immediate project study area. The following is a summary of transit, pedestrian, and bicycle facilities:

TRANSIT

Transit services within Volusia County are provided by Votran. There are no Votran bus routes on any of the adjacent roadways to the project site including SR 472, Dr Martin Luther King Jr Beltway, and Cassadaga Road, nor are there any bus stops available within a quarter-mile walking distance from the site.

PEDESTRIAN FACILTIES

There is existing sidewalk on the north side of SR 472, adjacent to the site. This 750-foot section of sidewalk extends from approximately 550 feet east of the eastern median opening on SR 472 to the I-4 westbound off-ramp.

There is no existing sidewalk on either side of Dr Martin Luther King Jr Beltway, south of Cassadaga Road to SR 472. However, there is sidewalk along the east side of Dr Martin Luther King Jr Beltway, north of Cassadaga Road and connecting to the existing sidewalk further north on Martin Luther King Jr Beltway. This connection thus provides sidewalk along the entire 1.25-mile stretch from Cassadaga Road to Orange Camp Road.

There is no sidewalk on either side of Cassadaga Road adjacent to the development. There are also no trails near the site.

The development is expected to connect to the existing sidewalk network but the specific locations of sidewalk installation have not yet been determined. The City of DeLand will be working with the developer on the provisions of sidewalks for the site and will be included in the Developer's Agreement.

BICYCLE FACILTIES

There are existing bicycle lanes along SR 472, however, there are no bicycle lanes adjacent to the site along Dr Martin Luther King Jr Beltway and Cassadaga Road.



Section 4
Conclusions

CONCLUSIONS

This traffic analysis has been prepared to evaluate the traffic impacts associated with the proposed DeLand Tech Park development to be located north of SR 472, east of Dr Martin Luther King Jr Beltway, and south of Cassadaga Road in support of obtaining concurrency through the City of DeLand.

The following is a summary of the study findings:

Trip Generation

- The proposed development is expected to generate 16,191 new daily trips, 683 new AM peak hour trips, and 1,220 new PM peak hour trips.

Proposed Access

- The site will have two full access driveways; one on Cassadaga Road and one on Dr Martin Luther King Jr Beltway. There will be one access driveway that will allow left-in, right-in, and right-out access on SR 472. Finally, there will be three right-in/right-out access driveways; two on SR 472, and one on Dr Martin Luther King Jr Beltway.

Existing Conditions

- All study roadway segments operate acceptably and are shown to have sufficient capacity under existing conditions with the exception of Graves Avenue from Veterans Memorial Parkway to Kentucky Avenue which is designated as a Critical roadway with a volume to capacity (v/c) ratio of 1.01.
- All intersections are operating at an overall LOS of E or better. However, there were movements at the intersections of SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway, SR 472 at I-4 WB Ramps, and Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard that operate at LOS F. The Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard intersection also operates with two overcapacity movements.

Background Conditions

- Several roadway segments for future conditions operate over capacity as a result from background traffic conditions. These segments include:
    - Dr Martin Luther King Jr Beltway
        - From Cassadaga Road to Orange Camp Road
        - From Orange Camp Road to Taylor Road
    - Orange Camp Road
        - From Blue Lake Avenue to Dr Martin Luther King Jr Beltway
    - Graves Avenue
        - From Veteran's Memorial Parkway to Kentucky Avenue
    - Howland Boulevard
        - From I-4/SR 472 to Wolf Pack Run
    - Normandy Boulevard
        - From Graves Avenue to Rhode Island Avenue
- It is recommended that the following roadway segments be widened due to deficiencies identified in the background traffic conditions in order to enhance operations and increase capacity in an effort to better accommodate future traffic conditions:
    - Widen the following roadway segments from two to four lanes:
        - Dr Martin Luther King Kr Beltway:
            - From Cassadaga Road to Orange Camp Road

            - From Orange Camp Road to Taylor Road
        - Orange Camp Road:
            - From Blue Lake Avenue to Martin Luther King Jr Beltway
        - Graves Avenue
            - From Veteran's Memorial Parkway to Kentucky Avenue
    - Widen the following roadway segments from four to six lanes:
        - Normandy Boulevard
            - From Graves Avenue to Rhode Island Avenue
- Under future background conditions, study intersections are projected to operate with an overall LOS of E or better with the exception of SR 472 at Dr Martin Luther King Jr Beltway. In addition, the following intersections operate with overcapacity movements:
    - SR 472 at Dr Martin Luther King Jr Beltway
    - Kentucky Avenue at Graves Avenue
    - Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard
- To help improve operations at the intersections showing an overall LOS F or overcapacity movements under the year 2027 PM peak hour future background conditions, the following background related improvements are recommended:
    - SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
        - Add one additional eastbound through lane (v/c ratio is 0.97 on east leg of intersection)
        - Add one additional westbound through lane (v/c ratio is 0.97 on east leg of intersection)
        - Add exclusive northbound left turn lane
        - Use protected/permitted phasing for northbound/southbound left turn movements
        - Optimize signal timings/splits (eliminate the split phase operation)
    - Kentucky Avenue at Graves Avenue
        - Add one additional eastbound through lane (v/c ratio is 1.36 on west leg of intersection in background condition)
        - Add one additional southbound left turn lane
        - Add overlap phasing on the southbound right turn movement
        - Optimize signal timings/splits)
    - Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard
        - Add one additional eastbound through lane (v/c ratio is 1.05 on both legs of intersection)
        - Add one additional westbound through lane (v/c ratio is 1.05 on both legs of intersection)

Buildout Conditions

- The analysis concludes that several roadway segments operate over capacity as a result of buildout traffic conditions. These segments include:
    - Dr Martin Luther King Jr Beltway:
        - From SR472 to Cassadaga Road
    - Kentucky Avenue:
        - From Graves Avenue to SR 472
    - Howland Boulevard:
        - From Wolf Pack Run to Catalina Boulevard
    - SR 472:
        - From Martin Luther King Jr Beltway to I-4
- Based on the future buildout roadway capacity analysis, it is recommended that the following roadway segments be widened to enhance operations and increase capacity to better accommodate future buildout traffic volumes:
    - Widen the following roadway segments from two to four lanes:
        - Dr Martin Luther King Kr Beltway:

            - From SR 472 to Cassadaga Road
        - Kentucky Avenue:
            - From Graves Avenue to SR 472
    - Widen the following roadway segments from four to six lanes:
        - Howland Boulevard:
            - From Wolf Pack Run to Catalina Boulevard
        - SR 472:
            - From Martin Luther King Jr Beltway to I-4

- Under future background improved roadway conditions SR 472 at Dr Martin Luther King Jr Beltway is expected to operate with an overall intersection LOS of F and overcapacity movements. The remaining intersections operate at LOS E or better and without overcapacity movements. The following is recommended to help improve operations at the intersection of SR 472 and Kentucky Avenue/Dr Martin Luther King Jr Beltway, which will improve operations to LOS E without overcapacity movements:

    - Add one additional northbound through lane (this is also a proposed roadway improvement for Kentucky Avenue)
    - Add one additional southbound through lane (this is also a proposed roadway improvement for Dr Martin Luther King Jr Beltway)
    - Add a second southbound left turn lane
    - Add a second westbound left turn lane
    - Add protected phasing on northbound and southbound left turn movements
    - Add permitted-protected phasing on eastbound and westbound right turn movements
    - Optimize signal timings/splits

    The list above show the minimum improvements that are needed to satisfy the deficiencies under the assumption that the main driveway for the site on SR 472 is restricted access, not allowing for left turns out of the site. This results in all traffic existing the project and desiring to head east on SR 472 to be stacked in the southbound left turn at the intersection of SR 472 and Dr Martin Luther King Jr Beltway. An ICE analysis and signal warrant analysis are being conducted to support a full access connection on SR 472.

- Several other intersection improvements are recommended so that the buildout condition performs acceptably, including:

    - Dr. Martin Luther Jr Beltway at Southern Driveway
        - Add one northbound and southbound through lane
    - Dr. Martin Luther Jr Beltway at Northern Driveway
        - Add one northbound and southbound through lane
    - Dr. Martin Luther Jr Beltway at Cassadaga Road
        - The exclusive northbound right turn lane will now be served directly by the second northbound lane.
        - The second southbound through lane will start on the south side of this intersection.

Turn Lane Analysis

- Per the turn lane analyses at the project access driveways the following turn lanes are recommended:
    - SR 472 at east right-in/right-out/left-in driveway
        - Dedicated 455-foot westbound right turn lane
        - Dedicated 455-foot eastbound left turn lane
    - SR 472 middle right-in/right-out driveway
        - Dedicated 455-foot westbound right turn lane
    - SR 472 at west driveway

        - Dedicated 455-foot westbound right turn lane
    - Dr Martin Luther King Jr Beltway at southern right-in/right-out driveway
        - Dedicated 505-foot northbound right turn lane
    - Dr Martin Luther King Jr Beltway at northern full access driveway (signal)
        - Dedicated 505-foot southbound left-turn lane
        - Dedicated 480-foot northbound right-turn lane
    - Cassadaga Road at project driveway
        - Dedicated 180-foot westbound left-turn lane
        - Dedicated 155-foot eastbound right-turn lane

With regards to off-site improvements the applicant will work with the City of DeLand, Volusia County , and the FDOT to determine which intersection improvements identified within this traffic study are feasible for proportionate share as outlined in the Florida Statues and local code. These improvements have been recommended to address future conditions deficiencies. The recommended improvements eligible for proportionate share or capacity improvement projects, the estimated improvement costs, and the proportionate share contribution should be negotiated with the review agencies once the TIA has been accepted and approved. The future conditions were analyzed for both the no-build and build scenarios.

Should full access be granted for the main driveway on SR 472, the intersection of SR 472 at Dr Martin Luther King Jr Beltway will be reevaluated to determine an updated set of improvements needed.

Appendix A:
TIA Methodology

To: Mr. Mike Holmes
Planning Director
City of DeLand

Date: 9/7/2022

Memorandum

Project #: 64054.01

From: Sergio Narea, P.E.
Transportation Engineer
VHB
225 E. Robinson St., Suite 300
Orlando, FL 32801

Re: Longleaf Four, LLC – DeLand Tech Park, DeLand
Traffic Study Methodology Statement

CC: Harry "Mac" McNaught
Kok Wan Mah, P.E. (VHB)
Kendall Story (City of DeLand)
John Prowell P.E. (VHB)
Mark Watts (Cobb Cole)

Purpose:

The purpose of this document is to outline the proposed methodology for the Traffic Impact Analysis (TIA) of the DeLand Tech Park mixed-use commercial development per the requirements set forth in the River to Sea Transportation Planning Organization (R2CTPO) TIA Guidelines. The TIA is divided into the following sections:

1. Introduction
2. Site Location and Access
3. Primary Impact Area / Significance Levels
4. Development Traffic Conditions
5. Trip Generation Estimate
6. Trip Distribution & Assignment
7. Data Collection / Existing Conditions
8. Minimum Acceptable Level of Service
9. Traffic Report

1. Introduction:

The following memorandum provides the proposed methodology to evaluate the traffic impacts of the proposed DeLand Tech Park mixed-use commercial development located on the northwest quadrant of Interstate 4 and SR 472 in DeLand, Volusia County, Florida. For this study, the development will be analyzed for a YR 2027 scenario. The property consists of approximately 142.8 acres and will include 1,500 KSF of Industrial Park, 240 KSF of General Retail and a 16 fueling position Gas Station with Convenience Store. The methodology was prepared in accordance with the River to Sea Transportation Planning Organization (R2CTPO) TIA Guidelines and consistent with the guidelines for the City of DeLand. The TIA will evaluate the transportation impacts within the study area to determine how impacts should be mitigated.

2. Site Location and Access

The proposed development is located on the north side of SR 472 and on the east side of Dr Martin Luther King Jr Beltway in DeLand, Florida (see ***Figure 1***). The City of DeLand, Volusia County, and Florida Department of Transportation (FDOT) will be reviewing the TIA. The site will have three (3) full access driveways; one (1) at Cassadaga Road, one (1) at SR 472, and one (1) (left in and right-in/right-out access) on Dr Martin Luther King Jr Beltway. Additionally, there will be three (3) right-in/right-out access driveways; two (2) on SR 472, and one (1) on Dr Martin Luther King Jr Beltway. A preliminary site plan is shown in ***Figure 2***.



DELAND TECH PARK - AERIAL PHOTO

VOLUSIA COUNTY | FLORIDA

Longleaf Four, LLC, Mac McNaught (c)317-439-4577

0' 250' 500'

NOTE: THE INFORMATION PROVIDED ON THIS DOCUMENT SHOULD BE TREATED AS CONCEPTUAL ONLY AND IS SUBJECT TO CHANGE © 2022 VHB

FEBRUARY 15, 2022



DELAND TECH PARK - PRELIMINARY SITE PLAN

VOLUSIA COUNTY | FLORIDA

Longleaf Four, LLC, Mac McNaught (c)317-439-4577

0' 250' 500'

vhb

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A-4

JUNE 20, 2022

Memorandum

3. Development Traffic Conditions

The project is proposed to be evaluated for the existing year of 2022 and for future project build out year of 2027. The development traffic conditions are to be developed by adding the development traffic (project traffic) to the future background traffic. The background traffic volumes are proposed to be generated for the year of 2027 by using historical traffic growth rates obtained from the latest Volusia County AADT spreadsheet for the study roadways.

In addition, any approved or committed developments will be incorporated into this analysis as background traffic. VHB is respectfully requesting that the any committed development programs be provided by the City and/or County as part of the pre-application process.

4. Trip Generation Estimate

The proposed development will include 1,500 KSF of Industrial Park, ITE Code 130, 240 KSF of General Retail, ITE Code 820, and a 16 fueling position Gas Station with Convenience Store, ITE Code 945. The project traffic volumes for the proposed development will be generated using the trip generation rates and formulas outlined in the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)*. Pass-by trips were calculated using the pass-by rate, given as 34% (PM) for General Retail land use, and 62% (AM) and 56% (PM) for Convenience Store/Gas Station land use. ***Table 1*** is an estimation of the daily, AM peak-hour, and PM peak-hour volumes.

Table 1: Summary of Trip Generation

Land Use	ITE Code	Intensity	Daily Trip Ends	AM Peak Period In Trips	AM Peak Period Out Trips	AM Peak Period Total	PM Peak Period In Trips	PM Peak Period Out Trips	PM Peak Period Total	Passby % AM	Passby % PM
Industrial Park	130	1,500 KSF	5,055	413	97	510	112	398	510	0%	0%
Shopping Center (>150 KSF)	820	240 KSF	8,882	125	77	202	509	551	1,060	0%	34%
Gas/Conv	945	16 Pumps	4,242	129	128	257	148	147	295	62%	56%
		Sub Total	18,179	667	302	969	769	1,096	1,865		
Internal Capture		0% 0%	0	0	0	0	0	0	0		
		Total Passby	684	80	80	159	263	263	525		
Total			**17,495**	**588**	**223**	**810**	**507**	**834**	**1,340**		

5. Primary Impact Area

Consistent with R2CTPO TIA Guidelines, impacted segments will include all roadway segments to which the site has direct connections, that are impacted by the proposed project to within three percent or greater of the peak-hour two-way adopted level of service (LOS) capacity, major intersections along the significant segments, and roadway segments that have been designated as "critical" or "near critical" within the site traffic influenced segments. Critical and near critical roadways are defined by Volusia County as roadways with a volume to capacity (v/c) ratio that is equal to or greater than 1.0 and 0.90, respectively. The 3-mile critical and near critical roadway segments within the area are shown in the Critical/Near-Critical Roadway Map provided in the ***Appendix***. The test for segments that are significantly impacted is shown in ***Table 2***.

Memorandum

6. Trip Distribution & Assignment

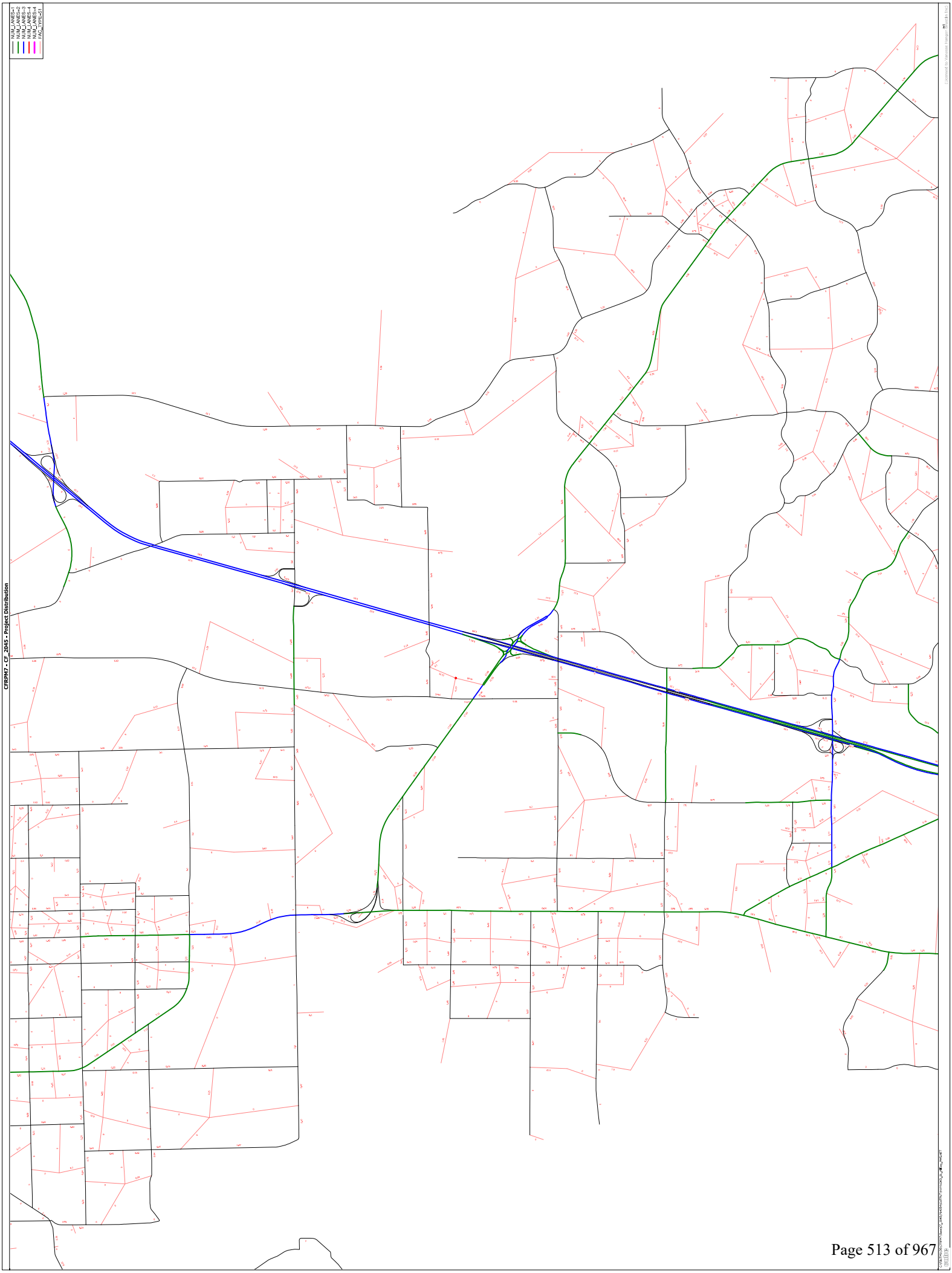
The project traffic will be distributed to the adjacent roadways and intersections based on the YR 2045 Central Florida Regional Planning Model (CFRPMv7) results, utilizing the existing and committed network. The distribution can be found on ***Figure 3***.

Memorandum

Table 2: Project Significance

Roadway	No. of Lanes	Critical / Near-Critical	Level of Service		2027 Project Traffic		Impact of LOS	3% Significant?
			Adopted LOS	MSV	Trips	Dist%		
W Volusia Beltway (Dr MLK Jr)								
SR 472 to Cassadaga Road	2	Vested Near Critical	E	1,540	328	24.42%	21.3%	Yes
Cassadaga Road to Orange Camp Road	2	Vested Near Critical	E	1,540	368	27.41%	23.9%	Yes
Orange Camp Road to Taylor Road	2	Vested Near Critical	E	1,540	118	8.78%	7.7%	Yes
Taylor Road to Beresford Ave Ext	2	Vested Near Critical	E	1,540	92	6.83%	6.0%	Yes
W Volusia Beltway (Kentucky Ave)								
Graves Ave to SR 472	2	Vested Near Critical	E	1,540	134	9.98%	8.7%	Yes
W Volusia Beltway (Veteran's Memorial Pkwy)								
Saxon Blvd to Harley Strickland Blvd	4	None	E	3,410	18	1.30%	0.5%	No
Harley Strickland Blvd to Rhode Island Ave	2	Critical	E	1,540	42	3.10%	2.7%	No
Rhode Island Ave to Graves Ave	2	Vested Critical	E	1,620	68	5.04%	4.2%	Yes
SR 472								
US 17/92 to CR 4101/MLK Blvd	4	None	D	5,900	237	17.63%	4.0%	Yes
CR 4101/MLK Blvd to I-4	4	None	D	3,580	473	35.23%	13.2%	Yes
Howland Blvd								
I-4/SR 472 to Wolf Pack Run	4	None	E	3,410	172	12.77%	5.0%	Yes
Wolf Pack Run to Catalina Blvd	4	None	E	3,410	124	9.20%	3.6%	Yes
Catalina Blvd to Providence Blvd	4	None	E	3,410	100	7.44%	2.9%	No
Cassadaga Rd								
W Volusia Beltway to Macy Ave	2	None	E	1,230	127	9.46%	10.3%	Yes
I-4								
Saxon Blvd to SR 472	6	None	D	10,060	210	15.61%	2.1%	No
SR 472 to Orange Camp Rd	6	None	D	10,060	92	6.86%	0.9%	No
Orange Camp Rd to SR 44	6	None	E	10,060	244	18.14%	2.4%	No
Orange Camp Road								
US 17/92 to Princeton	2	Vested Critical	E	1,270	0	0.00%	0.0%	No
Princeton to Blue Lake Ave	2	Vested Near Critical	E	1,540	23	1.69%	1.5%	No
Blue Lake Ave to W Volusia Bltwy (Dr MLK Jr)	2	Vested Near Critical	E	1,540	88	6.55%	5.7%	Yes
W Volusia Bltwy (Dr MLK Jr) to I-4	2	Vested Critical	E	1,540	160	11.89%	10.4%	Yes
Taylor Rd								
US 17/92 to Stratford Dr	2	None	E	1,020	2	0.10%	0.2%	No
Stratford Dr to Blue Lake Ave	2	None	E	1,540	7	0.51%	0.5%	No
Blue Lake Ave to Martin Luther King Bltwy	2	None	E	1,230	10	0.69%	0.8%	No
US 17/92								
Rhode Island Ave to Graves Ave	4	None	D	3,580	8	0.59%	0.2%	No
Graves Ave to New York Ave	4	None	D	3,580	21	1.54%	0.6%	No
New York Ave to SR 472	4	None	D	3,580	46	3.38%	1.3%	No
SR 472 to SR 15A/Taylor Rd	6	Near Critical	D	5,390	176	13.06%	3.3%	Yes
Rhode Island Ave								
US 17/92 to Veteran's Memorial Pkwy	2	None	E	1,230	19	1.41%	1.5%	No
Graves Ave/CR 4145								
US 17/92 to Leavitt Ave	2	None	E	1,330	12	0.83%	0.9%	No
Leavitt Ave to Veteran's Memorial Pkwy	2	None	E	1,020	40	2.92%	3.9%	Yes
Veteran's Memorial Pkwy to Kentucky Ave	2	Critical	E	1,620	107	7.93%	6.6%	Yes
Kentucky Ave to Howland Blvd	2	Near Critical	E	1,620	28	2.07%	1.7%	No
Normandy Blvd								
Graves to Rhode Island Ave	2	None	D	1,150	41	3.03%	3.6%	Yes
Rhode Island Ave to Elkcam Blvd	2	None	D	2,630	29	2.16%	1.1%	No
Blue Lake Ave								
Orange Camp Road to Taylor Road	2	None	E	1,540	56	4.11%	3.6%	Yes
Taylor Road to Beresford Ave	2	None	E	1,230	49	3.60%	4.0%	Yes

Source:
VHB, Inc.
Notes:
*Data from 2019 Volusia County AADT and Historical Counts


NUM_LANES-1
NUM_LANES-2
NUM_LANES-3
NUM_LANES-4
NUM_LANES-5
MAZ_Proj-1
CFRPM7 - CF_2045 - Project Distribution

Memorandum

7. Data Collection / Existing Conditions

Daily and PM peak-hour traffic counts will be assembled for the study roadway segments and intersections to establish existing traffic conditions. Roadway counts for all study roadways will be identified using the data within the latest *Volusia County AADT spreadsheet*. Intersection turning movement counts will be collected for study intersections with a seasonal factor adjustment applied. The existing condition analysis will evaluate the current capacity of the study roadways identified within the Primary Impact Area. For the purposes of this study, VHB proposes to evaluate the roadway traffic volumes of the following roadway segments:

- W Volusia Beltway (Dr MLK Jr)
    - from SR 472 to Cassadaga Road (Vested Near Critical roadway segment)
    - from Cassadaga Road to Orange Camp Road (Vested Near Critical roadway segment)
    - from Orange Camp Road to Taylor Road (Vested Near Critical roadway segment)
- W Volusia Beltway (Veteran's Memorial Parkway)
    - from Graves Avenue to SR 472 (Vested Critical roadway segment)
- W Volusia Beltway (Veteran's Memorial Parkway)
    - from Harley Strickland Blvd to Rhode Island Avenue (Critical roadway segment)
    - from Rhode Island Avenue to Graves Avenue (Vested Critical roadway segment)
- Orange Camp Road
    - from US 17/92 to Princeton (Vested Critical roadway segment)
    - from Princeton to Blue Lake Avenue (Vested Near Critical roadway segment)
    - from Blue Lake Avenue to W Volusia Beltway (Dr MLK Jr) (Vested Near Critical roadway segment)
    - from W Volusia Beltway (Dr MLK Jr) to I-4 (Vested Critical roadway segment)
- US 17/92 – from SR 472 to SR 15A/Taylor Road (Near Critical roadway segment)
- Graves Avenue/CR 4145
    - from Veteran's Memorial Parkway to Kentucky Avenue (Critical roadway segment)
    - from Kentucky Avenue to Howland Boulevard (Near Critical roadway segment)
- Howland Boulevard – from I-4/SR 472 to Wolf Pack Run
- Taylor Road – from US 17/92 to Stratford Drive
- SR 472 – from CR 4101/MLK Boulevard to I-4
- Blue Lake Avenue – from Taylor Road to Beresford Avenue

In addition, the following intersections will be analyzed using Synchro 11 and in accordance with the *Highway Capacity Manual* methodology:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
- Dr Martin Luther King Jr Beltway at Cassadaga Road
- Dr Martin Luther King Jr Beltway at Orange Camp Road
- Dr Martin Luther King Jr Beltway at Taylor Road
- Kentucky Avenue at Graves Avenue
- Veterans Memorial Parkway at Graves Avenue
- Veterans Memorial Parkway at Rhode Island Avenue
- SR 472 at I4 WB Ramps
- SR 472 at I4 EB Ramp
- SR 472 at Project Driveways
- W Volusia Beltway (Dr MLK Jr) at Project Driveways

Memorandum

- Cassadaga Road at Project Driveway

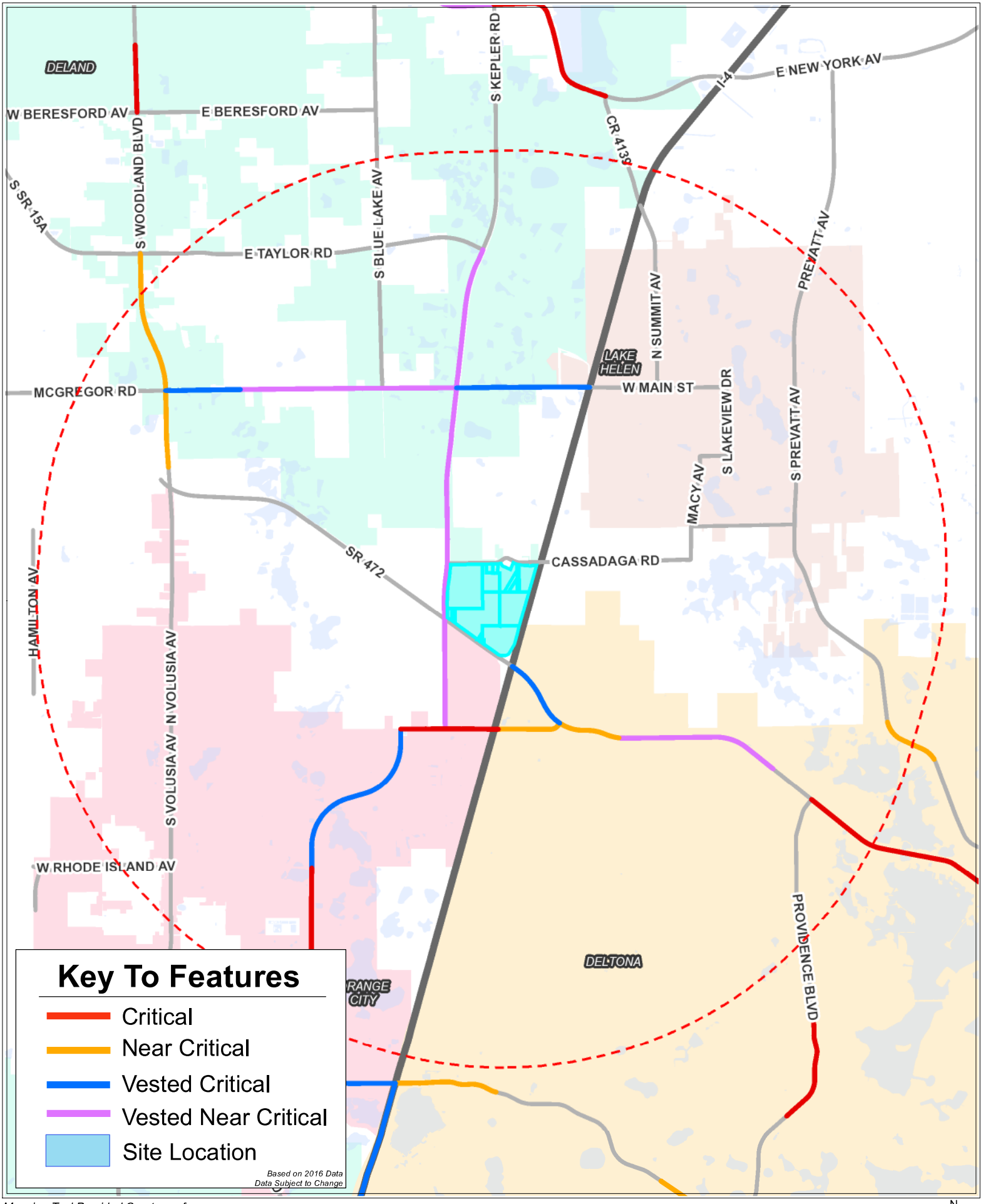
An alternate mode analysis will be conducted to analyze any transit stops within ¼ mile of the site, provisions for sidewalks adjacent to public roads within the limits of the site, sidewalk connectivity between parcels, provisions for any bicycle amenities, such as bike racks or lockers, and identification to any schools within 2-mile of the site.

8. Minimum Acceptable Level of Service

The level of service capacities will be derived from the FDOT Generalized LOS Tables and adopted standards used in this concurrency evaluation are consistent with the latest Volusia County AADT spreadsheet.

9. Traffic Report

As a result of the trip generation, trip distribution, and trip assignment previously mentioned, VHB will evaluate the adjacent transportation system to determine the necessary improvements and timing requirements to accommodate the project for the existing year 2022, background year 2027 traffic conditions, and the build-out year 2027 traffic conditions. The future background volumes will be determined based on the highest of existing plus vested traffic or existing with an applied historical growth (minimum 2% growth rate). The assessment of roadway segments and intersection conditions will be conducted for the AM and PM peak-hour conditions. In addition to the level of service and delay reported for intersections, a queue length evaluation will also be conducted for exclusive turn lane needs at project driveways to determine the warrant and length of any turn lanes. All improvements funded for construction within the first three years of the Volusia County and FDOT five-year work programs will be considered in the analysis in addition to the Volusia County Capital Improvement Program (CIP) and the River to Sea TPO Transportation Improvement Program (TIP). The findings of the study will be documented in the traffic report. The traffic report will summarize study procedures, analyses performed, and recommendations, including exhibits to show existing, background, and future with project traffic volumes. Impacts resulting from project traffic will be identified with recommendations to mitigate adverse segments and intersection lane groups.



Mapping Tool Provided Courtesy of Volusia County Public Works and is a graphic representation only.

Date 05/19/2022

3 mile Critical/Near Critical Roadway Buffer

DeLand Tech Park

A-11

N W E S

1 inch = 5,303 feet

Appendix B:
ITE Trip Generation Summary Sheets

Industrial Park
(130)

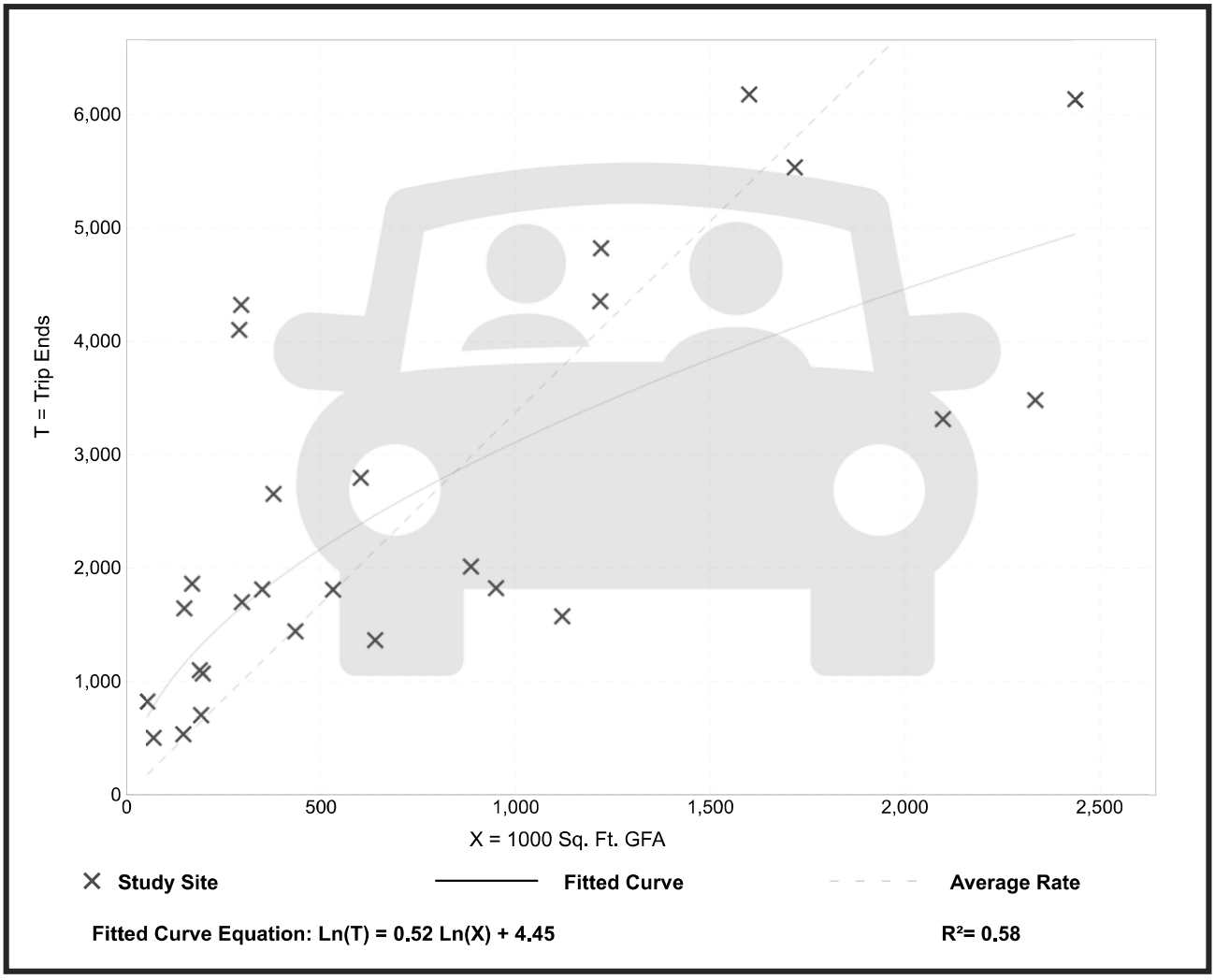
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 762
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.37	1.41 - 14.98	2.60

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

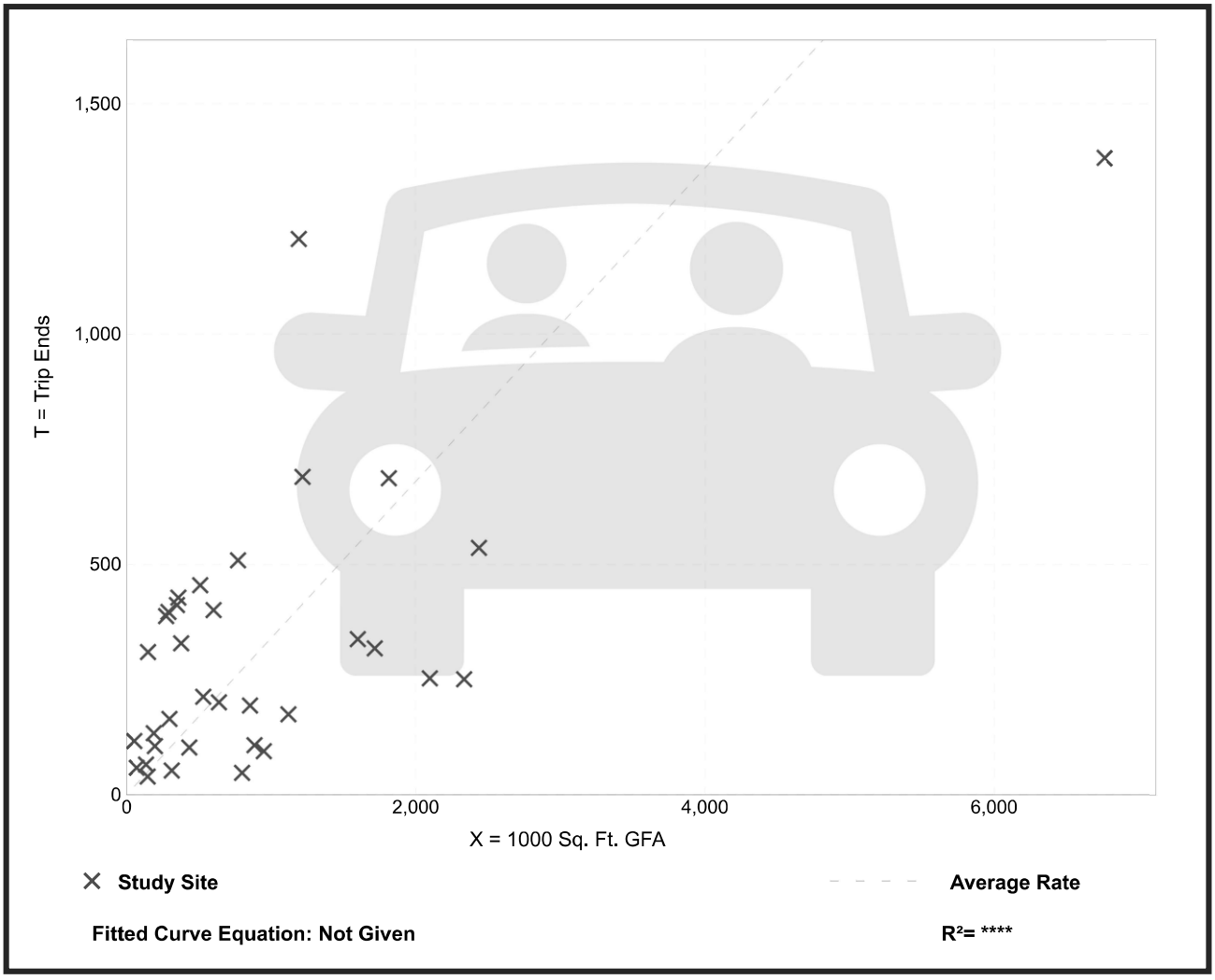
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 956
Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.06 - 2.13	0.33

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

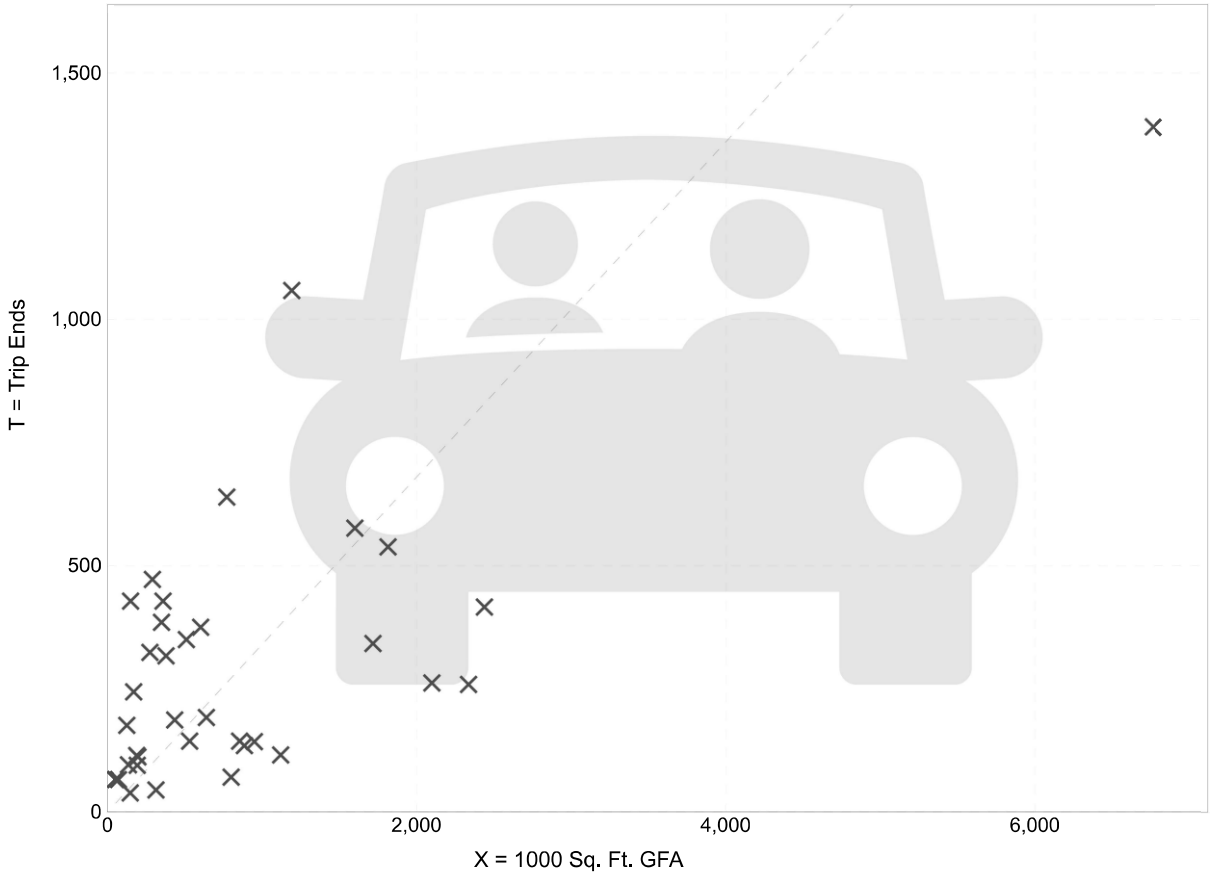
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 35
Avg. 1000 Sq. Ft. GFA: 899
Directional Distribution: 22% entering, 78% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.09 - 2.85	0.36

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Warehousing
(150)

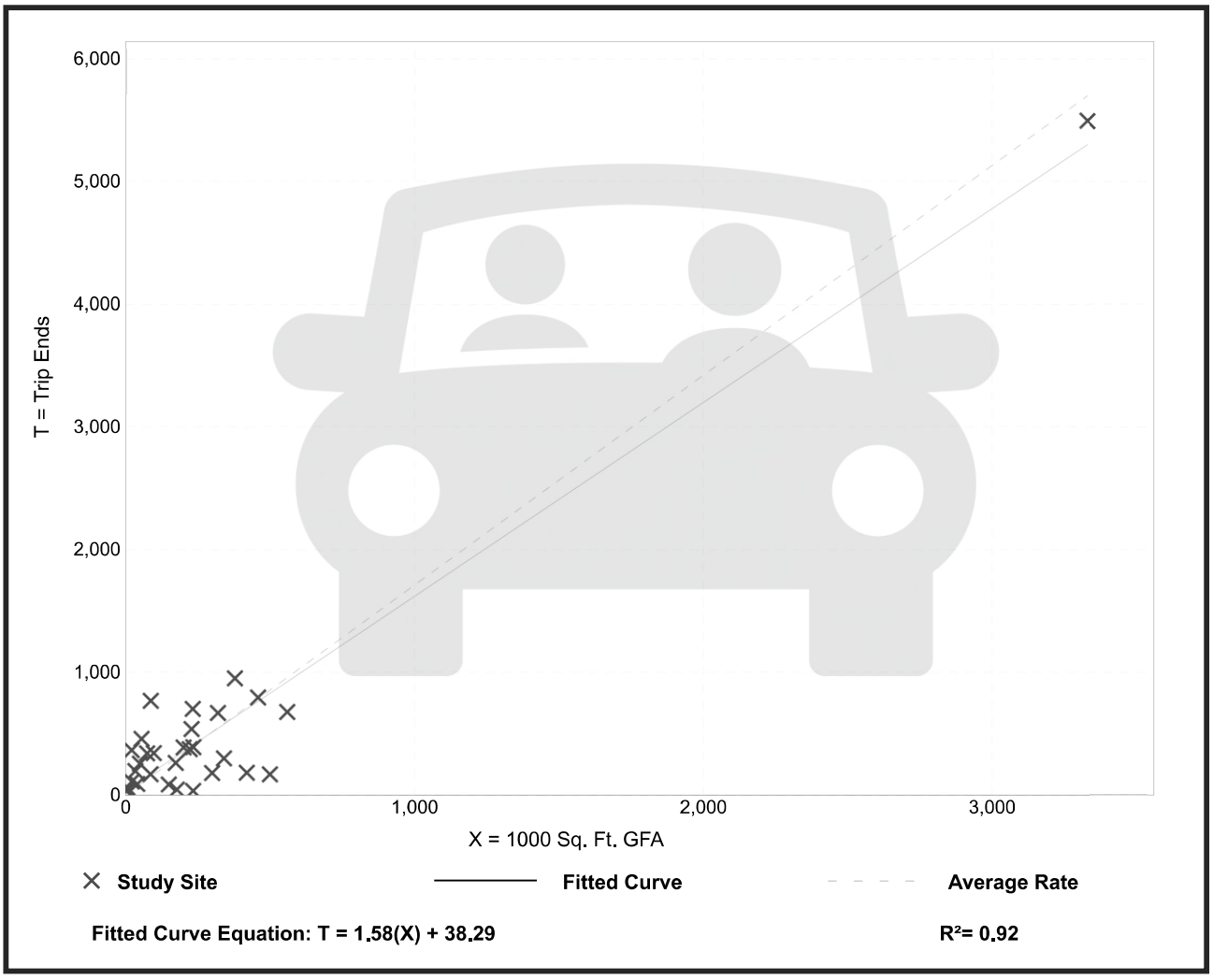
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. 1000 Sq. Ft. GFA: 292
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.71	0.15 - 16.93	1.48

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

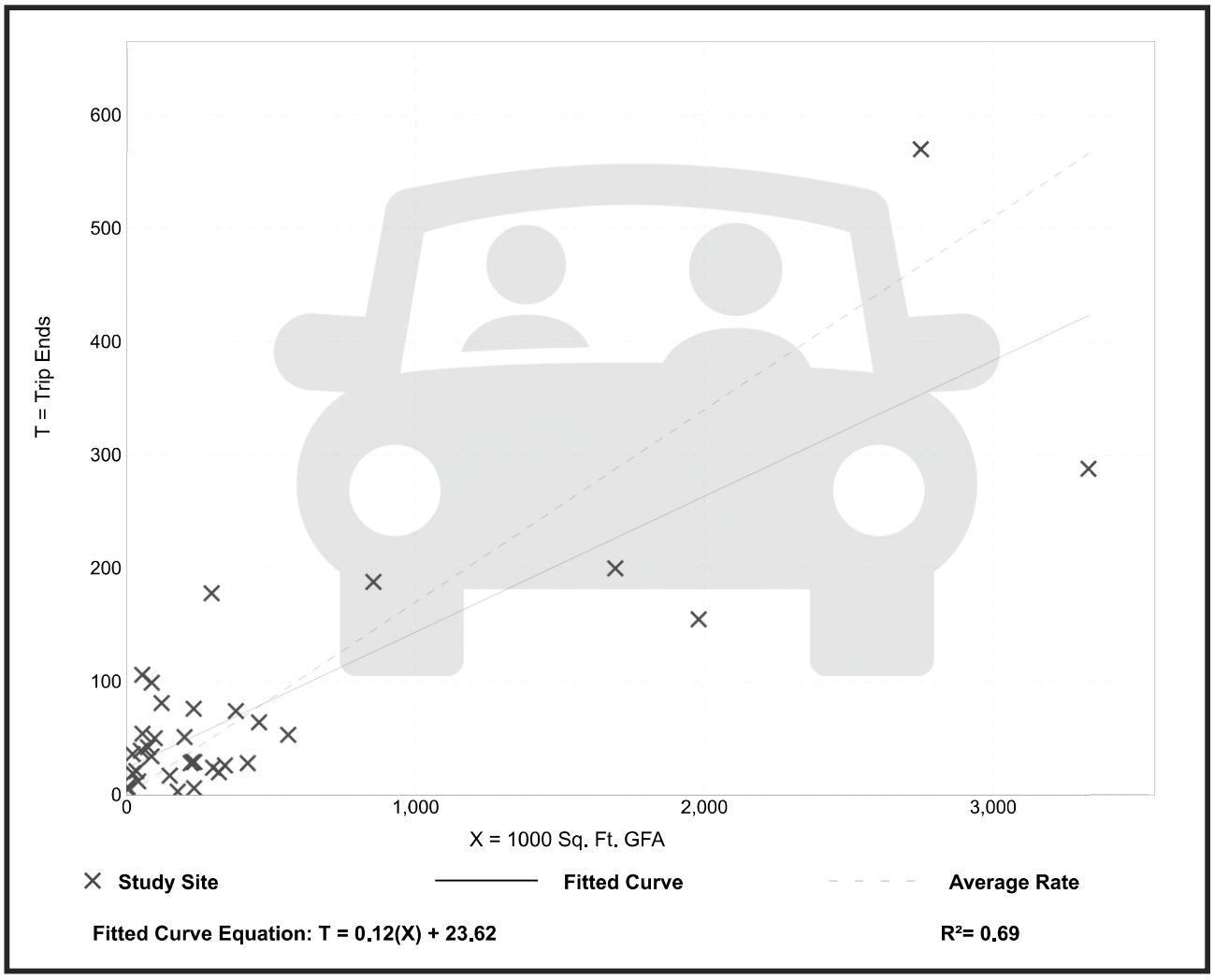
Warehousing
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 448
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

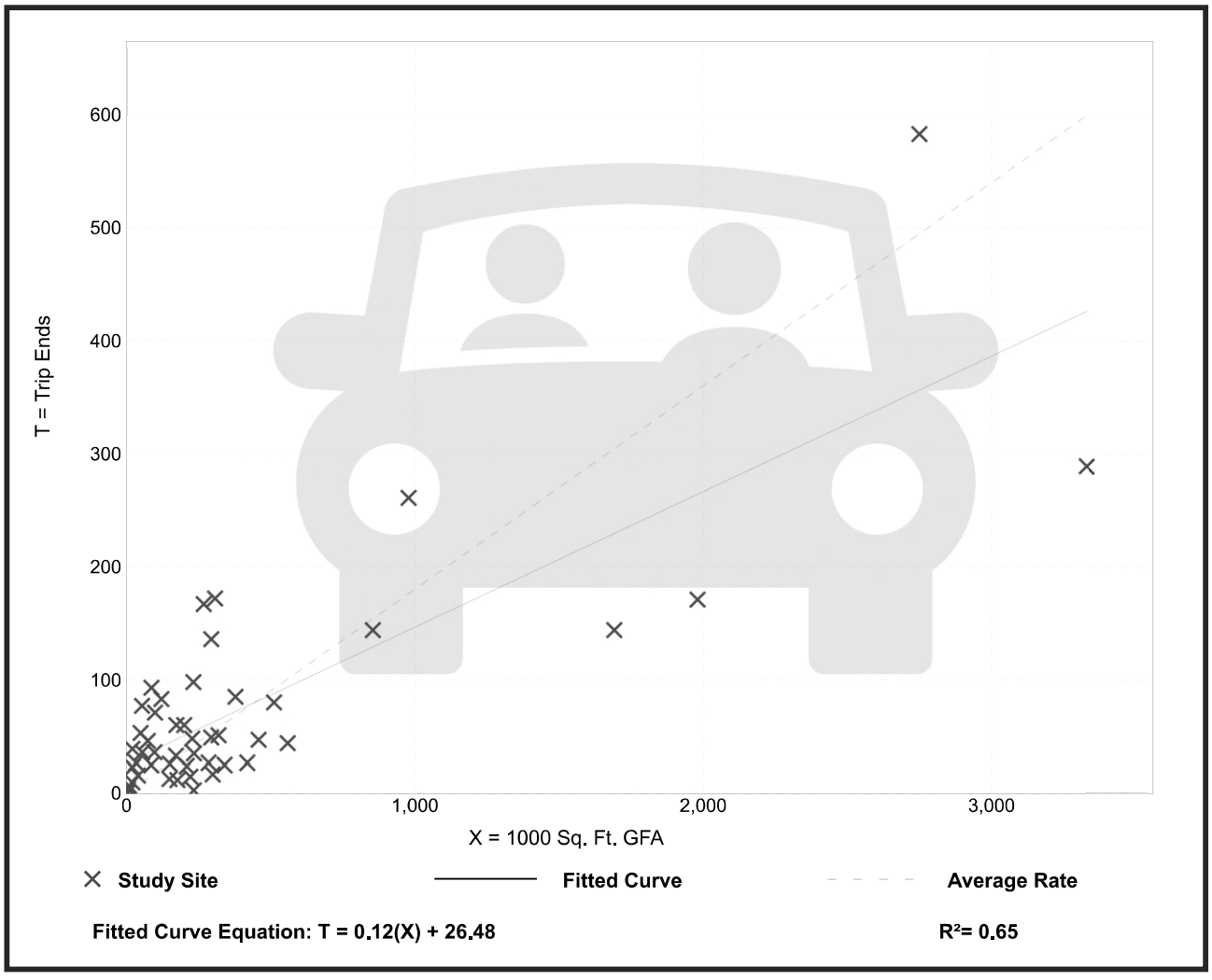
Warehousing
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. 1000 Sq. Ft. GFA: 400
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Shopping Center (>150k)
(820)

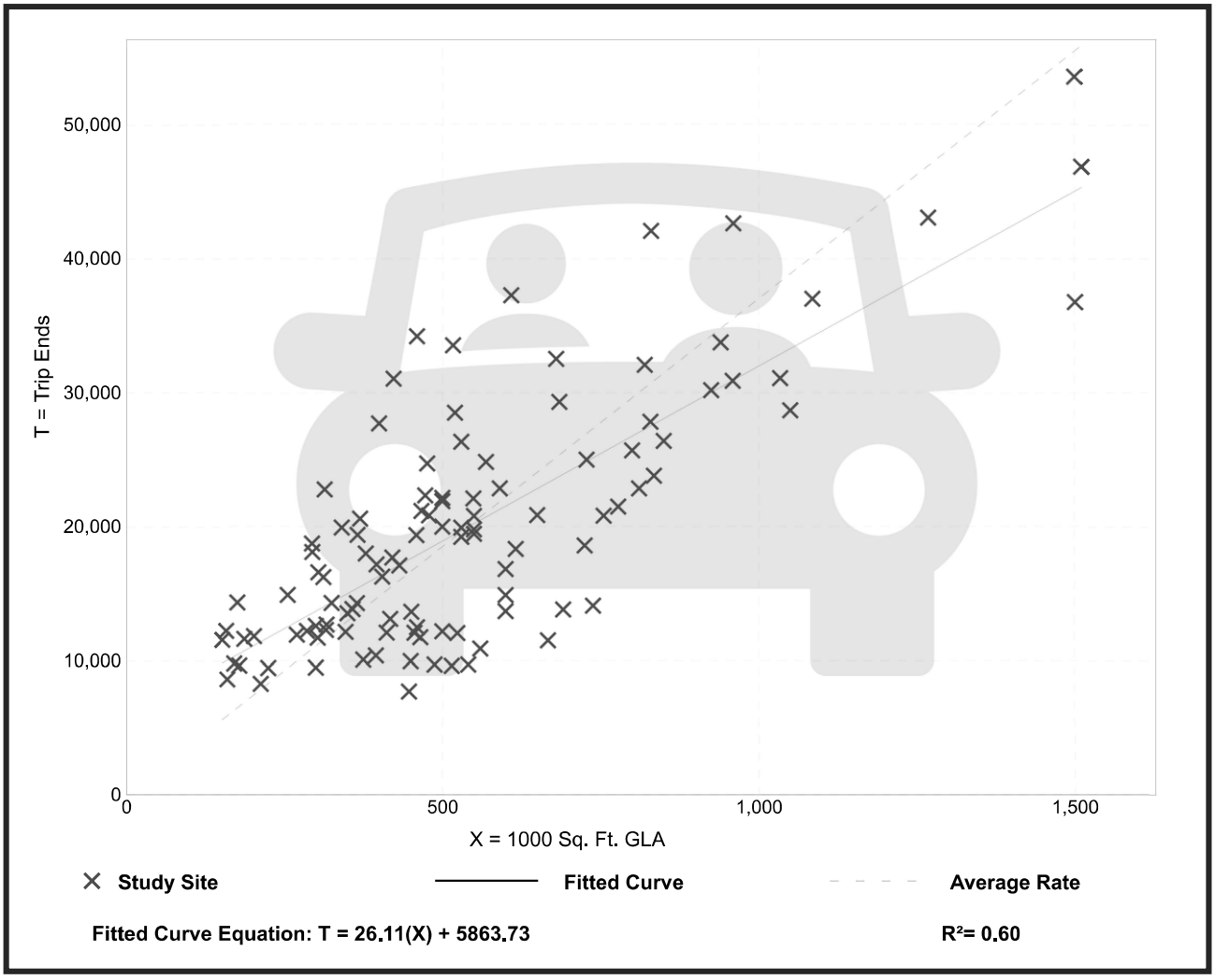
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 108
Avg. 1000 Sq. Ft. GLA: 538
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.01	17.27 - 81.53	12.79

Data Plot and Equation



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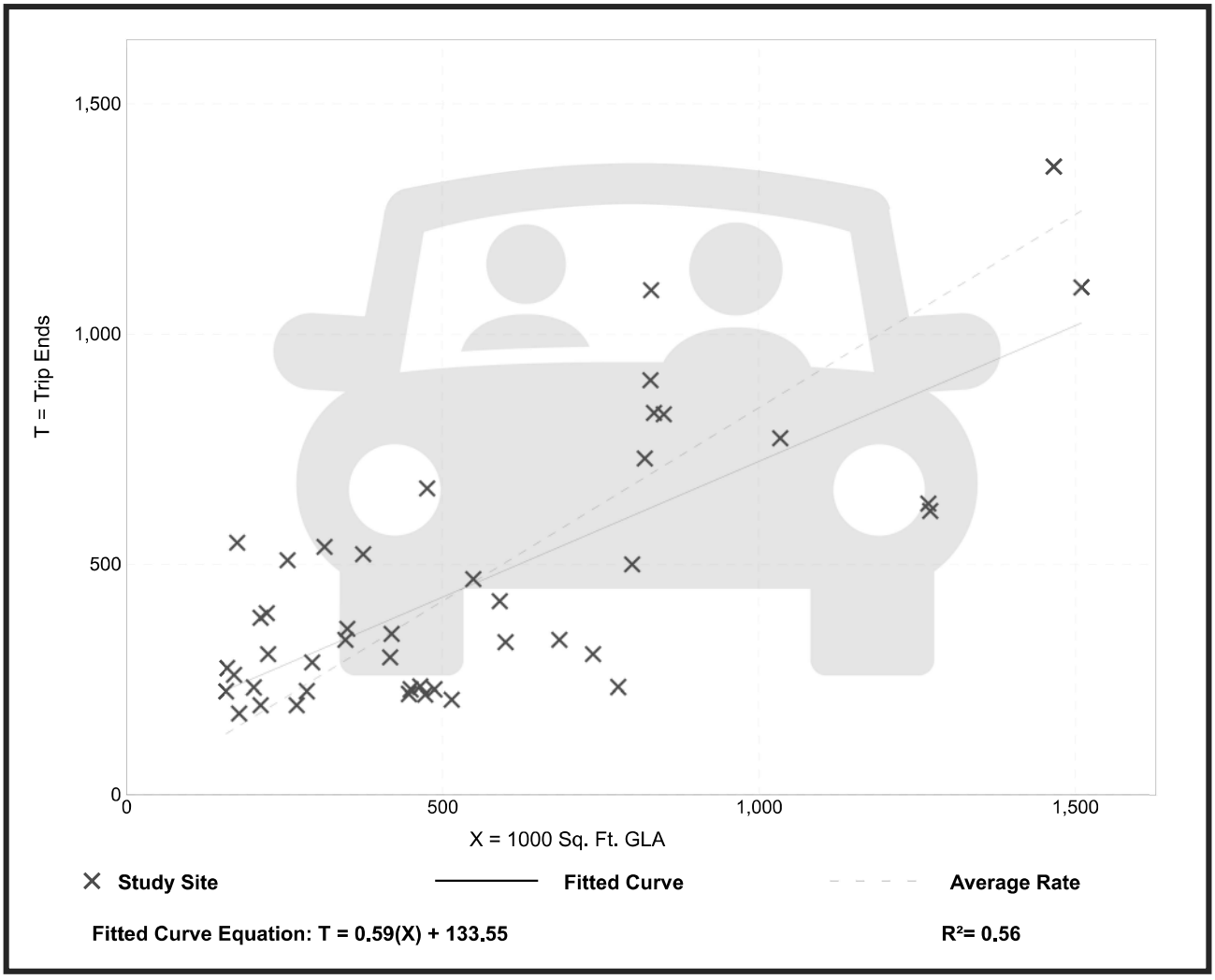
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 44
Avg. 1000 Sq. Ft. GLA: 546
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.84	0.30 - 3.11	0.42

Data Plot and Equation



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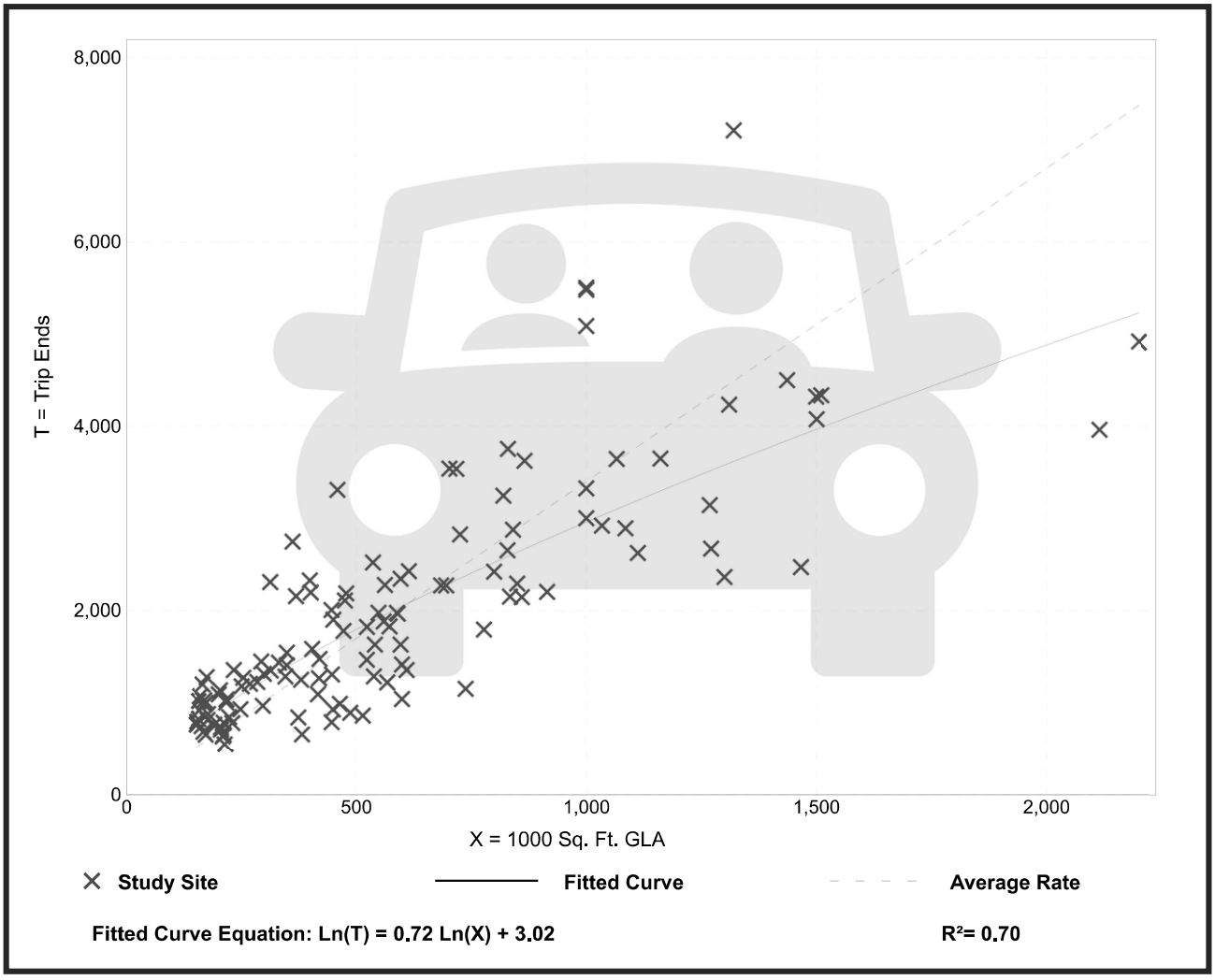
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 126
Avg. 1000 Sq. Ft. GLA: 581
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.40	1.57 - 7.58	1.26

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Convenience Store/Gas Station - GFA (2-4k)
(945)

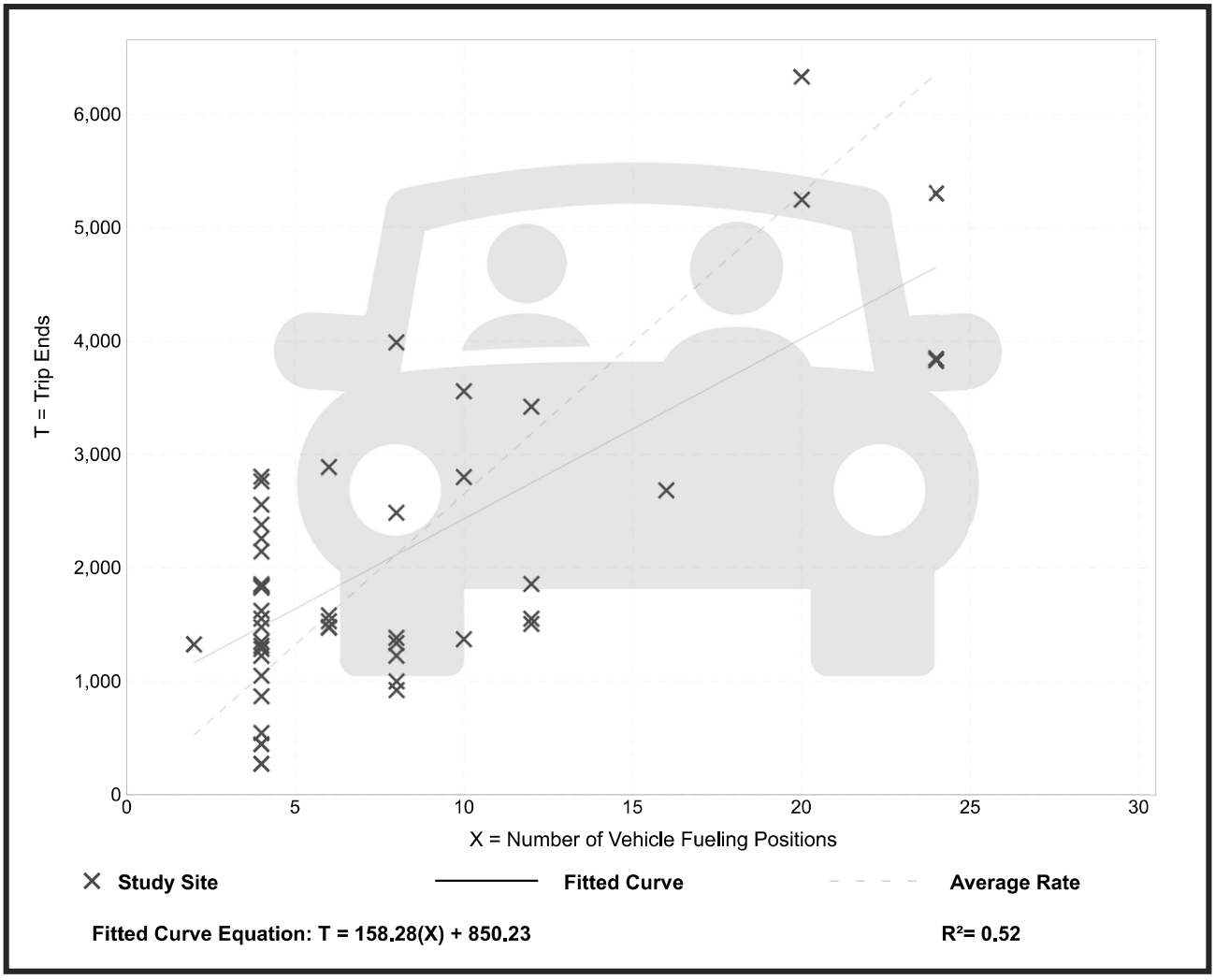
Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 48
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
265.12	68.50 - 701.00	142.37

Data Plot and Equation



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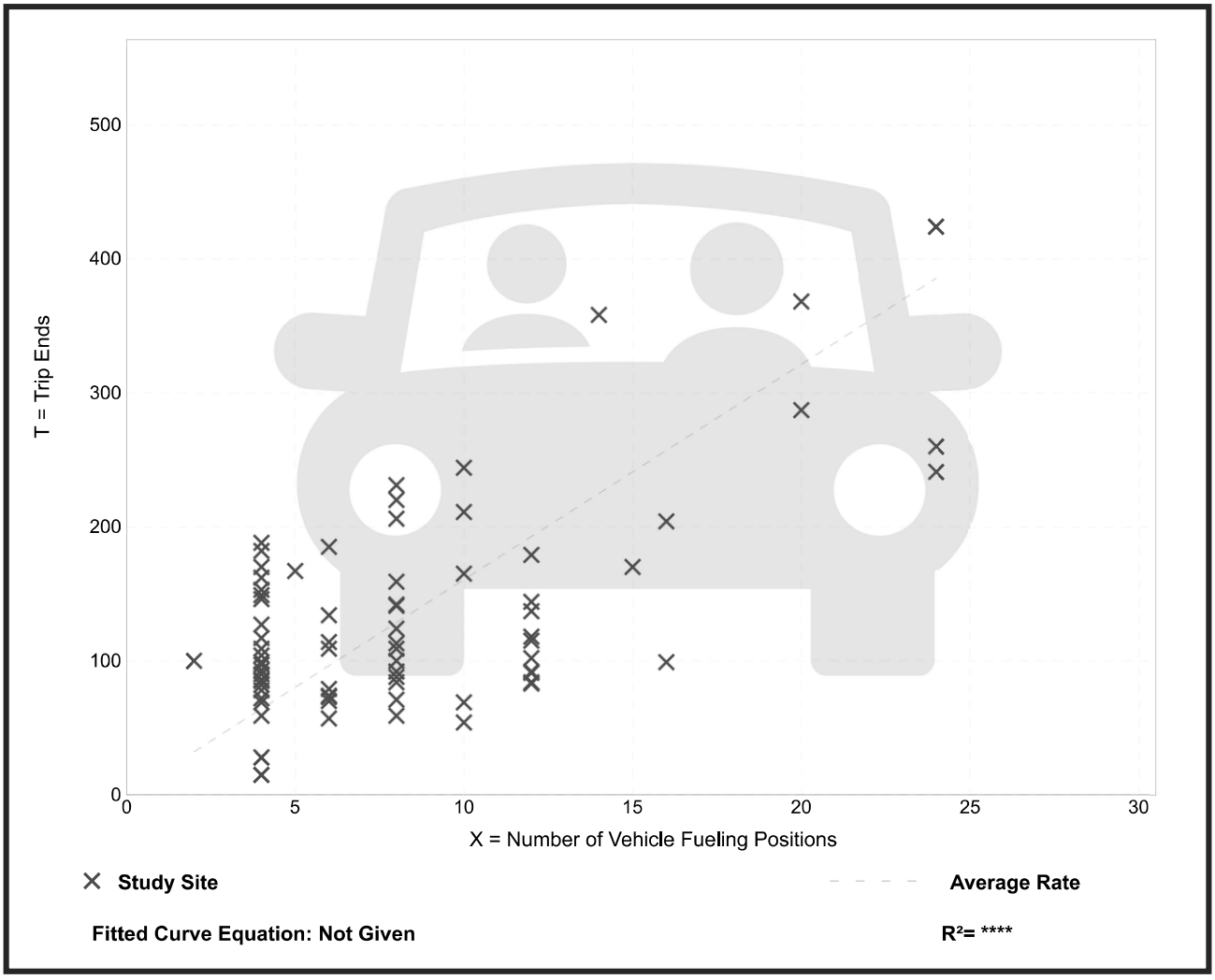
Convenience Store/Gas Station - GFA (2-4k)
(945)

Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 76
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
16.06	3.75 - 50.00	8.79

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

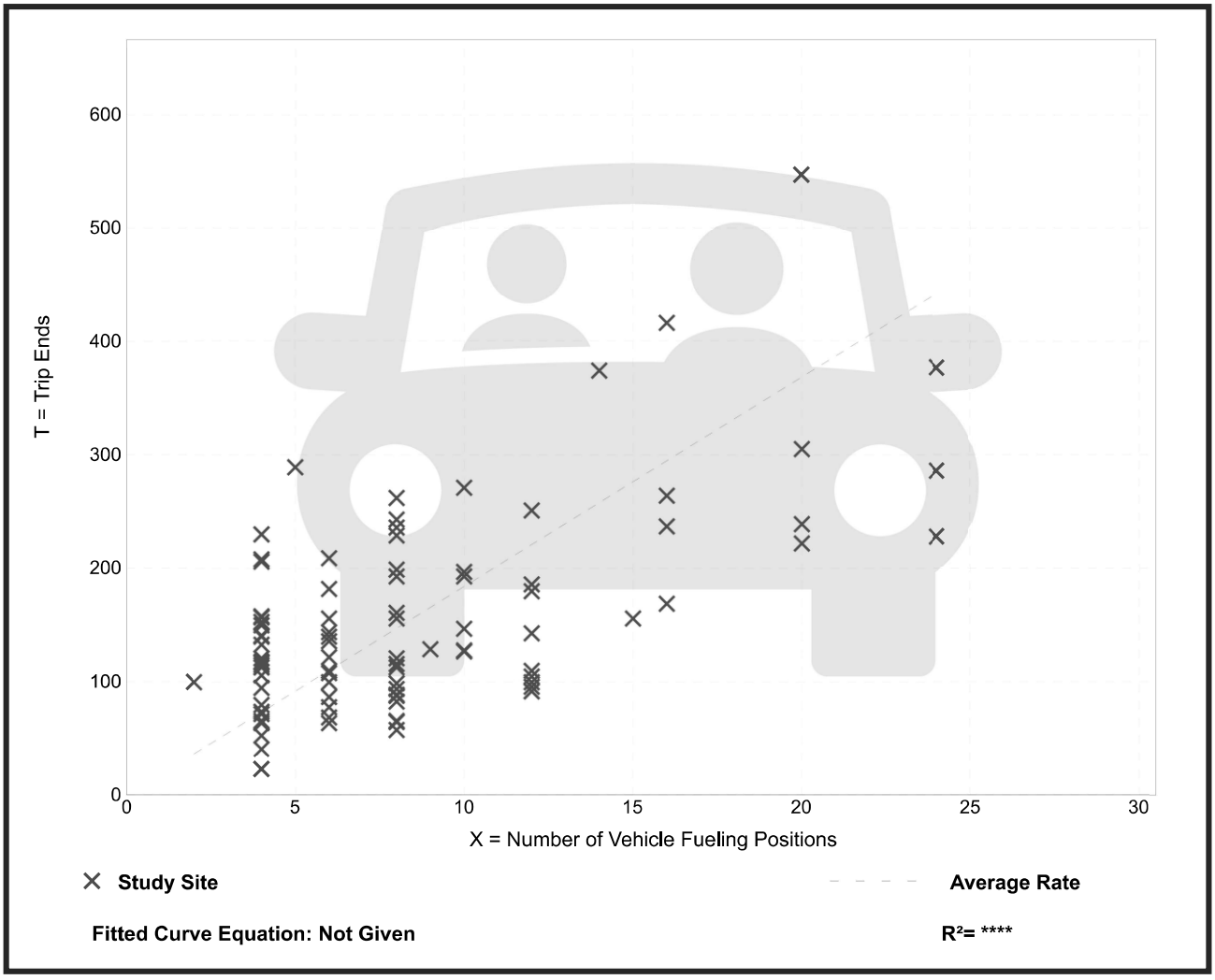
Convenience Store/Gas Station - GFA (2-4k)
(945)

Vehicle Trip Ends vs: **Vehicle Fueling Positions**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 93
Avg. Num. of Vehicle Fueling Positions: 8
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

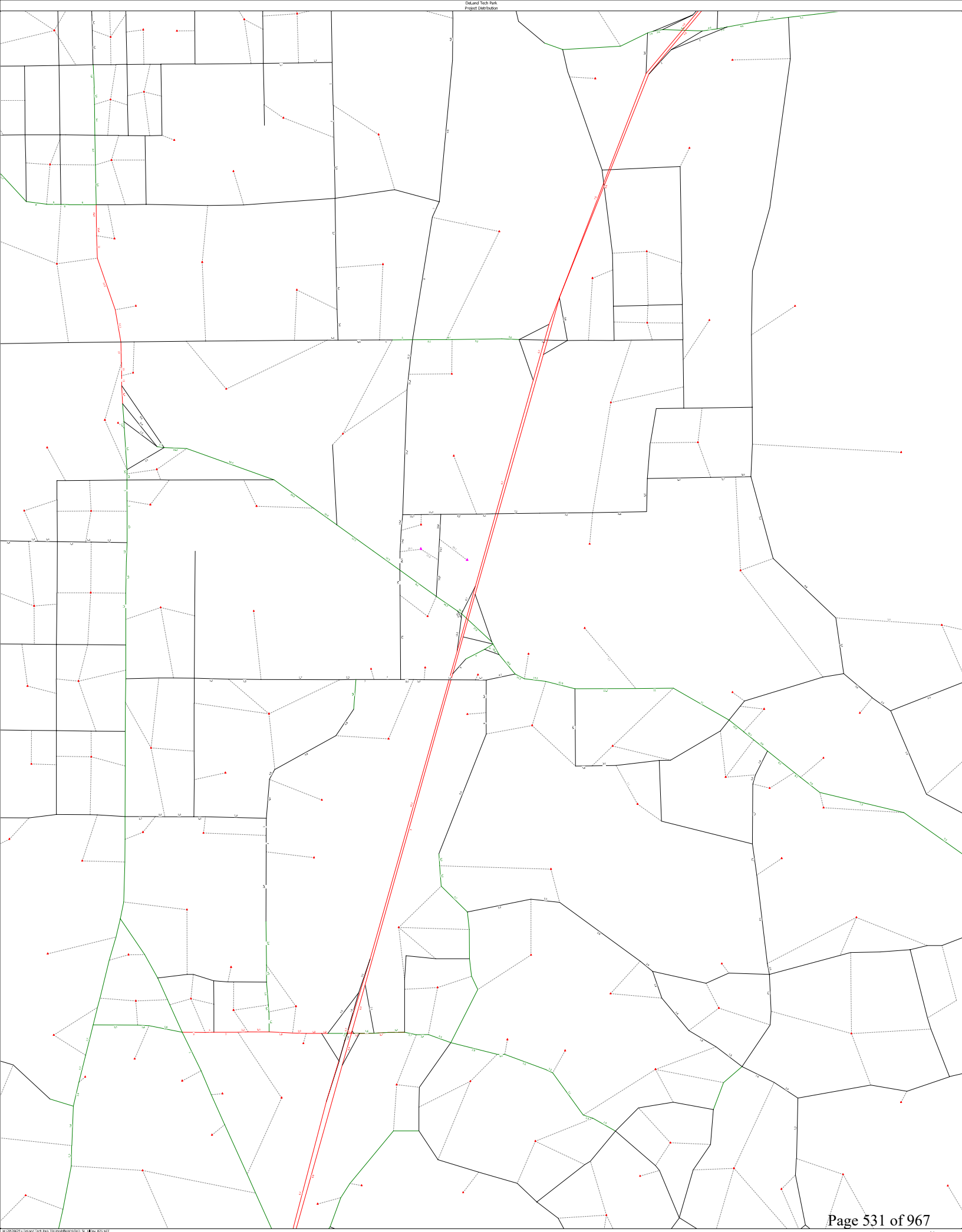
Average Rate	Range of Rates	Standard Deviation
18.42	5.75 - 57.80	10.16

Data Plot and Equation

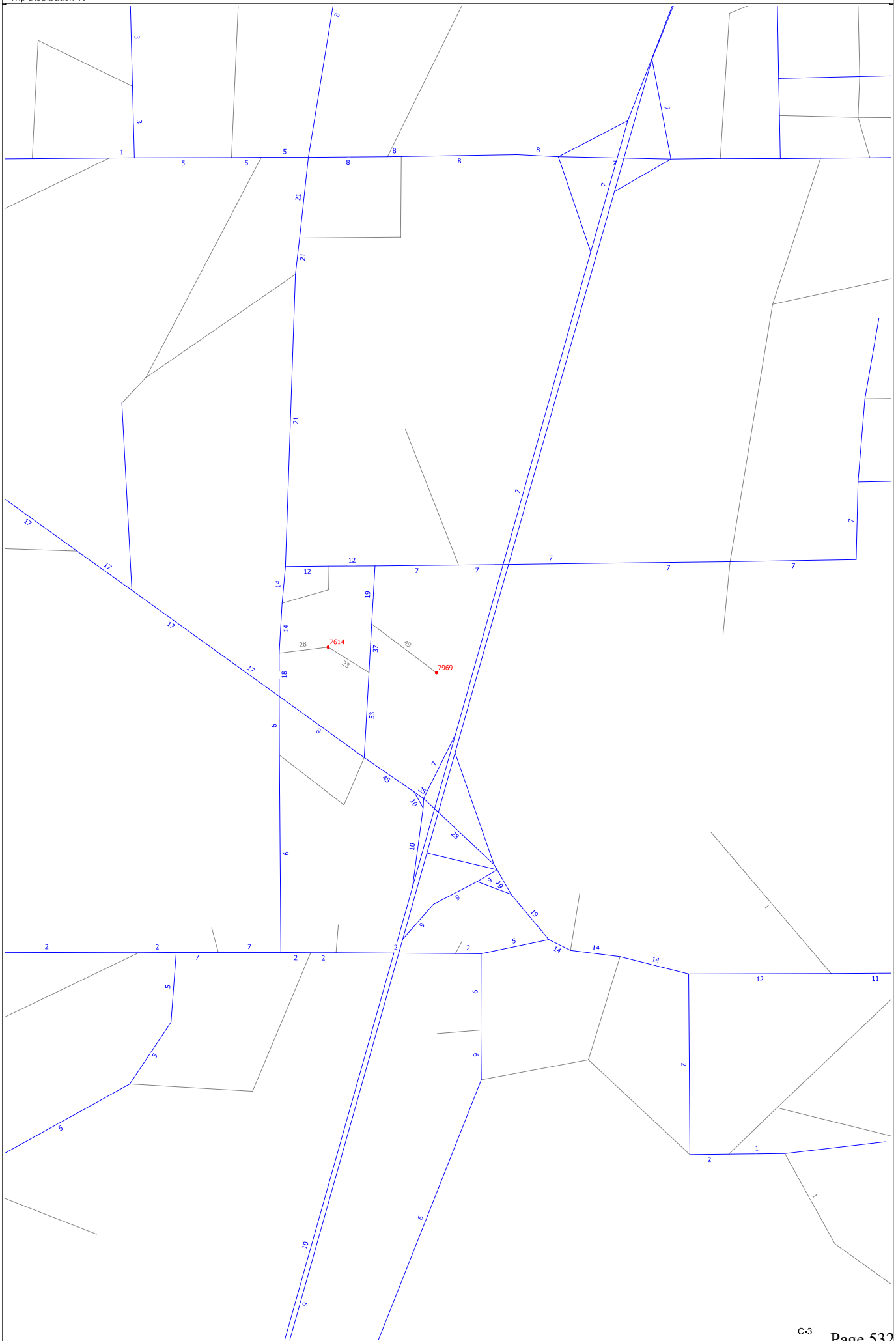


Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

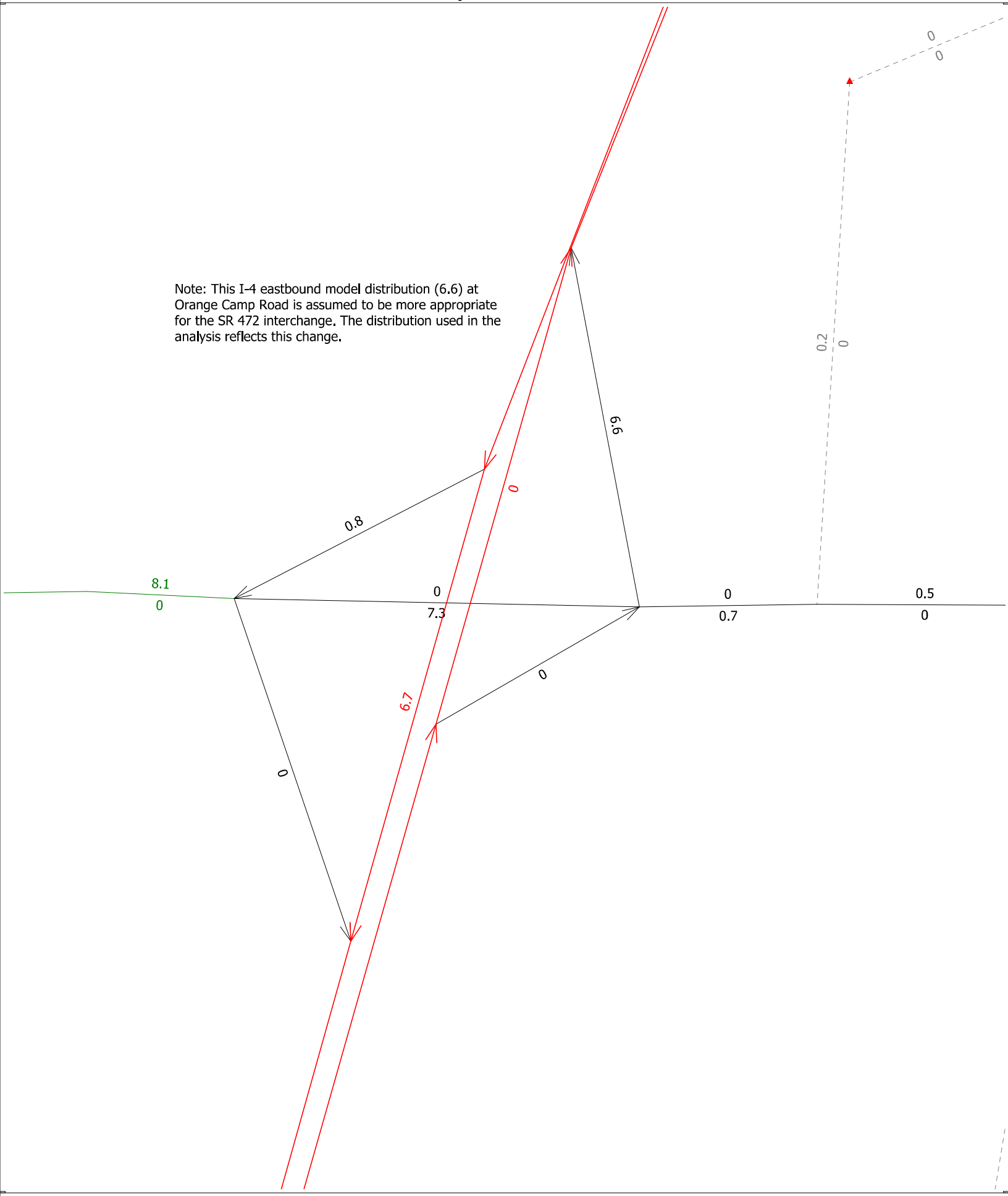
Appendix C:
CFRPM Travel Demand Model Plot



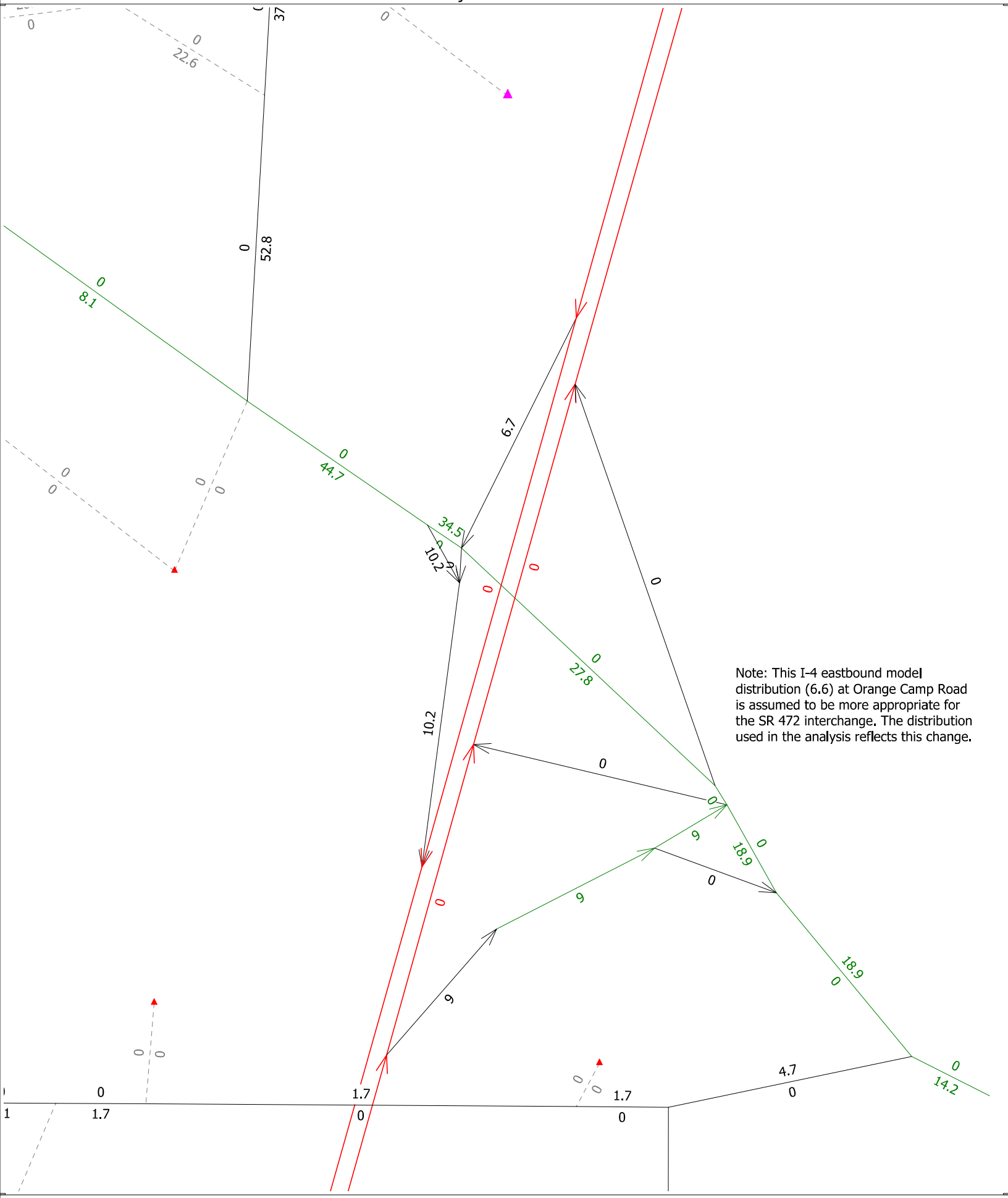
(Licensed to Kittelson & Associates Inc)



cube
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Appendix D:
Updated Project Significance Test

Updated Project Significance

Roadway / Segment	# Lanes	isting Critical - Near Criti	LOS OS Standar	MSV	2027 Project Traffic Trips	Dist%	Impact of LOS	3% Significant?
Dr Martin Luther King Jr Beltway								
SR 472 to Cassadaga Rd.	2	None	E	1540	199	16.25%	12.9%	Yes
Cassadaga Rd. to Orange Camp Rd.	2	Vested Near Critical	E	1540	260	21.30%	16.9%	Yes
Orange Camp Rd. to Taylor Rd.	2	Vested Near Critical	E	1540	92	7.50%	6.0%	Yes
Taylor Rd. to Beresford Ave.	2	Vested Near Critical	E	1540	81	6.60%	5.3%	Yes
Kentucky Avenue								
Graves Ave. to SR 472	2	None	E	1540	112	9.10%	7.3%	Yes
Veteran's Memorial Parkway								
Saxon Blvd to Harley Strickland Blvd	4	None	E	3410	20	1.60%	0.6%	No
Harley Strickland Blvd. to Rhode Island Ave.	2	Vested Critical	E	1540	33	2.70%	2.1%	No
Rhode Island Ave. to Graves Ave.	2	Vested Near Critical	E	1620	57	4.60%	3.5%	Yes
SR 472								
US 17/92 to Martin Luther King Jr Bltwy.	4	None	D	5960	205	16.74%	3.4%	Yes
Martin Luther King Jr Bltwy. to I-4	4	None	D	3580	323	26.40%	9.0%	Yes
Howland Boulevard								
I-4/SR 472 to Wolf Pack Rn.	4	Vested Near Critical	E	3410	187	15.28%	5.5%	Yes
Wolf Pack Rn. to Catalina Blvd.	4	Vested Near Critical	E	3410	142	11.60%	4.2%	Yes
Catalina Blvd. to Providence Blvd.	4	Vested Near Critical	E	3410	123	10.07%	3.6%	Yes
Cassadaga Road								
Dr. Martin Luther King Jr Bltwy. to Macy Ave.	2	None	E	1020	100	8.15%	9.8%	Yes
I-4								
Saxon Blvd. to SR 472	6	None	D	10,510	118	9.60%	1.1%	No
SR 472 to Orange Camp Rd.	6	None	D	10,510	82	6.70%	0.8%	No
Orange Camp Rd. to SR 44	6	None	D	10,510	87	7.05%	0.8%	No
Orange Camp Road								
US 17/92 to Princeton Rd.	2	Near Critical	E	1270	0	0.00%	0.0%	No
Princeton Rd. to Blue Lake Ave.	2	None	E	1540	16	1.30%	1.0%	No
Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	2	Vested Near Critical	E	1540	59	4.80%	3.8%	Yes
Dr Martin Luther King Jr Bltwy. to I-4	4	Vested Critical	E	3410	99	8.10%	2.90%	No
Taylor Rd								
US 17/92 to Stratford Dr.	2	None	E	1020	0	0.00%	0.0%	No
Stratford Dr. to Blue Lake Ave.	2	None	E	1540	0	0.00%	0.0%	No
Blue Lake Ave to Dr Martin Luther King Jr Bltwy.	2	None	E	1230	0	0.00%	0.0%	No
US 17/92								
Rhode Island Ave. to Graves Ave.	4	None	D	3580	0	0.00%	0.0%	No
Graves Ave. to New York Ave.	4	None	D	3580	16	1.30%	0.4%	No
New York Ave. to SR 472	4	None	D	3580	36	2.95%	1.0%	No
SR 472 to Taylor Rd. (SR 15A)	6	None	D	5390	144	11.78%	2.67%	No
Rhode Island Ave								
US 17/92 to Veteran's Memorial Pkwy.	2	None	E	1,020	17	1.35%	1.7%	No
Graves Avenue								
Leavitt Ave. to Veteran's Memorial Pkwy.	2	None	E	1,020	23	1.83%	2.3%	No
Veteran's Memorial Pkwy. to Kentucky Ave.	2	Critical	E	1,620	86	7.00%	5.3%	Yes
Kentucky Ave. to Normandy Blvd.	2	Vested Critical	E	1,620	24	1.90%	1.5%	No
Normandy Blvd. to Howland Blvd.	4	Vested Near Critical	E	2,740	58	4.70%	2.1%	No
Normandy Blvd.								
Graves Ave. to Rhode Island Ave.	2	Vested Critical	E	1,540	87	7.10%	5.6%	Yes
Rhode Island Ave. to Elkcam Blvd.	4	Vested Critical	E	2,740	65	5.30%	2.4%	No
Blue Lake Avenue								
Orange Camp Rd. to Taylor Rd.	2	None	E	1540	40	3.20%	2.6%	No
Taylor Rd. to Beresford Ave.	2	None	E	1230	30	2.40%	2.4%	No
Macy Avenue								
Ohio St. to Cassadaga Rd.	2	None	C	1,020	81	6.60%	7.9%	Yes
Ohio Avenue								
Macy Ave. to Lakeview Dr.	2	None	C	1,020	0	0.00%	0.0%	No
Kicklighter Road								
Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	2	None	E	1,020	69	5.60%	6.8%	Yes
Prevatt Avenue								
Kicklighter Rd. to Lake Pearl Dr.	2	None	C	1540	0	0.00%	0.0%	No
Lake Pearl Dr. to SR 44	2	None	E	1540	0	0.00%	0.0%	No

Appendix E:
Raw Turning Movement Counts and Peak Season Factor Category Report

Raw Turning Movement Counts

DE TRAFFIC

detraffic.com
(386) 341-4186
SR 472 at Dr MLK Blvd
Volusia County, Fl

File Name : 01 SR 472 at MLK
Site Code : 0000000
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	Dr Martin Luther King Jr Southbound					SR 472 Westbound					Kentucky Ave Northbound					SR 472 Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	38	30	7	3	78	11	178	24	9	222	35	29	10	6	80	10	225	20	8	263	643
07:15 AM	43	35	10	4	92	21	206	42	11	280	42	52	12	8	114	13	259	26	10	308	794
07:30 AM	36	86	10	5	137	25	236	35	8	304	35	44	19	4	102	17	240	34	8	299	842
07:45 AM	44	79	8	6	137	18	289	43	5	355	29	34	19	5	87	17	235	43	11	306	885
Total	161	230	35	18	444	75	909	144	33	1161	141	159	60	23	383	57	959	123	37	1176	3164
08:00 AM	35	79	12	4	130	19	259	25	7	310	25	27	15	4	71	20	232	26	9	287	798
08:15 AM	51	67	18	8	144	19	207	36	10	272	31	24	17	6	78	17	218	30	10	275	769
08:30 AM	43	53	17	9	122	21	209	26	8	264	25	28	16	11	80	11	230	25	16	282	748
08:45 AM	36	44	13	6	99	14	194	24	7	239	29	35	12	13	89	15	208	17	11	251	678
Total	165	243	60	27	495	73	869	111	32	1085	110	114	60	34	318	63	888	98	46	1095	2993
04:00 PM	35	63	10	6	114	19	204	43	13	279	26	43	12	4	85	13	220	24	6	263	741
04:15 PM	43	73	13	4	133	28	228	35	6	297	30	53	20	6	109	17	256	42	4	319	858
04:30 PM	51	47	12	5	115	39	192	43	4	278	35	43	11	2	91	17	228	35	17	297	781
04:45 PM	44	63	10	8	125	44	256	52	5	357	26	35	17	5	83	19	258	41	11	329	894
Total	173	246	45	23	487	130	880	173	28	1211	117	174	60	17	368	66	962	142	38	1208	3274
05:00 PM	63	69	15	4	151	35	220	42	8	305	28	53	15	4	100	17	245	52	16	330	886
05:15 PM	44	58	18	6	126	30	217	53	8	308	25	44	17	1	87	12	247	42	13	314	835
05:30 PM	56	67	15	6	144	28	245	36	10	319	36	52	11	8	107	16	239	35	8	298	868
05:45 PM	43	57	14	4	118	27	239	42	11	319	27	34	17	7	85	14	222	52	6	294	816
Total	206	251	62	20	539	120	921	173	37	1251	116	183	60	20	379	59	953	181	43	1236	3405
Grand Total	705	970	202	88	1965	398	3579	601	130	4708	484	630	240	94	1448	245	3762	544	164	4715	12836
Apprch %	35.9	49.4	10.3	4.5		8.5	76	12.8	2.8		33.4	43.5	16.6	6.5		5.2	79.8	11.5	3.5		
Total %	5.5	7.6	1.6	0.7	15.3	3.1	27.9	4.7	1	36.7	3.8	4.9	1.9	0.7	11.3	1.9	29.3	4.2	1.3	36.7	
Automobiles	683	942	183	88	1896	374	3476	584	130	4564	466	614	228	94	1402	229	3642	529	164	4564	12426
% Automobiles	96.9	97.1	90.6	100	96.5	94	97.1	97.2	100	96.9	96.3	97.5	95	100	96.8	93.5	96.8	97.2	100	96.8	96.8
Commercial	22	28	19	0	69	24	103	17	0	144	18	16	12	0	46	16	120	15	0	151	410
% Commercial	3.1	2.9	9.4	0	3.5	6	2.9	2.8	0	3.1	3.7	2.5	5	0	3.2	6.5	3.2	2.8	0	3.2	3.2

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Volusia County, Fl

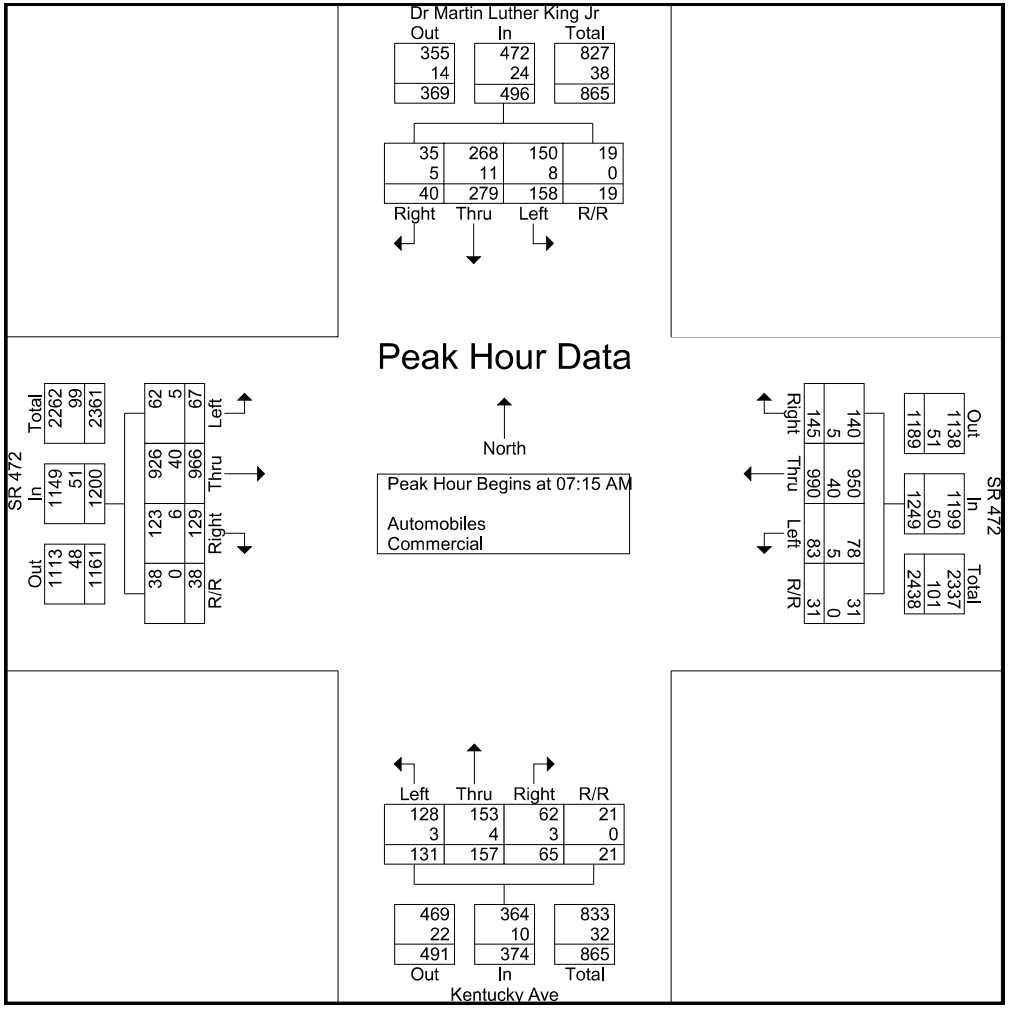
File Name : 01 SR 472 at MLK
Site Code : 0000000
Start Date : 7/26/2022
Page No : 2

	Dr Martin Luther King Jr Southbound					SR 472 Westbound					Kentucky Ave Northbound					SR 472 Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	43	35	10	4	92	21	206	42	11	280	42	52	12	8	114	13	259	26	10	308	794
07:30 AM	36	86	10	5	137	25	236	35	8	304	35	44	19	4	102	17	240	34	8	299	842
07:45 AM	44	79	8	6	137	18	289	43	5	355	29	34	19	5	87	17	235	43	11	306	885
08:00 AM	35	79	12	4	130	19	259	25	7	310	25	27	15	4	71	20	232	26	9	287	798
Total Volume	158	279	40	19	496	83	990	145	31	1249	131	157	65	21	374	67	966	129	38	1200	3319
% App. Total	31.9	56.2	8.1	3.8		6.6	79.3	11.6	2.5		35	42	17.4	5.6		5.6	80.5	10.8	3.2		
PHF	.898	.811	.833	.792	.905	.830	.856	.843	.705	.880	.780	.755	.855	.656	.820	.838	.932	.750	.864	.974	.938
Automobiles	150	268	35	19	472	78	950	140	31	1199	128	153	62	21	364	62	926	123	38	1149	3184
% Automobiles	94.9	96.1	87.5	100	95.2	94.0	96.0	96.6	100	96.0	97.7	97.5	95.4	100	97.3	92.5	95.9	95.3	100	95.8	95.9
Commercial	8	11	5	0	24	5	40	5	0	50	3	4	3	0	10	5	40	6	0	51	135
% Commercial	5.1	3.9	12.5	0	4.8	6.0	4.0	3.4	0	4.0	2.3	2.5	4.6	0	2.7	7.5	4.1	4.7	0	4.3	4.1

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File Name : 01 SR 472 at MLK
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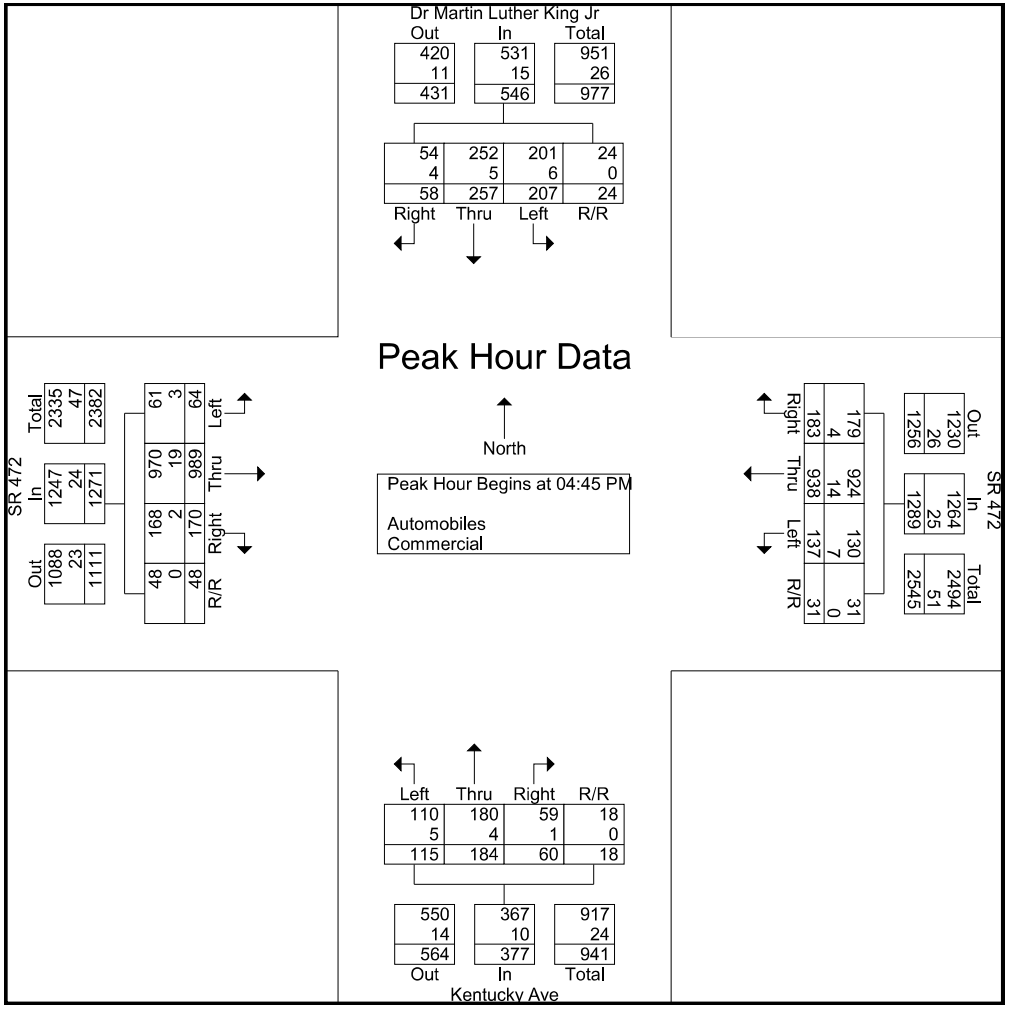
File Name : 04 SR 472 at MLK
Site Code : 0000000
Start Date : 7/26/2022
Page No : 4

	Dr Martin Luther King Jr Southbound					SR 472 Westbound					Kentucky Ave Northbound					SR 472 Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	44	63	10	8	125	44	256	52	5	357	26	35	17	5	83	19	258	41	11	329	894
05:00 PM	63	69	15	4	151	35	220	42	8	305	28	53	15	4	100	17	245	52	16	330	886
05:15 PM	44	58	18	6	126	30	217	53	8	308	25	44	17	1	87	12	247	42	13	314	835
05:30 PM	56	67	15	6	144	28	245	36	10	319	36	52	11	8	107	16	239	35	8	298	868
Total Volume	207	257	58	24	546	137	938	183	31	1289	115	184	60	18	377	64	989	170	48	1271	3483
% App. Total	37.9	47.1	10.6	4.4		10.6	72.8	14.2	2.4		30.5	48.8	15.9	4.8		5	77.8	13.4	3.8		
PHF	.821	.931	.806	.750	.904	.778	.916	.863	.775	.903	.799	.868	.882	.563	.881	.842	.958	.817	.750	.963	.974
Automobiles	201	252	54	24	531	130	924	179	31	1264	110	180	59	18	367	61	970	168	48	1247	3409
% Automobiles	97.1	98.1	93.1	100	97.3	94.9	98.5	97.8	100	98.1	95.7	97.8	98.3	100	97.3	95.3	98.1	98.8	100	98.1	97.9
Commercial	6	5	4	0	15	7	14	4	0	25	5	4	1	0	10	3	19	2	0	24	74
% Commercial	2.9	1.9	6.9	0	2.7	5.1	1.5	2.2	0	1.9	4.3	2.2	1.7	0	2.7	4.7	1.9	1.2	0	1.9	2.1

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SR 472 at Dr MLK Blvd
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File Name : 01 SR 472 at MLK
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File Name : 01 SR 472 at MLK
Site Code : 0000000
Start Date : 7/26/2022
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Groups Printed- Peds

	Dr Martin Luther King Jr Southbound				SR 472 Westbound				Kentucky Ave Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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Dr MLK Blvd at Cassadaga Rd
Volusia County, Fl

File Name : 05 MLK at Cassa
Site Code : 00000015
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	Dr Martin Luther King Jr Southbound				Cassadaga Rd Westbound				Dr Martin Luther King Jr Northbound				N/A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	67	0	71	7	0	4	11	0	67	4	71	0	0	0	0	153
07:15 AM	7	77	0	84	8	0	7	15	0	103	6	109	0	0	0	0	208
07:30 AM	3	132	0	135	15	0	7	22	0	102	1	103	0	0	0	0	260
07:45 AM	2	120	0	122	9	0	10	19	0	98	3	101	0	0	0	0	242
Total	16	396	0	412	39	0	28	67	0	370	14	384	0	0	0	0	863
08:00 AM	8	122	0	130	11	0	5	16	0	75	7	82	0	0	0	0	228
08:15 AM	10	125	0	135	9	0	7	16	0	83	4	87	0	0	0	0	238
08:30 AM	7	107	0	114	8	0	5	13	0	69	8	77	0	0	0	0	204
08:45 AM	8	91	0	99	7	0	6	13	0	75	8	83	0	0	0	0	195
Total	33	445	0	478	35	0	23	58	0	302	27	329	0	0	0	0	865
04:00 PM	10	105	0	115	14	0	7	21	0	103	24	127	0	0	0	0	263
04:15 PM	13	118	0	131	15	0	2	17	0	102	16	118	0	0	0	0	266
04:30 PM	7	107	0	114	14	0	6	20	0	91	19	110	0	0	0	0	244
04:45 PM	9	107	0	116	11	0	8	19	0	102	11	113	0	0	0	0	248
Total	39	437	0	476	54	0	23	77	0	398	70	468	0	0	0	0	1021
05:00 PM	11	131	0	142	16	0	5	21	0	104	20	124	0	0	0	0	287
05:15 PM	14	106	0	120	17	0	8	25	0	97	24	121	0	0	0	0	266
05:30 PM	9	124	0	133	18	0	5	23	0	83	19	102	0	0	0	0	258
05:45 PM	9	101	0	110	14	0	6	20	0	77	17	94	0	0	0	0	224
Total	43	462	0	505	65	0	24	89	0	361	80	441	0	0	0	0	1035
Grand Total	131	1740	0	1871	193	0	98	291	0	1431	191	1622	0	0	0	0	3784
Apprch %	7	93	0		66.3	0	33.7		0	88.2	11.8		0	0	0		
Total %	3.5	46	0	49.4	5.1	0	2.6	7.7	0	37.8	5	42.9	0	0	0	0	
Automobiles	123	1668	0	1791	187	0	91	278	0	1389	180	1569	0	0	0	0	3638
% Automobiles	93.9	95.9	0	95.7	96.9	0	92.9	95.5	0	97.1	94.2	96.7	0	0	0	0	96.1
Commercial	8	72	0	80	6	0	7	13	0	42	11	53	0	0	0	0	146
% Commercial	6.1	4.1	0	4.3	3.1	0	7.1	4.5	0	2.9	5.8	3.3	0	0	0	0	3.9

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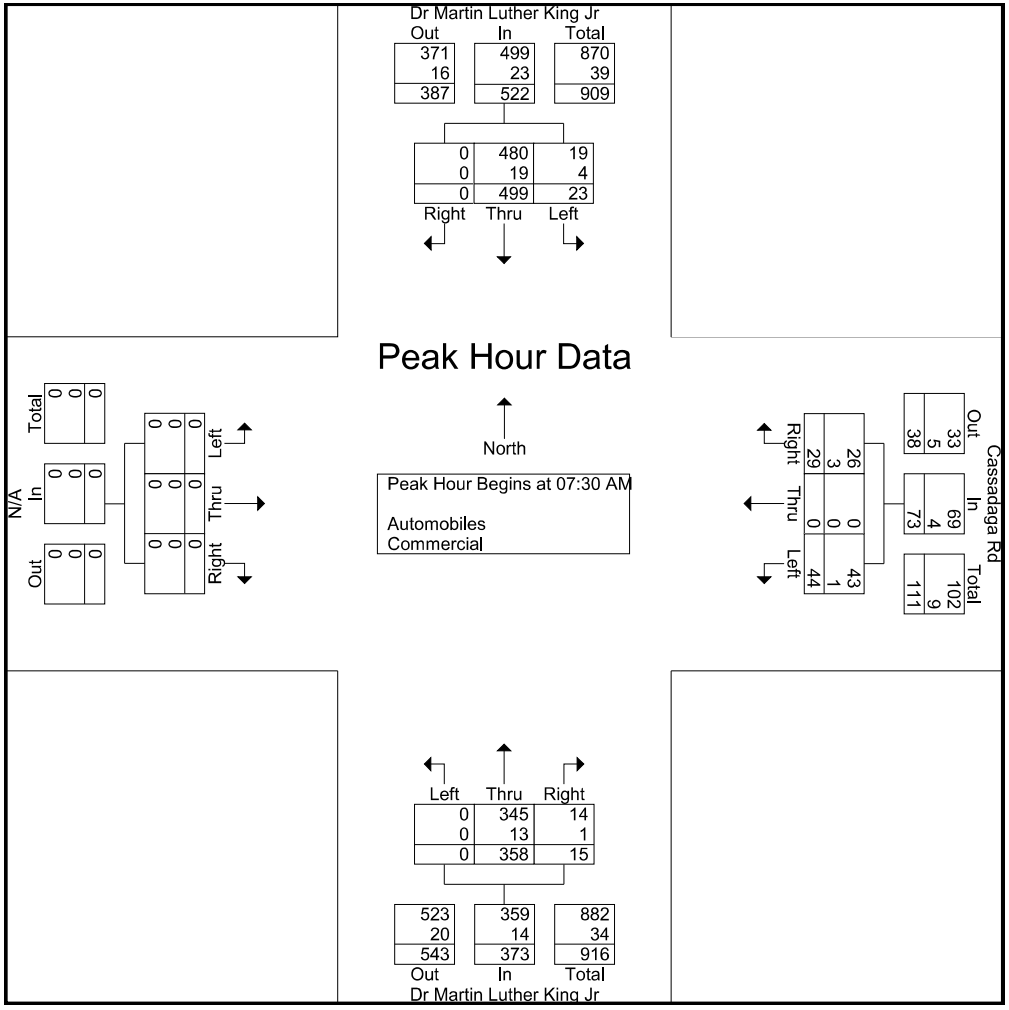
File Name : 05 MLK at Cassa
Site Code : 00000015
Start Date : 7/26/2022
Page No : 2

	Dr Martin Luther King Jr Southbound				Cassadaga Rd Westbound				Dr Martin Luther King Jr Northbound				N/A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	132	0	135	15	0	7	22	0	102	1	103	0	0	0	0	260
07:45 AM	2	120	0	122	9	0	10	19	0	98	3	101	0	0	0	0	242
08:00 AM	8	122	0	130	11	0	5	16	0	75	7	82	0	0	0	0	228
08:15 AM	10	125	0	135	9	0	7	16	0	83	4	87	0	0	0	0	238
Total Volume	23	499	0	522	44	0	29	73	0	358	15	373	0	0	0	0	968
% App. Total	4.4	95.6	0		60.3	0	39.7		0	96	4		0	0	0		
PHF	.575	.945	.000	.967	.733	.000	.725	.830	.000	.877	.536	.905	.000	.000	.000	.000	.931
Automobiles	19	480	0	499	43	0	26	69	0	345	14	359	0	0	0	0	927
% Automobiles	82.6	96.2	0	95.6	97.7	0	89.7	94.5	0	96.4	93.3	96.2	0	0	0	0	95.8
Commercial	4	19	0	23	1	0	3	4	0	13	1	14	0	0	0	0	41
% Commercial	17.4	3.8	0	4.4	2.3	0	10.3	5.5	0	3.6	6.7	3.8	0	0	0	0	4.2

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Dr MLK Blvd at Cassadaga Rd
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File Name : 05 MLK at Cassa
Site Code : 00000015
Start Date : 7/26/2022
Page No : 3



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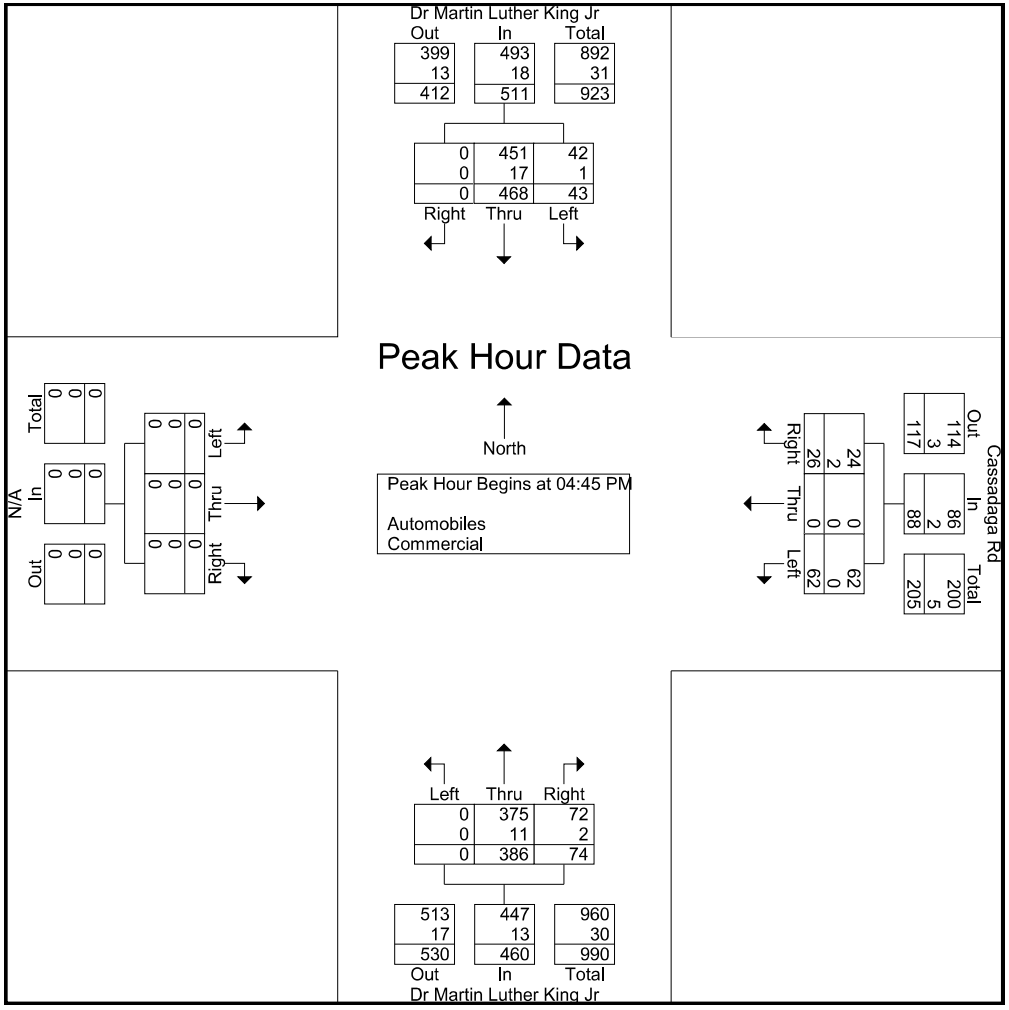
File Name : 05 MLK at Cassa
Site Code : 00000015
Start Date : 7/26/2022
Page No : 4

	Dr Martin Luther King Jr Southbound				Cassadaga Rd Westbound				Dr Martin Luther King Jr Northbound				N/A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	9	107	0	116	11	0	8	19	0	102	11	113	0	0	0	0	248
05:00 PM	11	131	0	142	16	0	5	21	0	104	20	124	0	0	0	0	287
05:15 PM	14	106	0	120	17	0	8	25	0	97	24	121	0	0	0	0	266
05:30 PM	9	124	0	133	18	0	5	23	0	83	19	102	0	0	0	0	258
Total Volume	43	468	0	511	62	0	26	88	0	386	74	460	0	0	0	0	1059
% App. Total	8.4	91.6	0		70.5	0	29.5		0	83.9	16.1		0	0	0		
PHF	.768	.893	.000	.900	.861	.000	.813	.880	.000	.928	.771	.927	.000	.000	.000	.000	.922
Automobiles	42	451	0	493	62	0	24	86	0	375	72	447	0	0	0	0	1026
% Automobiles	97.7	96.4	0	96.5	100	0	92.3	97.7	0	97.2	97.3	97.2	0	0	0	0	96.9
Commercial	1	17	0	18	0	0	2	2	0	11	2	13	0	0	0	0	33
% Commercial	2.3	3.6	0	3.5	0	0	7.7	2.3	0	2.8	2.7	2.8	0	0	0	0	3.1

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File Name : 05 MLK at Cassa
Site Code : 00000015
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File Name : 05 MLK at Cassa
Site Code : 00000015
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	Dr Martin Luther King Jr Southbound				Cassadaga Rd Westbound				Dr Martin Luther King Jr Northbound				N/A Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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Dr MLK Jr at Orange Camp Rd
Volusia County, Fl

File Name : 06 MLK at Orange
Site Code : 00000001
Start Date : 7/26/2022
Page No : 1

Groups Printed- Autpomobiles - Commercial

	Dr Martin Luther King Jr Southbound				Orange Camp Rd Westbound				Dr Martin Luther King Jr Northbound				Orange Camp Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	49	55	11	115	6	55	44	105	22	59	8	89	6	110	15	131	440
07:15 AM	45	74	13	132	4	61	38	103	19	83	18	120	6	98	20	124	479
07:30 AM	34	97	12	143	9	57	23	89	12	78	11	101	5	111	35	151	484
07:45 AM	44	87	19	150	7	46	34	87	21	56	17	94	5	103	26	134	465
Total	172	313	55	540	26	219	139	384	74	276	54	404	22	422	96	540	1868
08:00 AM	35	95	12	142	12	37	26	75	17	63	18	98	4	116	25	145	460
08:15 AM	42	75	18	135	16	44	17	77	18	59	18	95	6	107	36	149	456
08:30 AM	37	89	18	144	13	37	34	84	26	46	19	91	5	114	26	145	464
08:45 AM	30	78	14	122	9	45	27	81	19	60	14	93	6	104	34	144	440
Total	144	337	62	543	50	163	104	317	80	228	69	377	21	441	121	583	1820
04:00 PM	30	73	27	130	13	118	15	146	22	95	11	128	13	119	36	168	572
04:15 PM	42	64	32	138	27	90	60	177	26	89	16	131	14	98	40	152	598
04:30 PM	25	76	35	136	25	87	42	154	22	85	24	131	4	117	34	155	576
04:45 PM	35	67	26	128	21	99	34	154	19	76	24	119	11	115	42	168	569
Total	132	280	120	532	86	394	151	631	89	345	75	509	42	449	152	643	2315
05:00 PM	42	84	26	152	24	104	28	156	27	83	16	126	13	135	25	173	607
05:15 PM	35	80	27	142	30	115	24	169	34	77	24	135	15	120	34	169	615
05:30 PM	25	69	34	128	29	88	36	153	24	77	16	117	17	107	42	166	564
05:45 PM	25	57	27	109	29	95	27	151	16	62	11	89	11	105	52	168	517
Total	127	290	114	531	112	402	115	629	101	299	67	467	56	467	153	676	2303
Grand Total	575	1220	351	2146	274	1178	509	1961	344	1148	265	1757	141	1779	522	2442	8306
Apprch %	26.8	56.8	16.4		14	60.1	26		19.6	65.3	15.1		5.8	72.9	21.4		
Total %	6.9	14.7	4.2	25.8	3.3	14.2	6.1	23.6	4.1	13.8	3.2	21.2	1.7	21.4	6.3	29.4	
Autpomobiles	554	1175	336	2065	264	1138	493	1895	332	1113	260	1705	132	1732	513	2377	8042
% Autpomobiles	96.3	96.3	95.7	96.2	96.4	96.6	96.9	96.6	96.5	97	98.1	97	93.6	97.4	98.3	97.3	96.8
Commercial	21	45	15	81	10	40	16	66	12	35	5	52	9	47	9	65	264
% Commercial	3.7	3.7	4.3	3.8	3.6	3.4	3.1	3.4	3.5	3	1.9	3	6.4	2.6	1.7	2.7	3.2

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Dr MLK Jr at Orange Camp Rd
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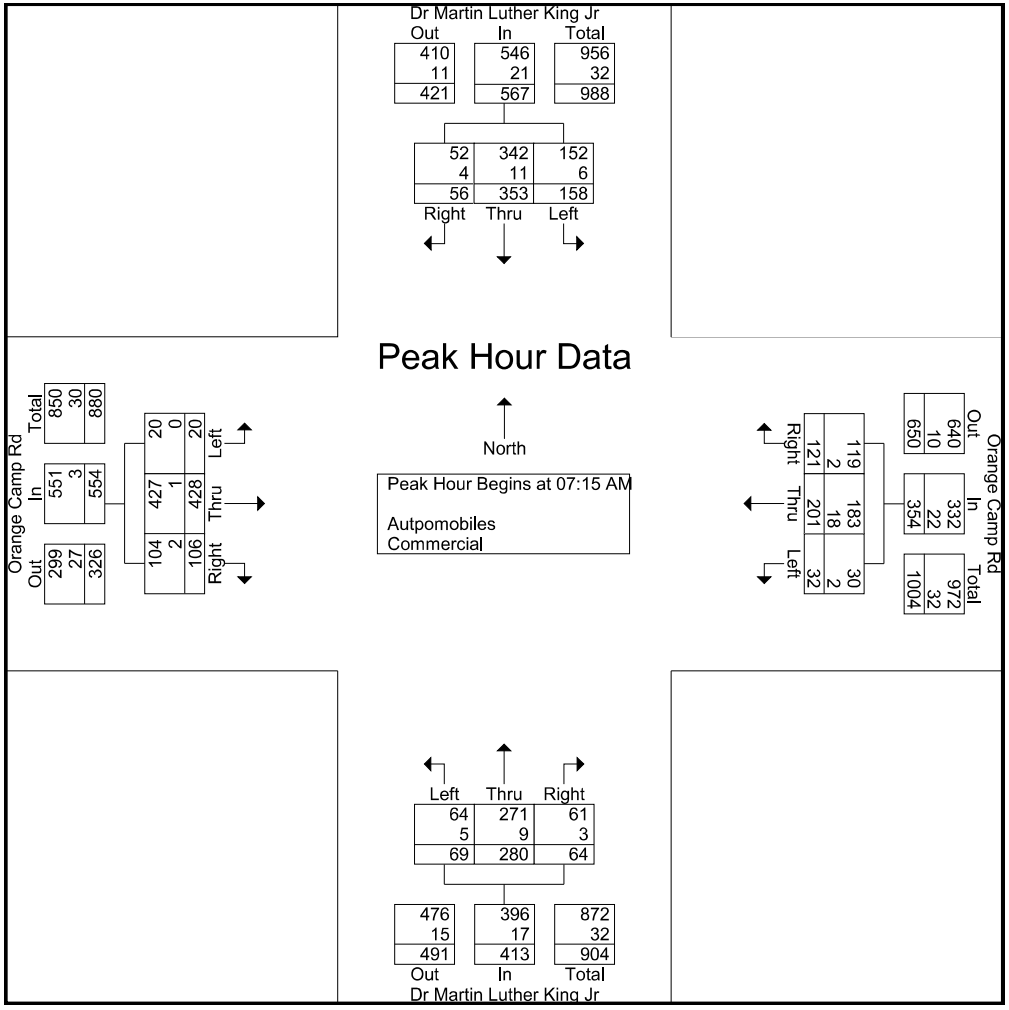
File Name : 06 MLK at Orange
Site Code : 00000001
Start Date : 7/26/2022
Page No : 2

	Dr Martin Luther King Jr Southbound				Orange Camp Rd Westbound				Dr Martin Luther King Jr Northbound				Orange Camp Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	45	74	13	132	4	61	38	103	19	83	18	120	6	98	20	124	479
07:30 AM	34	97	12	143	9	57	23	89	12	78	11	101	5	111	35	151	484
07:45 AM	44	87	19	150	7	46	34	87	21	56	17	94	5	103	26	134	465
08:00 AM	35	95	12	142	12	37	26	75	17	63	18	98	4	116	25	145	460
Total Volume	158	353	56	567	32	201	121	354	69	280	64	413	20	428	106	554	1888
% App. Total	27.9	62.3	9.9		9	56.8	34.2		16.7	67.8	15.5		3.6	77.3	19.1		
PHF	.878	.910	.737	.945	.667	.824	.796	.859	.821	.843	.889	.860	.833	.922	.757	.917	.975
Autpomobiles	152	342	52	546	30	183	119	332	64	271	61	396	20	427	104	551	1825
% Autpomobiles	96.2	96.9	92.9	96.3	93.8	91.0	98.3	93.8	92.8	96.8	95.3	95.9	100	99.8	98.1	99.5	96.7
Commercial	6	11	4	21	2	18	2	22	5	9	3	17	0	1	2	3	63
% Commercial	3.8	3.1	7.1	3.7	6.3	9.0	1.7	6.2	7.2	3.2	4.7	4.1	0	0.2	1.9	0.5	3.3

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File Name : 06 MLK at Orange
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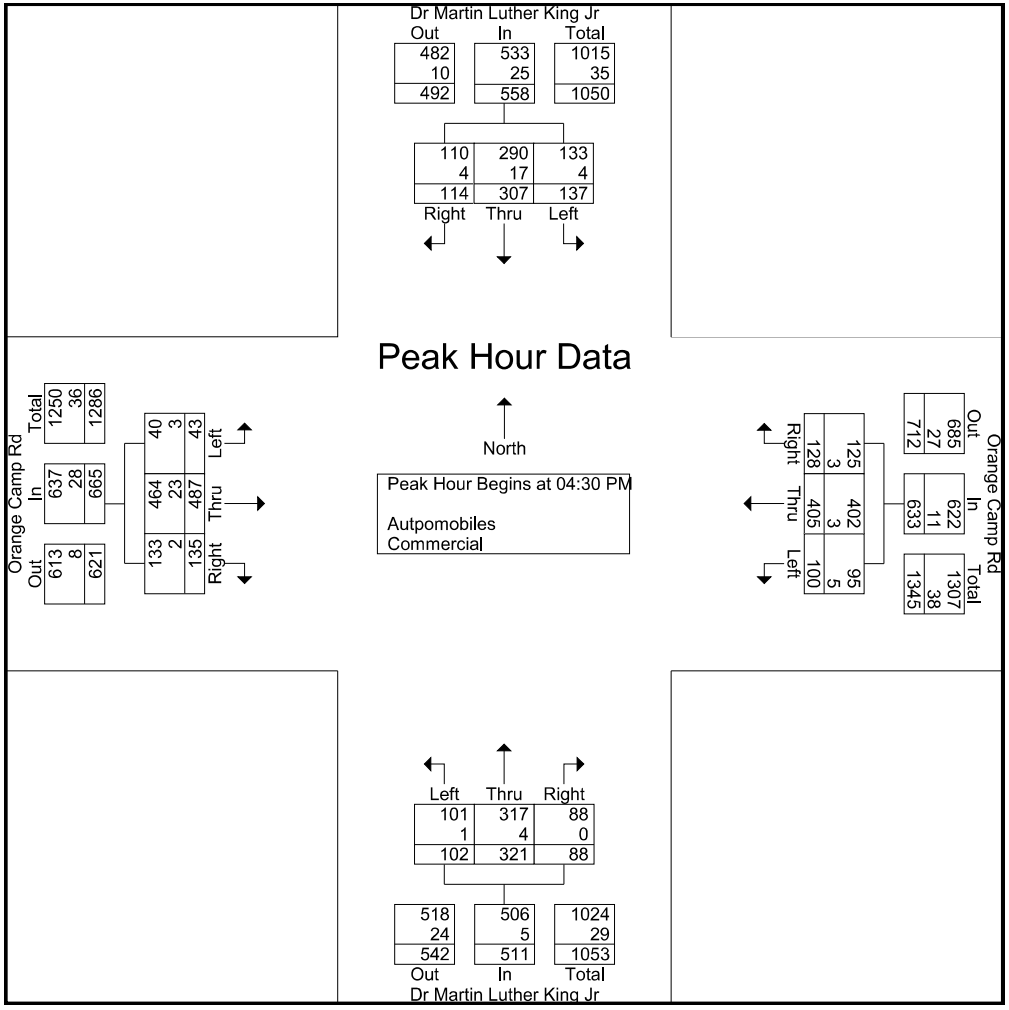
File Name : 06 MLK at Orange
Site Code : 00000001
Start Date : 7/26/2022
Page No : 4

	Dr Martin Luther King Jr Southbound				Orange Camp Rd Westbound				Dr Martin Luther King Jr Northbound				Orange Camp Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	25	76	35	136	25	87	42	154	22	85	24	131	4	117	34	155	576
04:45 PM	35	67	26	128	21	99	34	154	19	76	24	119	11	115	42	168	569
05:00 PM	42	84	26	152	24	104	28	156	27	83	16	126	13	135	25	173	607
05:15 PM	35	80	27	142	30	115	24	169	34	77	24	135	15	120	34	169	615
Total Volume	137	307	114	558	100	405	128	633	102	321	88	511	43	487	135	665	2367
% App. Total	24.6	55	20.4		15.8	64	20.2		20	62.8	17.2		6.5	73.2	20.3		
PHF	.815	.914	.814	.918	.833	.880	.762	.936	.750	.944	.917	.946	.717	.902	.804	.961	.962
Autpomobiles	133	290	110	533	95	402	125	622	101	317	88	506	40	464	133	637	2298
% Autpomobiles	97.1	94.5	96.5	95.5	95.0	99.3	97.7	98.3	99.0	98.8	100	99.0	93.0	95.3	98.5	95.8	97.1
Commercial	4	17	4	25	5	3	3	11	1	4	0	5	3	23	2	28	69
% Commercial	2.9	5.5	3.5	4.5	5.0	0.7	2.3	1.7	1.0	1.2	0	1.0	7.0	4.7	1.5	4.2	2.9

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File Name : 06 MLK at Orange
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Volusia County, Fl

File Name : 06 MLK at Orange
Site Code : 00000001
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	Dr Martin Luther King Jr Southbound				Orange Camp Rd Westbound				Dr Martin Luther King Jr Northbound				Orange Camp Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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Dr MLK Jr at E Taylor Rd/Victoria Gardens Dr
Volusia County, Fl

File Name : 07 Veterans at Taylor
Site Code : 00000007
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	Dr Martin Luther King Jr Southbound					Victoria Gardens Dr Westbound					Dr Martin Luther King Jr Northbound					E Taylor Rd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	3	77	6	2	88	7	11	20	0	38	19	84	5	0	108	9	3	27	5	44	278
07:15 AM	7	88	11	1	107	9	16	24	1	50	24	101	4	1	130	13	4	35	10	62	349
07:30 AM	4	97	16	2	119	4	17	19	1	41	34	81	7	0	122	19	6	42	6	73	355
07:45 AM	8	101	15	3	127	9	16	17	0	42	28	88	4	2	122	18	4	34	11	67	358
Total	22	363	48	8	441	29	60	80	2	171	105	354	20	3	482	59	17	138	32	246	1340
08:00 AM	5	105	16	1	127	4	17	27	0	48	20	73	7	1	101	20	8	42	4	74	350
08:15 AM	8	105	12	6	131	6	11	24	0	41	24	56	16	0	96	17	4	29	6	56	324
08:30 AM	7	102	13	3	125	4	10	19	0	33	34	37	11	2	84	11	8	34	4	57	299
08:45 AM	8	82	16	3	109	6	9	22	1	38	26	62	6	0	94	13	7	29	3	52	293
Total	28	394	57	13	492	20	47	92	1	160	104	228	40	3	375	61	27	134	17	239	1266
04:00 PM	5	88	16	0	109	5	6	11	0	22	44	75	6	0	125	10	18	39	3	70	326
04:15 PM	5	115	16	1	137	3	12	16	0	31	44	101	9	1	155	13	14	27	4	58	381
04:30 PM	7	110	14	3	134	6	11	11	1	29	41	97	4	0	142	11	11	19	2	43	348
04:45 PM	4	107	11	2	124	4	16	13	1	34	34	89	5	2	130	16	16	25	3	60	348
Total	21	420	57	6	504	18	45	51	2	116	163	362	24	3	552	50	59	110	12	231	1403
05:00 PM	5	119	20	0	144	5	8	13	2	28	27	95	4	0	126	8	17	19	4	48	346
05:15 PM	5	116	17	2	140	4	8	13	3	28	41	72	5	0	118	11	16	24	2	53	339
05:30 PM	4	105	16	0	125	7	7	6	1	21	34	91	4	3	132	9	6	19	3	37	315
05:45 PM	7	85	11	2	105	6	8	11	2	27	26	72	6	2	106	10	8	25	4	47	285
Total	21	425	64	4	514	22	31	43	8	104	128	330	19	5	482	38	47	87	13	185	1285
Grand Total	92	1602	226	31	1951	89	183	266	13	551	500	1274	103	14	1891	208	150	469	74	901	5294
Apprch %	4.7	82.1	11.6	1.6		16.2	33.2	48.3	2.4		26.4	67.4	5.4	0.7		23.1	16.6	52.1	8.2		
Total %	1.7	30.3	4.3	0.6	36.9	1.7	3.5	5	0.2	10.4	9.4	24.1	1.9	0.3	35.7	3.9	2.8	8.9	1.4	17	
Automobiles	86	1527	221	31	1865	85	182	264	13	544	497	1211	101	14	1823	200	150	456	74	880	5112
% Automobiles	93.5	95.3	97.8	100	95.6	95.5	99.5	99.2	100	98.7	99.4	95.1	98.1	100	96.4	96.2	100	97.2	100	97.7	96.6
Commercial	6	75	5	0	86	4	1	2	0	7	3	63	2	0	68	8	0	13	0	21	182
% Commercial	6.5	4.7	2.2	0	4.4	4.5	0.5	0.8	0	1.3	0.6	4.9	1.9	0	3.6	3.8	0	2.8	0	2.3	3.4

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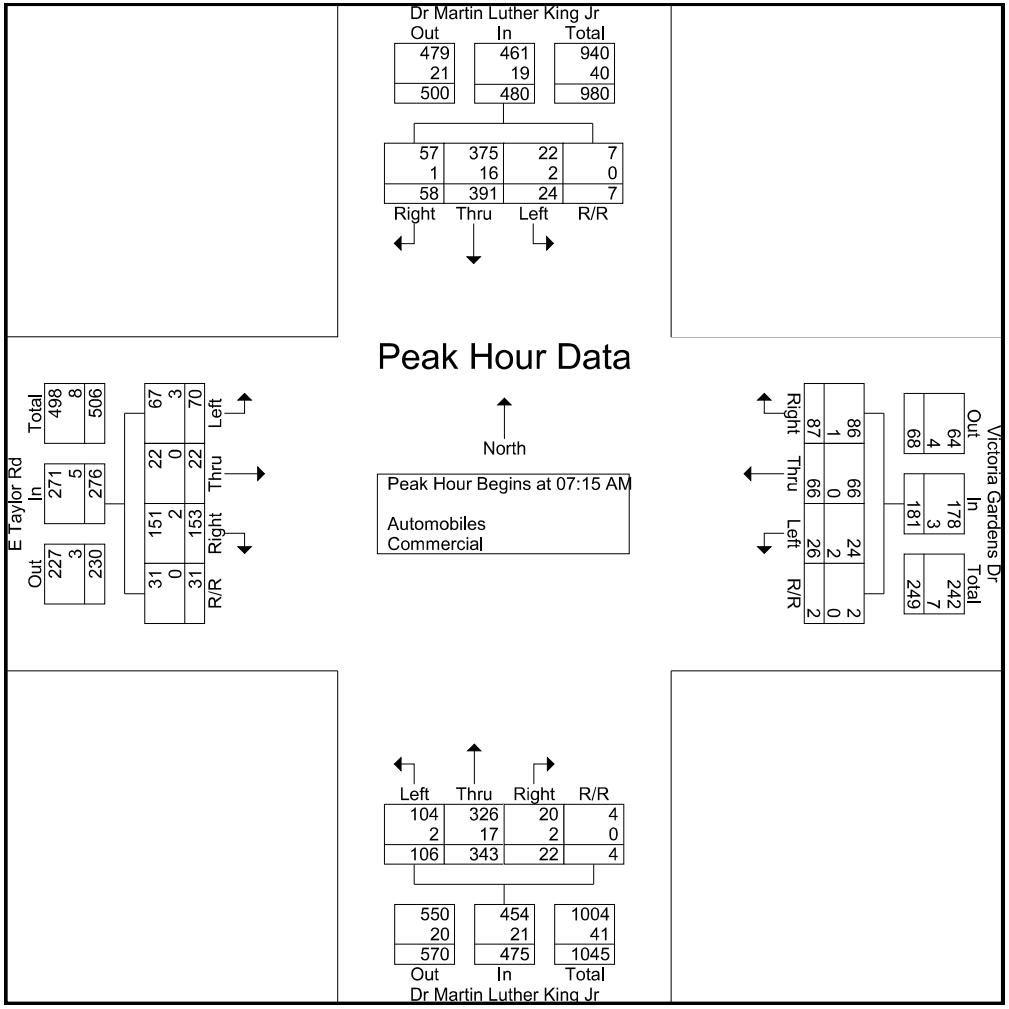
File Name : 07 Veterans at Taylor
Site Code : 00000007
Start Date : 7/26/2022
Page No : 2

	Dr Martin Luther King Jr Southbound					Victoria Gardens Dr Westbound					Dr Martin Luther King Jr Northbound					E Taylor Rd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	7	88	11	1	107	9	16	24	1	50	24	101	4	1	130	13	4	35	10	62	349
07:30 AM	4	97	16	2	119	4	17	19	1	41	34	81	7	0	122	19	6	42	6	73	355
07:45 AM	8	101	15	3	127	9	16	17	0	42	28	88	4	2	122	18	4	34	11	67	358
08:00 AM	5	105	16	1	127	4	17	27	0	48	20	73	7	1	101	20	8	42	4	74	350
Total Volume	24	391	58	7	480	26	66	87	2	181	106	343	22	4	475	70	22	153	31	276	1412
% App. Total	5	81.5	12.1	1.5		14.4	36.5	48.1	1.1		22.3	72.2	4.6	0.8		25.4	8	55.4	11.2		
PHF	.750	.931	.906	.583	.945	.722	.971	.806	.500	.905	.779	.849	.786	.500	.913	.875	.688	.911	.705	.932	.986
Automobiles	22	375	57	7	461	24	66	86	2	178	104	326	20	4	454	67	22	151	31	271	1364
% Automobiles	91.7	95.9	98.3	100	96.0	92.3	100	98.9	100	98.3	98.1	95.0	90.9	100	95.6	95.7	100	98.7	100	98.2	96.6
Commercial	2	16	1	0	19	2	0	1	0	3	2	17	2	0	21	3	0	2	0	5	48
% Commercial	8.3	4.1	1.7	0	4.0	7.7	0	1.1	0	1.7	1.9	5.0	9.1	0	4.4	4.3	0	1.3	0	1.8	3.4

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Dr MLK Jr at E Taylor Rd/Victoria Gardens Dr
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File Name : 07 Veterans at Taylor
Site Code : 00000007
Start Date : 7/26/2022
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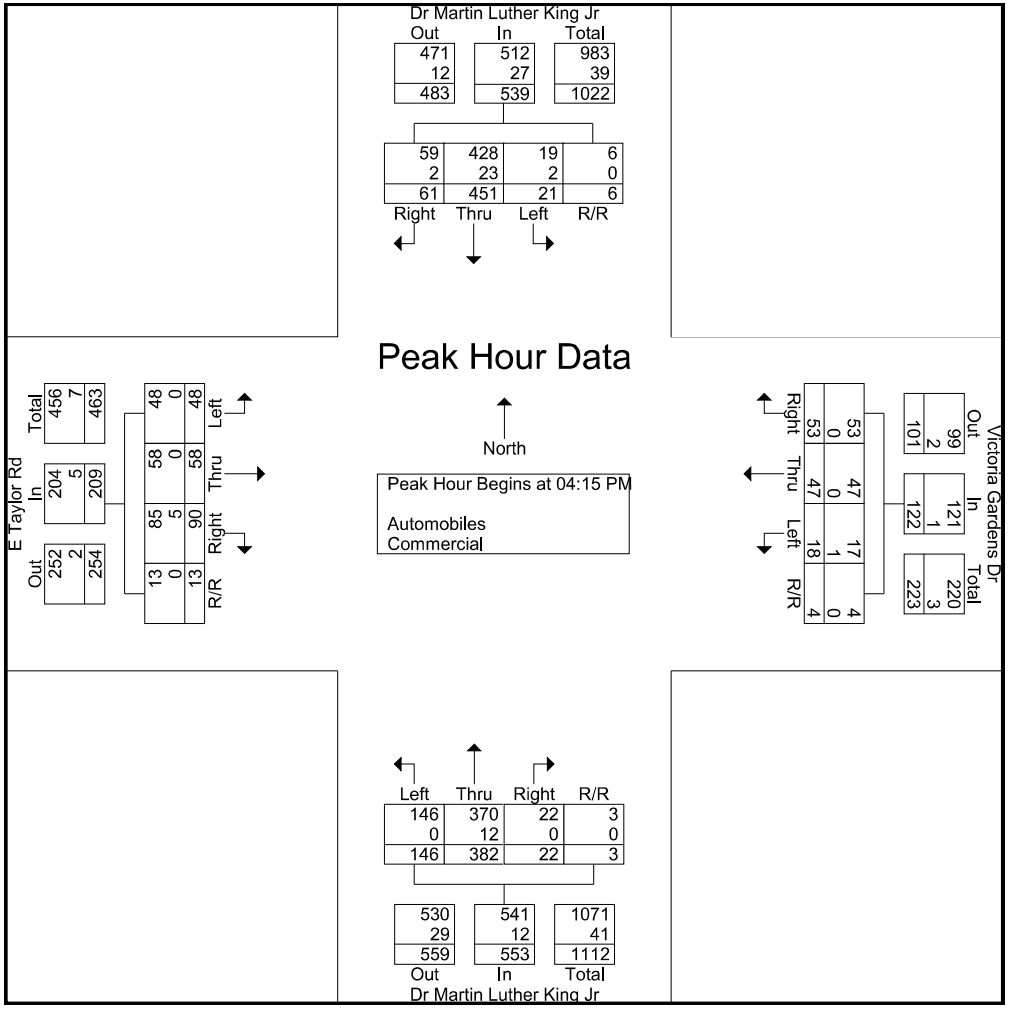
File Name : 07 Veterans at Taylor
Site Code : 00000007
Start Date : 7/26/2022
Page No : 4

	Dr Martin Luther King Jr Southbound					Victoria Gardens Dr Westbound					Dr Martin Luther King Jr Northbound					E Taylor Rd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	5	115	16	1	137	3	12	16	0	31	44	101	9	1	155	13	14	27	4	58	381
04:30 PM	7	110	14	3	134	6	11	11	1	29	41	97	4	0	142	11	11	19	2	43	348
04:45 PM	4	107	11	2	124	4	16	13	1	34	34	89	5	2	130	16	16	25	3	60	348
05:00 PM	5	119	20	0	144	5	8	13	2	28	27	95	4	0	126	8	17	19	4	48	346
Total Volume	21	451	61	6	539	18	47	53	4	122	146	382	22	3	553	48	58	90	13	209	1423
% App. Total	3.9	83.7	11.3	1.1		14.8	38.5	43.4	3.3		26.4	69.1	4	0.5		23	27.8	43.1	6.2		
PHF	.750	.947	.763	.500	.936	.750	.734	.828	.500	.897	.830	.946	.611	.375	.892	.750	.853	.833	.813	.871	.934
Automobiles	19	428	59	6	512	17	47	53	4	121	146	370	22	3	541	48	58	85	13	204	1378
% Automobiles	90.5	94.9	96.7	100	95.0	94.4	100	100	100	99.2	100	96.9	100	100	97.8	100	100	94.4	100	97.6	96.8
Commercial	2	23	2	0	27	1	0	0	0	1	0	12	0	0	12	0	0	5	0	5	45
% Commercial	9.5	5.1	3.3	0	5.0	5.6	0	0	0	0.8	0	3.1	0	0	2.2	0	0	5.6	0	2.4	3.2

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File Name : 07 Veterans at Taylor
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Start Date : 7/26/2022
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File Name : 07 Veterans at Taylor
Site Code : 00000007
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	Dr Martin Luther King Jr Southbound					Victoria Gardens Dr Westbound					Dr Martin Luther King Jr Northbound					E Taylor Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

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Kentucky Ave at E. Graves Ave
Volusia County, Fl

File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	Kentucky Ave Southbound					E. Graves Ave Westbound					Kentucky Ave Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	21	3	29	9	62	1	73	36	9	119	3	3	0	0	6	22	35	2	0	59	246
07:15 AM	36	2	38	11	87	1	98	43	8	150	2	6	2	1	11	34	53	3	1	91	339
07:30 AM	64	3	66	8	141	1	91	52	13	157	2	5	2	2	11	52	67	0	0	119	428
07:45 AM	64	2	57	13	136	0	121	32	5	158	4	4	3	0	11	44	66	2	1	113	418
Total	185	10	190	41	426	3	383	163	35	584	11	18	7	3	39	152	221	7	2	382	1431
08:00 AM	57	2	44	18	121	2	103	42	2	149	4	4	2	1	11	34	54	2	0	90	371
08:15 AM	58	2	34	16	110	1	100	36	5	142	6	2	1	0	9	43	75	0	1	119	380
08:30 AM	55	4	26	13	98	0	104	42	4	150	4	3	3	2	12	35	66	1	0	102	362
08:45 AM	36	3	35	11	85	2	103	36	3	144	3	4	1	3	11	46	44	2	0	92	332
Total	206	11	139	58	414	5	410	156	14	585	17	13	7	6	43	158	239	5	1	403	1445
04:00 PM	62	2	43	11	118	7	51	26	5	89	7	4	2	1	14	41	81	7	0	129	350
04:15 PM	73	2	54	16	145	3	64	43	3	113	3	2	2	1	8	53	101	3	0	157	423
04:30 PM	74	1	46	13	134	4	93	41	2	140	7	2	2	3	14	57	131	6	1	195	483
04:45 PM	61	2	62	8	133	4	73	34	2	113	7	1	3	4	15	51	114	6	0	171	432
Total	270	7	205	48	530	18	281	144	12	455	24	9	9	9	51	202	427	22	1	652	1688
05:00 PM	76	5	73	7	161	2	83	52	4	141	4	2	5	1	12	63	108	8	0	179	493
05:15 PM	81	5	56	8	150	3	78	43	2	126	9	2	5	2	18	54	101	7	2	164	458
05:30 PM	77	4	43	10	134	5	67	42	4	118	7	3	6	2	18	58	82	8	1	149	419
05:45 PM	73	6	37	13	129	5	72	34	6	117	7	2	4	2	15	61	88	7	0	156	417
Total	307	20	209	38	574	15	300	171	16	502	27	9	20	7	63	236	379	30	3	648	1787
Grand Total	968	48	743	185	1944	41	1374	634	77	2126	79	49	43	25	196	748	1266	64	7	2085	6351
Apprch %	49.8	2.5	38.2	9.5		1.9	64.6	29.8	3.6		40.3	25	21.9	12.8		35.9	60.7	3.1	0.3		
Total %	15.2	0.8	11.7	2.9	30.6	0.6	21.6	10	1.2	33.5	1.2	0.8	0.7	0.4	3.1	11.8	19.9	1	0.1	32.8	
Automobiles	948	47	721	185	1901	37	1356	622	76	2091	75	47	39	24	185	741	1229	62	7	2039	6216
% Automobiles	97.9	97.9	97	100	97.8	90.2	98.7	98.1	98.7	98.4	94.9	95.9	90.7	96	94.4	99.1	97.1	96.9	100	97.8	97.9
Commercial	20	1	22	0	43	4	18	12	1	35	4	2	4	1	11	7	37	2	0	46	135
% Commercial	2.1	2.1	3	0	2.2	9.8	1.3	1.9	1.3	1.6	5.1	4.1	9.3	4	5.6	0.9	2.9	3.1	0	2.2	2.1

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Kentucky Ave at E. Graves Ave
Volusia County, Fl

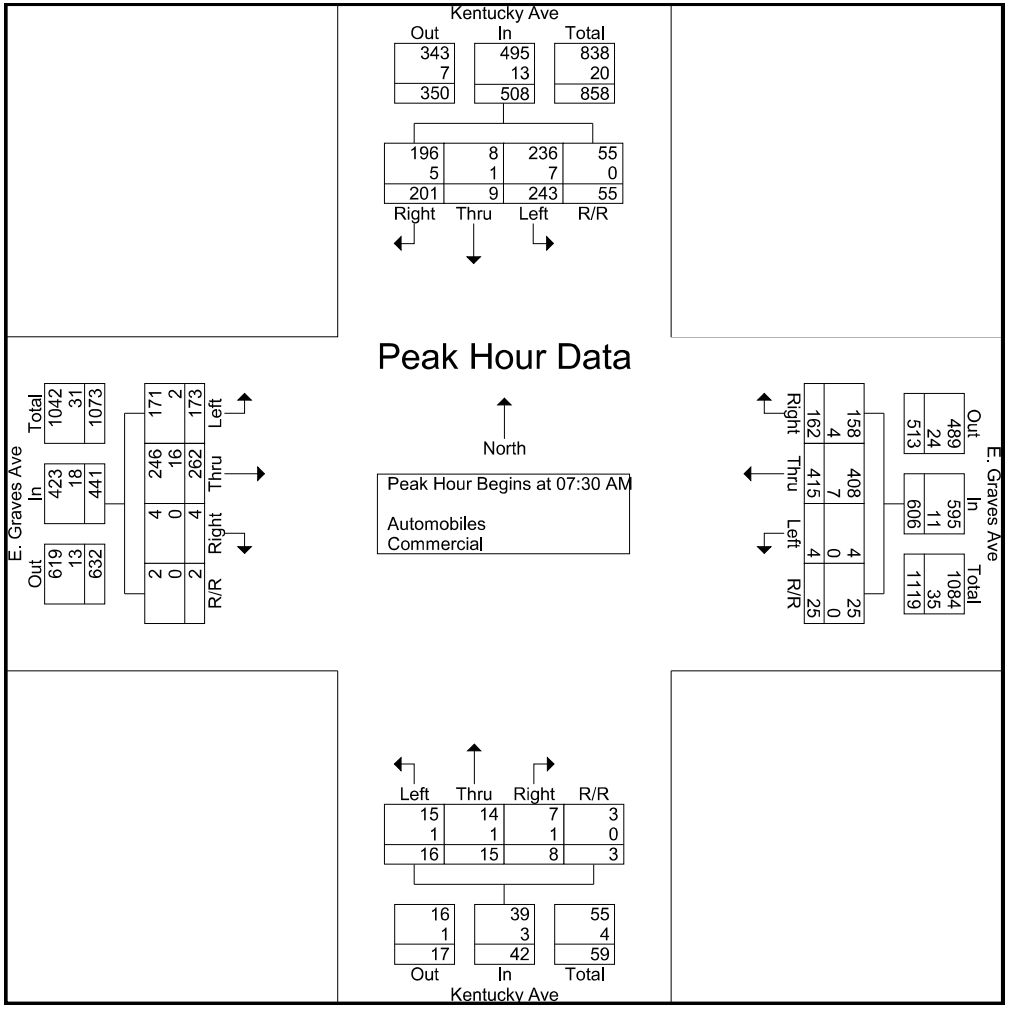
File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
Page No : 2

	Kentucky Ave Southbound					E. Graves Ave Westbound					Kentucky Ave Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	64	3	66	8	141	1	91	52	13	157	2	5	2	2	11	52	67	0	0	119	428
07:45 AM	64	2	57	13	136	0	121	32	5	158	4	4	3	0	11	44	66	2	1	113	418
08:00 AM	57	2	44	18	121	2	103	42	2	149	4	4	2	1	11	34	54	2	0	90	371
08:15 AM	58	2	34	16	110	1	100	36	5	142	6	2	1	0	9	43	75	0	1	119	380
Total Volume	243	9	201	55	508	4	415	162	25	606	16	15	8	3	42	173	262	4	2	441	1597
% App. Total	47.8	1.8	39.6	10.8		0.7	68.5	26.7	4.1		38.1	35.7	19	7.1		39.2	59.4	0.9	0.5		
PHF	.949	.750	.761	.764	.901	.500	.857	.779	.481	.959	.667	.750	.667	.375	.955	.832	.873	.500	.500	.926	.933
Automobiles	236	8	196	55	495	4	408	158	25	595	15	14	7	3	39	171	246	4	2	423	1552
% Automobiles	97.1	88.9	97.5	100	97.4	100	98.3	97.5	100	98.2	93.8	93.3	87.5	100	92.9	98.8	93.9	100	100	95.9	97.2
Commercial	7	1	5	0	13	0	7	4	0	11	1	1	1	0	3	2	16	0	0	18	45
% Commercial	2.9	11.1	2.5	0	2.6	0	1.7	2.5	0	1.8	6.3	6.7	12.5	0	7.1	1.2	6.1	0	0	4.1	2.8

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Kentucky Ave at E. Graves Ave
Volusia County, Fl

File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
Page No : 3



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Kentucky Ave at E. Graves Ave
Volusia County, Fl

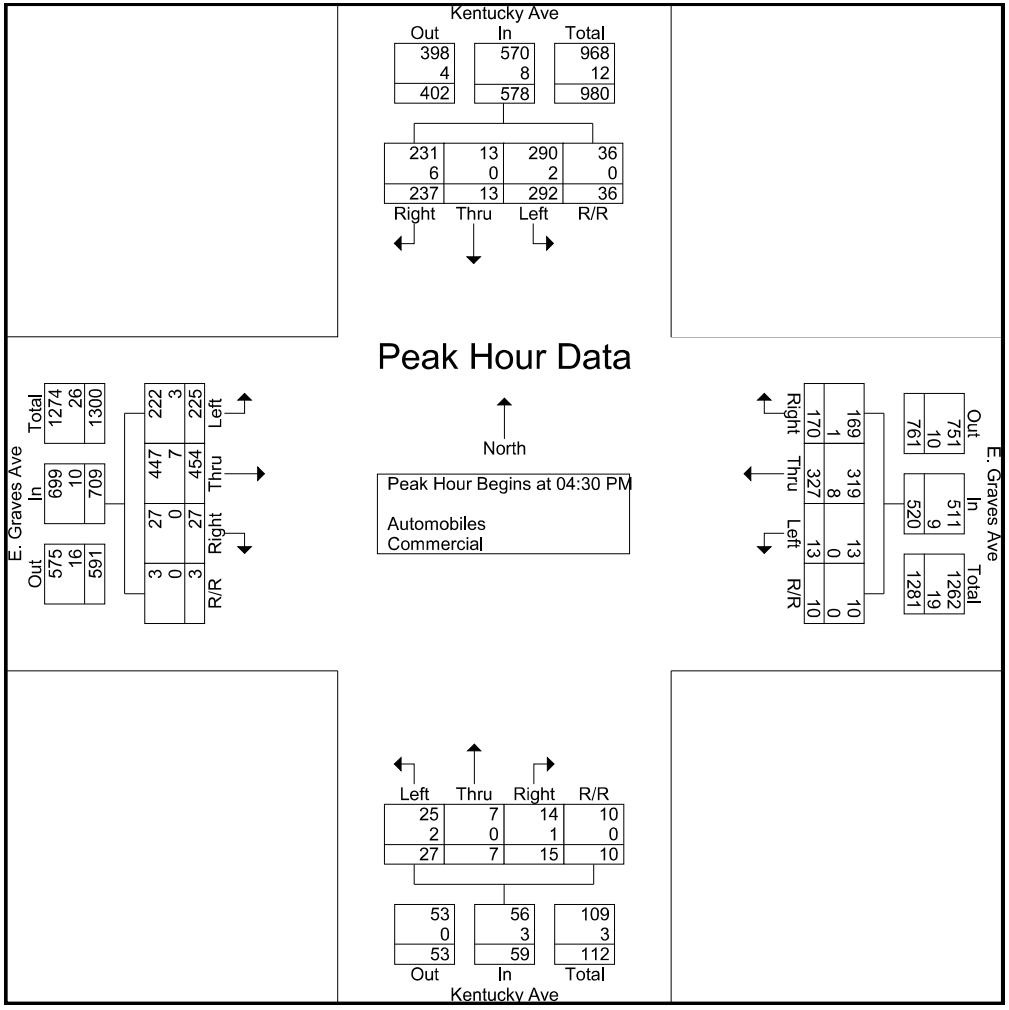
File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
Page No : 4

	Kentucky Ave Southbound					E. Graves Ave Westbound					Kentucky Ave Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	74	1	46	13	134	4	93	41	2	140	7	2	2	3	14	57	131	6	1	195	483
04:45 PM	61	2	62	8	133	4	73	34	2	113	7	1	3	4	15	51	114	6	0	171	432
05:00 PM	76	5	73	7	161	2	83	52	4	141	4	2	5	1	12	63	108	8	0	179	493
05:15 PM	81	5	56	8	150	3	78	43	2	126	9	2	5	2	18	54	101	7	2	164	458
Total Volume	292	13	237	36	578	13	327	170	10	520	27	7	15	10	59	225	454	27	3	709	1866
% App. Total	50.5	2.2	41	6.2		2.5	62.9	32.7	1.9		45.8	11.9	25.4	16.9		31.7	64	3.8	0.4		
PHF	.901	.650	.812	.692	.898	.813	.879	.817	.625	.922	.750	.875	.750	.625	.819	.893	.866	.844	.375	.909	.946
Automobiles	290	13	231	36	570	13	319	169	10	511	25	7	14	10	56	222	447	27	3	699	1836
% Automobiles	99.3	100	97.5	100	98.6	100	97.6	99.4	100	98.3	92.6	100	93.3	100	94.9	98.7	98.5	100	100	98.6	98.4
Commercial	2	0	6	0	8	0	8	1	0	9	2	0	1	0	3	3	7	0	0	10	30
% Commercial	0.7	0	2.5	0	1.4	0	2.4	0.6	0	1.7	7.4	0	6.7	0	5.1	1.3	1.5	0	0	1.4	1.6

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Kentucky Ave at E. Graves Ave
Volusia County, Fl

File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
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Kentucky Ave at E. Graves Ave
Volusia County, Fl

File Name : 03 Kentucky at Graves
Site Code : 00000003
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	Kentucky Ave Southbound					E. Graves Ave Westbound					Kentucky Ave Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	4
Grand Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	4	6
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	33.3	33.3	0	0	0	0	0	0	0	0	66.7	66.7	

DE TRAFFIC

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Veterans Memorial Pkwy at E. Graves Ave
Volusia County, Fl

File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	N/A Southbound					E. Graves Ave Westbound					Veterans Memorial Pkwy Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	0	0	0	0	0	69	54	0	0	123	6	0	24	9	39	0	55	11	3	69	231
07:15 AM	0	0	0	0	0	85	63	0	0	148	12	0	42	8	62	0	63	20	4	87	297
07:30 AM	0	0	0	0	0	77	72	0	0	149	19	0	45	4	68	0	78	17	6	101	318
07:45 AM	0	0	0	0	0	87	76	0	0	163	19	0	35	11	65	0	69	18	8	95	323
Total	0	0	0	0	0	318	265	0	0	583	56	0	146	32	234	0	265	66	21	352	1169
08:00 AM	0	0	0	0	0	81	75	0	0	156	20	0	53	6	79	0	58	19	7	84	319
08:15 AM	0	0	0	0	0	84	70	0	0	154	19	0	45	4	68	0	68	16	8	92	314
08:30 AM	0	0	0	0	0	78	78	0	0	156	18	0	52	2	72	0	47	16	10	73	301
08:45 AM	0	0	0	0	0	66	69	0	0	135	19	0	36	3	58	0	58	11	9	78	271
Total	0	0	0	0	0	309	292	0	0	601	76	0	186	15	277	0	231	62	34	327	1205
04:00 PM	0	0	0	0	0	62	63	0	0	125	21	0	66	6	93	0	59	42	9	110	328
04:15 PM	0	0	0	0	0	75	56	0	0	131	31	0	79	9	119	0	79	51	6	136	386
04:30 PM	0	0	0	0	0	82	72	0	0	154	24	0	100	16	140	0	74	76	11	161	455
04:45 PM	0	0	0	0	0	78	81	0	0	159	36	0	85	6	127	0	81	84	9	174	460
Total	0	0	0	0	0	297	272	0	0	569	112	0	330	37	479	0	293	253	35	581	1629
05:00 PM	0	0	0	0	0	81	73	0	0	154	32	0	104	16	152	0	78	65	8	151	457
05:15 PM	0	0	0	0	0	76	69	0	0	145	27	0	89	13	129	0	68	75	13	156	430
05:30 PM	0	0	0	0	0	67	56	0	0	123	25	0	73	19	117	0	74	81	5	160	400
05:45 PM	0	0	0	0	0	74	47	0	0	121	19	0	88	13	120	0	58	75	6	139	380
Total	0	0	0	0	0	298	245	0	0	543	103	0	354	61	518	0	278	296	32	606	1667
Grand Total	0	0	0	0	0	1222	1074	0	0	2296	347	0	1016	145	1508	0	1067	677	122	1866	5670
Apprch %	0	0	0	0		53.2	46.8	0	0		23	0	67.4	9.6		0	57.2	36.3	6.5		
Total %	0	0	0	0	0	21.6	18.9	0	0	40.5	6.1	0	17.9	2.6	26.6	0	18.8	11.9	2.2	32.9	
Automobiles	0	0	0	0	0	1202	1057	0	0	2259	338	0	987	145	1470	0	1043	674	122	1839	5568
% Automobiles	0	0	0	0	0	98.4	98.4	0	0	98.4	97.4	0	97.1	100	97.5	0	97.8	99.6	100	98.6	98.2
Commercial	0	0	0	0	0	20	17	0	0	37	9	0	29	0	38	0	24	3	0	27	102
% Commercial	0	0	0	0	0	1.6	1.6	0	0	1.6	2.6	0	2.9	0	2.5	0	2.2	0.4	0	1.4	1.8

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Volusia County, Fl

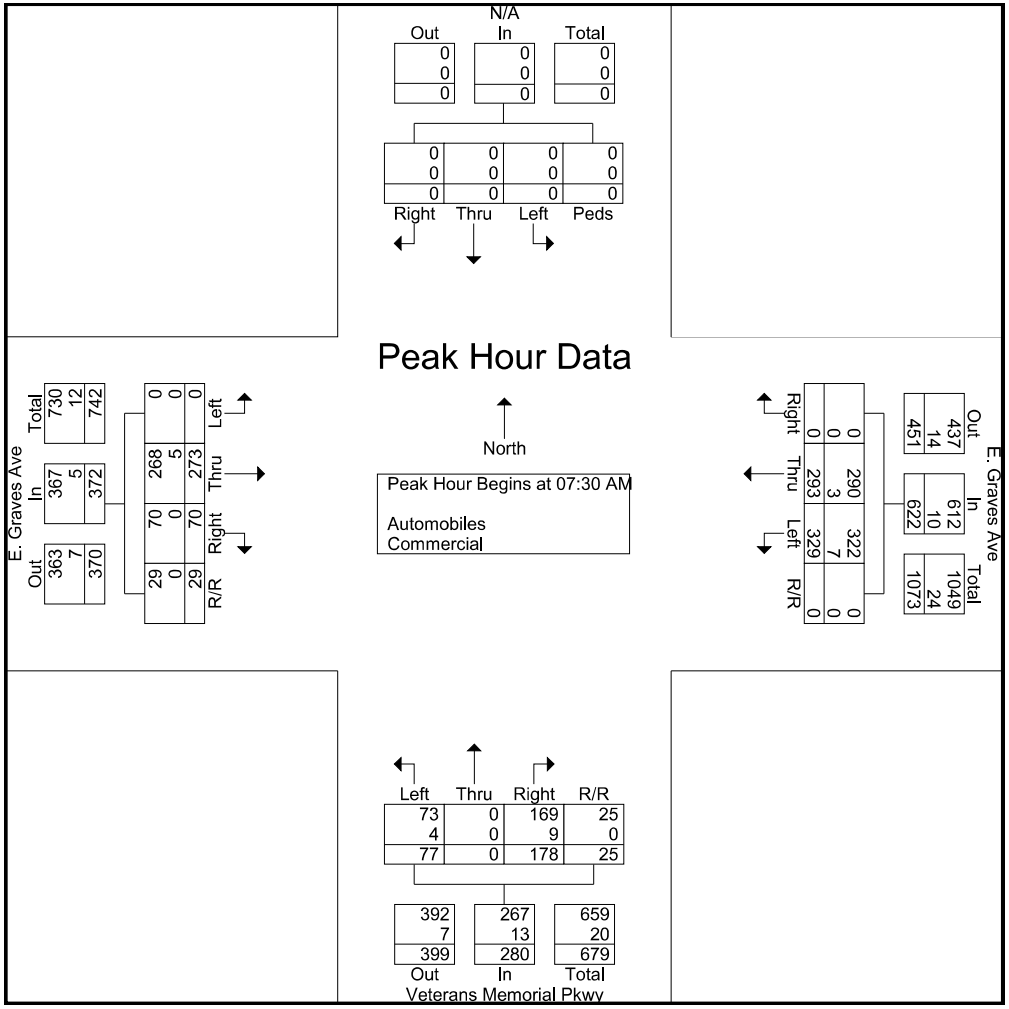
File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 2

	N/A Southbound					E. Graves Ave Westbound					Veterans Memorial Pkwy Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	77	72	0	0	149	19	0	45	4	68	0	78	17	6	101	318
07:45 AM	0	0	0	0	0	87	76	0	0	163	19	0	35	11	65	0	69	18	8	95	323
08:00 AM	0	0	0	0	0	81	75	0	0	156	20	0	53	6	79	0	58	19	7	84	319
08:15 AM	0	0	0	0	0	84	70	0	0	154	19	0	45	4	68	0	68	16	8	92	314
Total Volume	0	0	0	0	0	329	293	0	0	622	77	0	178	25	280	0	273	70	29	372	1274
% App. Total	0	0	0	0		52.9	47.1	0	0		27.5	0	63.6	8.9		0	73.4	18.8	7.8		
PHF	.000	.000	.000	.000	.000	.945	.964	.000	.000	.954	.963	.000	.840	.568	.886	.000	.875	.921	.906	.921	.986
Automobiles	0	0	0	0	0	322	290	0	0	612	73	0	169	25	267	0	268	70	29	367	1246
% Automobiles	0	0	0	0	0	97.9	99.0	0	0	98.4	94.8	0	94.9	100	95.4	0	98.2	100	100	98.7	97.8
Commercial	0	0	0	0	0	7	3	0	0	10	4	0	9	0	13	0	5	0	0	5	28
% Commercial	0	0	0	0	0	2.1	1.0	0	0	1.6	5.2	0	5.1	0	4.6	0	1.8	0	0	1.3	2.2

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Veterans Memorial Pkwy at E. Graves Ave
Volusia County, Fl

File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 3



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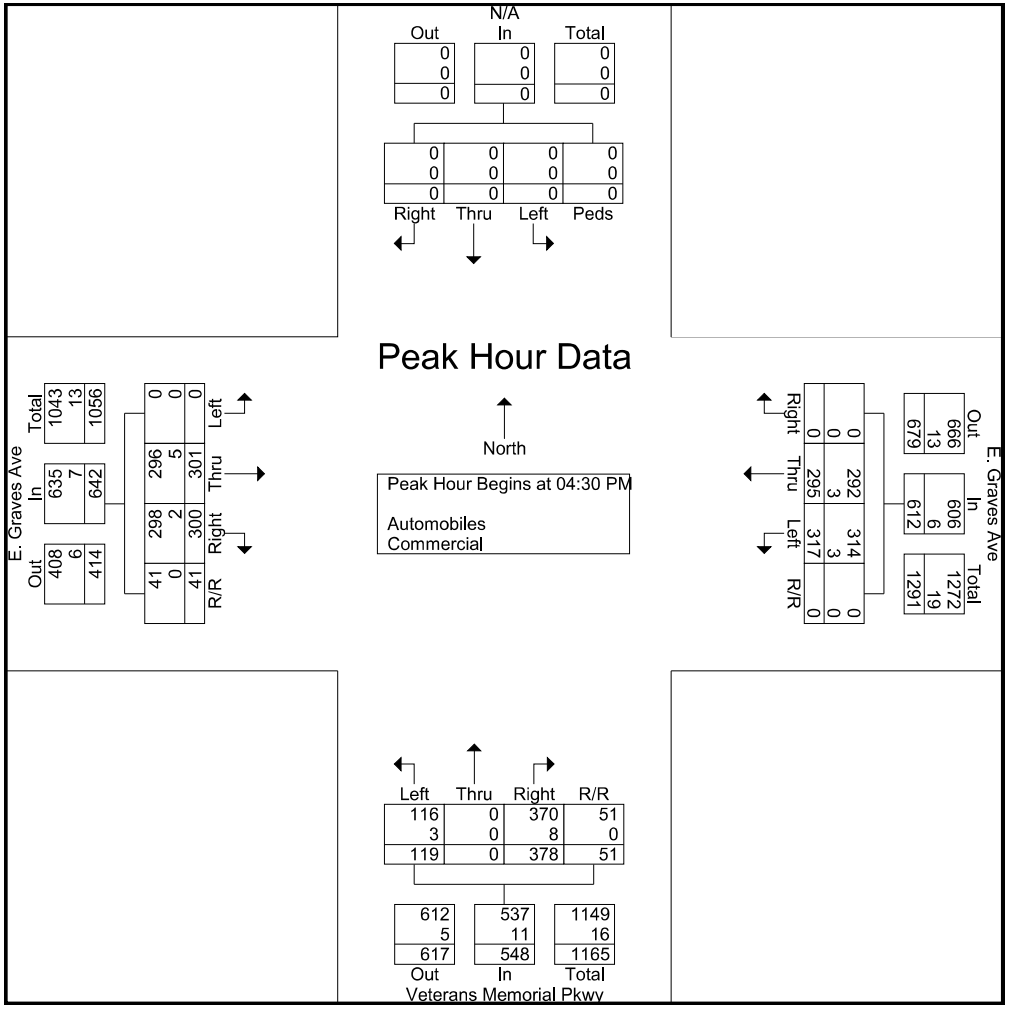
File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 4

	N/A Southbound					E. Graves Ave Westbound					Veterans Memorial Pkwy Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	82	72	0	0	154	24	0	100	16	140	0	74	76	11	161	455
04:45 PM	0	0	0	0	0	78	81	0	0	159	36	0	85	6	127	0	81	84	9	174	460
05:00 PM	0	0	0	0	0	81	73	0	0	154	32	0	104	16	152	0	78	65	8	151	457
05:15 PM	0	0	0	0	0	76	69	0	0	145	27	0	89	13	129	0	68	75	13	156	430
Total Volume	0	0	0	0	0	317	295	0	0	612	119	0	378	51	548	0	301	300	41	642	1802
% App. Total	0	0	0	0		51.8	48.2	0	0		21.7	0	69	9.3		0	46.9	46.7	6.4		
PHF	.000	.000	.000	.000	.000	.966	.910	.000	.000	.962	.826	.000	.909	.797	.901	.000	.929	.893	.788	.922	.979
Automobiles	0	0	0	0	0	314	292	0	0	606	116	0	370	51	537	0	296	298	41	635	1778
% Automobiles	0	0	0	0	0	99.1	99.0	0	0	99.0	97.5	0	97.9	100	98.0	0	98.3	99.3	100	98.9	98.7
Commercial	0	0	0	0	0	3	3	0	0	6	3	0	8	0	11	0	5	2	0	7	24
% Commercial	0	0	0	0	0	0.9	1.0	0	0	1.0	2.5	0	2.1	0	2.0	0	1.7	0.7	0	1.1	1.3

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Veterans Memorial Pkwy at E. Graves Ave
Volusia County, Fl

File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 5



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Veterans Memorial Pkwy at E. Graves Ave
Volusia County, Fl

File Name : 02 Veterans at Graves
Site Code : 00000002
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	N/A Southbound					E. Graves Ave Westbound					Veterans Memorial Pkwy Northbound					E. Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	4
Grand Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	4	6
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	33.3	33.3	0	0	0	0	0	0	0	0	66.7	66.7	

DE TRAFFIC

detraffic.com
(386) 341-4186
Veterans Memorial Pkwy at E. Rhode Island Ave
Volusia County, Fl

File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	Veterans Memorial Pkwy Southbound					N/A Westbound					Veterans Memorial Pkwy Northbound					E Rhode Island Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	0	63	22	3	88	0	0	0	0	0	35	36	0	0	71	12	0	39	16	67	226
07:15 AM	0	91	19	4	114	0	0	0	0	0	31	55	0	0	86	19	0	29	18	66	266
07:30 AM	0	75	24	5	104	0	0	0	0	0	35	45	0	0	80	26	0	35	11	72	256
07:45 AM	0	90	35	8	133	0	0	0	0	0	30	36	0	0	66	35	0	43	8	86	285
Total	0	319	100	20	439	0	0	0	0	0	131	172	0	0	303	92	0	146	53	291	1033
08:00 AM	0	92	25	4	121	0	0	0	0	0	35	53	0	0	88	29	0	52	6	87	296
08:15 AM	0	86	24	2	112	0	0	0	0	0	29	48	0	0	77	26	0	45	9	80	269
08:30 AM	0	78	20	3	101	0	0	0	0	0	25	55	0	0	80	29	0	54	8	91	272
08:45 AM	0	84	22	4	110	0	0	0	0	0	41	38	0	0	79	25	0	35	6	66	255
Total	0	340	91	13	444	0	0	0	0	0	130	194	0	0	324	109	0	186	29	324	1092
04:00 PM	0	84	21	6	111	0	0	0	0	0	52	73	0	0	125	28	0	35	12	75	311
04:15 PM	0	105	31	4	140	0	0	0	0	0	43	83	0	0	126	34	0	42	11	87	353
04:30 PM	0	151	16	3	170	0	0	0	0	0	36	100	0	0	136	41	0	53	8	102	408
04:45 PM	0	145	24	2	171	0	0	0	0	0	52	92	0	0	144	36	0	44	7	87	402
Total	0	485	92	15	592	0	0	0	0	0	183	348	0	0	531	139	0	174	38	351	1474
05:00 PM	0	155	26	6	187	0	0	0	0	0	86	119	0	0	205	55	0	56	8	119	511
05:15 PM	0	139	24	5	168	0	0	0	0	0	76	87	0	0	163	56	0	64	10	130	461
05:30 PM	0	123	27	4	154	0	0	0	0	0	54	85	0	0	139	50	0	55	9	114	407
05:45 PM	0	144	25	6	175	0	0	0	0	0	45	92	0	0	137	43	0	44	8	95	407
Total	0	561	102	21	684	0	0	0	0	0	261	383	0	0	644	204	0	219	35	458	1786
Grand Total	0	1705	385	69	2159	0	0	0	0	0	705	1097	0	0	1802	544	0	725	155	1424	5385
Apprch %	0	79	17.8	3.2		0	0	0	0		39.1	60.9	0	0		38.2	0	50.9	10.9		
Total %	0	31.7	7.1	1.3	40.1	0	0	0	0	0	13.1	20.4	0	0	33.5	10.1	0	13.5	2.9	26.4	
Automobiles	0	1649	380	69	2098	0	0	0	0	0	684	1046	0	0	1730	529	0	704	155	1388	5216
% Automobiles	0	96.7	98.7	100	97.2	0	0	0	0	0	97	95.4	0	0	96	97.2	0	97.1	100	97.5	96.9
Commercial	0	56	5	0	61	0	0	0	0	0	21	51	0	0	72	15	0	21	0	36	169
% Commercial	0	3.3	1.3	0	2.8	0	0	0	0	0	3	4.6	0	0	4	2.8	0	2.9	0	2.5	3.1

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Veterans Memorial Pkwy at E. Rhode Island Ave
Volusia County, Fl

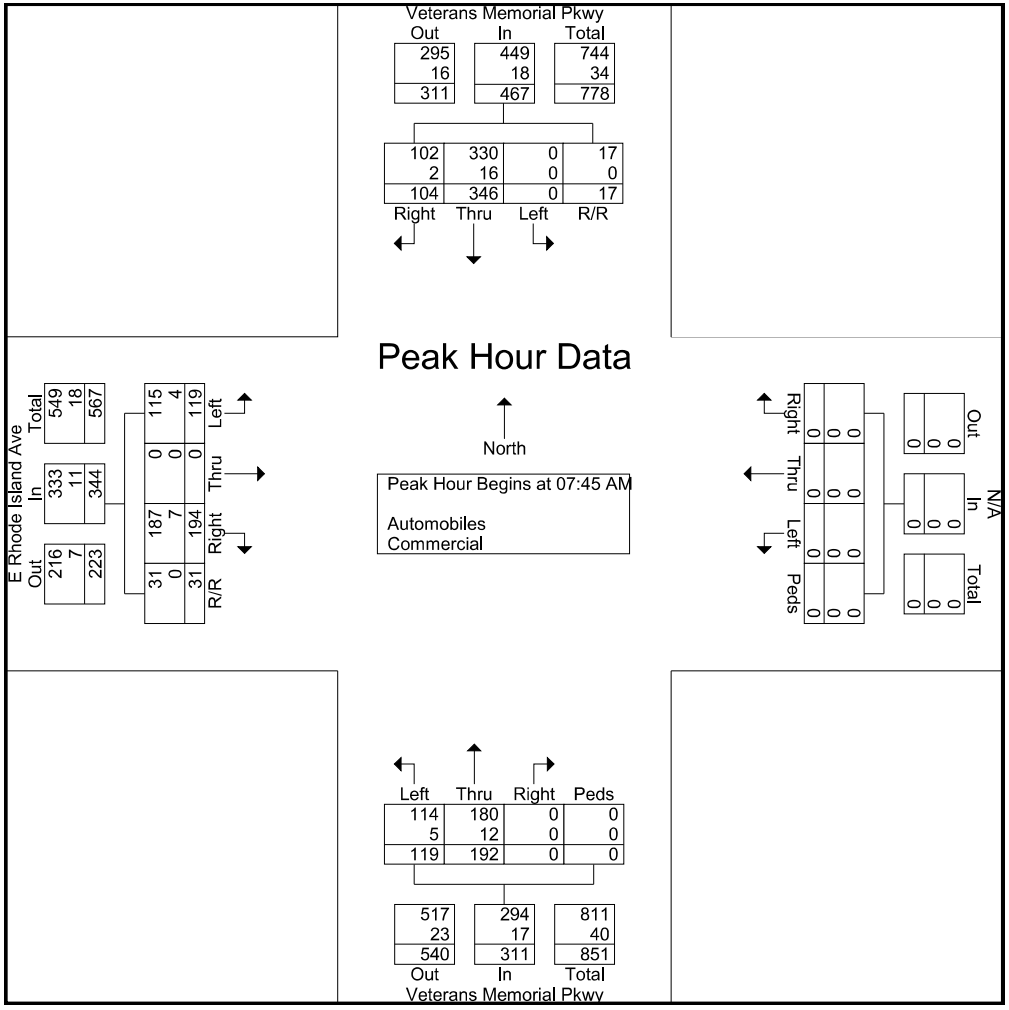
File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
Page No : 2

	Veterans Memorial Pkwy Southbound					N/A Westbound					Veterans Memorial Pkwy Northbound					E Rhode Island Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	90	35	8	133	0	0	0	0	0	30	36	0	0	66	35	0	43	8	86	285
08:00 AM	0	92	25	4	121	0	0	0	0	0	35	53	0	0	88	29	0	52	6	87	296
08:15 AM	0	86	24	2	112	0	0	0	0	0	29	48	0	0	77	26	0	45	9	80	269
08:30 AM	0	78	20	3	101	0	0	0	0	0	25	55	0	0	80	29	0	54	8	91	272
Total Volume	0	346	104	17	467	0	0	0	0	0	119	192	0	0	311	119	0	194	31	344	1122
% App. Total	0	74.1	22.3	3.6		0	0	0	0		38.3	61.7	0	0		34.6	0	56.4	9		
PHF	.000	.940	.743	.531	.878	.000	.000	.000	.000	.000	.850	.873	.000	.000	.884	.850	.000	.898	.861	.945	.948
Automobiles	0	330	102	17	449	0	0	0	0	0	114	180	0	0	294	115	0	187	31	333	1076
% Automobiles	0	95.4	98.1	100	96.1	0	0	0	0	0	95.8	93.8	0	0	94.5	96.6	0	96.4	100	96.8	95.9
Commercial	0	16	2	0	18	0	0	0	0	0	5	12	0	0	17	4	0	7	0	11	46
% Commercial	0	4.6	1.9	0	3.9	0	0	0	0	0	4.2	6.3	0	0	5.5	3.4	0	3.6	0	3.2	4.1

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Veterans Memorial Pkwy at E. Rhode Island Ave
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File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
Page No : 3



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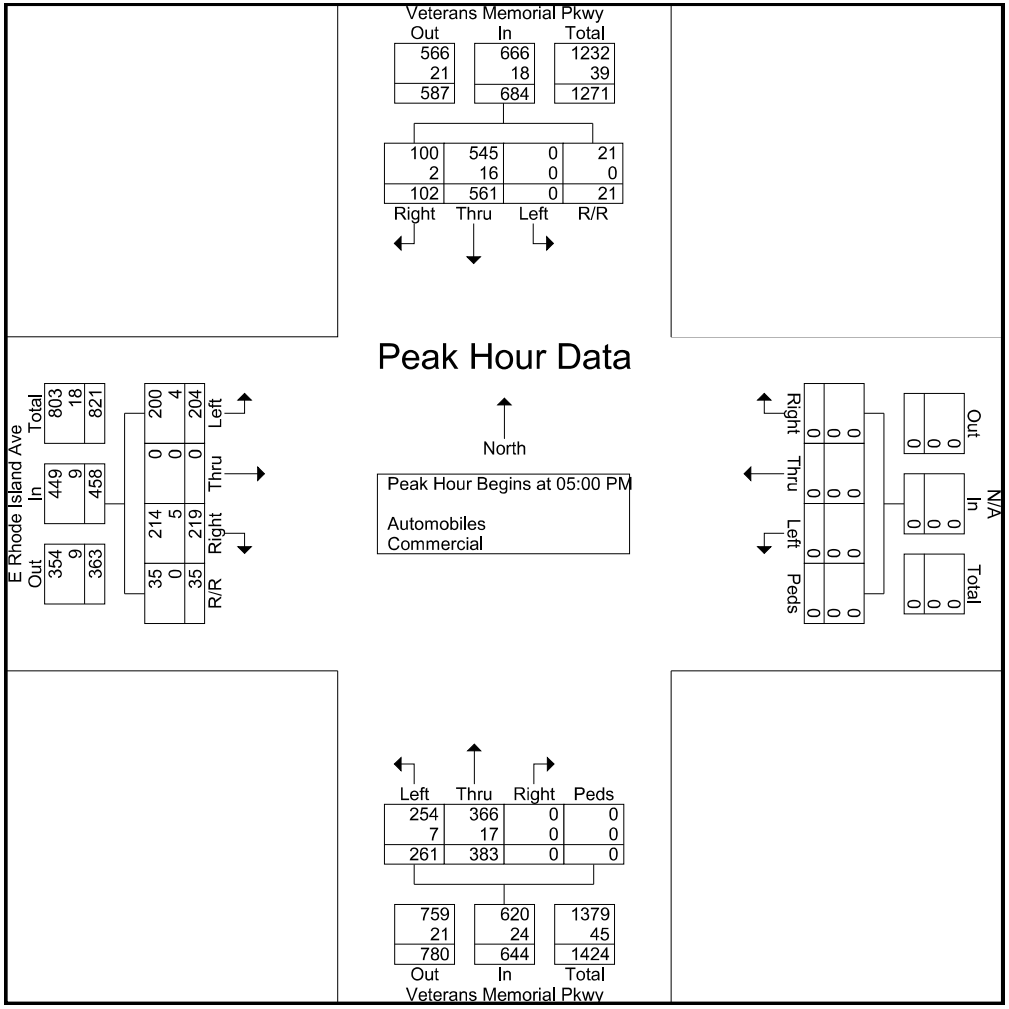
File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
Page No : 4

	Veterans Memorial Pkwy Southbound					N/A Westbound					Veterans Memorial Pkwy Northbound					E Rhode Island Ave Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	155	26	6	187	0	0	0	0	0	86	119	0	0	205	55	0	56	8	119	511
05:15 PM	0	139	24	5	168	0	0	0	0	0	76	87	0	0	163	56	0	64	10	130	461
05:30 PM	0	123	27	4	154	0	0	0	0	0	54	85	0	0	139	50	0	55	9	114	407
05:45 PM	0	144	25	6	175	0	0	0	0	0	45	92	0	0	137	43	0	44	8	95	407
Total Volume	0	561	102	21	684	0	0	0	0	0	261	383	0	0	644	204	0	219	35	458	1786
% App. Total	0	82	14.9	3.1		0	0	0	0		40.5	59.5	0	0		44.5	0	47.8	7.6		
PHF	.000	.905	.944	.875	.914	.000	.000	.000	.000	.000	.759	.805	.000	.000	.785	.911	.000	.855	.875	.881	.874
Automobiles	0	545	100	21	666	0	0	0	0	0	254	366	0	0	620	200	0	214	35	449	1735
% Automobiles	0	97.1	98.0	100	97.4	0	0	0	0	0	97.3	95.6	0	0	96.3	98.0	0	97.7	100	98.0	97.1
Commercial	0	16	2	0	18	0	0	0	0	0	7	17	0	0	24	4	0	5	0	9	51
% Commercial	0	2.9	2.0	0	2.6	0	0	0	0	0	2.7	4.4	0	0	3.7	2.0	0	2.3	0	2.0	2.9

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Veterans Memorial Pkwy at E. Rhode Island Ave
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File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
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Veterans Memorial Pkwy at E. Rhode Island Ave
Volusia County, Fl

File Name : 01 Veterans at Rhode
Site Code : 00000001
Start Date : 7/26/2022
Page No : 6

Groups Printed- Peds

	Veterans Memorial Pkwy Southbound				N/A Westbound				Veterans Memorial Pkwy Northbound				E Rhode Island Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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I-4 WB Ramp at SR 472
Volusia County, Fl

File Name : 08 i4 wb at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	I-4 WB Ramp Southbound					SR 472 Westbound				N/A Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	52	0	95	9	156	229	154	0	383	0	0	0	0	0	102	171	273	812
07:15 AM	43	0	117	11	171	248	128	0	376	0	0	0	0	0	97	228	325	872
07:30 AM	66	0	126	16	208	216	119	0	335	0	0	0	0	0	106	217	323	866
07:45 AM	82	0	131	18	231	183	169	0	352	0	0	0	0	0	65	169	234	817
Total	243	0	469	54	766	876	570	0	1446	0	0	0	0	0	370	785	1155	3367
08:00 AM	72	0	115	13	200	145	144	0	289	0	0	0	0	0	83	143	226	715
08:15 AM	53	0	122	8	183	143	159	0	302	0	0	0	0	0	106	155	261	746
08:30 AM	63	0	105	17	185	111	151	0	262	0	0	0	0	0	75	112	187	634
08:45 AM	47	0	98	13	158	117	117	0	234	0	0	0	0	0	90	138	228	620
Total	235	0	440	51	726	516	571	0	1087	0	0	0	0	0	354	548	902	2715
04:00 PM	76	0	61	9	146	82	276	0	358	0	0	0	0	0	142	167	309	813
04:15 PM	76	0	62	6	144	69	249	0	318	0	0	0	0	0	118	140	258	720
04:30 PM	80	0	43	8	131	89	227	0	316	0	0	0	0	0	119	161	280	727
04:45 PM	77	0	50	6	133	63	236	0	299	0	0	0	0	0	164	148	312	744
Total	309	0	216	29	554	303	988	0	1291	0	0	0	0	0	543	616	1159	3004
05:00 PM	79	0	45	4	128	69	251	0	320	0	0	0	0	0	171	147	318	766
05:15 PM	96	0	70	3	169	56	262	0	318	0	0	0	0	0	162	170	332	819
05:30 PM	98	0	79	6	183	85	261	0	346	0	0	0	0	0	169	143	312	841
05:45 PM	124	0	67	4	195	56	205	0	261	0	0	0	0	0	137	110	247	703
Total	397	0	261	17	675	266	979	0	1245	0	0	0	0	0	639	570	1209	3129
Grand Total	1184	0	1386	151	2721	1961	3108	0	5069	0	0	0	0	0	1906	2519	4425	12215
Apprch %	43.5	0	50.9	5.5		38.7	61.3	0		0	0	0		0	43.1	56.9		
Total %	9.7	0	11.3	1.2	22.3	16.1	25.4	0	41.5	0	0	0	0	0	15.6	20.6	36.2	
Automobiles	1159	0	1349	151	2659	1917	3041	0	4958	0	0	0	0	0	1871	2477	4348	11965
% Automobiles	97.9	0	97.3	100	97.7	97.8	97.8	0	97.8	0	0	0	0	0	98.2	98.3	98.3	98
Commercial	25	0	37	0	62	44	67	0	111	0	0	0	0	0	35	42	77	250
% Commercial	2.1	0	2.7	0	2.3	2.2	2.2	0	2.2	0	0	0	0	0	1.8	1.7	1.7	2

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I-4 WB Ramp at SR 472
Volusia County, FI

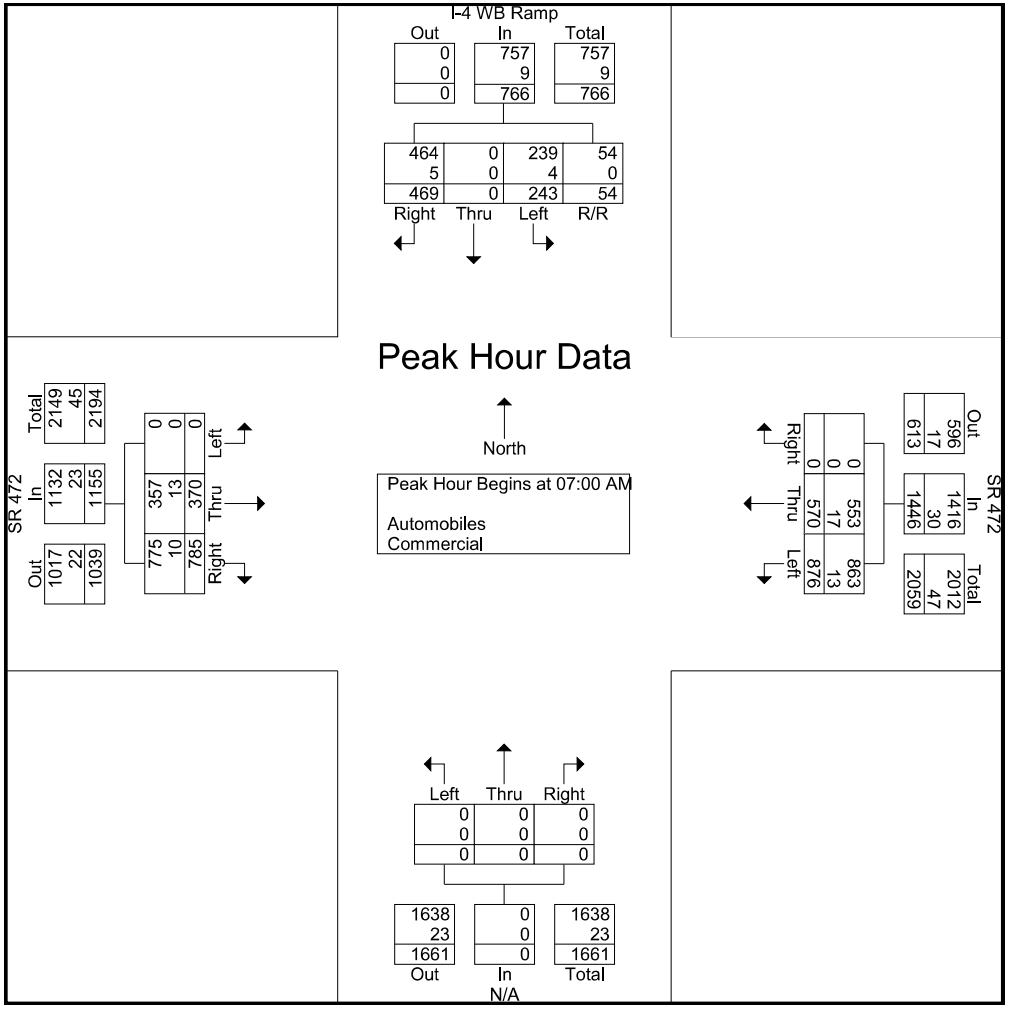
File Name : 08 i4 wb at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 2

	I-4 WB Ramp Southbound					SR 472 Westbound				N/A Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	52	0	95	9	156	229	154	0	383	0	0	0	0	0	102	171	273	812
07:15 AM	43	0	117	11	171	248	128	0	376	0	0	0	0	0	97	228	325	872
07:30 AM	66	0	126	16	208	216	119	0	335	0	0	0	0	0	106	217	323	866
07:45 AM	82	0	131	18	231	183	169	0	352	0	0	0	0	0	65	169	234	817
Total Volume	243	0	469	54	766	876	570	0	1446	0	0	0	0	0	370	785	1155	3367
% App. Total	31.7	0	61.2	7		60.6	39.4	0		0	0	0		0	32	68		
PHF	.741	.000	.895	.750	.829	.883	.843	.000	.944	.000	.000	.000	.000	.000	.873	.861	.888	.965
Automobiles	239	0	464	54	757	863	553	0	1416	0	0	0	0	0	357	775	1132	3305
% Automobiles	98.4	0	98.9	100	98.8	98.5	97.0	0	97.9	0	0	0	0	0	96.5	98.7	98.0	98.2
Commercial	4	0	5	0	9	13	17	0	30	0	0	0	0	0	13	10	23	62
% Commercial	1.6	0	1.1	0	1.2	1.5	3.0	0	2.1	0	0	0	0	0	3.5	1.3	2.0	1.8

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I-4 WB Ramp at SR 472
Volusia County, Fl

File Name : 08 i4 wb at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 3



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I-4 WB Ramp at SR 472
Volusia County, Fl

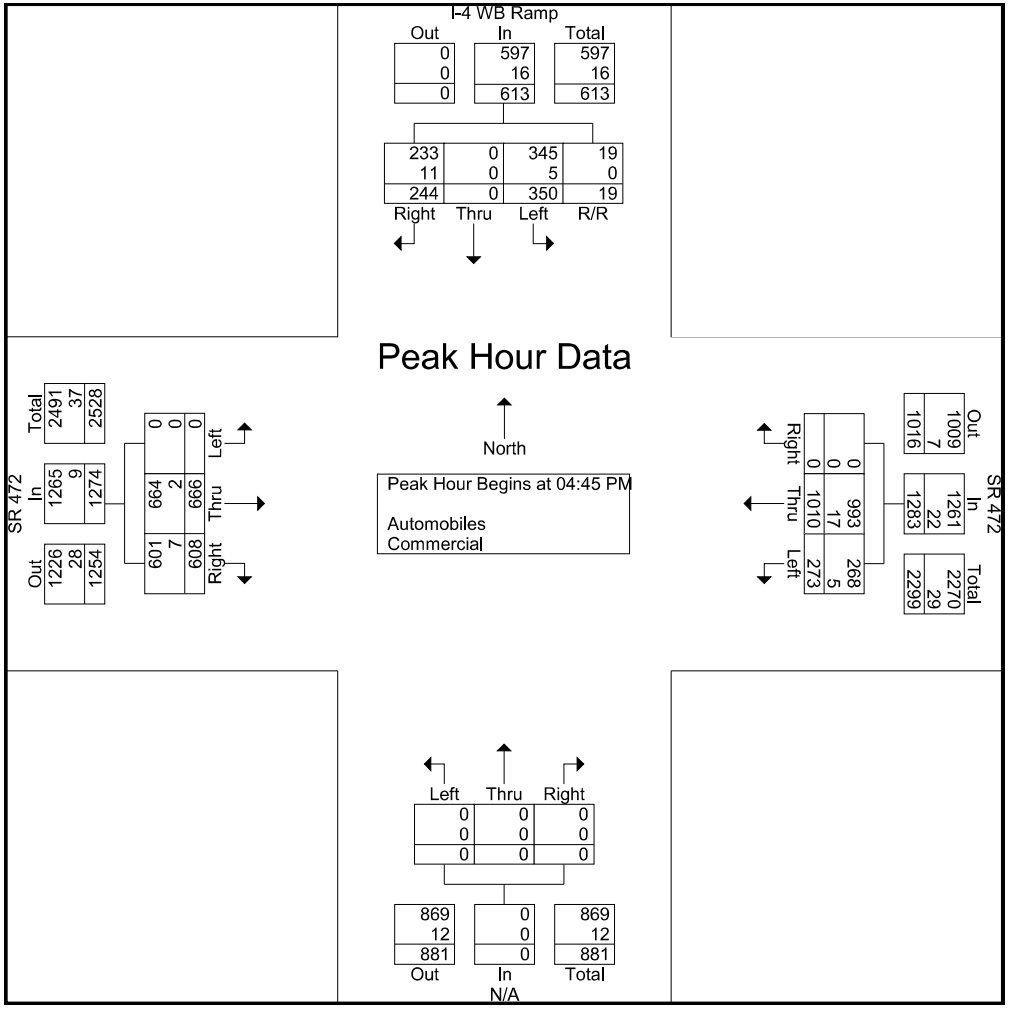
File Name : 08 i4 wb at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 4

	I-4 WB Ramp Southbound					SR 472 Westbound				N/A Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
04:45 PM	77	0	50	6	133	63	236	0	299	0	0	0	0	0	164	148	312	744
05:00 PM	79	0	45	4	128	69	251	0	320	0	0	0	0	0	171	147	318	766
05:15 PM	96	0	70	3	169	56	262	0	318	0	0	0	0	0	162	170	332	819
05:30 PM	98	0	79	6	183	85	261	0	346	0	0	0	0	0	169	143	312	841
Total Volume	350	0	244	19	613	273	1010	0	1283	0	0	0	0	0	666	608	1274	3170
% App. Total	57.1	0	39.8	3.1		21.3	78.7	0		0	0	0		0	52.3	47.7		
PHF	.893	.000	.772	.792	.837	.803	.964	.000	.927	.000	.000	.000	.000	.000	.974	.894	.959	.942
Automobiles	345	0	233	19	597	268	993	0	1261	0	0	0	0	0	664	601	1265	3123
% Automobiles	98.6	0	95.5	100	97.4	98.2	98.3	0	98.3	0	0	0	0	0	99.7	98.8	99.3	98.5
Commercial	5	0	11	0	16	5	17	0	22	0	0	0	0	0	2	7	9	47
% Commercial	1.4	0	4.5	0	2.6	1.8	1.7	0	1.7	0	0	0	0	0	0.3	1.2	0.7	1.5

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I-4 WB Ramp at SR 472
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File Name : 08 i4 wb at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 5



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I-4 WB Ramp at SR 472
Volusia County, Fl

File Name : 08 I4 WB at 472
Site Code : 00000008
Start Date : 7/27/2022
Page No : 6

Groups Printed- Peds

	I-4 WB Ramp Southbound					SR 472 Westbound					N/A Northbound					SR 472 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

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I-4 EB Ramp at SR 472
Volusia County, Fl

File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
Page No : 1

Groups Printed- Automobiles - Commercial

	N/A Southbound				SR 472 Westbound				I-4 EB Ramp Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	259	0	259	109	0	57	166	0	118	29	147	572
07:15 AM	0	0	0	0	0	417	0	417	129	0	43	172	0	99	46	145	734
07:30 AM	0	0	0	0	0	457	0	457	156	0	59	215	0	129	36	165	837
07:45 AM	0	0	0	0	0	362	0	362	152	0	65	217	0	112	40	152	731
Total	0	0	0	0	0	1495	0	1495	546	0	224	770	0	458	151	609	2874
08:00 AM	0	0	0	0	0	356	0	356	153	0	55	208	0	133	26	159	723
08:15 AM	0	0	0	0	0	336	0	336	111	0	58	169	0	122	35	157	662
08:30 AM	0	0	0	0	0	310	0	310	119	0	68	187	0	103	35	138	635
08:45 AM	0	0	0	0	0	230	0	230	116	0	73	189	0	108	17	125	544
Total	0	0	0	0	0	1232	0	1232	499	0	254	753	0	466	113	579	2564
04:00 PM	0	0	0	0	0	203	0	203	180	0	125	305	0	218	9	227	735
04:15 PM	0	0	0	0	0	223	0	223	152	0	182	334	0	189	17	206	763
04:30 PM	0	0	0	0	0	224	0	224	153	0	165	318	0	199	12	211	753
04:45 PM	0	0	0	0	0	191	0	191	183	0	152	335	0	217	16	233	759
Total	0	0	0	0	0	841	0	841	668	0	624	1292	0	823	54	877	3010
05:00 PM	0	0	0	0	0	228	0	228	169	0	142	311	0	203	25	228	767
05:15 PM	0	0	0	0	0	201	0	201	183	0	163	346	0	237	14	251	798
05:30 PM	0	0	0	0	0	247	0	247	139	0	166	305	0	216	19	235	787
05:45 PM	0	0	0	0	0	225	0	225	170	0	203	373	0	205	25	230	828
Total	0	0	0	0	0	901	0	901	661	0	674	1335	0	861	83	944	3180
Grand Total	0	0	0	0	0	4469	0	4469	2374	0	1776	4150	0	2608	401	3009	11628
Apprch %	0	0	0		0	100	0		57.2	0	42.8		0	86.7	13.3		
Total %	0	0	0	0	0	38.4	0	38.4	20.4	0	15.3	35.7	0	22.4	3.4	25.9	
Automobiles	0	0	0	0	0	4324	0	4324	2289	0	1687	3976	0	2576	378	2954	11254
% Automobiles	0	0	0	0	0	96.8	0	96.8	96.4	0	95	95.8	0	98.8	94.3	98.2	96.8
Commercial	0	0	0	0	0	145	0	145	85	0	89	174	0	32	23	55	374
% Commercial	0	0	0	0	0	3.2	0	3.2	3.6	0	5	4.2	0	1.2	5.7	1.8	3.2

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I-4 EB Ramp at SR 472
Volusia County, FI

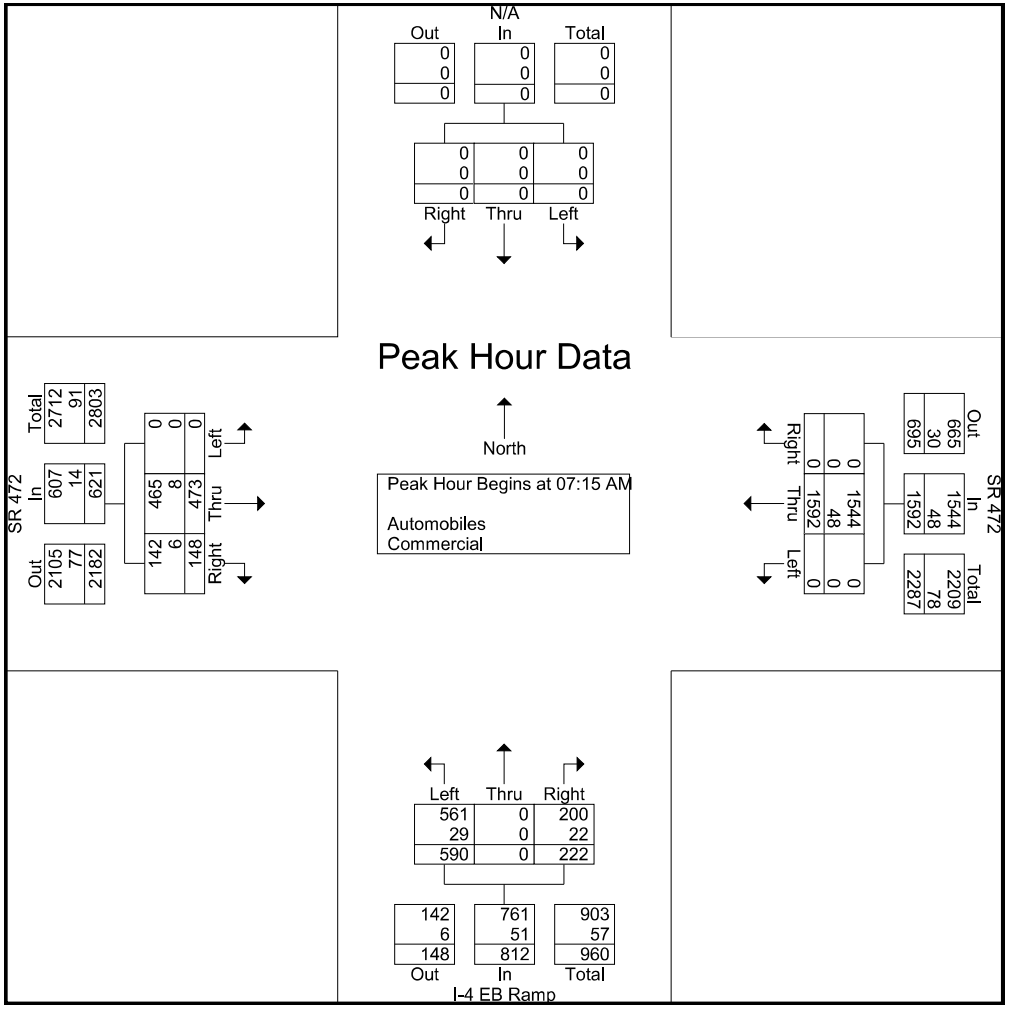
File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
Page No : 2

	N/A Southbound				SR 472 Westbound				I-4 EB Ramp Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	417	0	417	129	0	43	172	0	99	46	145	734
07:30 AM	0	0	0	0	0	457	0	457	156	0	59	215	0	129	36	165	837
07:45 AM	0	0	0	0	0	362	0	362	152	0	65	217	0	112	40	152	731
08:00 AM	0	0	0	0	0	356	0	356	153	0	55	208	0	133	26	159	723
Total Volume	0	0	0	0	0	1592	0	1592	590	0	222	812	0	473	148	621	3025
% App. Total	0	0	0		0	100	0		72.7	0	27.3		0	76.2	23.8		
PHF	.000	.000	.000	.000	.000	.871	.000	.871	.946	.000	.854	.935	.000	.889	.804	.941	.904
Automobiles	0	0	0	0	0	1544	0	1544	561	0	200	761	0	465	142	607	2912
% Automobiles	0	0	0	0	0	97.0	0	97.0	95.1	0	90.1	93.7	0	98.3	95.9	97.7	96.3
Commercial	0	0	0	0	0	48	0	48	29	0	22	51	0	8	6	14	113
% Commercial	0	0	0	0	0	3.0	0	3.0	4.9	0	9.9	6.3	0	1.7	4.1	2.3	3.7

DE TRAFFIC

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I-4 EB Ramp at SR 472
Volusia County, Fl

File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
Page No : 3



DE TRAFFIC

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I-4 EB Ramp at SR 472
Volusia County, FI

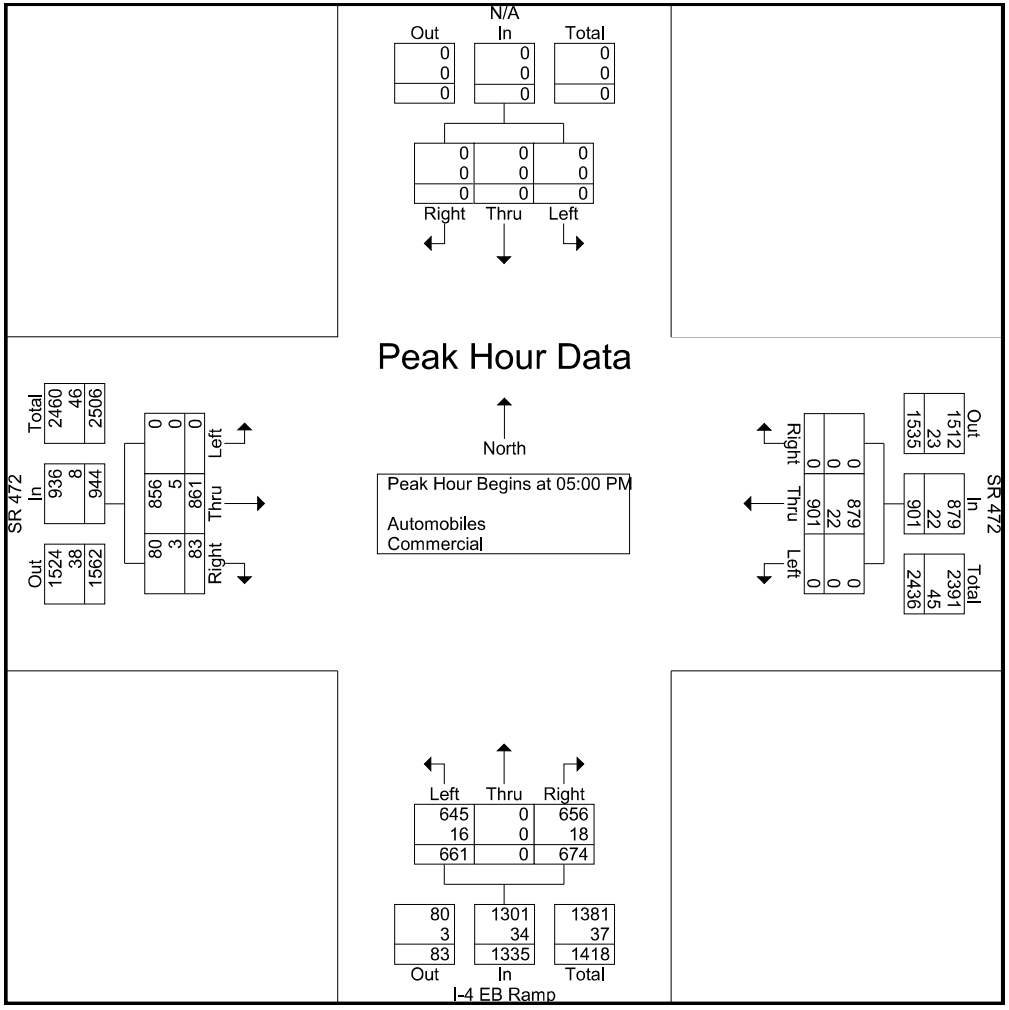
File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
Page No : 4

	N/A Southbound				SR 472 Westbound				I-4 EB Ramp Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	228	0	228	169	0	142	311	0	203	25	228	767
05:15 PM	0	0	0	0	0	201	0	201	183	0	163	346	0	237	14	251	798
05:30 PM	0	0	0	0	0	247	0	247	139	0	166	305	0	216	19	235	787
05:45 PM	0	0	0	0	0	225	0	225	170	0	203	373	0	205	25	230	828
Total Volume	0	0	0	0	0	901	0	901	661	0	674	1335	0	861	83	944	3180
% App. Total	0	0	0		0	100	0		49.5	0	50.5		0	91.2	8.8		
PHF	.000	.000	.000	.000	.000	.912	.000	.912	.903	.000	.830	.895	.000	.908	.830	.940	.960
Automobiles	0	0	0	0	0	879	0	879	645	0	656	1301	0	856	80	936	3116
% Automobiles	0	0	0	0	0	97.6	0	97.6	97.6	0	97.3	97.5	0	99.4	96.4	99.2	98.0
Commercial	0	0	0	0	0	22	0	22	16	0	18	34	0	5	3	8	64
% Commercial	0	0	0	0	0	2.4	0	2.4	2.4	0	2.7	2.5	0	0.6	3.6	0.8	2.0

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I-4 EB Ramp at SR 472
Volusia County, Fl

File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
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I-4 EB Ramp at SR 472
Volusia County, Fl

File Name : 09 i4 eb at 472
Site Code : 00000002
Start Date : 7/27/2022
Page No : 6

Groups Printed- Peds

	N/A Southbound				SR 472 Westbound				I-4 EB Ramp Northbound				SR 472 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

DE TRAFFIC

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(386) 341-4186
Graves Ave/Halifax Crossing Blvd at Howland Blvd
Volusia County, Fl

File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
Page No : 1

Groups Printed- Automobiles - Commercial

	Halifax Crossing Blvd Southbound					Howland Blvd Westbound					Graves Ave Northbound				Howland Blvd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	5	6	7	0	18	78	320	10	2	410	35	5	39	79	3	127	14	3	147	654
07:15 AM	3	1	9	1	14	85	326	13	3	427	53	6	46	105	6	136	12	5	159	705
07:30 AM	4	4	6	1	15	118	383	11	3	515	45	5	52	102	4	176	23	3	206	838
07:45 AM	6	3	9	2	20	95	377	9	3	484	62	6	62	130	8	158	19	9	194	828
Total	18	14	31	4	67	376	1406	43	11	1836	195	22	199	416	21	597	68	20	706	3025
08:00 AM	6	2	12	1	21	78	364	13	4	459	54	7	56	117	11	165	35	9	220	817
08:15 AM	4	1	16	0	21	85	291	16	2	394	54	4	69	127	9	143	28	8	188	730
08:30 AM	2	1	14	1	18	79	274	13	6	372	43	4	89	136	8	135	30	4	177	703
08:45 AM	6	2	11	0	19	69	226	6	4	305	37	3	75	115	7	114	13	9	143	582
Total	18	6	53	2	79	311	1155	48	16	1530	188	18	289	495	35	557	106	30	728	2832
04:00 PM	13	3	6	2	24	63	158	6	6	233	25	7	58	90	9	281	20	3	313	660
04:15 PM	9	4	8	3	24	75	180	6	6	267	38	4	83	125	7	330	25	7	369	785
04:30 PM	6	6	11	1	24	82	169	4	6	261	31	5	92	128	9	361	34	8	412	825
04:45 PM	5	4	20	3	32	78	178	9	6	271	37	8	97	142	9	377	29	4	419	864
Total	33	17	45	9	104	298	685	25	24	1032	131	24	330	485	34	1349	108	22	1513	3134
05:00 PM	6	8	13	0	27	85	202	4	4	295	31	9	83	123	10	383	28	9	430	875
05:15 PM	4	4	12	3	23	98	221	6	4	329	43	9	87	139	11	360	27	9	407	898
05:30 PM	7	5	10	4	26	80	208	4	4	296	22	9	78	109	14	348	26	8	396	827
05:45 PM	7	6	8	2	23	103	199	6	6	314	27	8	67	102	11	330	65	11	417	856
Total	24	23	43	9	99	366	830	20	18	1234	123	35	315	473	46	1421	146	37	1650	3456
Grand Total	93	60	172	24	349	1351	4076	136	69	5632	637	99	1133	1869	136	3924	428	109	4597	12447
Apprch %	26.6	17.2	49.3	6.9		24	72.4	2.4	1.2		34.1	5.3	60.6		3	85.4	9.3	2.4		
Total %	0.7	0.5	1.4	0.2	2.8	10.9	32.7	1.1	0.6	45.2	5.1	0.8	9.1	15	1.1	31.5	3.4	0.9	36.9	
Automobiles	89	60	163	22	334	1314	4035	134	69	5552	608	91	1117	1816	132	3889	409	106	4536	12238
% Automobiles	95.7	100	94.8	91.7	95.7	97.3	99	98.5	100	98.6	95.4	91.9	98.6	97.2	97.1	99.1	95.6	97.2	98.7	98.3
Commercial	4	0	9	2	15	37	41	2	0	80	29	8	16	53	4	35	19	3	61	209
% Commercial	4.3	0	5.2	8.3	4.3	2.7	1	1.5	0	1.4	4.6	8.1	1.4	2.8	2.9	0.9	4.4	2.8	1.3	1.7

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Volusia County, Fl

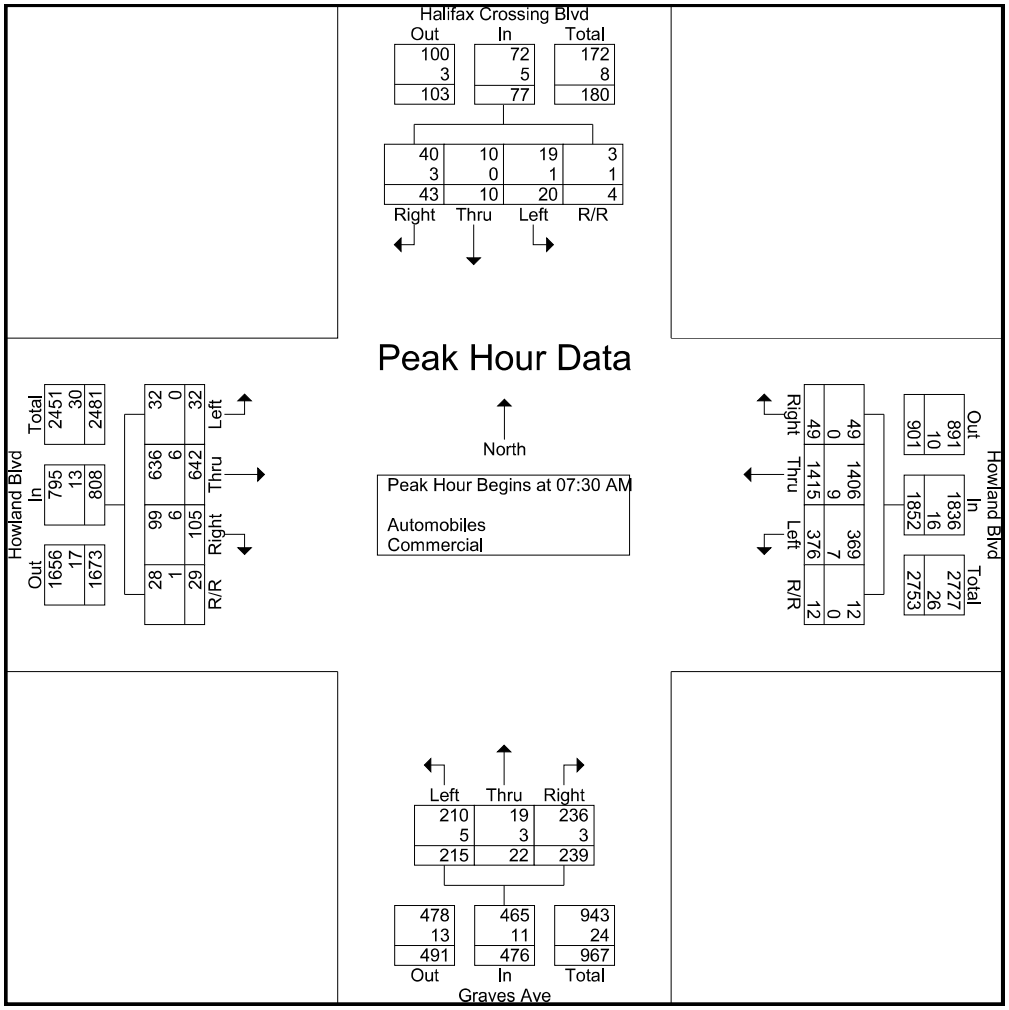
File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
Page No : 2

	Halifax Crossing Blvd Southbound					Howland Blvd Westbound					Graves Ave Northbound				Howland Blvd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 07:30 AM																				
07:30 AM	4	4	6	1	15	118	383	11	3	515	45	5	52	102	4	176	23	3	206	838
07:45 AM	6	3	9	2	20	95	377	9	3	484	62	6	62	130	8	158	19	9	194	828
08:00 AM	6	2	12	1	21	78	364	13	4	459	54	7	56	117	11	165	35	9	220	817
08:15 AM	4	1	16	0	21	85	291	16	2	394	54	4	69	127	9	143	28	8	188	730
Total Volume	20	10	43	4	77	376	1415	49	12	1852	215	22	239	476	32	642	105	29	808	3213
% App. Total	26	13	55.8	5.2		20.3	76.4	2.6	0.6		45.2	4.6	50.2		4	79.5	13	3.6		
PHF	.833	.625	.672	.500	.917	.797	.924	.766	.750	.899	.867	.786	.866	.915	.727	.912	.750	.806	.918	.959
Automobiles	19	10	40	3	72	369	1406	49	12	1836	210	19	236	465	32	636	99	28	795	3168
% Automobiles	95.0	100	93.0	75.0	93.5	98.1	99.4	100	100	99.1	97.7	86.4	98.7	97.7	100	99.1	94.3	96.6	98.4	98.6
Commercial	1	0	3	1	5	7	9	0	0	16	5	3	3	11	0	6	6	1	13	45
% Commercial	5.0	0	7.0	25.0	6.5	1.9	0.6	0	0	0.9	2.3	13.6	1.3	2.3	0	0.9	5.7	3.4	1.6	1.4

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Graves Ave/Halifax Crossing Blvd at Howland Blvd
Volusia County, Fl

File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
Page No : 3



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Graves Ave/Halifax Crossing Blvd at Howland Blvd
Volusia County, Fl

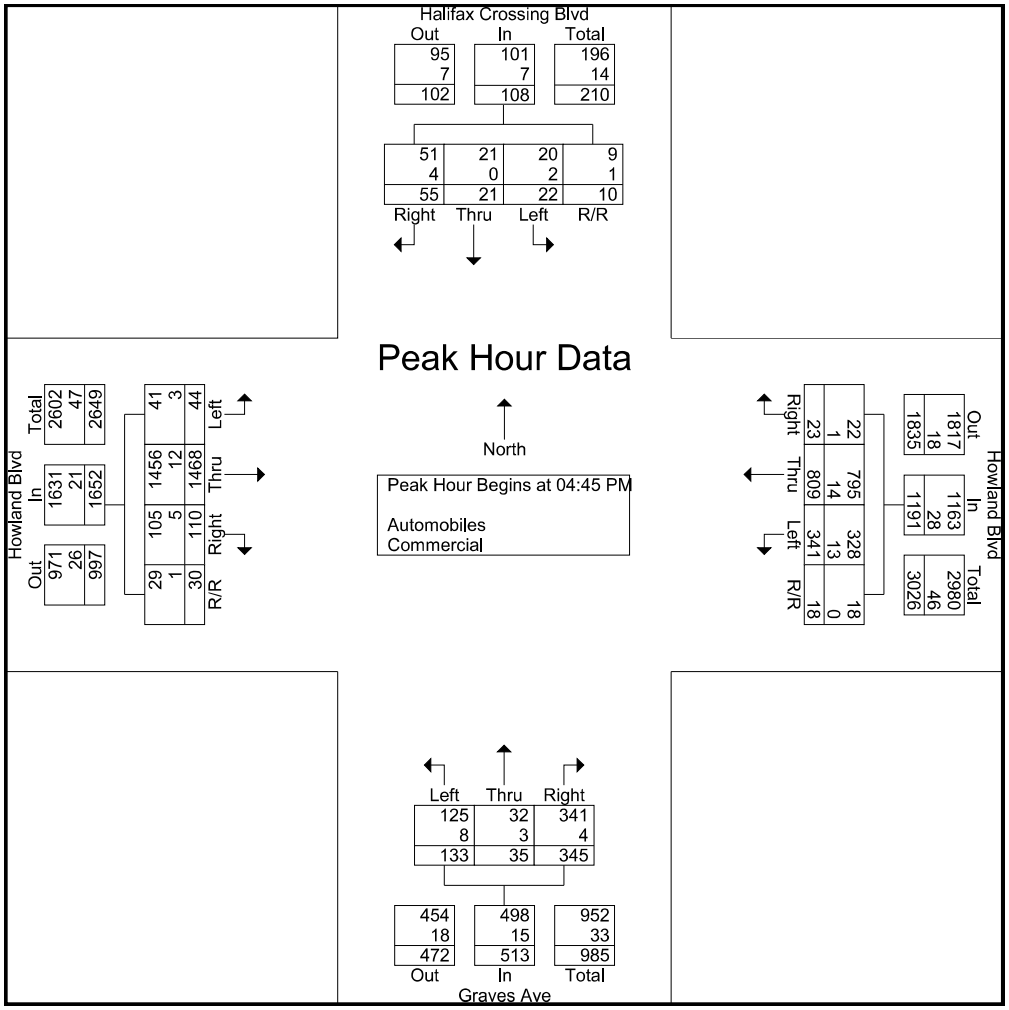
File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
Page No : 4

	Halifax Crossing Blvd Southbound					Howland Blvd Westbound					Graves Ave Northbound				Howland Blvd Eastbound					
Start Time	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 04:45 PM																				
04:45 PM	5	4	20	3	32	78	178	9	6	271	37	8	97	142	9	377	29	4	419	864
05:00 PM	6	8	13	0	27	85	202	4	4	295	31	9	83	123	10	383	28	9	430	875
05:15 PM	4	4	12	3	23	98	221	6	4	329	43	9	87	139	11	360	27	9	407	898
05:30 PM	7	5	10	4	26	80	208	4	4	296	22	9	78	109	14	348	26	8	396	827
Total Volume	22	21	55	10	108	341	809	23	18	1191	133	35	345	513	44	1468	110	30	1652	3464
% App. Total	20.4	19.4	50.9	9.3		28.6	67.9	1.9	1.5		25.9	6.8	67.3		2.7	88.9	6.7	1.8		
PHF	.786	.656	.688	.625	.844	.870	.915	.639	.750	.905	.773	.972	.889	.903	.786	.958	.948	.833	.960	.964
Automobiles	20	21	51	9	101	328	795	22	18	1163	125	32	341	498	41	1456	105	29	1631	3393
% Automobiles	90.9	100	92.7	90.0	93.5	96.2	98.3	95.7	100	97.6	94.0	91.4	98.8	97.1	93.2	99.2	95.5	96.7	98.7	98.0
Commercial	2	0	4	1	7	13	14	1	0	28	8	3	4	15	3	12	5	1	21	71
% Commercial	9.1	0	7.3	10.0	6.5	3.8	1.7	4.3	0	2.4	6.0	8.6	1.2	2.9	6.8	0.8	4.5	3.3	1.3	2.0

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Graves Ave/Halifax Crossing Blvd at Howland Blvd
Volusia County, Fl

File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
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Graves Ave/Halifax Crossing Blvd at Howland Blvd
Volusia County, Fl

File Name : Graves at 472
Site Code : 00000004
Start Date : 1/18/2023
Page No : 6

Groups Printed- Peds

	Halifax Crossing Blvd Southbound					Howland Blvd Westbound					Graves Ave Northbound					Howland Blvd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

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Normandy Blvd at Graves Ave
Volusia County, Fl

File Name : normandy at graves
Site Code : 00000003
Start Date : 1/18/2023
Page No : 1

Groups Printed- Automobiles - Commercial

	N/A Southbound				Graves Ave Westbound				Normandy Blvd Northbound					Graves Ave Eastbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
07:00 AM	0	0	0	0	35	67	0	102	47	0	35	6	88	0	64	30	5	99	289
07:15 AM	0	0	0	0	43	79	0	122	62	0	41	8	111	0	78	36	8	122	355
07:30 AM	0	0	0	0	34	86	0	120	82	0	35	3	120	0	77	42	10	129	369
07:45 AM	0	0	0	0	29	95	0	124	78	0	41	5	124	0	69	29	4	102	350
Total	0	0	0	0	141	327	0	468	269	0	152	22	443	0	288	137	27	452	1363
08:00 AM	0	0	0	0	26	77	0	103	85	0	35	5	125	0	87	33	8	128	356
08:15 AM	0	0	0	0	28	65	0	93	77	0	45	3	125	0	96	33	6	135	353
08:30 AM	0	0	0	0	27	77	0	104	72	0	30	7	109	0	86	33	2	121	334
08:45 AM	0	0	0	0	41	67	0	108	80	0	36	7	123	0	69	34	7	110	341
Total	0	0	0	0	122	286	0	408	314	0	146	22	482	0	338	133	23	494	1384
04:00 PM	0	0	0	0	22	77	0	99	25	0	31	6	62	0	93	77	6	176	337
04:15 PM	0	0	0	0	19	83	0	102	36	0	36	4	76	0	77	84	5	166	344
04:30 PM	0	0	0	0	27	94	0	121	31	0	44	2	77	0	103	80	10	193	391
04:45 PM	0	0	0	0	45	85	0	130	35	0	38	4	77	0	85	103	4	192	399
Total	0	0	0	0	113	339	0	452	127	0	149	16	292	0	358	344	25	727	1471
05:00 PM	0	0	0	0	36	97	0	133	41	0	31	3	75	0	78	90	5	173	381
05:15 PM	0	0	0	0	43	103	0	146	36	0	35	3	74	0	96	98	4	198	418
05:30 PM	0	0	0	0	38	128	0	166	38	0	30	5	73	0	85	77	6	168	407
05:45 PM	0	0	0	0	36	104	0	140	29	0	28	3	60	0	71	82	9	162	362
Total	0	0	0	0	153	432	0	585	144	0	124	14	282	0	330	347	24	701	1568
Grand Total	0	0	0	0	529	1384	0	1913	854	0	571	74	1499	0	1314	961	99	2374	5786
Apprch %	0	0	0		27.7	72.3	0		57	0	38.1	4.9		0	55.3	40.5	4.2		
Total %	0	0	0	0	9.1	23.9	0	33.1	14.8	0	9.9	1.3	25.9	0	22.7	16.6	1.7	41	
Automobiles	0	0	0	0	500	1357	0	1857	831	0	547	65	1443	0	1290	921	82	2293	5593
% Automobiles	0	0	0	0	94.5	98	0	97.1	97.3	0	95.8	87.8	96.3	0	98.2	95.8	82.8	96.6	96.7
Commercial	0	0	0	0	29	27	0	56	23	0	24	9	56	0	24	40	17	81	193
% Commercial	0	0	0	0	5.5	2	0	2.9	2.7	0	4.2	12.2	3.7	0	1.8	4.2	17.2	3.4	3.3

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Normandy Blvd at Graves Ave
Volusia County, Fl

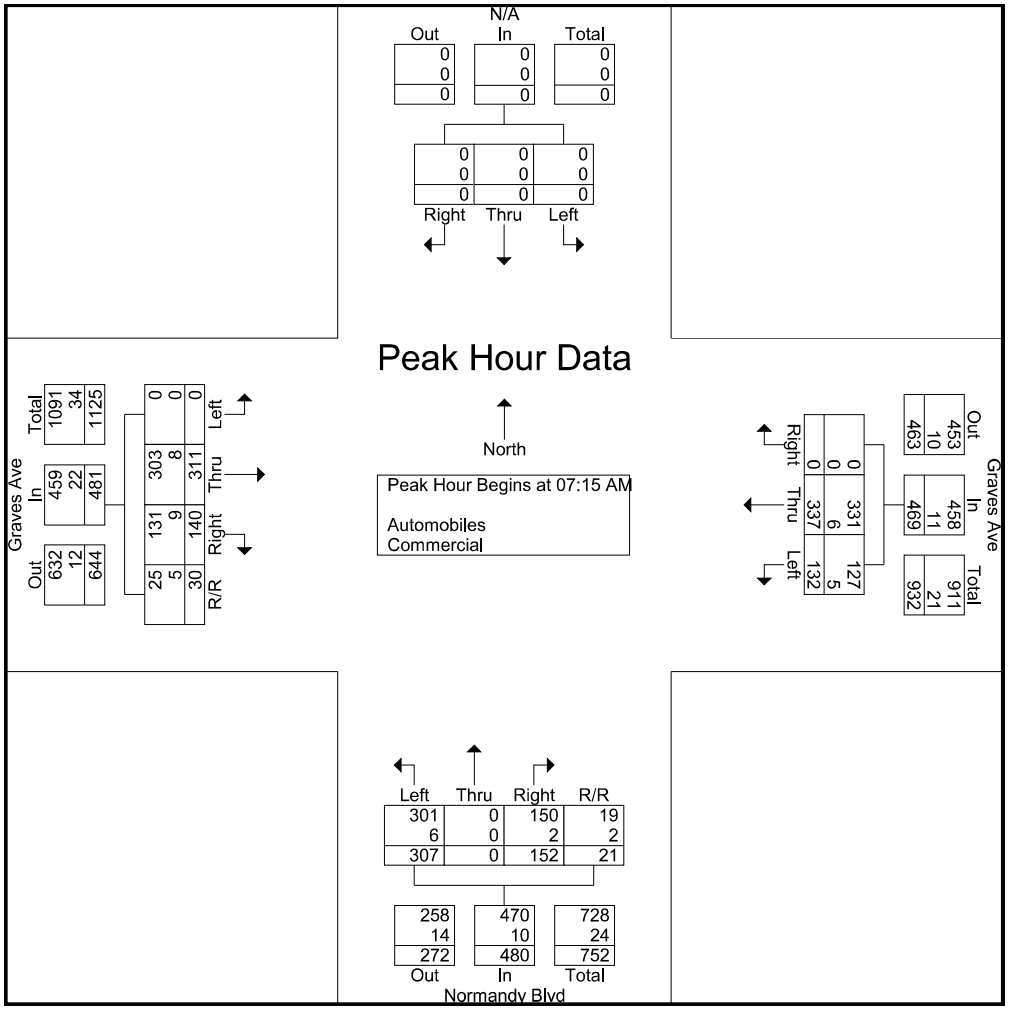
File Name : normandy at graves
Site Code : 00000003
Start Date : 1/18/2023
Page No : 2

	N/A Southbound				Graves Ave Westbound				Normandy Blvd Northbound					Graves Ave Eastbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	0	0	0	0	43	79	0	122	62	0	41	8	111	0	78	36	8	122	355
07:30 AM	0	0	0	0	34	86	0	120	82	0	35	3	120	0	77	42	10	129	369
07:45 AM	0	0	0	0	29	95	0	124	78	0	41	5	124	0	69	29	4	102	350
08:00 AM	0	0	0	0	26	77	0	103	85	0	35	5	125	0	87	33	8	128	356
Total Volume	0	0	0	0	132	337	0	469	307	0	152	21	480	0	311	140	30	481	1430
% App. Total	0	0	0		28.1	71.9	0		64	0	31.7	4.4		0	64.7	29.1	6.2		
PHF	.000	.000	.000	.000	.767	.887	.000	.946	.903	.000	.927	.656	.960	.000	.894	.833	.750	.932	.969
Automobiles	0	0	0	0	127	331	0	458	301	0	150	19	470	0	303	131	25	459	1387
% Automobiles	0	0	0	0	96.2	98.2	0	97.7	98.0	0	98.7	90.5	97.9	0	97.4	93.6	83.3	95.4	97.0
Commercial	0	0	0	0	5	6	0	11	6	0	2	2	10	0	8	9	5	22	43
% Commercial	0	0	0	0	3.8	1.8	0	2.3	2.0	0	1.3	9.5	2.1	0	2.6	6.4	16.7	4.6	3.0

DE TRAFFIC

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Normandy Blvd at Graves Ave
Volusia County, Fl

File Name : normandy at graves
Site Code : 00000003
Start Date : 1/18/2023
Page No : 3



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Normandy Blvd at Graves Ave
Volusia County, Fl

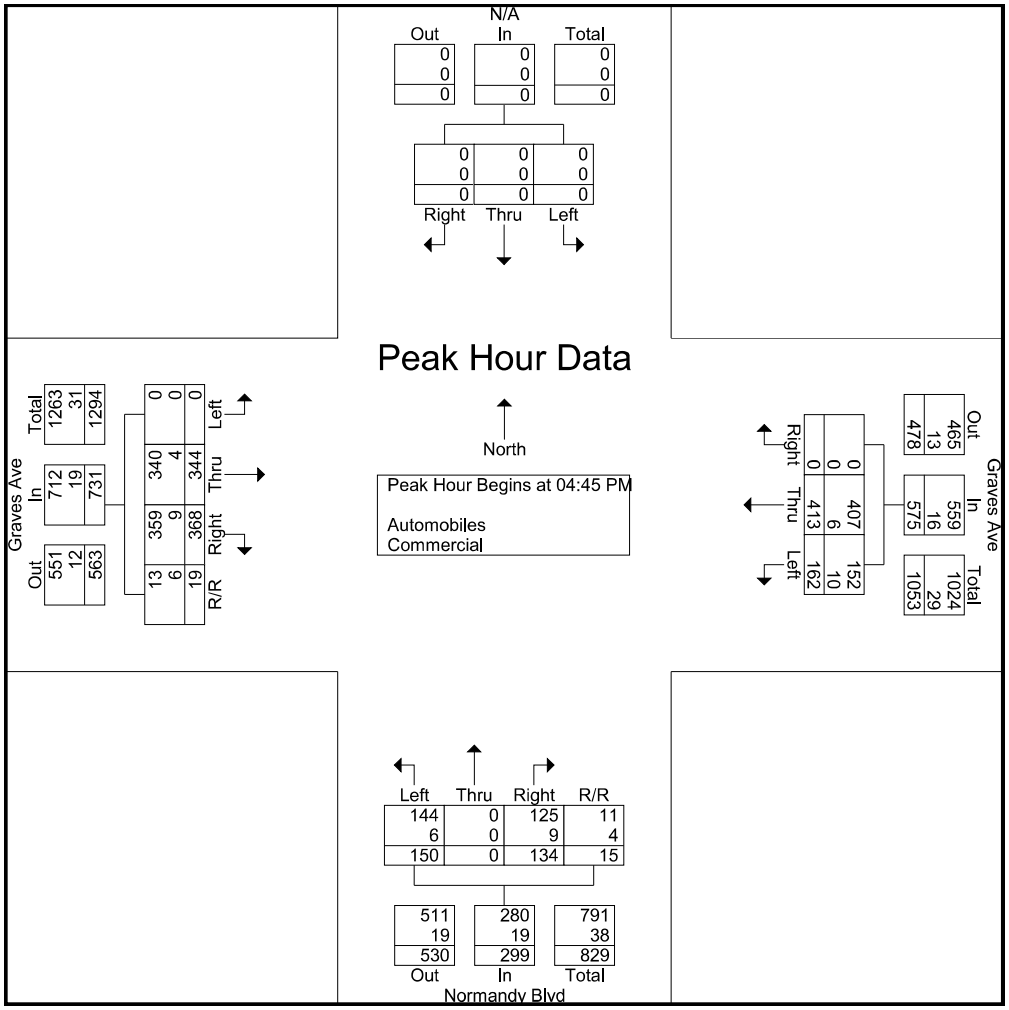
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Site Code : 00000003
Start Date : 1/18/2023
Page No : 4

	N/A Southbound				Graves Ave Westbound				Normandy Blvd Northbound					Graves Ave Eastbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	R/R	App. Total	Left	Thru	Right	R/R	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	0	0	0	0	45	85	0	130	35	0	38	4	77	0	85	103	4	192	399
05:00 PM	0	0	0	0	36	97	0	133	41	0	31	3	75	0	78	90	5	173	381
05:15 PM	0	0	0	0	43	103	0	146	36	0	35	3	74	0	96	98	4	198	418
05:30 PM	0	0	0	0	38	128	0	166	38	0	30	5	73	0	85	77	6	168	407
Total Volume	0	0	0	0	162	413	0	575	150	0	134	15	299	0	344	368	19	731	1605
% App. Total	0	0	0		28.2	71.8	0		50.2	0	44.8	5		0	47.1	50.3	2.6		
PHF	.000	.000	.000	.000	.900	.807	.000	.866	.915	.000	.882	.750	.971	.000	.896	.893	.792	.923	.960
Automobiles	0	0	0	0	152	407	0	559	144	0	125	11	280	0	340	359	13	712	1551
% Automobiles	0	0	0	0	93.8	98.5	0	97.2	96.0	0	93.3	73.3	93.6	0	98.8	97.6	68.4	97.4	96.6
Commercial	0	0	0	0	10	6	0	16	6	0	9	4	19	0	4	9	6	19	54
% Commercial	0	0	0	0	6.2	1.5	0	2.8	4.0	0	6.7	26.7	6.4	0	1.2	2.4	31.6	2.6	3.4

DE TRAFFIC

detraffic.com
(386) 341-4186
Normandy Blvd at Graves Ave
Volusia County, Fl

File Name : normandy at graves
Site Code : 00000003
Start Date : 1/18/2023
Page No : 5



DE TRAFFIC

detraffic.com
(386) 341-4186
Normandy Blvd at Graves Ave
Volusia County, Fl

File Name : normandy at graves
Site Code : 00000003
Start Date : 1/18/2023
Page No : 6

Groups Printed- Peds

	N/A Southbound					Graves Ave Westbound					Normandy Blvd Northbound					Graves Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					



NB Approach



SB Approach



EB Approach



WB Approach

de traffic	Graves Ave/Halifax Crossing Blvd at Howland Blvd	Volusia County
	www.de-traffic.com	Project Number: K&A-02 / Sheet Number: 3
	299 McGregor Rd. DeLand Fl. 32720	



NB Approach



EB Approach



WB Approach

de traffic	Normandy Blvd at Graves Ave	Volusia County
	www.de-traffic.com	Project Number: K&A-02 / Sheet Number: 4
	299 McGregor Rd. DeLand Fl. 32720	

Peak Season Factor Category Report

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7900 VOLUSIA COUNTYWIDE

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2021 - 01/02/2021	1.01	1.04
2	01/03/2021 - 01/09/2021	1.04	1.07
3	01/10/2021 - 01/16/2021	1.06	1.09
4	01/17/2021 - 01/23/2021	1.05	1.08
5	01/24/2021 - 01/30/2021	1.04	1.07
6	01/31/2021 - 02/06/2021	1.03	1.06
7	02/07/2021 - 02/13/2021	1.02	1.05
8	02/14/2021 - 02/20/2021	1.00	1.03
9	02/21/2021 - 02/27/2021	0.99	1.02
*10	02/28/2021 - 03/06/2021	0.97	1.00
*11	03/07/2021 - 03/13/2021	0.95	0.98
*12	03/14/2021 - 03/20/2021	0.94	0.97
*13	03/21/2021 - 03/27/2021	0.95	0.98
*14	03/28/2021 - 04/03/2021	0.95	0.98
*15	04/04/2021 - 04/10/2021	0.96	0.99
*16	04/11/2021 - 04/17/2021	0.97	1.00
*17	04/18/2021 - 04/24/2021	0.98	1.01
*18	04/25/2021 - 05/01/2021	0.98	1.01
*19	05/02/2021 - 05/08/2021	0.98	1.01
*20	05/09/2021 - 05/15/2021	0.99	1.02
*21	05/16/2021 - 05/22/2021	0.99	1.02
*22	05/23/2021 - 05/29/2021	0.99	1.02
23	05/30/2021 - 06/05/2021	0.99	1.02
24	06/06/2021 - 06/12/2021	1.00	1.03
25	06/13/2021 - 06/19/2021	1.00	1.03
26	06/20/2021 - 06/26/2021	1.01	1.04
27	06/27/2021 - 07/03/2021	1.02	1.05
28	07/04/2021 - 07/10/2021	1.04	1.07
29	07/11/2021 - 07/17/2021	1.05	1.08
30	07/18/2021 - 07/24/2021	1.05	1.08
31	07/25/2021 - 07/31/2021	1.05	1.08
32	08/01/2021 - 08/07/2021	1.05	1.08
33	08/08/2021 - 08/14/2021	1.05	1.08
34	08/15/2021 - 08/21/2021	1.05	1.08
35	08/22/2021 - 08/28/2021	1.05	1.08
36	08/29/2021 - 09/04/2021	1.04	1.07
37	09/05/2021 - 09/11/2021	1.04	1.07
38	09/12/2021 - 09/18/2021	1.03	1.06
39	09/19/2021 - 09/25/2021	1.02	1.05
40	09/26/2021 - 10/02/2021	1.00	1.03
41	10/03/2021 - 10/09/2021	0.99	1.02
42	10/10/2021 - 10/16/2021	0.98	1.01
43	10/17/2021 - 10/23/2021	0.98	1.01
44	10/24/2021 - 10/30/2021	0.99	1.02
45	10/31/2021 - 11/06/2021	0.99	1.02
46	11/07/2021 - 11/13/2021	1.00	1.03
47	11/14/2021 - 11/20/2021	1.00	1.03
48	11/21/2021 - 11/27/2021	1.00	1.03
49	11/28/2021 - 12/04/2021	1.01	1.04
50	12/05/2021 - 12/11/2021	1.01	1.04
51	12/12/2021 - 12/18/2021	1.01	1.04
52	12/19/2021 - 12/25/2021	1.04	1.07
53	12/26/2021 - 12/31/2021	1.06	1.09

* PEAK SEASON

08-MAR-2022 12:36:28 830UPD 5_7900_PKSEASON.TXT

Appendix F:
Signal Timings

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB	SB	NB	WBL	EB		
TURN TYPE	PROT	-	SPLIT LEAD	SPLIT LAG	PROT	-		
MIN GREEN	5	17	7	7	5	17		
EXTENSION	3	4	4	4	3	4		
YELLOW	5.5	5.5	5.6	5.5	5.5	5.5		
RED CLR	2.8	2.8	3.8	3.3	2.8	2.8		
WALK								
PED CLR								
MAX 1	25	60	35	35	35	60		
MAX 2								
MAX 3		-		-		-		
DYM MAX		90		35		90		
DYM STP		10		10		10		
RECALL		MIN		-		MIN		
DETECTOR	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK		
FLASH	RED	YELLOW	RED	RED	RED	YELLOW		

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8
CYCLE	150	130	150	-	-	-	-	-
OFFSET	93	99	0	-	-	-	-	-

PHASE	1	2	3	4	5	6	7	8
PATTERN 1	19	57	37	37	19	57		
PATTERN 2	19	43	31	37	19	43		
PATTERN 3	19	59	35	37	20	58		
PATTERN 4	-	-	-	-	-	-	-	-
PATTERN 5	-	-	-	-	-	-	-	-
PATTERN 6	-	-	-	-	-	-	-	-
PATTERN 7	-	-	-	-	-	-	-	-

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:

Pattern #1	2	1	4	3	Pat #2	1	2	3	4	Pat #3	1	2	4	3		
Seq #4	5	6			Seq #5	6	5			Seq #7	6	5				

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

TIME OF DAY SCHEDULE

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
MON #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P2
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
TUES #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
WED #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P4
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
THU #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
FRI #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P6
	TIME	00:00-00:00							
SAT #2	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #2	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	02.62.00	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE	03/2008	PRE-EMPTION TYPE	INFRARED		LED YES

REMARKS:

Seq #4					Seq #5					Seq #7				
	2	1	4	3		1	2	3	4		1	2	4	3
	5	6				6	5				6	5		

Received 11/11/2021

Volusia County
FLORIDA

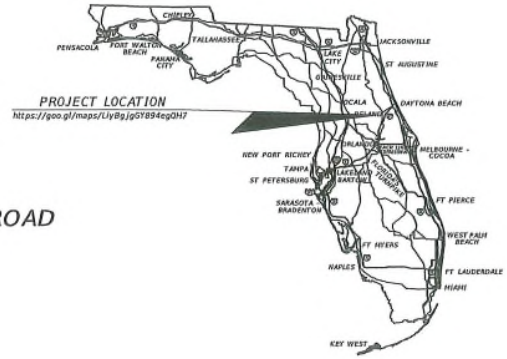
VOLUSIA COUNTY, FLORIDA
PUBLIC WORKS DEPARTMENT

CONSTRUCTION PLANS

DR. MARTIN LUTHER KING JR. BELTWAY AND CASSADAGA ROAD

SIGNALIZATION PLANS

SIGNAL NO. 471



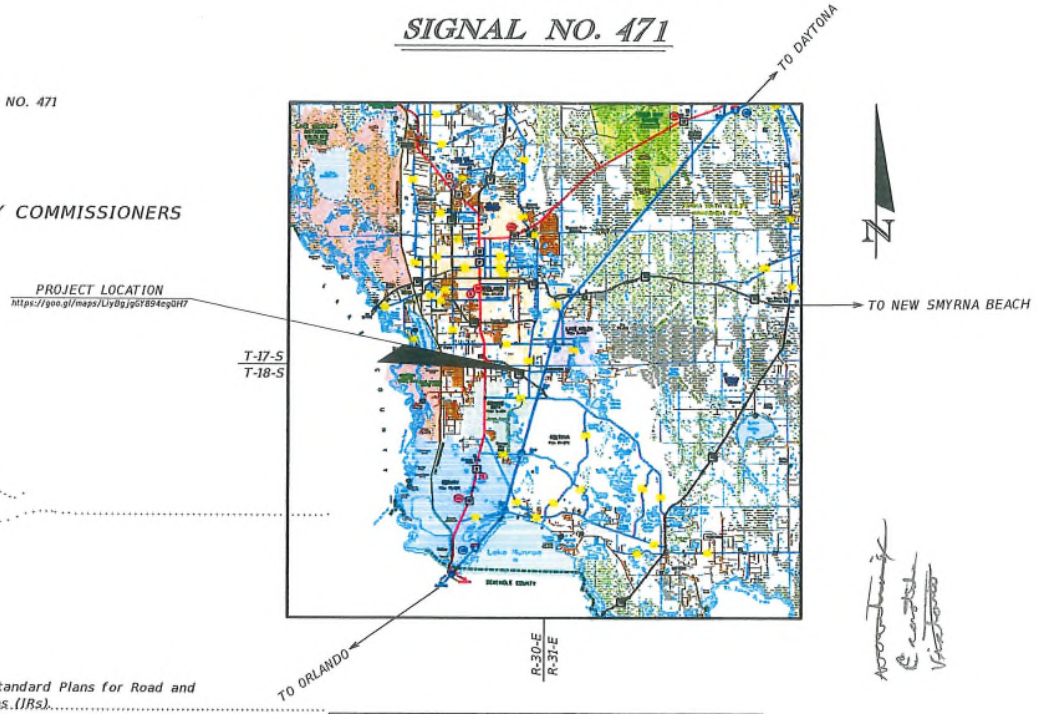
INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4 - T-5	GENERAL NOTES
T-6	SIGNALIZATION PLAN - SIGNAL NO. 471
T-7	CORNER CLIPS
T-8	STRAIN POLE SCHEDULE
T-9	GUIDESIGN WORKSHEET
B-1	SPT BORING SHEET

VOLUSIA COUNTY BOARD OF COUNTY COMMISSIONERS

COUNTY CHAIR - JEFF BROWER
AT-LARGE REPRESENTATIVE - BEN JOHNSON
COUNTY MANAGER - GEORGE RECKTENWALD

DISTRICT 1	BARBARA GIRTMAN
DISTRICT 2	BILLIE WHEELER
DISTRICT 3	DANNY ROBINS
DISTRICT 4	HEATHER POST
DISTRICT 5	DR. FRED LOWRY



SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:
JEREMY M. CROWE, PE 77064
TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD
SUITE 265
ORLANDO, FL 32803

PLANS PREPARED BY:

TMC
Traffic & Mobility Consultants

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD
SUITE 265
ORLANDO, FL 32803
(407) 531-5332
CERTIFICATE OF AUTHORIZATION NO.: 30024

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2021/22 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: N/A

Standard Plans for Bridge Construction are included in the Structures Plans Component

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2021 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

FINAL SUBMITTAL
11/08/2021

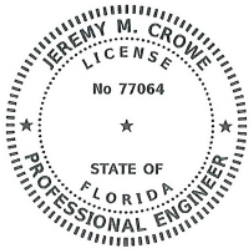
2021-P-USE-0554

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGES DUE TO REPRODUCTION

ENGINEER OF RECORD: JEREMY M CROWE, PE
P.E. NO.: 77064

TMC PROJECT NO.	FISCAL YEAR	SHEET NO.
20147.3	22	T-1

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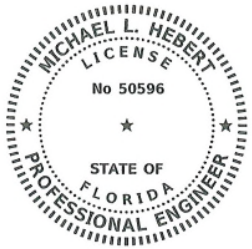
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P.E. LICENSE NUMBER 77064
TRAFFIC & MOBILITY CONSULTANTS LLC.
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL. 32803
CERTIFICATE OF AUTHORIZATION 30024

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
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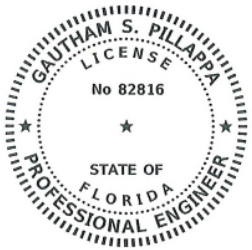
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MICHAEL L. HEBERT, P.E.
P.E. LICENSE NUMBER 50596
FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC.
633 DARTMOUTH STREET
ORLANDO, FL. 32804
CERTIFICATE OF AUTHORIZATION 26379

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-8	STRAIN POLE SCHEDULE



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GAUTHAM S. PILLAPPA, P.E.
P.E. LICENSE NUMBER 82816
GEO-TECHNOLOGY ASSOCIATES, INC.
4617 PARKBREEZE COURT
ORLANDO, FL. 32808
CERTIFICATE OF AUTHORIZATION 35088

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
B-1	SPT BORING SHEET

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

Volusia County

SIGNATURE SHEET

SHEET NO. T-2 F-5

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-6 PLAN	T-6 FINAL	TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	511		511		511	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1		1		1	
634-4-153	SPAN WIRE ASSEMBLY, FURNISH & INSTALL, TWO POINT, BOX OR DROP BOX	PI	1		1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	29		29		29	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS	1		1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	151		151		151	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE	EA	2		2		2	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	2		2		2	
641-2-18	PRESTRESSED CONCRETE POLE, F&I, TYPE P-VIII	EA	4		4		4	
646-1-11	ALUMINIUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL	EA	8		8		8	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	6		6		6	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS	1		1		1	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN 1 WAY	AS	8		8		8	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT, WAVETRONIX	EA	1		1		1	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	6		6		6	
663-1-121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH & INSTALL, GPS, CABINET ELECTRONICS	EA	1		1		1	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	3		3		3	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL STANDARD	EA	8		8		8	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, FURNISH & INSTALL NEMA 2 PREEMPTION (ECONOLITE WITH UPS & 4G WIRELESS)	AS	1		1		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, LAYER 2, FURNISH & INSTALL	EA	1		1		1	
684-6-12	WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL ETHERNET SUBSCRIBER UNIT	EA	1		1		1	
685-1-11	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE	EA	1		1		1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	4		4		4	
715-5-31	LUMINAIRE & BRACKET ARM, FURNISH & INSTALL NEW LUMINAIRE & ARM ON NEW STRAIN POLE, ALUMINIUM	EA	4		4		4	

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

TMC Traffic & Mobility Consultants

Volusia County FLORIDA

TABULATION OF QUANTITIES

SHEET NO. T-3

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTIFY VOLUSIA COUNTY TRAFFIC ENGINEERING AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING WORK. NOTIFY TIM KARR, ALLEN CATES AND BILLY WHITE (386) 736-5968.
2. THE CONTRACTOR SHALL COORDINATE WORK SCHEDULE, COORDINATE TIMING AND AUTHORIZATION OF POWER SERVICE WITH VOLUSIA COUNTY TRAFFIC ENGINEERING. NOTIFY BOBBY MADDOX, TIM KARR, AND BILLY WHITE (386) 736-5968.
3. ANY ITEM NOT SPECIFICALLY ADDRESSED IN THESE PLANS, USE F.D.O.T. FY 2021-22 STANDARD PLANS AND JULY 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL MATERIALS AND HARDWARE SHALL BE PRE-APPROVED BY VOLUSIA COUNTY TRAFFIC ENGINEERING.
4. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL NOTIFY SUNSHINE ONE-CALL 1-800-432-4770 AT LEAST TWO BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION WORK WHICH WOULD OTHERWISE INTERFERE WITH ANY ABOVE GROUND OR BELOW GROUND UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING CURRENT LOCATE TICKET THROUGHOUT THE DURATION OF THE WORK. THE COUNTY OF VOLUSIA IS NOT A MEMBER OF THE SUNSHINE ONE-CALL, FOR LOCATES CALL (386) 736-5968, VOLUSIA COUNTY TRAFFIC ENGINEERING TO REQUEST TO COMPLETE A LOCATE TICKET TO SCHEDULE THE LOCATE.
6. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH VOLUSIA COUNTY TRAFFIC ENGINEERING BEFORE ORDERING.
7. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING A BID PROPOSAL.
8. A SIGNAL INSPECTION IS TO BE SCHEDULED WITH ALLEN CATES AND BILLY WHITE (VOLUSIA COUNTY TRAFFIC ENGINEERING) (386) 736-5968 10 DAYS PRIOR TO THE SIGNAL BEING PLACED INTO OPERATION.
9. AT THE TIME OF FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE TWO SETS OF CONSTRUCTION "AS-BUILT" PLANS: ONE TO VOLUSIA COUNTY TRAFFIC ENGINEERING AND ONE FOR THE TRAFFIC SIGNAL CONTROLLER CABINET.
10. THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.
11. AT NO TIME IS THE CONTRACTOR TO CHANGE ANY SIGNAL TIMINGS. VOLUSIA COUNTY WILL MAINTAIN ALL SIGNAL TIMINGS BEFORE, DURING AND AFTER CONSTRUCTION. IF ANY TIMING CHANGES ARE MADE BY THE CONTRACTOR, A TIMING SHEET SHALL BE PLACED IN THE CONTROLLER CABINET WITH DATE AND TIME OF INSTALLING, ALONG WITH A CONTACT NUMBER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE EXISTING POWER UTILITY TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. IF REQUIRED, FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR THE ELECTRICAL POWER SERVICE ASSEMBLY.
13. THE CONTRACTOR SHALL HAVE AN I.M.S.A. LEVEL II SIGNAL TECHNICIAN ON SITE THROUGH ALL PHASES OF CONSTRUCTION AND ON CALL WITH A TWO-HOUR MAX. RESPONSE TIME.
14. UNLESS OTHERWISE STATED, ELEVATIONS LISTED IN THESE PLANS WERE DERIVED FROM ROD READINGS.

SIGNS:

1. LED INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE A SEPARATE POWER BREAKER, NOT LOCATED IN THE CONTROLLER CABINET.
2. LED INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON THE PROPOSED HANGING ARMS.

SIGNALS:

1. BLACK POLYCARBONATE HOUSINGS ARE REQUIRED FOR VEHICULAR AND PEDESTRIAN SIGNAL HEAD ASSEMBLIES IN VOLUSIA COUNTY. ALL VEHICLE SIGNAL DISPLAYS SHALL BE LED. ALL SIGNAL HEADS SHALL INCLUDE TUNNEL VISORS AND BACKPLATES WITH REFLECTIVE BORDERS.
2. ALL SIGNAL ASSEMBLES SHALL HAVE A VERTICAL CLEARANCE OF 17.5' MINIMUM AND 19.0' MAXIMUM FROM THE BOTTOM OF THE ASSEMBLY TO THE ROAD.

POLES / PEDS/ CONTROLLER:

1. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS PRIOR TO SETTING AND HAVE THE POLE LOCATIONS FIELD CHECKED BY VOLUSIA COUNTY TRAFFIC ENGINEERING. NOTIFY THOMAS EDWARDS (386) 736-5968 FOR FIELD CHECK AND POLE LOCATION APPROVAL.
2. ALL UNDERGROUND CONDUIT ENTRY HOLES ON SIGNAL POLES SHALL BE STUBBED OUT.
3. DUE TO THE CLOSE PROXIMITY OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL HAND DIG THE FIRST (4) FOUR FEET OF ANY POLE FOUNDATION.
4. NO POWER SERVICE EQUIPMENT WILL BE ALLOWED TO BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET.
5. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL TRAFFIC SIGNAL CONTROLLER CABINETS.
6. TWO SPARE CABINET CONDUITS SHALL BE STUBBED OUT AND CAPPED IN EACH TRAFFIC SIGNAL CABINET ENTRY PULL BOX.
7. THE CONTROLLER BASE SHALL BE A MONOLITHIC POUR WITH A 4" MINIMUM/ 8" MAXIMUM ABOVE FINISHED GRADE. THE SERVICE PAD SHALL BE A SEPARATE CONCRETE PAD WITH A MINIMUM OF 4" THICKNESS. PROVIDE A SEALED 1/2" EXPANSION JOINT BETWEEN THE SERVICE PAD AND CONTROLLER BASE.
8. THE PROPOSED CONTROLLER ASSEMBLY SHALL BE NEMA TS2 TYPE V1 CABINET WITH A TS2 TYPE 2 ECONO LITE CONTROLLER (COLBALT) (2100) AND SHALL INCLUDE BACKUP INTERNAL TIME-BASED COORDINATION. THE CONTROLLER ASSEMBLY SHALL ALSO INCLUDE CONNECTION TO A UPS ECONOLITE (1000-WATT DOUBLE CONVERSION) BACKUP SYSTEM TO BE INTERNAL TO THE CONTROLLER CABINET, EXPRESS SUPPLY 8042 V3 PLUS NETWORK SWITCH, INTERFACE PANEL, FIBER OPTIC TRANSCEIVER MODULE AND ALL NECESSARY EQUIPMENT FOR A COMPLETE OPERATIONAL AND ACCEPTABLE INSTALLATION (670-5-110). ALSO, CONTROLLER CABINETS SHALL REQUIRE A GENERATOR HOOKUP BOX EXTERNAL TO THE CABINET, WIC, OR FIBER ENCLOSURE AND ECONOLITE 4G WIRELESS FOR COMMUNICATION.
9. CONTRACTOR TO ENSURE THAT A 4FT. X 4FT. FLAT LANDING AREA IS ADJACENT TO ALL PED BUTTONS FOR PEDESTRIANS.
10. PEDESTRIAN HEADS SHALL BE COUNTDOWN LED MODULAR WITH INTERNATIONAL SYMBOLS.

LOOPS/ CONDUIT/ PULL BOXES/ VIDEO DETECTION:

1. ALL CONDUIT SHALL BE 2" MINIMUM DIAMETER UNLESS OTHERWISE SPECIFIED IN THE PLANS. ABOVEGROUND CONDUIT SHALL BE 2" RIGID GALVANIZED STEEL, UNLESS OTHERWISE INDICATED. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 BURIED AT 36" MINIMUM DEPTH, UNLESS OTHERWISE INDICATED.
2. SIDE STREET AND LEFT TURN DETECTION ZONES SHALL BE CENTERED IN THE LANE AND SHALL BE EXTENDED 5' BEYOND THE STOP BAR.
3. WHEN MULTIPLE RUNS OF CONDUIT ARE PLACED UNDER PAVEMENT BY DIRECTIONAL BORE, JACKING OR TRENCHING, ONLY ONE RUN IS PAID FOR AS DIRECTIONAL BORE. ADDITIONAL RUNS ARE TO BE PAID FOR AS UNDERGROUND CONDUIT.
4. AS DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
5. PULL BOXES SHALL NOT BE LOCATED AT THE BOTTOM OF ANY DITCH OR RETENTION AREA/POND.
6. ALL ENDS OF CONDUITS IN PULL BOXES AND CABINETS SHALL BE SEALED WITH ELECTRICAL PUTTY AFTER WIRING IS COMPLETE.
7. TRAFFIC SIGNAL PULL BOXES SHALL BE COMPOSITE AND THE COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNALS" (QUAZITE 1324 BK., 1212BA OR EQUAL).
8. ALL PULL BOXES AND FIBER BOXES SHALL HAVE A CONCRETE APRON AROUND THE PULL BOX PER FDOT SPECIFICATIONS.

SIGNAL CABLE:

1. IF A CONTINUOUS RUN OF SIGNAL CABLE IS NOT POSSIBLE FROM THE CABINET TO THE SIGNAL HEAD, THEN A SPLICE WITH ORD WATERPROOF CONNECTORS SHALL BE USED AT THE HAND HOLE, NOT A TERMINAL STRIP - MARK PHASING ON WIRES.
2. THE PROPOSED SIGNAL CABLE SHALL INCLUDE SUFFICIENT CONDUCTORS FOR FUTURE LEFT TURN PHASES.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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FAX: (407) 531-5331
JEREMY N. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

Traffic & Mobility Consultants

Volusia County

GENERAL NOTES

SHEET NO. F-7 T-4

POWER SERVICE:

1. THE MAIN SERVICE DISCONNECT ENCLOSURE AND THE LOAD CENTER ENCLOSURE LOCATED ADJACENT TO THE CONTROLLER CABINET SHALL BE NEMA 3R OR BETTER RATED.
2. ABOVEGROUND CONDUIT USED FOR ELECTRIC SERVICE SHALL BE RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT 2" MIN. FOR POWER SERVICE WIRES AND A 3/4" MIN. FOR GROUNDING ELECTRODE CONDUCTORS.
3. ANTI-CORROSIVE PASTE SHALL BE USED ON ALL ELECTRIC SERVICE CONNECTIONS.
4. ELECTRICAL SERVICE INSTALLATIONS MUST CONFORM WITH THE MOST RECENT VERSION OF THE NATIONAL ELECTRIC CODE (NEC), FDOT SPECIFICATIONS, AND POWER UTILITY COMPANY REQUIREMENTS.

UTILITIES:

1. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE VV, VH, VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY; THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY UTILITY OWNER(S) THAT MAY OR MAY NOT BE A "SUNSHINE ONE-CALL" MEMBER IN ORDER TO COORDINATE UTILITY MARKING AND LOCATING AT A MINIMUM OF TWO DAYS PRIOR TO DIGGING. IT SHOULD BE NOTED THAT VOLUSIA COUNTY TRAFFIC ENGINEERING IS NOT A MEMBER OF "SUNSHINE ONE-CALL" AND THAT SEPARATE CONTACT WILL NEED TO BE MADE IN ORDER TO OBTAIN UTILITY LOCATE INFORMATION FOR VOLUSIA COUNTY TRAFFIC ENGINEERING FACILITIES.

BELOW IS A LIST OF UTILITY OWNERS NOTIFIED ON 06/08/2021:

COMPANY	CONTACT	TELEPHONE #
ATT	STEVE HAMER	813-888-8300
CENTURYLINK	BILL MCCLOUD	850-599-1444
CITY OF DELAND	RAYMOND BAHRAMI	386-626-7189
DUKE ENERGY	STEPHANIE OLMO	407-905-3376
FL PUBLIC UTILITIES	COLIN DUNN	386-785-4554
CENTURY LINK	NETWORK RELATIONS	877-366-8344
VOLUSIA COUNTY WATER & UTILITY SERVICE	EARL FARMER	251-753-8695
VOLUSIA COUNTY TRAFFIC ENGINEERING	ALLEN CATES	386-736-5968

VOLUSIA COUNTY USE PERMIT NOTES:

1. NOTIFY VOLUSIA COUNTY DEVELOPMENT ENGINEERING OFFICE AT (386) 736-5926 ONE BUSINESS DAY PRIOR TO BEGINNING ANY PERMITTED WORK BEFORE ANY CHANGES FROM APPROVED PLANS AND WHEN COMPLETED.
   A. ALL ROAD/LANE CLOSURES "ARE SEPARATE FROM THE PERMIT" AND REQUIRE PLAN REVIEW AND APPROVAL WITH 7 DAY ADVANCE NOTICE FROM VOLUSIA COUNTY TRAFFIC OPERATIONS AT (386) 239-6535 PRIOR TO ANY CLOSURES. MOT IS REQUIRED ON ALL PROJECTS.
   B. ALL TRAFFIC & PEDESTRIAN SIGNALS (& SURROUNDING AREAS), "ARE NOT" A MEMBER OF SUNSHINE ONE CALL. LOCATES MUST REQUESTED /LOCATED FROM VOLUSIA COUNTY TRAFFIC ENGINEERING AT (386) 736-5968.
   C. THE VOLUSIA COUNTY -STAMPED "APPROVED" PERMIT PLANS MUST BE ONSITE AT ALL TIMES.
   D. NO TRENCH/EXCAVATIONS SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT.
   E. SOD ALL DISTURBED AREAS.
   F. CONTRACTOR IS RESPONSIBLE FOR PRE/POST CONSTRUCTION VIDEO/PHOTOS OF EXISTING ROADWAYS, DRIVEWAYS, SIDEWAYS, DITCH SWALES, CULVERTS AND ABOVE GROUND UTILITIES.
2. OPERATIONS WITHIN THE COUNTY RIGHT-OF-WAY SHALL NORMALLY BE CONDUCTED FROM 7:00 AM TO 7:00 PM, MONDAY THROUGH FRIDAY. ANY DEVIATION FROM THESE HOURS REQUIRES PRIOR APPROVAL FROM THE COUNTY DEVELOPMENT ENGINEER. EMERGENCY REPAIRS ARE EXCLUDED FROM THIS TIME RESTRICTION.
3. ALL EXISTING SIDEWALKS WITHIN COUNTY RIGHT -OF-WAY SHALL EITHER REMAIN OPEN OR BE PROVIDED A TEMPORARY WALKWAY IN ACCORDANCE WITH THE CURRENT VERSION OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD INDEX NO. 102-660. ANY DAMAGE TO SIDEWALKS SHALL BE REPAIRED AND/OR REPLACED IN LIKE KIND BY THE CONTRACTOR. NEW SIDEWALKS AND SECTIONS THROUGH DRIVEWAYS MUST BE AT LEAST A 1.5% CROSS SLOPE AND 2% MAXIMUM CROSS SLOPE PER ADA STANDARDS.
4. DRIVING OR STAGING OF CONSTRUCTION VEHICLES OR MATERIALS IS NOT PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY OR ON PEDESTRIAN WALKWAYS AND PATHS. THERE SHALL BE NO OVERNIGHT CONSTRUCTION VEHICLE RELATED PARKING, CONSTRUCTION MATERIAL PLACEMENT, OR STORAGE OF ANY KIND PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY.

PAY ITEM NOTES:

660-3-XX: VENDOR AND DEVICE CONTRACTOR ARE TO USE RADAR DETECTION PROVIDED BY WAVETRONIX AS APPROVED BY VOLUSIA COUNTY. RADAR DETECTOR SHALL BE POLE MOUNTED AND NOT SPAN MOUNTED.

665-1-11: THE PEDESTRIAN DETECTOR MUST INCLUDE THE FURNISHING AND INSTALLING OF THE FTP-68B-06 SIGNS.

670-5-112: THIS PAY ITEM INCLUDES BOTH THE CONTROLLER ELECTRONICS AND THE CABINET. THE CONTRACTOR MUST INSTALL AN ECONOLITE CONTROLLER WITH UPS AND 4G WIRELESS CAPABILITY.

700-5-22: ALL INTERNALLY ILLUMINATED SIGNS INCLUDE STREET NAME SIGN PANELS. THE CANTILEVER ARM AND ALL MOUNTING HARDWARE IS INCLUDED IN THE PAY ITEM. THE SUPPORT STRUCTURE (CONCRETE POLE) IS PAID SEPERATELY.

715-5-32: THIS PAY ITEM INCLUDES THE BRACKET ARM, LUMINAIRE WITH LAMP AND ALL NECESSARY MOUNTING HARDWARE AS PER THE PLANS AND INDEXES. THE CONTRACTOR MUST FURNISH AND INSTALL GE EVOLVE LED STREET LIGHT OR AN EQUIVALENT VENDOR AS APPROVED BY VOLUSIA COUNTY TRAFFIC ENGINEERING.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

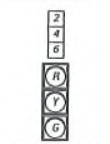
TRAFFIC & MOBILITY CONSULTANTS LLC
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Volusia County

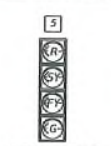
GENERAL NOTES

SHEET NO. F-8 T-5

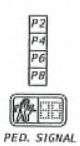
TRAFFIC SIGNAL HEAD DETAILS



3-SECT., 1-WAY
6 AS
650-1-14



4-SECT., 1-WAY
1 AS
650-1-16



PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
8 AS



FTP-68B-06
9"X18"
8 EA
(INCLUDED IN
665-1-11)

FUTURE TRAFFIC SIGNAL HEAD DETAILS

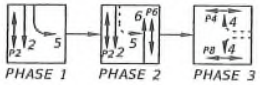


3-SECT., 1-WAY
2 AS



4-SECT., 1-WAY
3 AS

S.O.P. 2 (MOD)



PHASE 1 PHASE 2 PHASE 3

R1 R2 R3 R4 R5 R6

660-3-12 6 EA

INTERNALLY ILLUMINATED
OVERHEAD SIGNS (SINGLE-SIDED FACE MOUNTED)
N.T.S

(A) Dr Martin L King Jr Bltwy

700-5-22 2 EA

(B) Cassadaga Rd

700-5-22 2 EA

CABINET PAY ITEMS
7 RUNS @ 16 LF
1-2" GROUND
1-2" LIGHTING
1-2" PEDESTRIAN
1-2" PED DETECTOR
1-2" RADAR
1-2" SIGNAL
1-2" SPARE

630-2-11	16 LF
632-7-1	1 PI
634-4-153	1 PI
635-2-11	4 EA
660-3-11	1 EA
663-1-121	1 EA
670-5-112	1 AS
684-1-1	1 EA
684-6-12	1 EA
685-1-11	1 EA

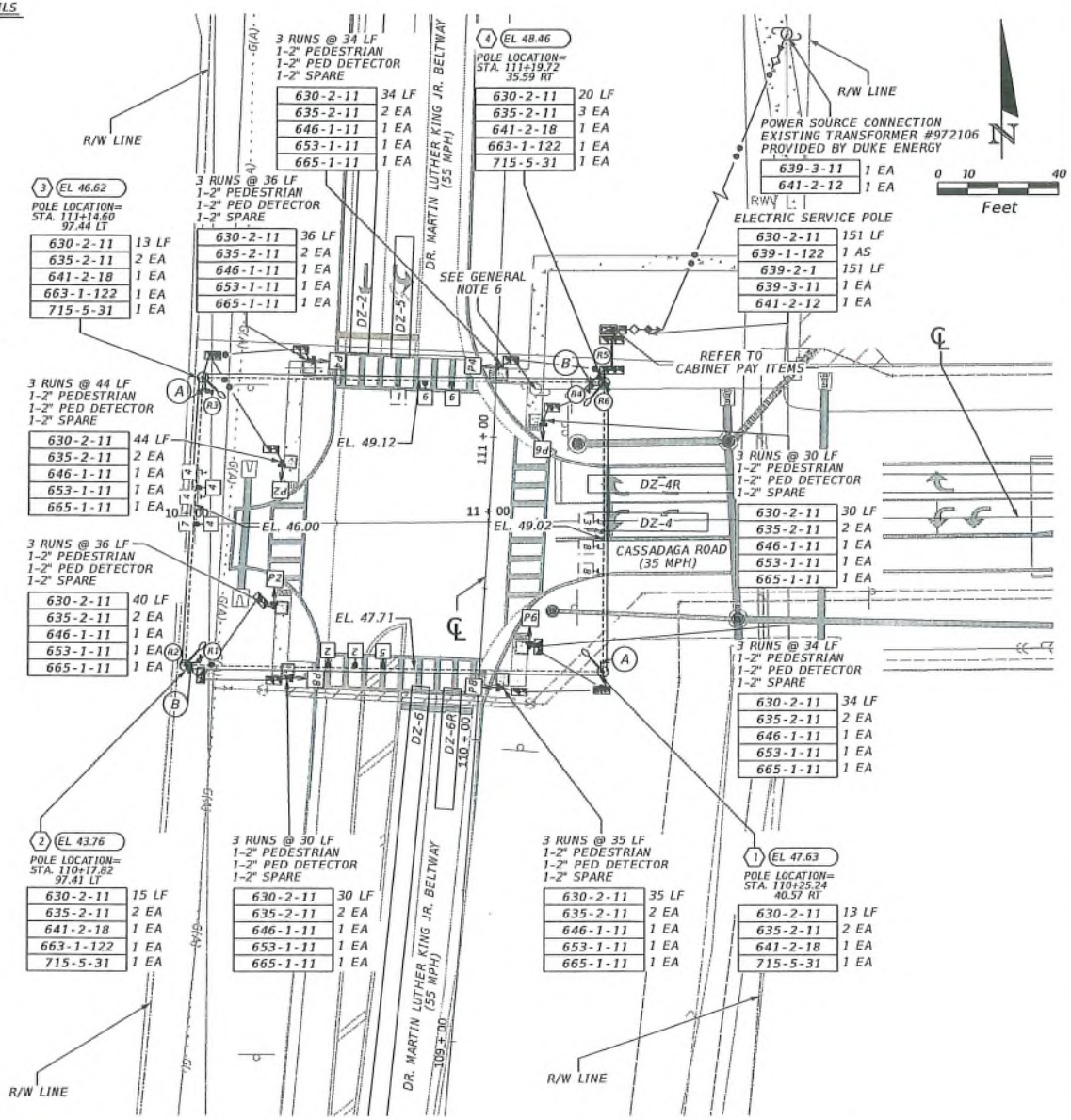
RADAR DETECTION CONNECTION CHART

CAMERA DETECTION	DETECTION ZONE	DELAY TIME (SEC)	DETECTION ZONE DIMENSION
R1	DZ-2	-	6' X 330'
	DZ-5	-	6' X 40'
R2	DZ-6	-	6' X 40'
	DZ-6R	5	6' X 40'
R3	DZ-4R	5	6' X 330'
	DZ-4	-	6' X 40'
R4	DZ-6	-	6' X 330'
R5	DZ-5	-	6' X 40'
	DZ-2	-	6' X 40'
R6	DZ-4R	5	6' X 40'
	DZ-4	-	6' X 40'

SIZE AND PLACEMENT OF RADAR DETECTION ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER

CONTROLLER TIMINGS

TIMING FUNCTION	DIRECTION	SBT	WBL/WBR	SBL	NBT	PED
	MOVEMENT NUMBER	2	4	5	6	P8
TIMING FUNCTION	MINIMUM GREEN	10	7	5	10	-
	EXTENSION	3.0	3.0	3.0	3.0	-
	MAXIMUM GREEN 1	70	50	30	70	-
	MAXIMUM GREEN 2	-	-	-	-	-
	YELLOW CLEARANCE	5.5	4.0	5.5	5.5	-
	ALL RED	2.0	2.8	2.0	2.0	-
	PEDESTRIAN WALK	7	7	-	7	7
	PED. CLEARANCE	9	15	-	17	17
	RECALL	MIN	-	-	MIN	-
	FLASH	Y	R	R	Y	-



GENERAL NOTES

1. THE MAJOR STREET IS DR. MARTIN LUTHER KING JR. BELTWAY (SPEED LIMIT 55 MPH). THE MINOR STREET IS CASSADAGA ROAD (SPEED LIMIT 35 MPH). THE MAJOR STREET MOVEMENTS ARE 2,5 AND 6, AND THE MINOR STREET MOVEMENT IS 4.
2. DURING FLASH OPERATION, MOVEMENTS 4 AND 5 SHALL FLASH RED, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW.
3. CONTRACTOR TO COORDINATE WITH POWER COMPANY FOR CONNECTION TO POWER SERVICE.
4. THE FUTURE SIGNAL HEAD PLACEMENT FOR THE MAJOR STREET (MOVEMENT 1) AND MINOR STREET (MOVEMENTS 3,7 & 8) TO BE INSTALLED UPON CONSTRUCTION OF THE WEST LEG OF THE INTERSECTION.
5. THE FUTURE LANE CONFIGURATION FOR THE NEW WEST LEG (MOVEMENTS 3 & 8) WAS ASSUMED TO MIRROR CASSADAGA ROAD (EXCLUSIVE LEFT AND A SHARED THROUGH AND RIGHT LANE).
6. PEDESTRIAN SIGNALS OF THE NORTHWEST AND SOUTHWEST CORNERS TO BE ADJUSTED UPON CONSTRUCTION OF THE WEST LEG OF THE INTERSECTION.
7. EXISTING SOLAR STREET LIGHT REMOVAL BY DUKE ENERGY AT THE TIME OF CONSTRUCTION. EXISTING STREET LIGHT TO REMAIN ENERGIZED UNTIL THE NEW LIGHTS ARE OPERATIONAL.
8. MOVEMENT P8 IS TO OVERLAP WITH MOVEMENT P4.
9. MOVEMENT 5 SHALL OMIT THE FLASHING YELLOW PHASE WHILE MOVEMENT P6 IS ACTIVE.

REVISIONS			
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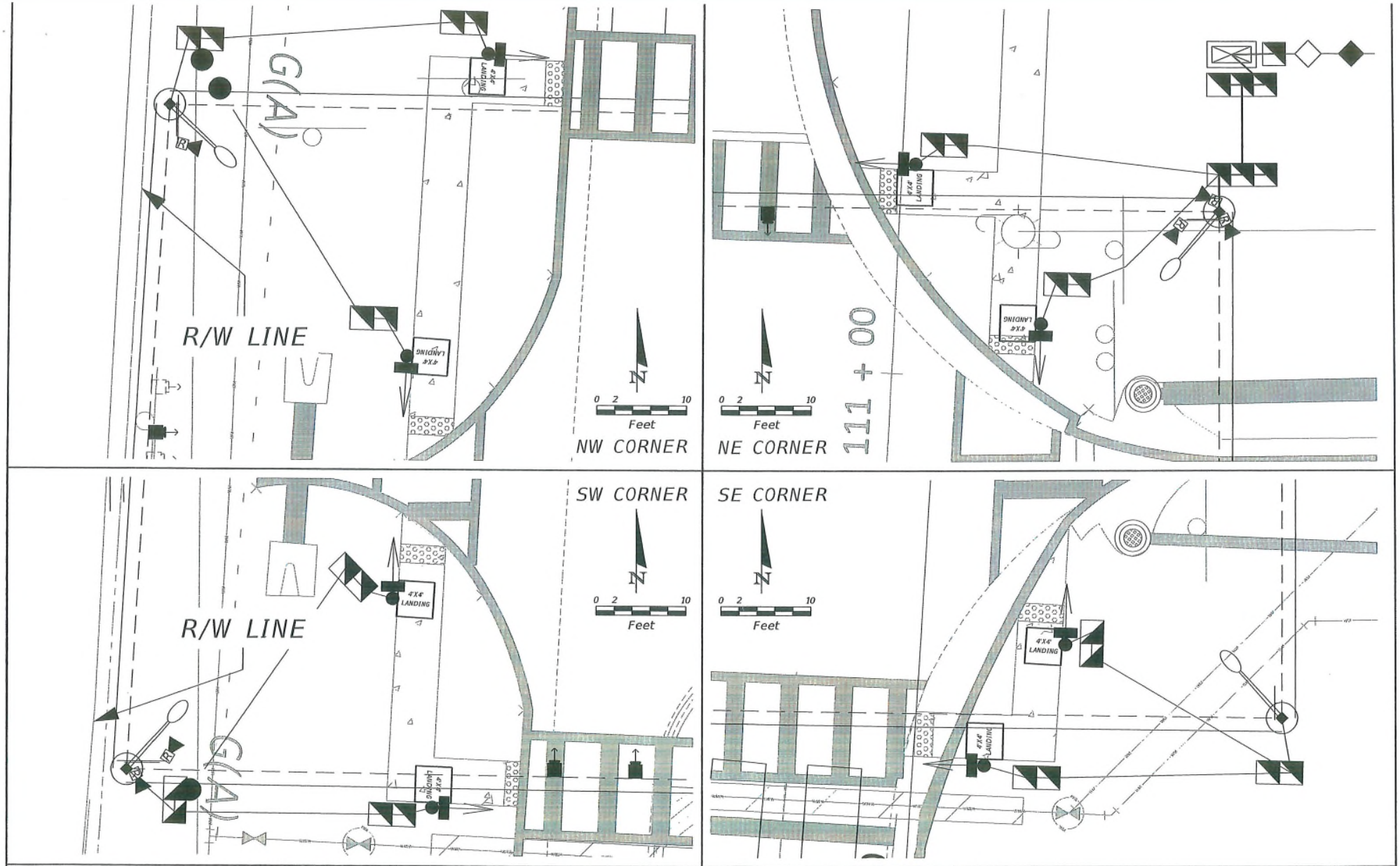
Volusia County

SIGNALIZATION PLAN

SIGNAL NO. 471

SHEET NO. F-9 T-6

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Volusia County

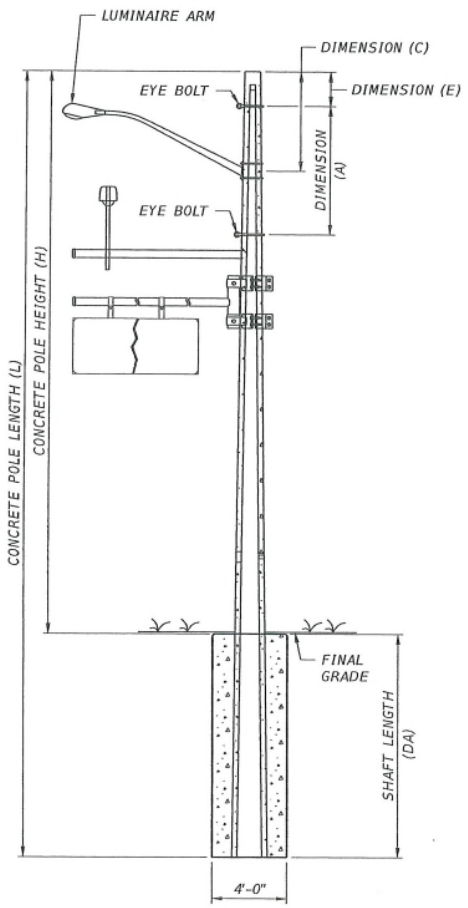
CORNER CLIPS

SHEET NO. E-10 T-7

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STRAIN POLE SCHEDULE

ID NO.	SHEET NO.	POLE LOCATION		FINAL GRADE ELEVATION	CROWN ELEVATION	POLE TYPE	POLE LENGTH (L)	POLE HEIGHT (H)	DIMENSION (A)	DIMENSION (C)	DIMENSION (E)	SHAFT LENGTH (DA)
		STATION	OFFSET									
1	T-6	110+25.24	40.57' RT	47.63	47.71	P-VIII	50.00	33.07	6.53	4.27	1.00	16.93
2	T-6	110+17.82	97.41' LT	43.76	46.00	P-VIII	54.00	36.94	6.53	4.27	1.00	17.06
3	T-6	111+14.60	97.44' LT	46.62	49.12	P-VIII	52.00	35.03	6.53	4.27	1.00	16.97
4	T-6	111+19.72	35.59' RT	48.46	49.02	P-VIII	50.00	33.19	6.53	4.27	1.00	16.81



CONCRETE STRAIN POLE DIMENSIONS
TYPES P-III THROUGH P-VIII

NOTES:

1. SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS FOR THE LUMINAIRE ARM ATTACHMENT TO THE POLE DETAILS MUST BE PROVIDED. THE DRAWINGS AND CALCULATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. LUMINAIRE ATTACHMENT MUST BE THROUGH BOLTED.
2. WORK THIS SHEET WITH INDEX 641-010.
3. MESSENGER AND CATENARY WIRE DIAMETER SHALL BE 1/2".
4. DESIGN OF THE STRAIN POLES, WIRES, AND FOUNDATIONS ARE BASED ON A DESIGN WIND SPEED OF 140 MPH, IN ACCORDANCE WITH THE JANUARY 2021 FDOT STRUCTURES MANUAL.
5. DESIGN OF THE FOUNDATIONS IS BASED ON BORINGS TAKEN 08/03/21, SEALED BY GEO-TECHOLOGY ASSOCIATES, INC. THE FOLLOWING ASSUMED SOIL PROPERTIES ARE USED IN DESIGN:
   SOIL TYPE = COHESIONLESS
   SOIL LAYER THICKNESS = 30 FT.
   SOIL FRICTION ANGLE = 30 DEG. (POLE 1), 29 DEG. (POLES 2-4).
   SOIL EFFECTIVE UNIT WEIGHT = 50 PCF (POLES 1-4).
   SOIL SPT N-VALUE = 13 BLOWS/FT (POLE 1), 5 BLOWS/FT (POLES 2-3), 6 BLOWS/FT (POLE 4).
   DESIGN WATER TABLE IS 0 FT. BELOW SURFACE

Designed By : ADB 09-21
Drawn By : BSW 08-21

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

MICHAEL L. HEBERT, P.E.
P.E. LICENSE NUMBER 50596
FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC.
633 DARTMOUTH STREET
ORLANDO, FL 32804
(407) 513-9709

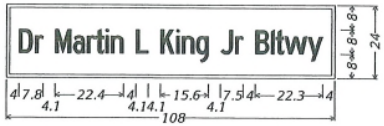
Volusia County
FLORIDA

STRAIN POLE SCHEDULE

SHEET NO.
T-8

SIGN NUMBER	A
QUANTITY	2
WIDTH	9'-0"
HEIGHT	2'-0"
BORDER WIDTH	1"
BORDER RADII	0"
BACKGROUND COLOR	3M EC GREEN
LEGEND & BORDER COLOR	3M 490T WHITE
STATION(S)	N/A

NOTES:
1. SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON CANTILEVER ARMS



0" Radius, 1.0" Border, White on Green;
"Dr Martin L King Jr Bltwy", C 2K specified length;
Table of distances between letter and object lefts

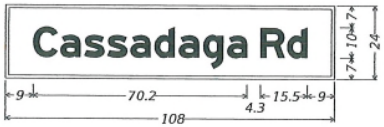
4.0	D 5.2	r 6.7	M 5.9	a 4.5	r 2.8	t 3.3	i 1.8	n 8.1	L 4.1

4.1	K 5.0	i 1.9	n 4.6	g 8.2	J 4.9	r 2.6

4.0	B 5.1	l 1.6	t 3.0	w 7.6	y 5.0	4.0

SIGN NUMBER	B
QUANTITY	2
WIDTH	9'-0"
HEIGHT	2'-0"
BORDER WIDTH	1"
BORDER RADII	0"
BACKGROUND COLOR	3M EC GREEN
LEGEND & BORDER COLOR	3M 490T WHITE
STATION(S)	N/A

NOTES:
1. SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON CANTILEVER ARMS



0" Radius, 1.0" Border, White on Green;
"Cassadaga Rd", E Mod 2K specified length;
Table of distances between letter and object lefts

9.0	C 8.9	a 7.9	s 7.4	s 7.6	a 7.9	d 8.0	a 7.9	g 8.0	a 10.9	R 8.9	d 6.6	9.0

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

GUIDESIGN WORKSHEET

SHEET NO.
F-12
T-9

LOG OF BORING NO. MA-01

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	5	0	SP		Brown, dry, loose, fine Poorly Graded SAND, trace Organics.	
S-2	5				Same, Light Brown	
S-3	4				Same, Brown	
S-4	25	6			Same, medium dense	
S-5	19					
S-6	10	12			Same, loose	
S-7	16	18	SP-SM		Brown to Orange, moist, medium dense, fine Poorly Graded SAND with Silt.	
S-8	10	24			Same, Light Gray, loose	M/C = 15% F/C = 26%
S-9	15	30			Same, Brown to Light Brown, medium dense	

Boring terminated at 30 feet.

LOG OF BORING NO. MA-02

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	14	0	SP-SM		Brown, dry, medium dense, fine Poorly Graded SAND with Silt, trace Organics.	
S-2	17		SP		Brown, dry, medium dense, fine Poorly Graded SAND, trace Organics.	
S-3	6	6			Same, loose	
S-4	3				Same, very loose	
S-5	5				Same, loose	
S-6	8	12	SC		Brown, dry, loose, Clayey SAND.	M/C = 18% F/C = 34%
S-7	10	18	SP		Light Gray, dry, loose, fine Poorly Graded SAND.	
S-8	11	24	SP-SM		Gray to Orange, dry, medium dense, fine Poorly Graded SAND with Silt.	
S-9	26	30				

Boring terminated at 30 feet.

LOG OF BORING NO. MA-03

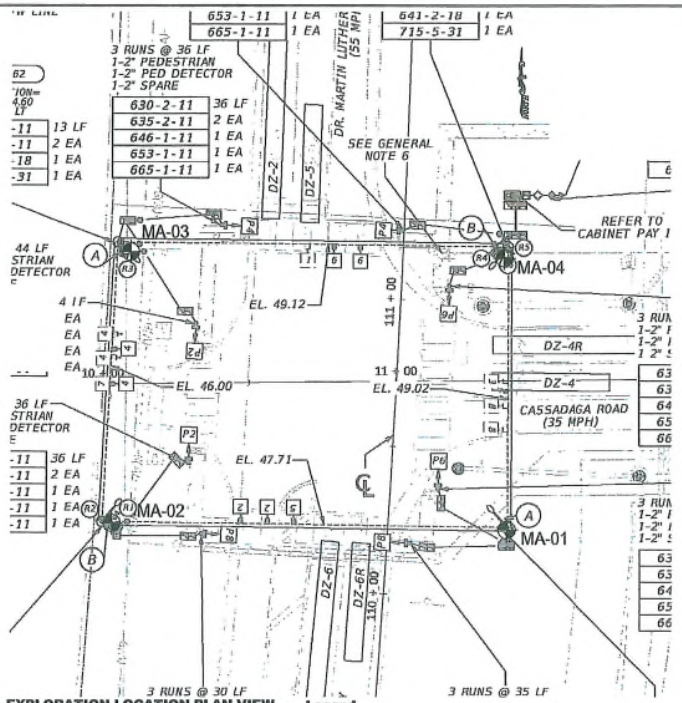
SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	10	0	SP-SM		Brown, dry, loose, fine Poorly Graded SAND with Silt, trace Asphalt Fragments and Organics.	
S-2	14		SP		Brown, dry, medium dense, fine Poorly Graded SAND, trace Organics.	
S-3	8				Same, Light Brown, loose	
S-4	4	6			Same, very loose	
S-5	4					M/C = 3% F/C = 1%
S-6	9	12	SP-SM		Brown to Orange, moist, loose, fine Poorly Graded SAND with Silt.	
S-7	9	18	SP		Light Gray, moist, loose, fine Poorly Graded SAND.	
S-8	10	24	SP-SM		Gray to Orange, moist, loose, fine Poorly Graded SAND with Silt.	
S-9	24	30			Same, medium dense	

Boring terminated at 30 feet.

LOG OF BORING NO. MA-04

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	5	0	SP		Brown, dry, loose, fine Poorly Graded SAND, trace Organics.	
S-2	5				Same, Light Brown to Brown	
S-3	7					M/C = 9% F/C = 1%
S-4	22	6			Same, medium dense	
S-5	19					
S-6	10	12			Same, loose	
S-7	13	18	SP-SM		Brown to Orange, dry, medium dense, Poorly Graded SAND with Silt.	
S-8	11	24			Same, Light Gray	
S-9	14	30			Same, Brown to Light Gray	

Boring terminated at 30 feet.



EXPLORATION LOCATION PLAN VIEW

Scale: 1" = 20'

Base image was adapted from the Signalization Plan, Signal No. 471, undated, and prepared by Traffic & Mobility Consultants, LLC (Original scale 1" = 40').

Legend

MA-01 Identification and approximate location of Standard Penetration Test (SPT) boring performed by Geo-Technology Associates, Inc. (GTA) subcontractor in August of 2021.

Notes

1. Exploration locations were selected by GTA and staked in the field by AWK Consulting Engineers, Inc. using an instrumented survey. Exploration locations should be considered accurate only to the degree implied by the method used.

Key to Boring Logs

M/C NATURAL MOISTURE CONTENT (%)

F/C FINES CONTENT (%)

SP USCS GROUP SYMBOL BASED ON VISUAL OBSERVATION AND LABORATORY TEST

SAND AND SANDY SOILS	CLEAN SANDS (LESS THAN 15% PASSING THE NO. 200 SIEVE)	SW	Well-Graded SAND
		SP	Poorly Graded SAND
MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)	SM	Silty SAND
		SC	Clayey SAND

COARSE-GRAINED SOILS (GRAVEL AND SAND)

DESIGNATION	BLOWS PER FOOT (BPF)
VERY LOOSE	0-4
LOOSE	5-10
MEDIUM DENSE	11-30
DENSE	31-50
VERY DENSE	>50

NOTE: "N" VALUE DETERMINED AS PER ASTM D 1586

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
4617 PARKBREEZE COURT
ORLANDO, FLORIDA 32808
(321) 482-4239
www.gtaeng.com

© Geo-Technology Associates, Inc.

SHEET NO. B-1

STRAIN POLES
MLK BELTWAY & CASSADAGA ROAD
VOLUSIA COUNTY, FLORIDA

SPT BORING SHEET

F-13

PROJECT: 31211343 | DATE: OCTOBER 2021 | SCALE: AS SHOWN | DRAWN BY: YMR | REVIEW BY: GSP | FIGURE: 2

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: CR 4101 & Taylor Road
DeLand
ISOLATED: X
DATE: 5/10/2022

SIGNAL #: 446
CO-ORD:
Design By: M. Tobin

System #:

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	SBL	NB	-	WB	NBL	SB	WBL	EB	
TURN TYPE	PERM/PROT	-	-	-	PERM/PROT	-	PERM/PROT	-	
MIN GREEN	7	17		7	7	17	7	7	
EXTENSION	3	3		3.5	3	3	3	3.5	
CLEARANCE	3.0	5.5		4.0	3.0	5.5	4.0	4.0	
ALL RED	2.0	2.0		2.5	2.0	2.0	2.0	2.5	
WALK	-	-		-	-	-	-	-	
FDW	-	-		-	-	-	-	-	
MAX 1	25	45		30	25	45	20	30	
MAX 2									
DYM MAX				-					
DYM Stp				-					
RECALL	-	MIN		-	-	MIN	-		
DETECTOR	NON-LOCK	LOCK		NON-LOCK	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	
FLASH	YELLOW	YELLOW		RED	YELLOW	YELLOW	YELLOW	RED	
SET	-	2		-	-	2			
CLEAR	-	2		-	-	2			

BASE DAY		1	2	3	4	5	6	7
	TIME	00:01-00:00						
MON #1	PLAN	FREE						
	TIME	00:01-00:00						
TUES#1	PLAN	FREE						
	TIME	00:01-00:00						
WED #1	PLAN	FREE						
	TIME	00:01-00:00						
THU #1	PLAN	FREE						
	TIME	00:01-00:00						
FRI #1	PLAN	FREE						
	TIME	00:01-00:00						
SAT #2	PLAN	FREE						
	TIME	00:01-00:00						
SUN #3	PLAN	FREE						

Crosswalk Length
P2
-
P4
-
P6
-
P8
-

CONTROLLER TYPE		CONDITION OF OVERHEAD	New	PROM NUMBER	SIGNAL OWNER
ASC/3		OVERHEAD STREET NAMES	NO		COUNTY
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	ECONOLITE 2.62.0	LED: YES
CABINET TYPE	V	PRE-EMPTION	NO	IP ADDRESS	
CABINET DATE	6/2015	PRE-EMPTION TYPE	N/A		

REMARKS:

Speed Limit 50 MPH----Taylor R
Speed Limit 55 MPH----MLK Beltway

1	2	3	4
5	6		8

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Graves Avenue & CR 4101-Kentucky Av
Orange City
ISOLATED: X
DATE: 10/15/2018

SIGNAL #: 229
CO-ORD:
Design By: Sean Castello

System #: -

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8
DIRECTION	-	EB	SB	NB	EBL	WB	-	-
TURN TYPE	-	-	SPLIT LEAD	SPLIT LAG	PERM/PROT	-	-	-
MIN GREEN		11	7	7	5	11		
EXTENSION		4	3	3	3	4		
CLEARANCE		5.0	5.0	4.0	4.0	5.0		
ALL RED		2.0	2.0	3.0	2.0	2.0		
WALK		-	-		-			
FDW		-	-		-			
MAX 1		50	50	20	20	50		
MAX 2		-	-	-	-	-		
MAX 3		-	-	-	60	-		
ADJUST		-	-	-	10	-		
RECALL		MIN	-	-	-	MIN		
DETECTOR		LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK		
FLASH		YELLOW	RED	RED	-	YELLOW		
SET		-	-	-		-		
CLEAR		-	-	-		-		

BASE DAY		1	2	3	4	5	6	7
MON #1	TIME	00:01-00:00						
	PLAN	FREE						
TUES#1	TIME	00:01-00:00						
	PLAN	FREE						
WED #1	TIME	00:01-00:00						
	PLAN	FREE						
THU #1	TIME	00:01-00:00						
	PLAN	FREE						
FRI #1	TIME	00:01-00:00						
	PLAN	FREE						
SAT #1	TIME	00:01-00:00						
	PLAN	FREE						
SUN #1	TIME	00:01-00:00						
	PLAN	FREE						

Crosswalk Length
P2
-
P4
-
P6
-
P8
-

CONTROLLER TYPE		CONDITION OF OVERHEAD	New - 2011	PROM NUMBER	SIGNAL OWNER
1880 EL		OVERHEAD STREET NAMES	YES		
PHASES:	8Φ	ILLUMINATED STREET NAMES	NO		
CABINET TYPE	V	PRE-EMPTION	NO	IP ADDRESS	County
CABINET DATE	2017	PRE-EMPTION TYPE	N/A	-	LED YES

REMARKS:

	2	3 & 6R 4
5 & 3R	6	

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Graves Ave. @ Veterans Memorial Pkwy
Deltona

FREE: X

DATE: 2/15/2017

SIGNAL #: 350

CO-ORD:

Design By: M. Tobin

NETWORK #: Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	WBL	EB				WB		NB	
TURN TYPE	PERM/PROT	-				-		-	
MIN GREEN	7	11				11		7	
EXTENSION	3	4				4		3	
YELLOW	4.5	4.5				4.5		5.0	
RED CLR	2.5	2.5				2.5		2.0	
WALK		7						7	
PED CLR		27						16	
MAX 1	20	30				30		25	
MAX 2									
MAX 3		-				-			
DYM MAX	35								
DYM STP	10								
RECALL		MIN				MIN			
DETECTOR	NON-LOCK	LOCK				LOCK		NON-LOCK	
FLASH	-	YELLOW				YELLOW		RED	

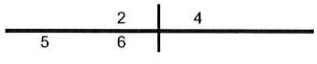
COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE				-	-	-	-	-	
OFFSET				-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1									
PATTERN 2									
PATTERN 3									
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:



COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Veterans Memorial Pkwy & Rhode Island Blvd
Orange City ISOLATED: X DATE: 7/14/2017

SIGNAL #: 375 CO-ORD: Design By: M. Tobin

System #: -

Controller Timing Chart

PHASE	1	2	3	4	5	OLA	7	8	
DIRECTION	NBL	SB	-	EB	-	NB	-	-	
TURN TYPE	PERM/PROT	-	-	-	-	-	-	-	
MIN GREEN	5	11		7		11			
EXTENSION	3	4		3		4			
CLEARANCE	5.5	5.5		3.5		5.5			
ALL RED	3.0	3.0		3.0		3.0			
WALK	-	7		7		7			
FDW	-	20		18		20			
MAX 1	15	35		20		35			
MAX 2	-	-		-		-			
MAX 3	-	60		-		-			
ADJUST	-	10		-		-			
RECALL	-	MIN		-		MIN			
DETECTOR	NON-LOCK	LOCK		NON-LOCK		LOCK			
FLASH	-	YELLOW		RED		YELLOW			
SET	-	1		-		-			
CLEAR	-	2		-		-			

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
MON #1	TIME	00:00-00:00							P2
	PLAN	FREE							
TUES#1	TIME	00:00-00:00							70 Feet
	PLAN	FREE							
WED #1	TIME	00:00-00:00							P4
	PLAN	FREE							
THU #1	TIME	00:00-00:00							63 Feet
	PLAN	FREE							
FRI #1	TIME	00:00-00:00							P6
	PLAN	FREE							
SAT #2	TIME	00:00-00:00							-
	PLAN	FREE							
SUN #3	TIME	00:00-00:00							P8
	PLAN	FREE							

CONTROLLER TYPE		CONDITION OF OVERHEAD	Fair	PROM NUMBER	P8
1880 EL		OVERHEAD STREET NAMES	NO		-
PHASES:	4Φ	ILLUMINATED STREET NAMES	NO	92R09	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	NO	IP ADDRESS	County
CABINET DATE	05/1998	PRE-EMPTION TYPE	N/A	-	LED YES

REMARKS:

1	2	4
OLA		

VOLUSIA COUNTY TRAFFIC ENGINEERING
SYSTEM INVENTORY

Volusia County
FLORIDA

Switch IP.# _____
Controller IP.# -
Camera IP # _____

DATE: 7/14/2017 DESIGNED BY: M. Tobin

LOCATION: ans Memorial Pkwy & Rhode Islan

CITY: Orange City SIGNAL ID NO: 375 SYSTEM ID: -

CONTROLLER TIME CHART

TP# XX

MVMNT	MIN	EXT	CLR	A.R.	WALK	FDW	MAX1	MAX2	MAX3	ADJST	REC	DET	FL	SET	CLR
1	5	3	5.5	3	-	-	15	-	-	-	-	NL	-	-	-
2	11	4	5.5	3	7	20	35	-	60	10	MIN	L	Y	1	2
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	7	3	3.5	3	7	18	20	-	-	-	-	NL	R	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	11	4	5.5	3	7	20	35	-	-	-	MIN	L	Y	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CO-ORDINATION

PLAN	C1/S1	C2/S1	C3/S1	C4/S1	C5/S1	C6/S1		
CYCLE								
OFF 1								
OFF 2								
OFF 3								
OFF 4								
OFF 5								
PERM	10%	10%	10%	10%	10%	10%	10%	10%

PHASE SPLITS (seconds)

CY/SP	C1/S1	C2/S1	C3/S1	C4/S1	C5/S1	C6/S1		
PH 1	-	-	-	-	-	-		
PH 2	-	-	-	-	-	-		
PH 3	-	-	-	-	-	-		
PH 4	-	-	-	-	-	-		
PH 5	-	-	-	-	-	-		
PH 6	-	-	-	-	-	-		
PH 7	-	-	-	-	-	-		
PH 8	-	-	-	-	-	-		

1	2	4
	OLA	

BASE DAY		1	2	3	4	5	6	7	8	9	10	11	
	TIME	00:00-00:00											
MON #1	PLAN	FREE											
	TIME	00:00-00:00											
TUES#1	PLAN	FREE											
	TIME	00:00-00:00											
WED #1	PLAN	FREE											
	TIME	00:00-00:00											
THU #1	PLAN	FREE											
	TIME	00:00-00:00											
FRI #1	PLAN	FREE											
	TIME	00:00-00:00											
SAT #2	PLAN	FREE											
	TIME	00:00-00:00											
SUN #3	PLAN	FREE											

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Howland Blvd @ I 4 EB RAMP
Deltona

FREE: [ ]

DATE: 5/10/2022

SIGNAL #: 359

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8
DIRECTION		WB		NB		EB		
TURN TYPE		-		SPLIT LEAD		-		
MIN GREEN		17		7		17		
EXTENSION		4		3		4		
YELLOW		5.5		4.8		5.5		
RED CLR		2.0		2.4		2.0		
WALK						0		
PED CLR								
MAX 1		40		25		60		
MAX 2								
MAX 3		-		-		-		
DYM MAX								
DYM STP								
RECALL		MIN		-		MIN		
DETECTOR		LOCK		NON-LOCK		LOCK		
FLASH		YELLOW		RED		YELLOW		

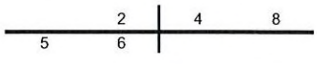
COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8
CYCLE	150	130	150	-	-	-	-	-
OFFSET	74	84	73	-	-	-	-	-

PHASE	1	2	3	4	5	6	7	8
PATTERN 1		96		54		96		54
PATTERN 2		72		58		72		58
PATTERN 3		91		59		91		59
PATTERN 4	-	-	-	-	-	-	-	-
PATTERN 5	-	-	-	-	-	-	-	-
PATTERN 6	-	-	-	-	-	-	-	-
PATTERN 7	-	-	-	-	-	-	-	-

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:



COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Howland Blvd @ I 4 EB RAMP
Deltona

FREE: [ ]

DATE: 5/10/2022

SIGNAL #: 359

CO-ORD: [X]

Design By: Sean Castello

Volusia County FLORIDA

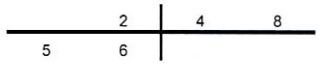
NETWORK #: Deltona Area Network # 90

TIME OF DAY SCHEDULE

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	06:30-09:00	09:00-15:30	15:30-18:15	18:15-00:00				
MON #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P2
	TIME	06:30-09:00	09:00-15:30	15:30-18:15	18:15-00:00				
TUES #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				86
	TIME	06:30-09:00	09:00-15:30	15:30-18:15	18:15-00:00				
WED #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P4
	TIME	06:30-09:00	09:00-15:30	15:30-18:15	18:15-00:00				
THU #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-15:30	15:30-18:15	18:15-00:00				
FRI #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P6
	TIME	00:00-00:00							
SAT #2	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #2	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	02.62.00	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE	03/2008	PRE-EMPTION TYPE	INFRARED		LED YES

REMARKS:



COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Howland Blvd @ I 4 WB RAMP
Deltona

FREE: [ ]

DATE: 5/10/2022

SIGNAL #: 358

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8
DIRECTION		WB			WBL	EB		SB
TURN TYPE		-			PROT	-		-
MIN GREEN		17			6	17		7
EXTENSION		3			3	3		3
YELLOW		5.1			5.1	5.1		5.1
RED CLR		2.0			2.0	2.0		2.9
WALK		7						
PED CLR		20						
MAX 1		40			25	40		25
MAX 2								
MAX 3		-				-		
DYM MAX					60			
DYM STP					10			
RECALL		MIN				MIN		
DETECTOR		LOCK			LOCK	LOCK		NON-LOCK
FLASH		YELLOW			RED	YELLOW		RED

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8
CYCLE	150	130	150	-	-	-	-	-
OFFSET	138	11	38	-	-	-	-	-

PHASE	1	2	3	4	5	6	7	8
PATTERN 1		120	30		80	40		30
PATTERN 2		101	29		43	58		29
PATTERN 3		111	39		45	66		39
PATTERN 4	-	-	-	-	-	-	-	-
PATTERN 5	-	-	-	-	-	-	-	-
PATTERN 6	-	-	-	-	-	-	-	-
PATTERN 7	-	-	-	-	-	-	-	-

Controller IP		Switch IP		Camera IP		
Controller Gateway		Switch Gateway		Camera Gateway		

REMARKS:

PATTERNS 2,3 FREE
SEQ #1: 5 6 | 2 8

PATTERN 1
SEQ #5: 6 5 | 2 8

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Howland Blvd @ I 4 WB RAMP
Deltona

FREE: [ ]

DATE: 5/10/2022

SIGNAL #: 358

CO-ORD: [X]

Design By: Sean Castello

Volusia County FLORIDA

NETWORK #: Deltona Area Network # 90

TIME OF DAY SCHEDULE

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
MON #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P2
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
TUES #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				66
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
WED #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P4
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
THU #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
FRI #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P6
	TIME	00:00-00:00							
SAT #2	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #2	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	02.62.00	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE	03/2008	PRE-EMPTION TYPE	INFRARED		LED YES

REMARKS:

PATTERNS 1, 2, FREE		2	8
SEQ #1	5	6	

PATTERN 3		2	8
SEQ #5	6	5	

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Howland Blvd @ Graves Ave.
Deltona

FREE: [ ]

DATE: 5/10/2022

SIGNAL #: 360

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	EBL	WB	-	NB	WBL	EB	-	SB	
TURN TYPE	PERM/PROT	-	-	SPLIT LEAD	PROT	-	-	SPLIT LAG	
MIN GREEN	7	17		7	5	17		7	
EXTENSION	3	4		3	3	4		3	
YELLOW	5.0	5.5		5.0	5.0	5.5		5.0	
RED CLR	2.0	2.0		3.0	2.0	2.0		2.5	
WALK		9				7			
PED CLR		23							
MAX 1	20	60		30	30	60		20	
MAX 2									
MAX 3		-		-		-			
DYM MAX									
DYM STP									
RECALL		MIN		-		MIN			
DETECTOR	NON-LOCK	LOCK		NON-LOCK	NON-LOCK	LOCK		NON-LOCK	
FLASH	-	YELLOW		RED	-	YELLOW		RED	

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE	150	130	150	-	-	-	-	-	
OFFSET	82	80	89	-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1	25	79		30	54	40		16	
PATTERN 2	25	59		30	34	50		16	
PATTERN 3	14	104		18	34	76		14	
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:
Pattern #3, Sequence #2 by TOD

Pattern #1 & 2: 1 2 4 8 / 5 6

Pattern #3: 2 1 4 8 / 5 6

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Graves Ave. @ Normandy Blvd.
Deltona

FREE: X

DATE: 5/19/2017

SIGNAL #: 347

CO-ORD:

Design By: M. Tobin

NETWORK #: Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION		WB		NB	WBL	EB			
TURN TYPE		-		-	PERM/PROT	-			
MIN GREEN		12		7	5	12			
EXTENSION		4		3	3	4			
YELLOW		5.0		4.0	5.0	5.0			
RED CLR		2.0		2.0	2.0	2.0			
WALK						7			
PED CLR									
MAX 1		45		25	20	45			
MAX 2									
MAX 3		-		-		-			
DYM MAX		90				90			
DYM STP		10				10			
RECALL		MIN		-		MIN			
DETECTOR		LOCK		NON-LOCK	NON-LOCK	LOCK			
FLASH		YELLOW		RED	-	YELLOW			

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE				-	-	-	-	-	
OFFSET				-	-	-	-	-	

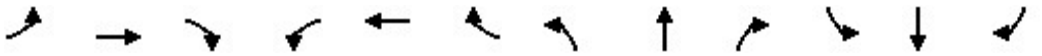
PHASE	1	2	3	4	5	6	7	8	
PATTERN 1									
PATTERN 2									
PATTERN 3									
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:
Omit Phase 5 when Phase 6 is active



Appendix G:
Existing Conditions Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	1038	229	144	985	225	121	193	82	217	270	86
Future Volume (vph)	67	1038	229	144	985	225	121	193	82	217	270	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.3	8.3	8.3	8.3	8.3	8.3		8.8	8.8	9.4	9.4	9.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3539	1599	1719	3539	1583		1814	1583	1752	1863	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	3539	1599	1719	3539	1583		1814	1583	1752	1863	1509
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	1070	236	148	1015	232	125	199	85	224	278	89
RTOR Reduction (vph)	0	0	159	0	0	149	0	0	69	0	0	74
Lane Group Flow (vph)	69	1070	77	148	1015	83	0	324	16	224	278	15
Heavy Vehicles (%)	5%	2%	1%	5%	2%	2%	4%	2%	2%	3%	2%	7%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	8.3	49.1	49.1	13.1	53.9	53.9		28.1	28.1	24.9	24.9	24.9
Effective Green, g (s)	8.3	49.1	49.1	13.1	53.9	53.9		28.1	28.1	24.9	24.9	24.9
Actuated g/C Ratio	0.06	0.33	0.33	0.09	0.36	0.36		0.19	0.19	0.17	0.17	0.17
Clearance Time (s)	8.3	8.3	8.3	8.3	8.3	8.3		8.8	8.8	9.4	9.4	9.4
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	95	1158	523	150	1271	568		339	296	290	309	250
v/s Ratio Prot	0.04	c0.30		c0.09	c0.29			c0.18		0.13	c0.15	
v/s Ratio Perm			0.05			0.05			0.01			0.01
v/c Ratio	0.73	0.92	0.15	0.99	0.80	0.15		0.96	0.05	0.77	0.90	0.06
Uniform Delay, d1	69.7	48.7	35.7	68.4	43.2	32.5		60.3	50.0	59.8	61.3	52.7
Progression Factor	1.00	1.00	1.00	1.15	1.14	3.74		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.9	13.5	0.6	64.8	4.7	0.5		37.2	0.1	12.7	27.5	0.1
Delay (s)	93.6	62.2	36.3	143.4	54.1	122.1		97.5	50.1	72.5	88.8	52.8
Level of Service	F	E	D	F	D	F		F	D	E	F	D
Approach Delay (s)		59.3			74.9			87.7			77.2	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	71.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	34.8
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	69	1070	236	148	1015	232	324	85	224	278	89
v/c Ratio	0.62	0.92	0.35	0.99	0.77	0.32	0.95	0.20	0.77	0.90	0.23
Control Delay	91.9	62.2	5.5	140.3	53.8	16.2	97.7	1.0	77.9	92.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.9	62.2	5.5	140.3	53.8	16.2	97.7	1.0	77.9	92.6	1.4
Queue Length 50th (ft)	67	528	0	~168	380	42	317	0	211	269	0
Queue Length 95th (ft)	122	#656	61	m#316	592	137	#510	0	#328	#430	0
Internal Link Dist (ft)		900			559		708			484	
Turn Bay Length (ft)	465		485	460		485		550	180		230
Base Capacity (vph)	122	1172	687	150	1310	731	341	433	299	317	392
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.91	0.34	0.99	0.77	0.32	0.95	0.20	0.75	0.88	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	65	27	405	78	45	491
Future Volume (vph)	65	27	405	78	45	491
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	1495	1845	1568	1770	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.35	1.00
Satd. Flow (perm)	1805	1495	1845	1568	648	1827
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	29	440	85	49	534
RTOR Reduction (vph)	0	26	0	26	0	0
Lane Group Flow (vph)	71	3	440	59	49	534
Heavy Vehicles (%)	0%	8%	3%	3%	2%	4%
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	6.7	6.7	26.1	26.1	37.8	37.8
Effective Green, g (s)	6.7	6.7	26.1	26.1	37.8	37.8
Actuated g/C Ratio	0.11	0.11	0.44	0.44	0.64	0.64
Clearance Time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	205	170	818	696	496	1174
v/s Ratio Prot	c0.04		c0.24		0.01	c0.29
v/s Ratio Perm		0.00		0.04	0.06	
v/c Ratio	0.35	0.02	0.54	0.09	0.10	0.45
Uniform Delay, d1	24.0	23.1	11.9	9.5	4.9	5.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0	0.7	0.1	0.1	0.3
Delay (s)	25.1	23.2	12.6	9.5	4.9	5.6
Level of Service	C	C	B	A	A	A
Approach Delay (s)	24.5		12.1			5.5
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	21.8
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	71	29	440	85	49	534
v/c Ratio	0.24	0.11	0.45	0.10	0.09	0.43
Control Delay	25.6	11.6	16.1	8.0	5.2	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	11.6	16.1	8.0	5.2	7.5
Queue Length 50th (ft)	21	0	125	9	6	87
Queue Length 95th (ft)	61	21	237	36	18	166
Internal Link Dist (ft)	1320		791			656
Turn Bay Length (ft)	180			145	125	
Base Capacity (vph)	1595	1325	1845	1568	1093	1827
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.02	0.24	0.05	0.04	0.29

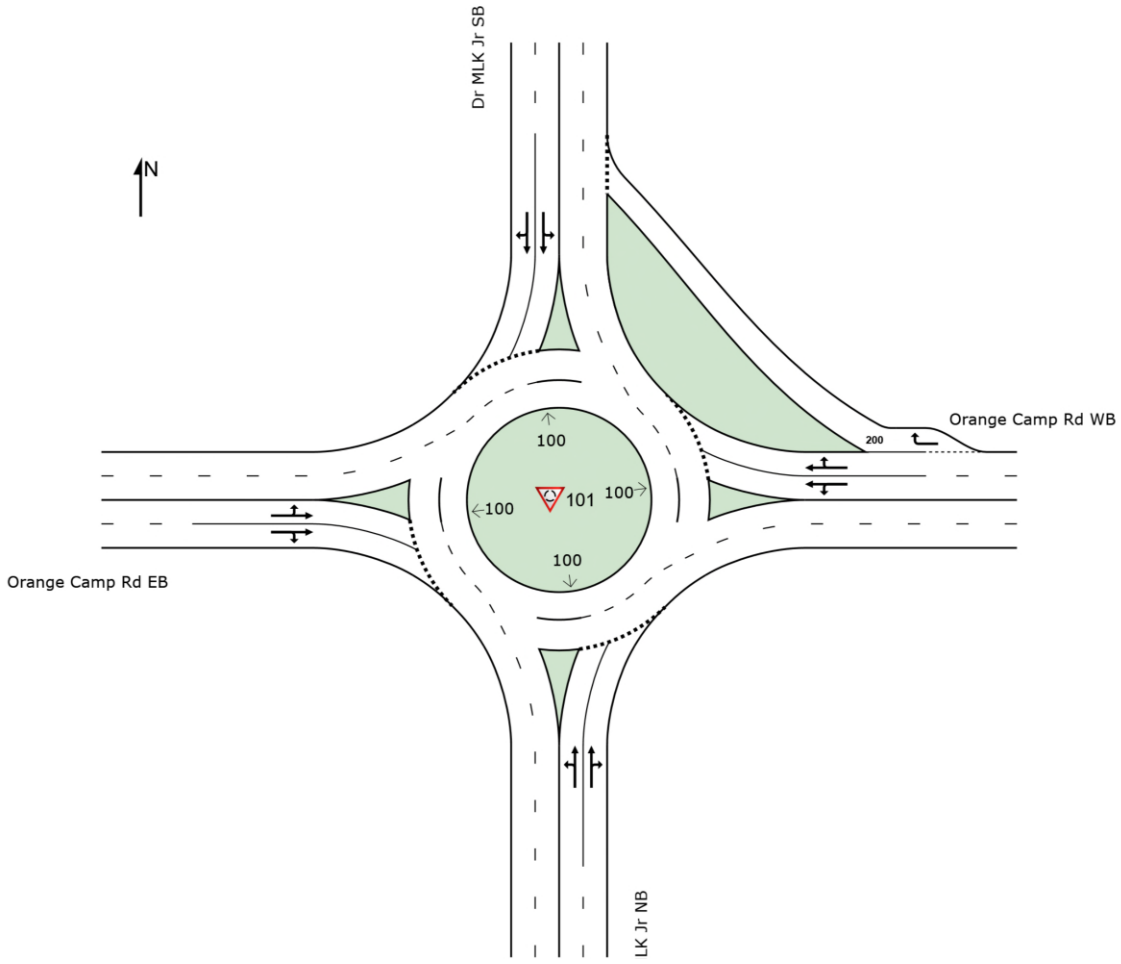
Intersection Summary

SITE LAYOUT

Site: 101 [2022 Existing PM Peak Hour Conditions (Site Folder: General)]

Existing Roundabout
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2022 Existing PM Peak Hour Conditions (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

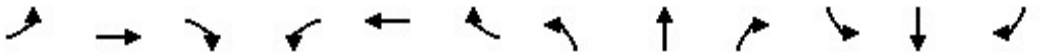
Existing Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Dr MLK Jr NB															
3	L2	All MCs	116	1.0	116	1.0	0.433	12.0	LOS B	2.2	54.7	0.70	0.73	0.93	29.4
8	T1	All MCs	366	1.0	366	1.0	0.433	11.5	LOS B	2.2	55.1	0.69	0.71	0.92	30.6
18	R2	All MCs	100	0.0	100	0.0	0.433	10.8	LOS B	2.2	55.1	0.68	0.70	0.91	30.9
Approach			583	0.8	583	0.8	0.433	11.5	LOS B	2.2	55.1	0.69	0.71	0.92	30.4
East: Orange Camp Rd WB															
1	L2	All MCs	109	5.0	109	5.0	0.331	8.8	LOS A	1.4	35.5	0.59	0.49	0.59	30.7
6	T1	All MCs	443	1.0	443	1.0	0.331	7.9	LOS A	1.4	35.6	0.58	0.47	0.58	32.2
16	R2	All MCs	140	2.0	140	2.0	0.145	5.1	LOS A	0.5	13.8	0.45	0.34	0.45	33.5
Approach			692	1.8	692	1.8	0.331	7.4	LOS A	1.4	35.6	0.56	0.45	0.56	32.2
North: Dr MLK Jr SB															
7	L2	All MCs	157	3.0	157	3.0	0.460	11.8	LOS B	2.4	63.1	0.69	0.71	0.96	29.1
4	T1	All MCs	350	6.0	350	6.0	0.460	12.0	LOS B	2.4	63.1	0.68	0.69	0.95	30.3
14	R2	All MCs	130	4.0	130	4.0	0.460	11.2	LOS B	2.4	62.5	0.67	0.68	0.94	30.6
Approach			637	4.9	637	4.9	0.460	11.8	LOS B	2.4	63.1	0.68	0.69	0.95	30.0
West: Orange Camp Rd EB															
5	L2	All MCs	49	7.0	49	7.0	0.527	13.9	LOS B	3.2	83.5	0.72	0.76	1.08	29.2
2	T1	All MCs	555	5.0	555	5.0	0.527	13.1	LOS B	3.3	84.6	0.71	0.74	1.07	30.1
12	R2	All MCs	154	2.0	154	2.0	0.527	12.0	LOS B	3.3	84.6	0.70	0.73	1.05	30.2
Approach			759	4.5	759	4.5	0.527	13.0	LOS B	3.3	84.6	0.71	0.74	1.07	30.1
All Vehicles			2670	3.1	2670	3.1	0.527	10.9	LOS B	3.3	84.6	0.66	0.65	0.87	30.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

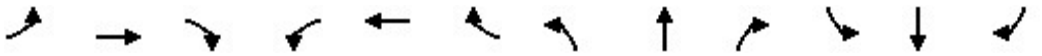
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	61	108	19	49	60	153	401	26	22	474	70
Future Volume (veh/h)	50	61	108	19	49	60	153	401	26	22	474	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1811	1811	1900	1900	1900	1856	1900	1752	1826	1856
Adj Flow Rate, veh/h	54	66	83	20	53	65	165	431	24	24	510	67
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	6	6	0	0	0	3	0	10	5	3
Cap, veh/h	84	102	154	49	129	153	350	733	636	354	603	519
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.10	0.40	0.40	0.04	0.33	0.33
Sat Flow, veh/h	836	1022	1535	514	1361	1610	1810	1856	1610	1668	1826	1572
Grp Volume(v), veh/h	120	0	83	73	0	65	165	431	24	24	510	67
Grp Sat Flow(s),veh/h/ln	1858	0	1535	1874	0	1610	1810	1856	1610	1668	1826	1572
Q Serve(g_s), s	4.3	0.0	3.5	2.5	0.0	2.6	3.8	12.5	0.6	0.6	17.8	2.0
Cycle Q Clear(g_c), s	4.3	0.0	3.5	2.5	0.0	2.6	3.8	12.5	0.6	0.6	17.8	2.0
Prop In Lane	0.45		1.00	0.27		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	0	154	178	0	153	350	733	636	354	603	519
V/C Ratio(X)	0.65	0.00	0.54	0.41	0.00	0.43	0.47	0.59	0.04	0.07	0.85	0.13
Avail Cap(c_a), veh/h	489	0	404	493	0	423	641	1369	1188	462	1054	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	0.0	29.3	29.2	0.0	29.2	14.6	16.3	12.7	14.4	21.3	16.0
Incr Delay (d2), s/veh	4.5	0.0	3.5	1.8	0.0	2.3	1.0	0.8	0.0	0.1	3.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	2.4	2.2	0.0	1.8	2.2	7.8	0.3	0.4	11.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	0.0	32.8	31.0	0.0	31.5	15.6	17.1	12.7	14.5	24.7	16.1
LnGrp LOS	C	A	C	C	A	C	B	B	B	B	C	B
Approach Vol, veh/h		203			138			620			601	
Approach Delay, s/veh		33.6			31.2			16.5			23.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	34.5		13.0	12.0	30.1		13.4				
Change Period (Y+Rc), s	5.0	7.5		6.5	5.0	7.5		6.5				
Max Green Setting (Gmax), s	7.0	50.5		18.0	18.0	39.5		18.0				
Max Q Clear Time (g_c+I1), s	2.6	14.5		4.6	5.8	19.8		6.3				
Green Ext Time (p_c), s	0.0	2.4		0.5	0.3	2.8		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		22.6	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	477	32	14	343	189	28	7	26	307	14	287
Future Volume (vph)	236	477	32	14	343	189	28	7	26	307	14	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.0		7.0	7.0	7.0		7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1787	1847		1805	1863	1599		1647		1787	1900	1568
Flt Permitted	0.26	1.00		0.46	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (perm)	492	1847		882	1863	1599		1647		1787	1900	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	248	502	34	15	361	199	29	7	27	323	15	302
RTOR Reduction (vph)	0	2	0	0	0	144	0	17	0	0	0	227
Lane Group Flow (vph)	248	534	0	15	361	55	0	46	0	323	15	75
Heavy Vehicles (%)	1%	2%	0%	0%	2%	1%	7%	0%	7%	1%	0%	3%
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2			6		4	4		3	3	
Permitted Phases	2			6		6						3
Actuated Green, G (s)	54.5	54.5		30.4	30.4	30.4		7.2		27.3	27.3	27.3
Effective Green, g (s)	54.5	54.5		30.4	30.4	30.4		7.2		27.3	27.3	27.3
Actuated g/C Ratio	0.50	0.50		0.28	0.28	0.28		0.07		0.25	0.25	0.25
Clearance Time (s)	6.0	7.0		7.0	7.0	7.0		7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	4.0		4.0	4.0	4.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	456	915		243	514	441		107		443	471	389
v/s Ratio Prot	0.09	c0.29			c0.19			c0.03		c0.18	0.01	
v/s Ratio Perm	0.18			0.02		0.03						0.05
v/c Ratio	0.54	0.58		0.06	0.70	0.12		0.43		0.73	0.03	0.19
Uniform Delay, d1	18.4	19.7		29.3	35.7	29.8		49.4		38.0	31.3	32.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.3	1.1		0.1	4.6	0.2		2.8		5.9	0.0	0.2
Delay (s)	19.7	20.8		29.4	40.4	30.0		52.2		43.9	31.4	32.9
Level of Service	B	C		C	D	C		D		D	C	C
Approach Delay (s)		20.5			36.5			52.2			38.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	248	536	15	361	199	63	323	15	302
v/c Ratio	0.54	0.58	0.06	0.71	0.34	0.39	0.73	0.03	0.49
Control Delay	22.7	25.0	35.4	47.3	6.6	50.4	50.9	36.4	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	25.0	35.4	47.3	6.6	50.4	50.9	36.4	7.2
Queue Length 50th (ft)	101	268	8	241	0	32	217	8	0
Queue Length 95th (ft)	207	504	29	420	59	93	388	30	73
Internal Link Dist (ft)		965		1007		975		1049	
Turn Bay Length (ft)	165		165		320		260		115
Base Capacity (vph)	509	1316	442	935	902	345	897	954	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.41	0.03	0.39	0.22	0.18	0.36	0.02	0.32

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	316	358	333	310	125	450
Future Volume (veh/h)	316	358	333	310	125	450
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1856	1870
Adj Flow Rate, veh/h	322	323	340	316	128	407
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	3	2
Cap, veh/h	493	421	480	986	505	453
Arrive On Green	0.26	0.26	0.16	0.52	0.29	0.29
Sat Flow, veh/h	1870	1598	1795	1885	1767	1585
Grp Volume(v), veh/h	322	323	340	316	128	407
Grp Sat Flow(s),veh/h/ln	1870	1598	1795	1885	1767	1585
Q Serve(g_s), s	11.2	13.7	9.3	7.0	4.1	18.1
Cycle Q Clear(g_c), s	11.2	13.7	9.3	7.0	4.1	18.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	493	421	480	986	505	453
V/C Ratio(X)	0.65	0.77	0.71	0.32	0.25	0.90
Avail Cap(c_a), veh/h	766	655	676	1467	603	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	24.9	15.5	10.0	20.1	25.1
Incr Delay (d2), s/veh	2.1	4.2	2.0	0.3	0.3	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	8.8	6.2	4.3	2.7	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	29.1	17.5	10.3	20.4	41.0
LnGrp LOS	C	C	B	B	C	D
Approach Vol, veh/h	645			656	535	
Approach Delay, s/veh	27.6			14.0	36.1	
Approach LOS	C			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	19.0	26.3				45.3	27.9
Change Period (Y+Rc), s	7.0	7.0				7.0	7.0
Max Green Setting (Gmax), s	20.0	30.0				57.0	25.0
Max Q Clear Time (g_c+I1), s	11.3	15.7				9.0	20.1
Green Ext Time (p_c), s	0.7	3.6				2.7	0.9

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

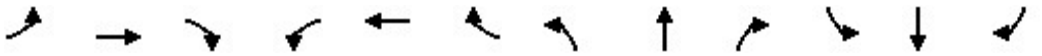
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	214	267	274	402	589	129
Future Volume (veh/h)	214	267	274	402	589	129
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1856	1870
Adj Flow Rate, veh/h	246	307	315	462	677	148
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	3	4	3	2
Cap, veh/h	392	349	349	1135	704	602
Arrive On Green	0.22	0.22	0.14	0.62	0.38	0.38
Sat Flow, veh/h	1781	1585	1767	1841	1856	1585
Grp Volume(v), veh/h	246	307	315	462	677	148
Grp Sat Flow(s),veh/h/ln	1781	1585	1767	1841	1856	1585
Q Serve(g_s), s	11.5	17.2	11.1	11.8	32.8	5.9
Cycle Q Clear(g_c), s	11.5	17.2	11.1	11.8	32.8	5.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	392	349	349	1135	704	602
V/C Ratio(X)	0.63	0.88	0.90	0.41	0.96	0.25
Avail Cap(c_a), veh/h	484	431	382	1171	706	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	34.7	24.3	9.0	27.9	19.5
Incr Delay (d2), s/veh	1.8	16.1	22.6	0.3	24.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	12.5	10.3	6.8	24.6	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.2	50.8	46.9	9.3	52.5	19.8
LnGrp LOS	C	D	D	A	D	B
Approach Vol, veh/h	553			777	825	
Approach Delay, s/veh	43.4			24.6	46.6	
Approach LOS	D			C	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.8	43.4		26.7		65.2
Change Period (Y+Rc), s	8.5	8.5		6.5		8.5
Max Green Setting (Gmax), s	15.0	35.0		25.0		58.5
Max Q Clear Time (g_c+I1), s	13.1	34.8		19.2		13.8
Green Ext Time (p_c), s	0.2	0.1		1.0		4.2

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑					↰↰		↱
Traffic Volume (veh/h)	0	699	638	287	1061	0	0	0	0	368	0	276
Future Volume (veh/h)	0	699	638	287	1061	0	0	0	0	368	0	276
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1885	1870	1870	0				1885	0	1826
Adj Flow Rate, veh/h	0	744	0	305	1129	0				391	0	294
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	1	2	2	0				1	0	5
Cap, veh/h	0	874		726	2477	0				705	0	313
Arrive On Green	0.00	0.24	0.00	0.41	0.70	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3705	1598	1781	3647	0				3483	0	1547
Grp Volume(v), veh/h	0	744	0	305	1129	0				391	0	294
Grp Sat Flow(s),veh/h/ln	0	1805	1598	1781	1777	0				1742	0	1547
Q Serve(g_s), s	0.0	29.5	0.0	18.4	21.2	0.0				15.1	0.0	28.1
Cycle Q Clear(g_c), s	0.0	29.5	0.0	18.4	21.2	0.0				15.1	0.0	28.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	874		726	2477	0				705	0	313
V/C Ratio(X)	0.00	0.85		0.42	0.46	0.00				0.55	0.00	0.94
Avail Cap(c_a), veh/h	0	1418		726	2477	0				720	0	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.84	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	54.3	0.0	31.8	10.1	0.0				53.7	0.0	58.9
Incr Delay (d2), s/veh	0.0	10.2	0.0	0.3	0.5	0.0				0.9	0.0	34.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	20.4	0.0	11.9	11.6	0.0				11.0	0.0	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	64.5	0.0	32.1	10.6	0.0				54.6	0.0	93.1
LnGrp LOS	A	E		C	B	A				D	A	F
Approach Vol, veh/h		744			1434						685	
Approach Delay, s/veh		64.5			15.2						71.2	
Approach LOS		E			B						E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		111.6			68.2	43.4		38.4				
Change Period (Y+Rc), s		7.1			7.1	7.1		8.0				
Max Green Setting (Gmax), s		103.9			37.9	58.9		31.0				
Max Q Clear Time (g_c+I1), s		23.2			20.4	31.5		30.1				
Green Ext Time (p_c), s		9.5			0.8	4.8		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			41.4									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	904	87	0	946	694	708
Future Volume (veh/h)	904	87	0	946	694	708
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	0	1870	1870	1856
Adj Flow Rate, veh/h	942	0	0	985	723	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	4	0	2	2	3
Cap, veh/h	2393		0	3411	809	
Arrive On Green	1.00	0.00	0.00	0.67	0.23	0.00
Sat Flow, veh/h	3676	1560	0	5443	3456	1572
Grp Volume(v), veh/h	942	0	0	985	723	0
Grp Sat Flow(s),veh/h/ln	1791	1560	0	1702	1728	1572
Q Serve(g_s), s	0.0	0.0	0.0	11.9	30.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	11.9	30.4	0.0
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2393		0	3411	809	
V/C Ratio(X)	0.39		0.00	0.29	0.89	
Avail Cap(c_a), veh/h	2393		0	3411	1193	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	10.2	55.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	6.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	0.0	7.5	20.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.4	0.0	0.0	10.5	62.0	0.0
LnGrp LOS	A		A	B	E	
Approach Vol, veh/h	942			985	723	
Approach Delay, s/veh	0.4			10.5	62.0	
Approach LOS	A			B	E	

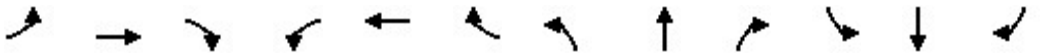
Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	107.7		42.3		107.7
Change Period (Y+Rc), s	7.5		* 7.2		7.5
Max Green Setting (Gmax), s	83.5		* 52		83.5
Max Q Clear Time (g_c+I1), s	13.9		32.4		2.0
Green Ext Time (p_c), s	11.7		2.7		11.3

Intersection Summary		
HCM 6th Ctrl Delay	20.9	
HCM 6th LOS	C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1541	147	358	849	43	140	37	362	23	22	68
Future Volume (veh/h)	46	1541	147	358	849	43	140	37	362	23	22	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1826	1841	1870	1841	1811	1767	1885	1767	1900	1796
Adj Flow Rate, veh/h	48	1605	153	373	884	45	92	114	0	24	23	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	1	5	4	2	4	6	9	1	9	0	7
Cap, veh/h	829	2018	872	431	2309	1013	109	112		79	89	71
Arrive On Green	0.04	0.56	0.56	0.13	0.65	0.65	0.06	0.06	0.00	0.05	0.05	0.05
Sat Flow, veh/h	3319	3582	1547	3401	3554	1560	1725	1767	1598	1682	1900	1522
Grp Volume(v), veh/h	48	1605	153	373	884	45	92	114	0	24	23	71
Grp Sat Flow(s),veh/h/ln	1659	1791	1547	1700	1777	1560	1725	1767	1598	1682	1900	1522
Q Serve(g_s), s	0.9	53.2	7.2	16.1	17.4	1.6	7.9	9.5	0.0	2.1	1.8	7.0
Cycle Q Clear(g_c), s	0.9	53.2	7.2	16.1	17.4	1.6	7.9	9.5	0.0	2.1	1.8	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	829	2018	872	431	2309	1013	109	112		79	89	71
V/C Ratio(X)	0.06	0.80	0.18	0.87	0.38	0.04	0.84	1.02		0.31	0.26	1.00
Avail Cap(c_a), veh/h	850	2018	872	612	2309	1013	109	112		79	89	71
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	25.9	15.9	64.2	12.3	9.5	69.5	70.3	0.0	69.1	69.0	71.5
Incr Delay (d2), s/veh	0.0	3.3	0.4	9.1	0.5	0.1	41.7	90.2	0.0	2.2	1.5	106.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	29.6	4.6	11.9	10.9	1.0	8.3	11.5	0.0	1.7	1.6	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	29.3	16.3	73.3	12.7	9.6	111.2	160.5	0.0	71.3	70.5	178.1
LnGrp LOS	B	C	B	E	B	A	F	F		E	E	F
Approach Vol, veh/h		1806			1302			206			118	
Approach Delay, s/veh		27.7			30.0			138.5			135.4	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.1	104.9		17.5	26.0	92.0		14.5				
Change Period (Y+Rc), s	7.0	7.5		8.0	7.0	7.5		7.5				
Max Green Setting (Gmax), s	7.0	96.5		9.5	27.0	68.5		7.0				
Max Q Clear Time (g_c+I1), s	2.9	19.4		11.5	18.1	55.2		9.0				
Green Ext Time (p_c), s	0.0	11.0		0.0	0.9	10.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		38.9
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	361	406	170	434	158	156
Future Volume (veh/h)	361	406	170	434	158	156
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1811	1870	1841	1796
Adj Flow Rate, veh/h	376	423	177	452	165	162
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	6	2	4	7
Cap, veh/h	1361	607	502	2159	253	387
Arrive On Green	0.38	0.38	0.09	0.61	0.14	0.14
Sat Flow, veh/h	3676	1598	1725	3647	1753	2679
Grp Volume(v), veh/h	376	423	177	452	165	162
Grp Sat Flow(s),veh/h/ln	1791	1598	1725	1777	1753	1340
Q Serve(g_s), s	3.8	11.7	2.9	3.0	4.7	2.9
Cycle Q Clear(g_c), s	3.8	11.7	2.9	3.0	4.7	2.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1361	607	502	2159	253	387
V/C Ratio(X)	0.28	0.70	0.35	0.21	0.65	0.42
Avail Cap(c_a), veh/h	3077	1372	998	3053	837	1279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	13.7	7.4	4.6	21.2	20.4
Incr Delay (d2), s/veh	0.2	2.1	0.4	0.1	2.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	6.3	1.5	1.2	3.3	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	15.8	7.8	4.7	24.0	21.1
LnGrp LOS	B	B	A	A	C	C
Approach Vol, veh/h	799			629	327	
Approach Delay, s/veh	13.7			5.6	22.6	
Approach LOS	B			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.8		13.6	11.9	26.9
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0
Max Green Setting (Gmax), s		45.0		25.0	20.0	45.0
Max Q Clear Time (g_c+I1), s		5.0		6.7	4.9	13.7
Green Ext Time (p_c), s		4.6		1.0	0.4	6.2

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Appendix H:
Traffic Trends

Dr Martin Luther King Jr Beltway

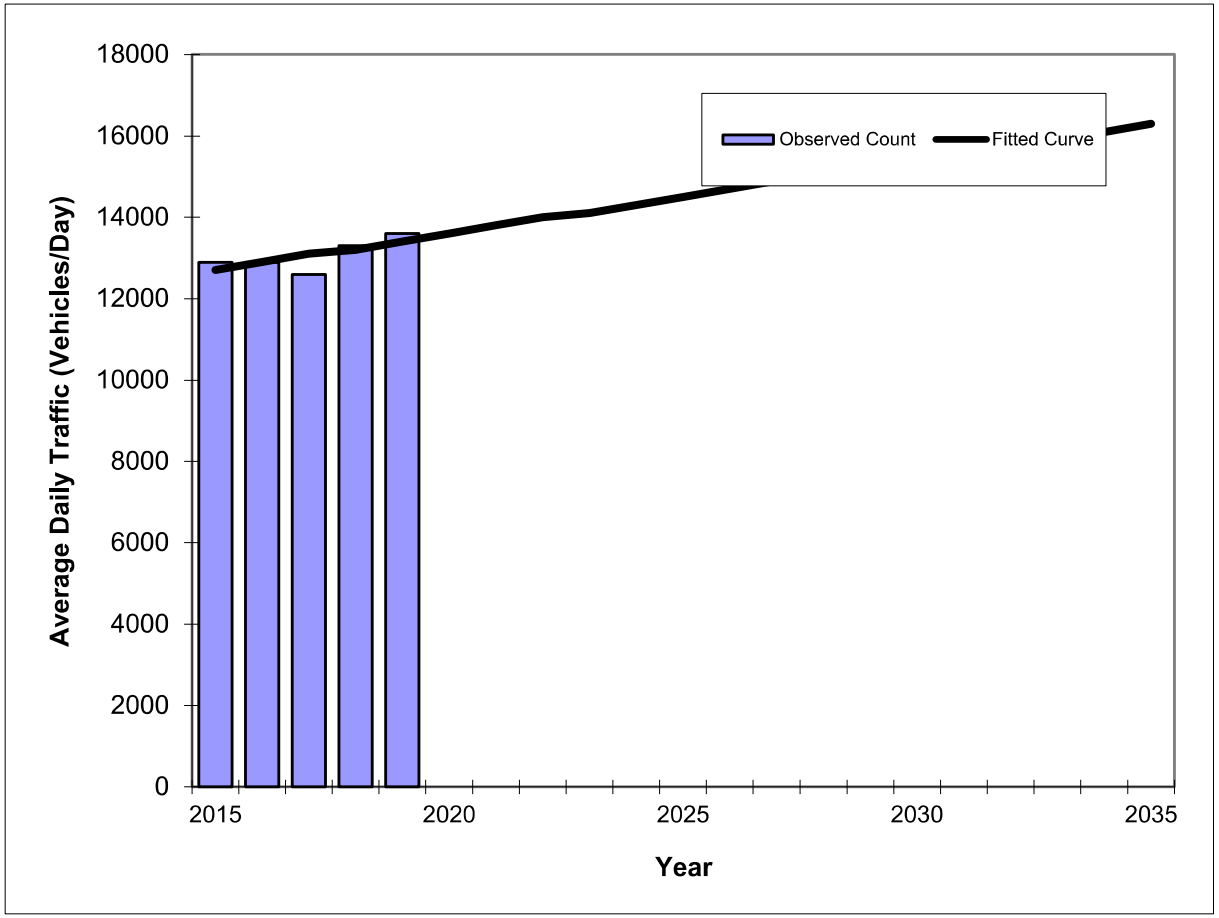
Five Year Trends

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12900	12700
2016	12900	12900
2017	12600	13100
2018	13300	13200
2019	13600	13400
2022 Opening Year Trend		
2022	N/A	14000
2024 Mid-Year Trend		
2024	N/A	14300
2027 Design Year Trend		
2027	N/A	14900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

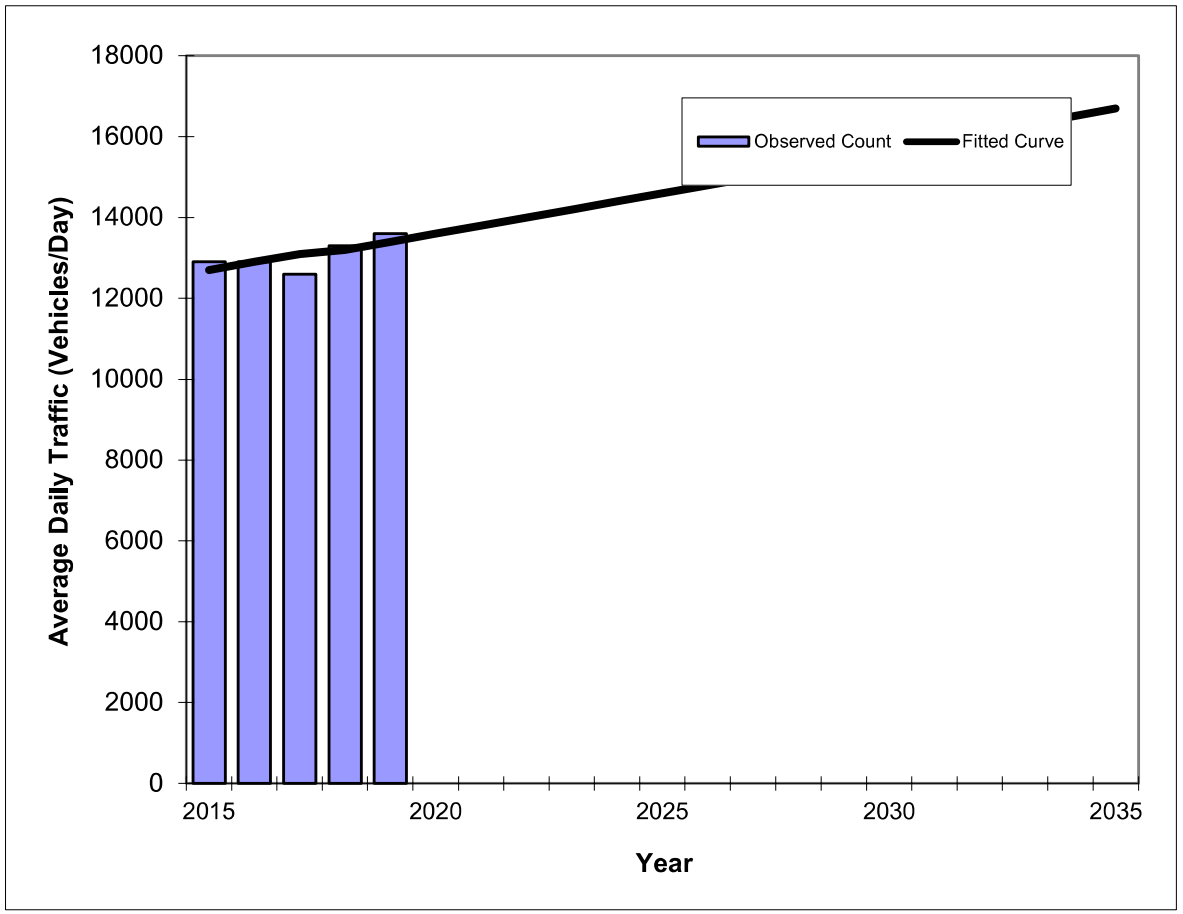
**** Annual Trend Increase:**	180
Trend R-squared:	52.94%
Trend Annual Historic Growth Rate:	1.38%
Trend Growth Rate (2019 to Design Year):	1.40%
Printed:	15-Nov-22
Straight Line Growth Option	

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12900	12700
2016	12900	12900
2017	12600	13100
2018	13300	13200
2019	13600	13400
2022 Opening Year Trend		
2022	N/A	14000
2024 Mid-Year Trend		
2024	N/A	14400
2027 Design Year Trend		
2027	N/A	15000
TRANPLAN Forecasts/Trends		

Trend R-squared:	52.09%
Compounded Annual Historic Growth Rate:	1.35%
Compounded Growth Rate (2019 to Design Year):	1.42%
Printed:	18-Jan-23

Exponential Growth Option

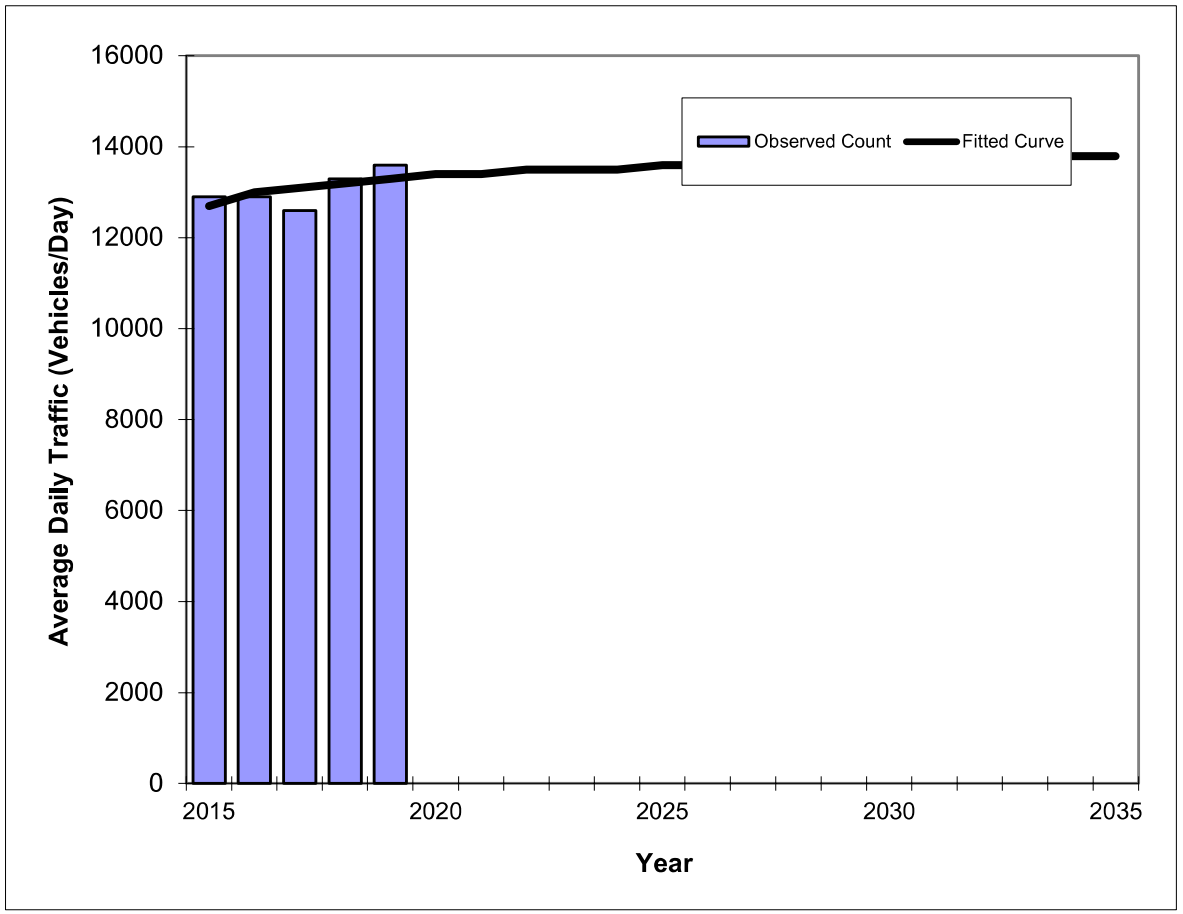
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12900	12700
2016	12900	13000
2017	12600	13100
2018	13300	13200
2019	13600	13300
2022 Opening Year Trend		
2022	N/A	13500
2024 Mid-Year Trend		
2024	N/A	13500
2027 Design Year Trend		
2027	N/A	13600
TRANPLAN Forecasts/Trends		

Trend R-squared:	34.68%
Compounded Annual Historic Growth Rate:	1.16%
Compounded Growth Rate (2019 to Design Year):	0.28%
Printed:	18-Jan-23

Decaying Exponential Growth Option

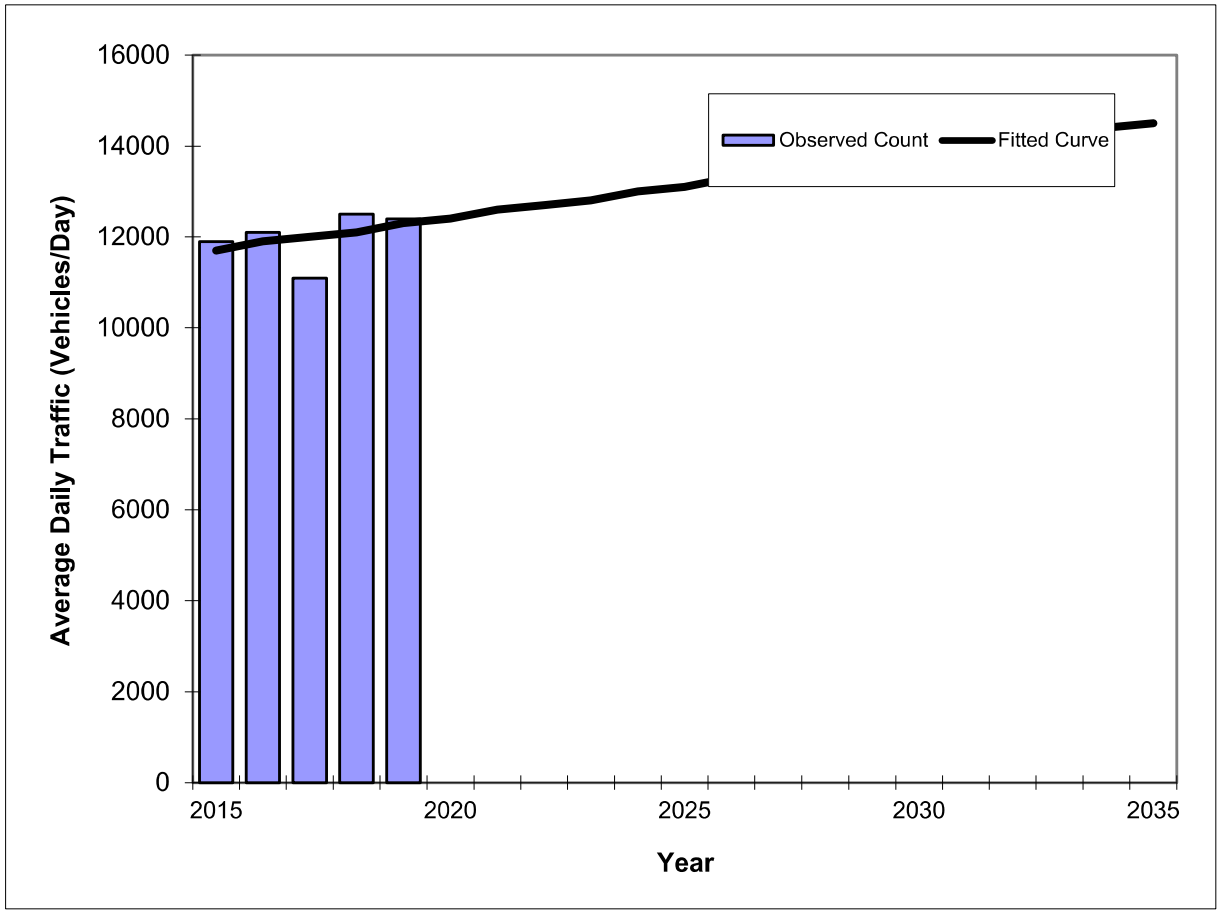
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga to Orange Camp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11900	11700
2016	12100	11900
2017	11100	12000
2018	12500	12100
2019	12400	12300
2027 Opening Year Trend		
2027	N/A	13400
2033 Mid-Year Trend		
2033	N/A	14200
2034 Design Year Trend		
2034	N/A	14400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	140
Trend R-squared:	15.81%
Trend Annual Historic Growth Rate:	1.28%
Trend Growth Rate (2019 to Design Year):	1.14%
Printed:	15-Nov-22
Straight Line Growth Option	

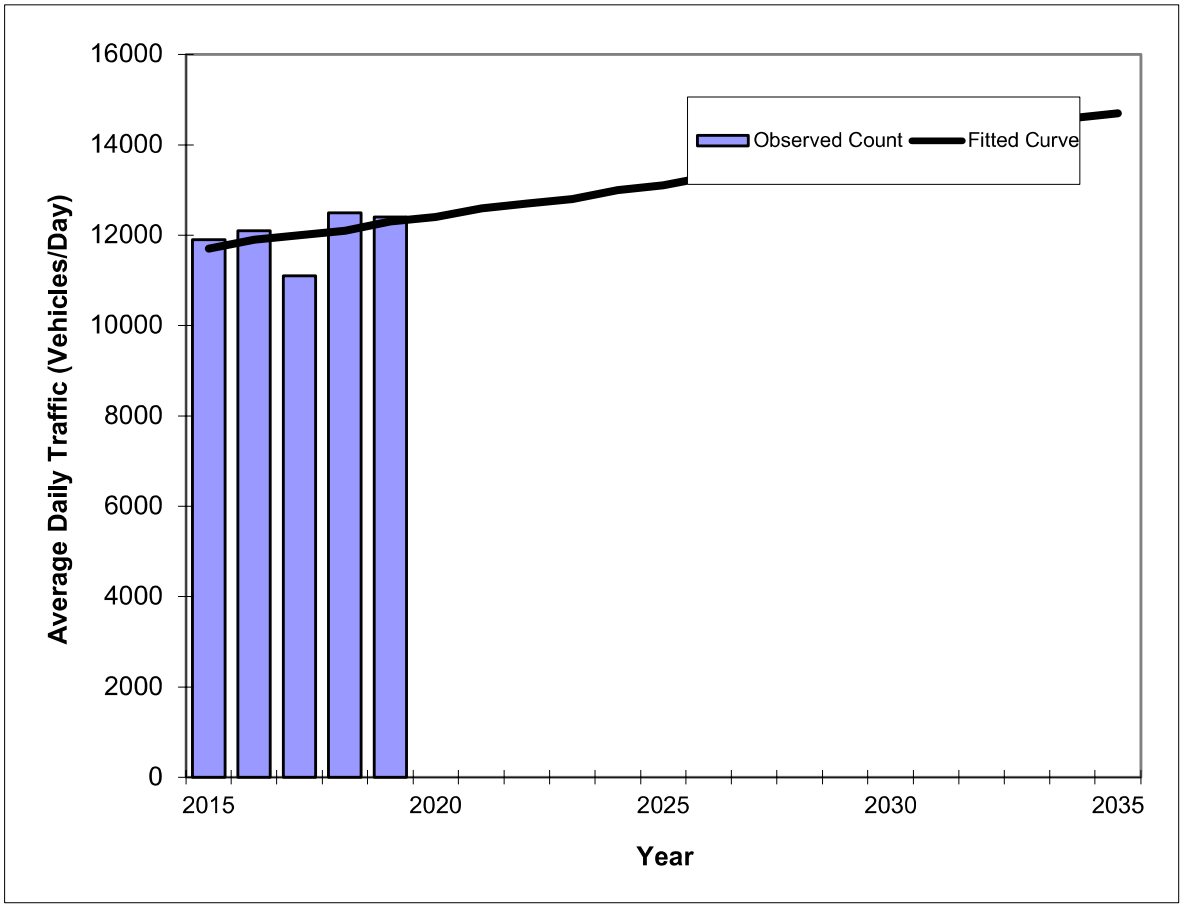
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga to Orange Camp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11900	11700
2016	12100	11900
2017	11100	12000
2018	12500	12100
2019	12400	12300
2027 Opening Year Trend		
2027	N/A	13400
2033 Mid-Year Trend		
2033	N/A	14400
2034 Design Year Trend		
2034	N/A	14600
TRANPLAN Forecasts/Trends		

Trend R-squared:	14.73%
Compounded Annual Historic Growth Rate:	1.26%
Compounded Growth Rate (2019 to Design Year):	1.15%
Printed:	18-Jan-23

Exponential Growth Option

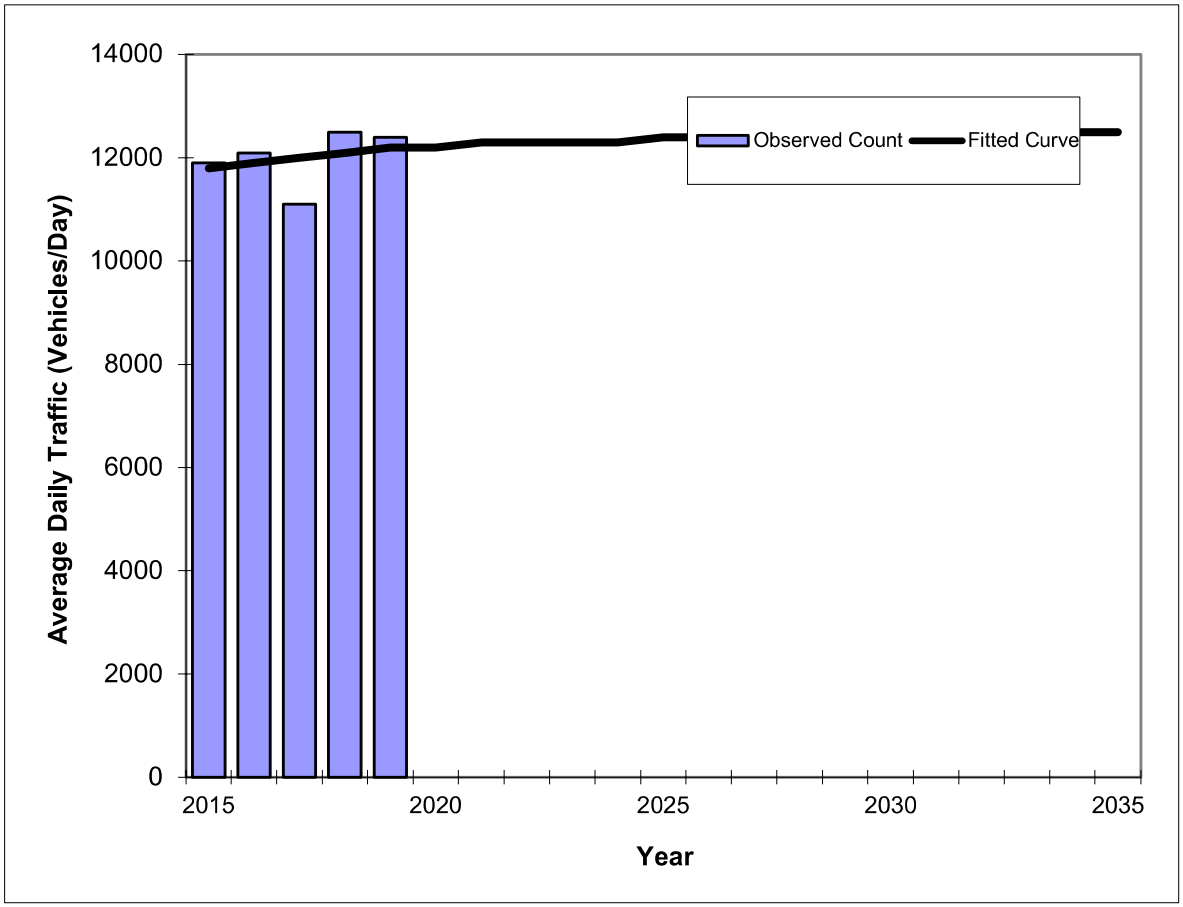
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga to Orange Camp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11900	11800
2016	12100	11900
2017	11100	12000
2018	12500	12100
2019	12400	12200
2027 Opening Year Trend		
2027	N/A	12400
2033 Mid-Year Trend		
2033	N/A	12500
2034 Design Year Trend		
2034	N/A	12500
TRANPLAN Forecasts/Trends		

Trend R-squared:	8.70%
Compounded Annual Historic Growth Rate:	0.84%
Compounded Growth Rate (2019 to Design Year):	0.16%
Printed:	7-Feb-23

Decaying Exponential Growth Option

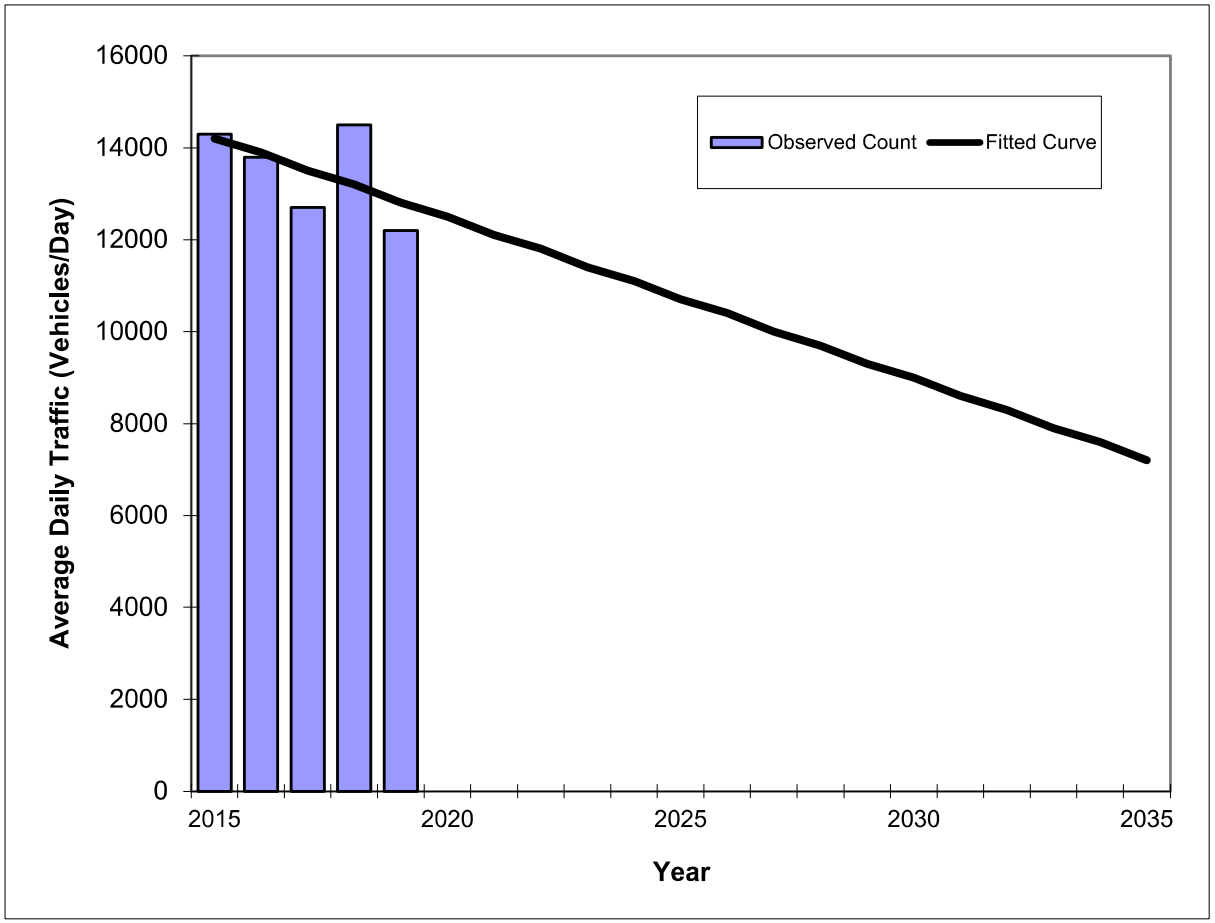
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14300	14200
2016	13800	13900
2017	12700	13500
2018	14500	13200
2019	12200	12800
2027 Opening Year Trend		
2027	N/A	10000
2033 Mid-Year Trend		
2033	N/A	7900
2034 Design Year Trend		
2034	N/A	7600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	-350
Trend R-squared:	30.17%
Trend Annual Historic Growth Rate:	-2.46%
Trend Growth Rate (2019 to Design Year):	-2.71%
Printed:	15-Nov-22

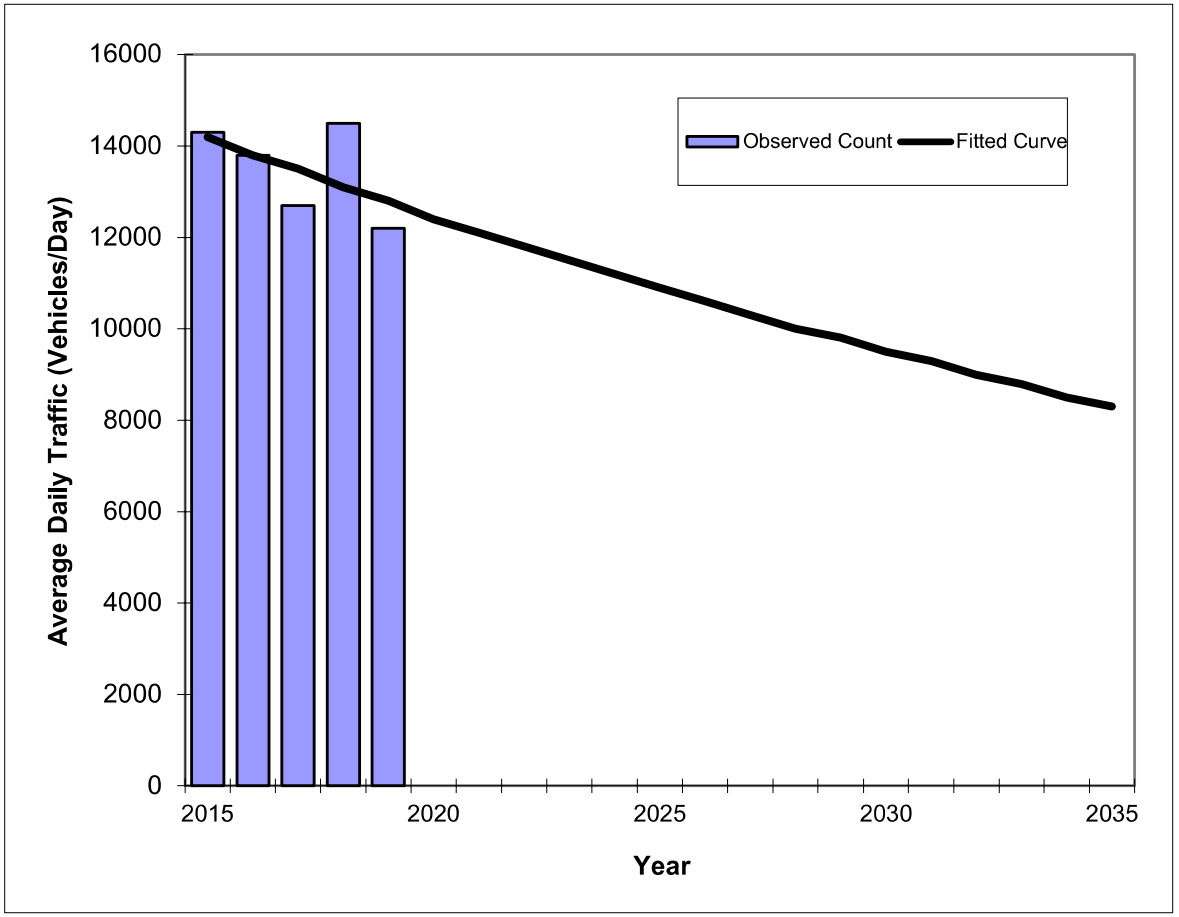
Straight Line Growth Option

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14300	14200
2016	13800	13800
2017	12700	13500
2018	14500	13100
2019	12200	12800
2027 Opening Year Trend		
2027	N/A	10300
2033 Mid-Year Trend		
2033	N/A	8800
2034 Design Year Trend		
2034	N/A	8500
TRANPLAN Forecasts/Trends		

Trend R-squared:	31.46%
Compounded Annual Historic Growth Rate:	-2.56%
Compounded Growth Rate (2019 to Design Year):	-2.69%
Printed:	18-Jan-23

Exponential Growth Option

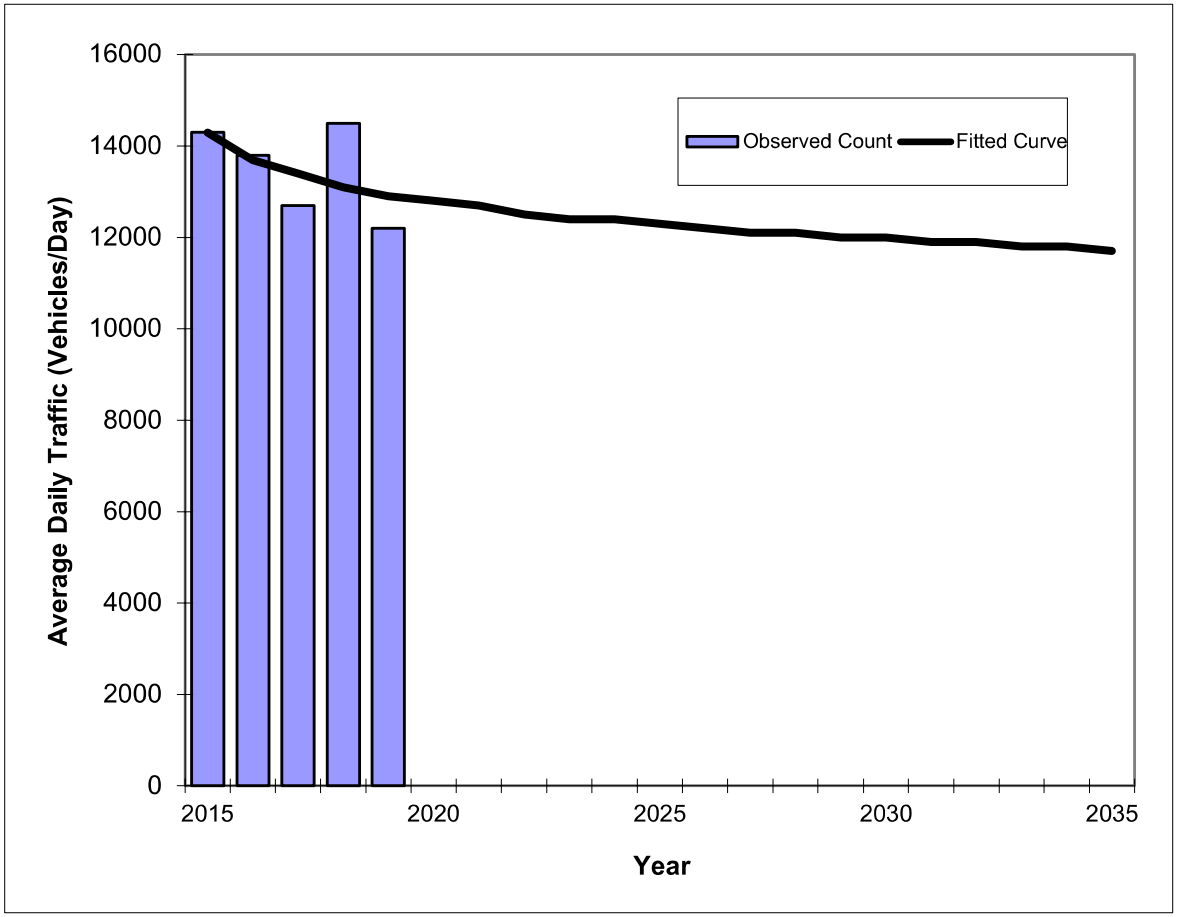
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14300	14300
2016	13800	13700
2017	12700	13400
2018	14500	13100
2019	12200	12900
2027 Opening Year Trend		
2027	N/A	12100
2033 Mid-Year Trend		
2033	N/A	11800
2034 Design Year Trend		
2034	N/A	11800
TRANPLAN Forecasts/Trends		

Trend R-squared:	28.91%
Compounded Annual Historic Growth Rate:	-2.54%
Compounded Growth Rate (2019 to Design Year):	-0.59%
Printed:	18-Jan-23

Decaying Exponential Growth Option

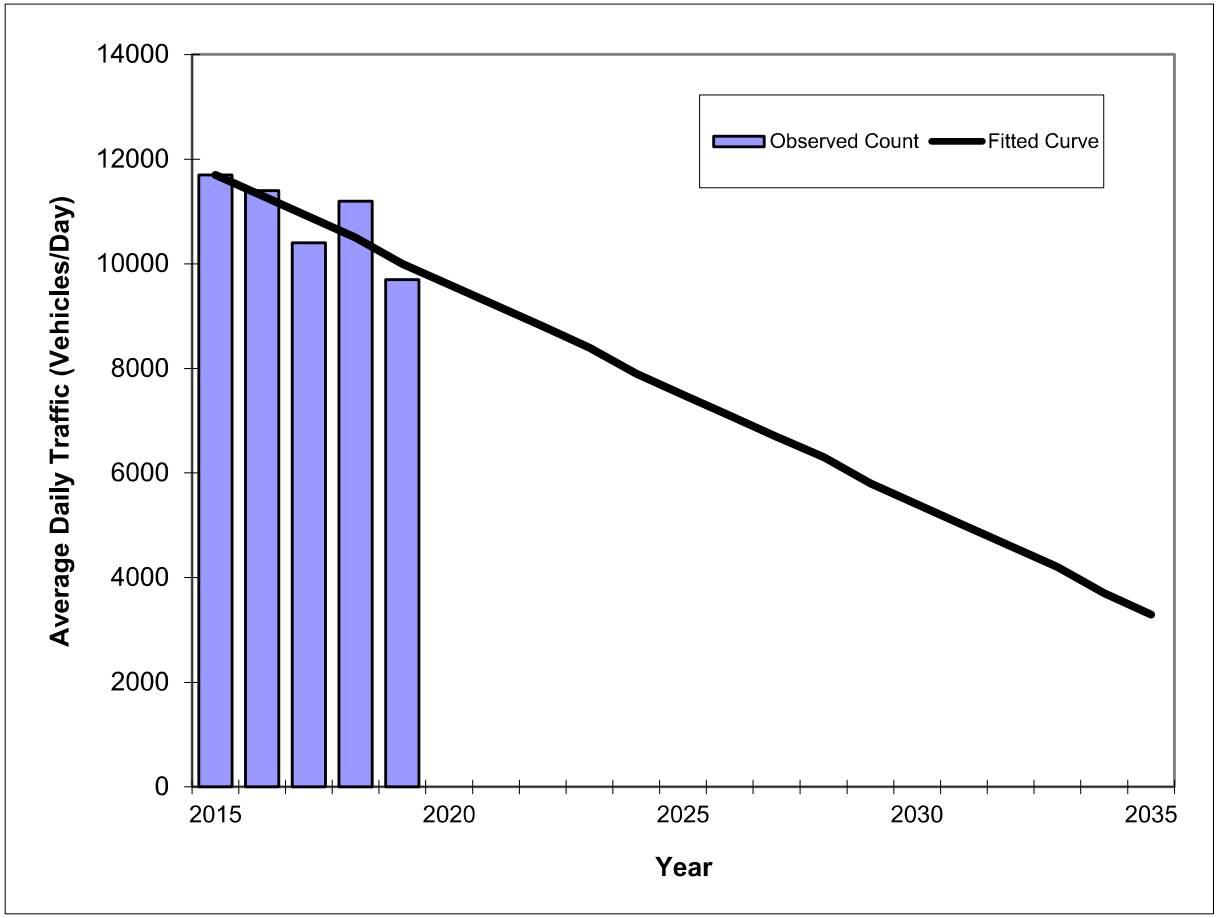
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11700
2016	11400	11300
2017	10400	10900
2018	11200	10500
2019	9700	10000
2027 Opening Year Trend		
2027	N/A	6700
2033 Mid-Year Trend		
2033	N/A	4200
2034 Design Year Trend		
2034	N/A	3700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-420
Trend R-squared:	66.12%
Trend Annual Historic Growth Rate:	-3.63%
Trend Growth Rate (2019 to Design Year):	-4.20%
Printed:	15-Nov-22

Straight Line Growth Option

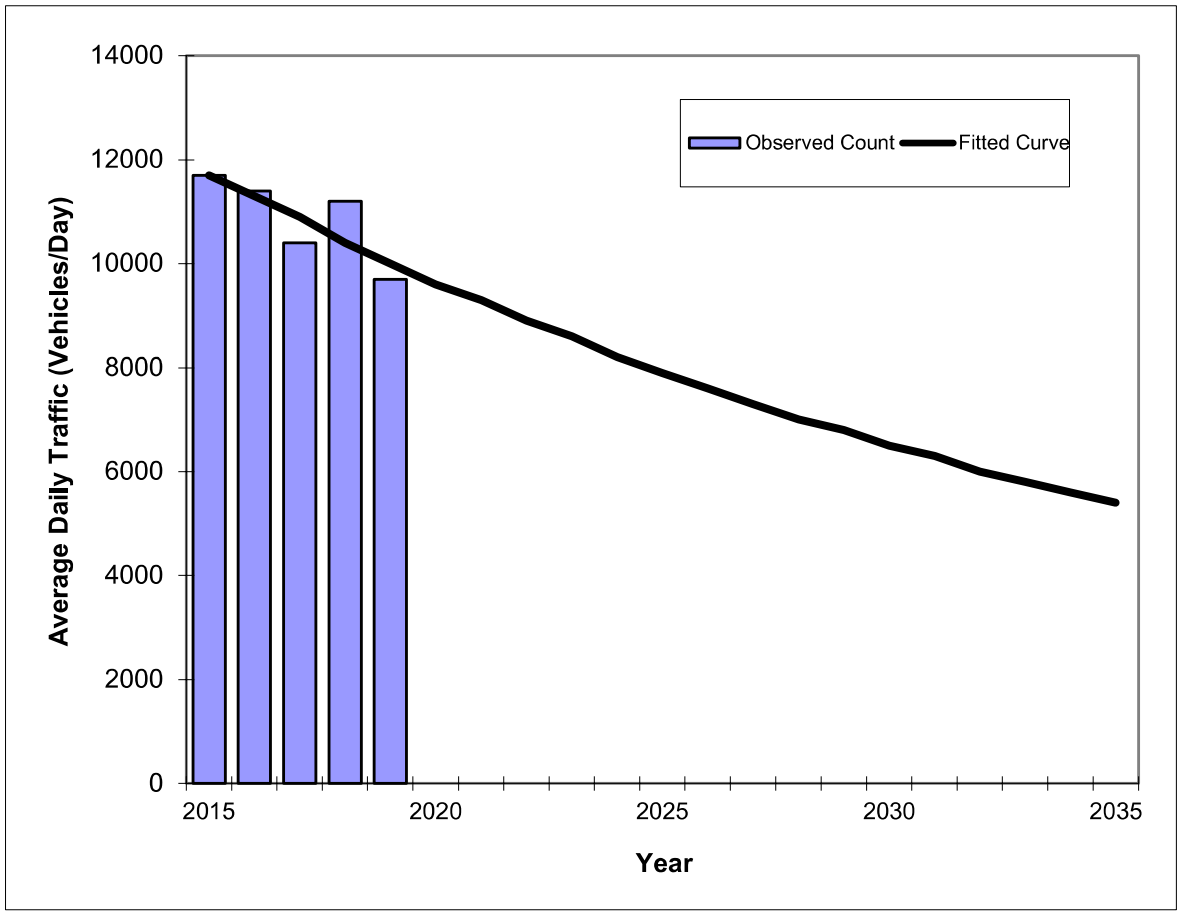
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11700
2016	11400	11300
2017	10400	10900
2018	11200	10400
2019	9700	10000
2027 Opening Year Trend		
2027	N/A	7300
2033 Mid-Year Trend		
2033	N/A	5800
2034 Design Year Trend		
2034	N/A	5600
TRANPLAN Forecasts/Trends		

Trend R-squared:	65.63%
Compounded Annual Historic Growth Rate:	-3.85%
Compounded Growth Rate (2019 to Design Year):	-3.79%
Printed:	18-Jan-23

Exponential Growth Option

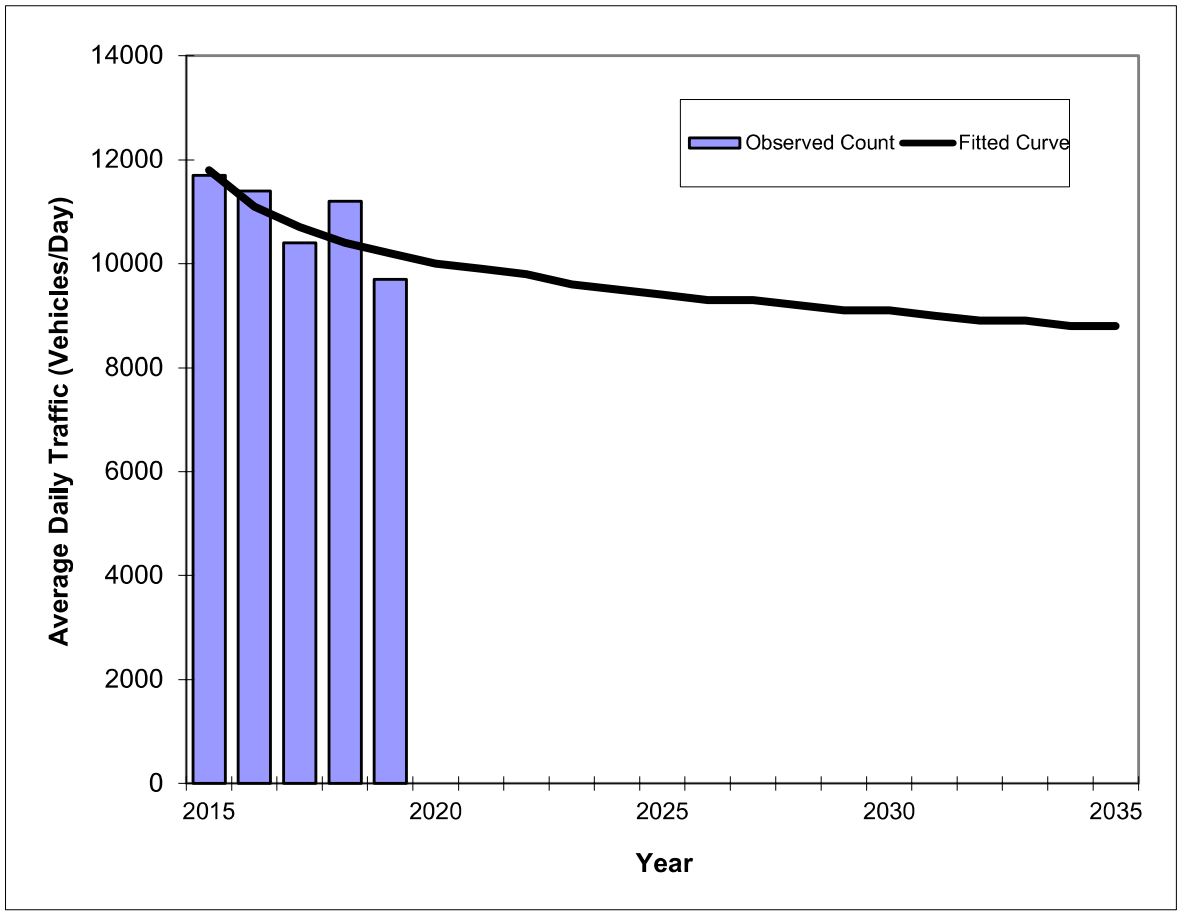
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11800
2016	11400	11100
2017	10400	10700
2018	11200	10400
2019	9700	10200
2027 Opening Year Trend		
2027	N/A	9300
2033 Mid-Year Trend		
2033	N/A	8900
2034 Design Year Trend		
2034	N/A	8800
TRANPLAN Forecasts/Trends		

Trend R-squared:	61.07%
Compounded Annual Historic Growth Rate:	-3.58%
Compounded Growth Rate (2019 to Design Year):	-0.98%
Printed:	7-Feb-23

Decaying Exponential Growth Option

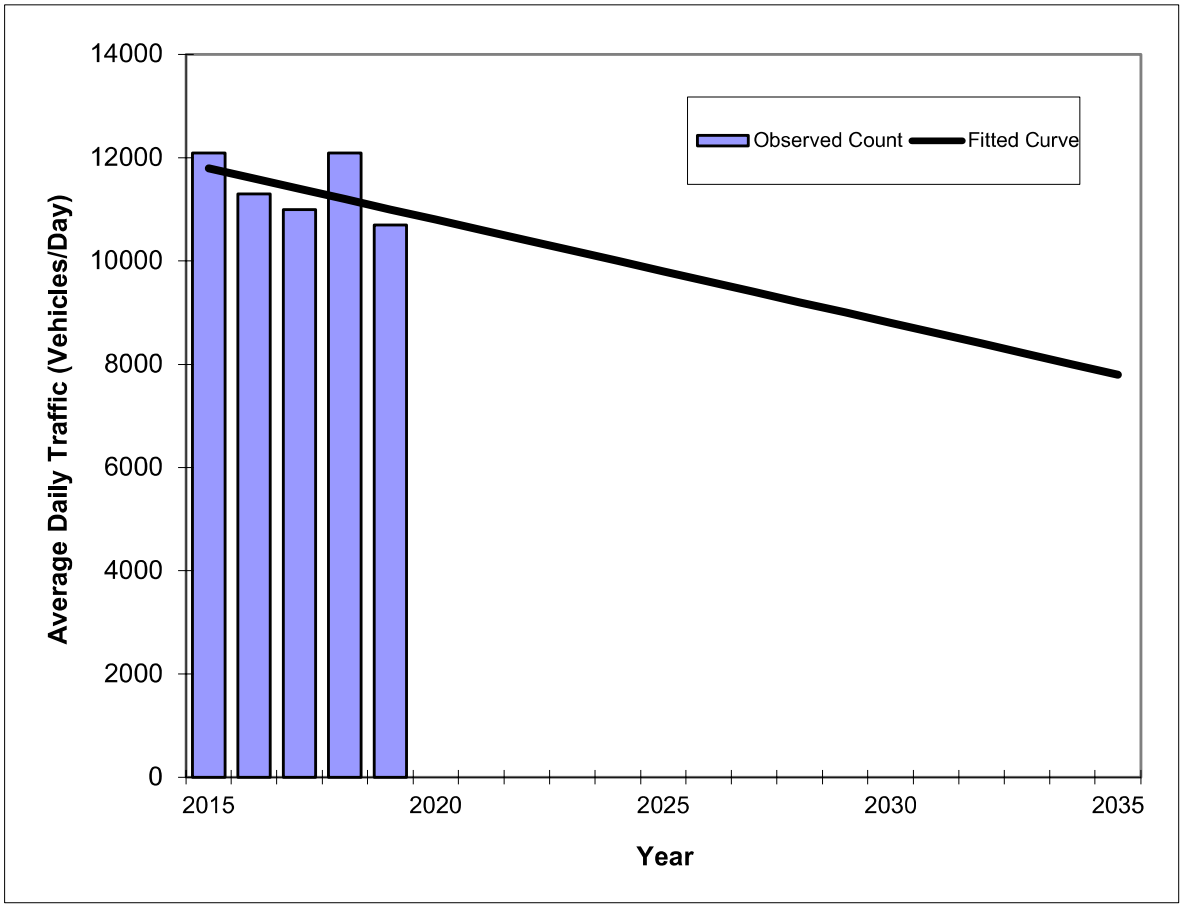
***Axle-Adjusted**

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12100	11800
2016	11300	11600
2017	11000	11400
2018	12100	11200
2019	10700	11000
2027 Opening Year Trend		
2027	N/A	9400
2033 Mid-Year Trend		
2033	N/A	8200
2034 Design Year Trend		
2034	N/A	8000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-200
Trend R-squared:	24.51%
Trend Annual Historic Growth Rate:	-1.69%
Trend Growth Rate (2019 to Design Year):	-1.82%
Printed:	19-Jan-23

Straight Line Growth Option

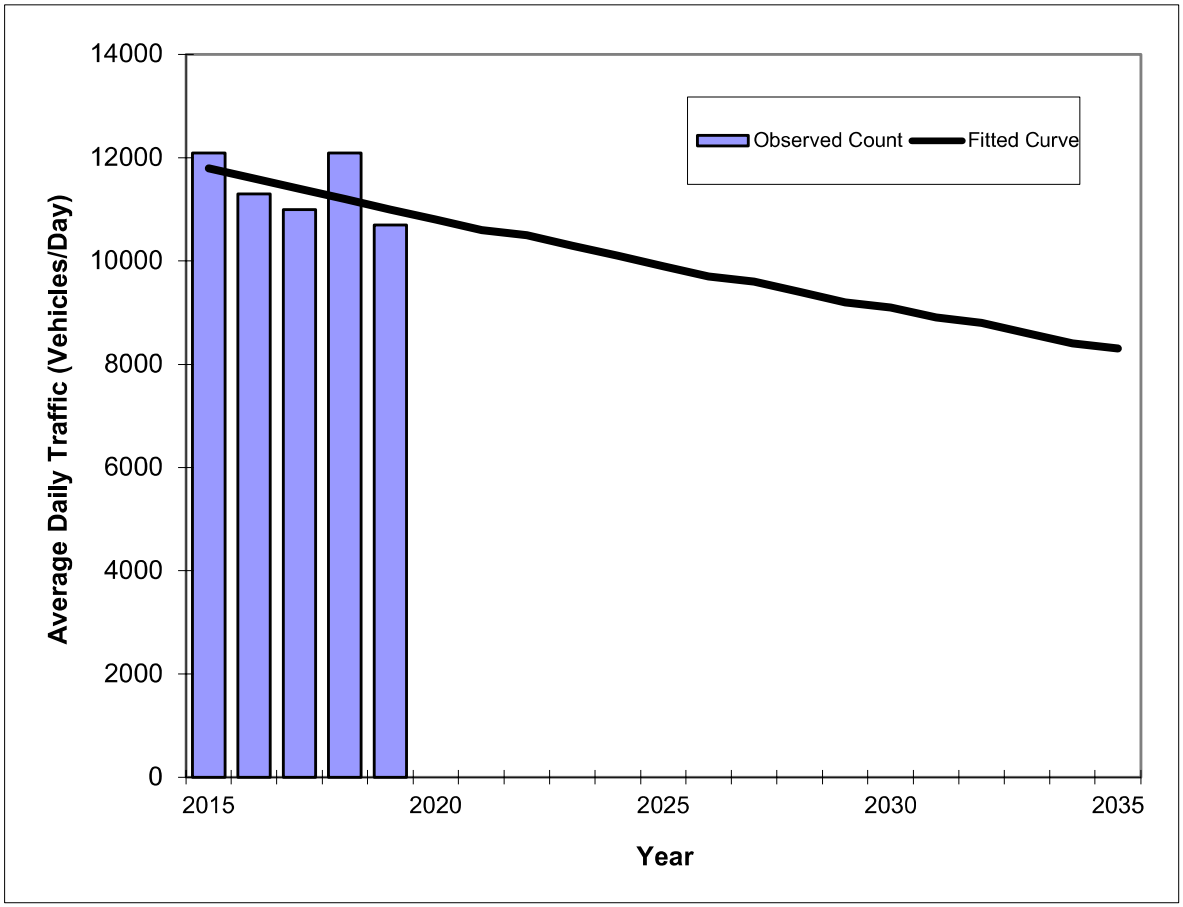
***Axle-Adjusted**

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12100	11800
2016	11300	11600
2017	11000	11400
2018	12100	11200
2019	10700	11000
2027 Opening Year Trend		
2027	N/A	9600
2033 Mid-Year Trend		
2033	N/A	8600
2034 Design Year Trend		
2034	N/A	8400
TRANPLAN Forecasts/Trends		

Trend R-squared:	25.32%
Compounded Annual Historic Growth Rate:	-1.74%
Compounded Growth Rate (2019 to Design Year):	-1.78%
Printed:	19-Jan-23

Exponential Growth Option

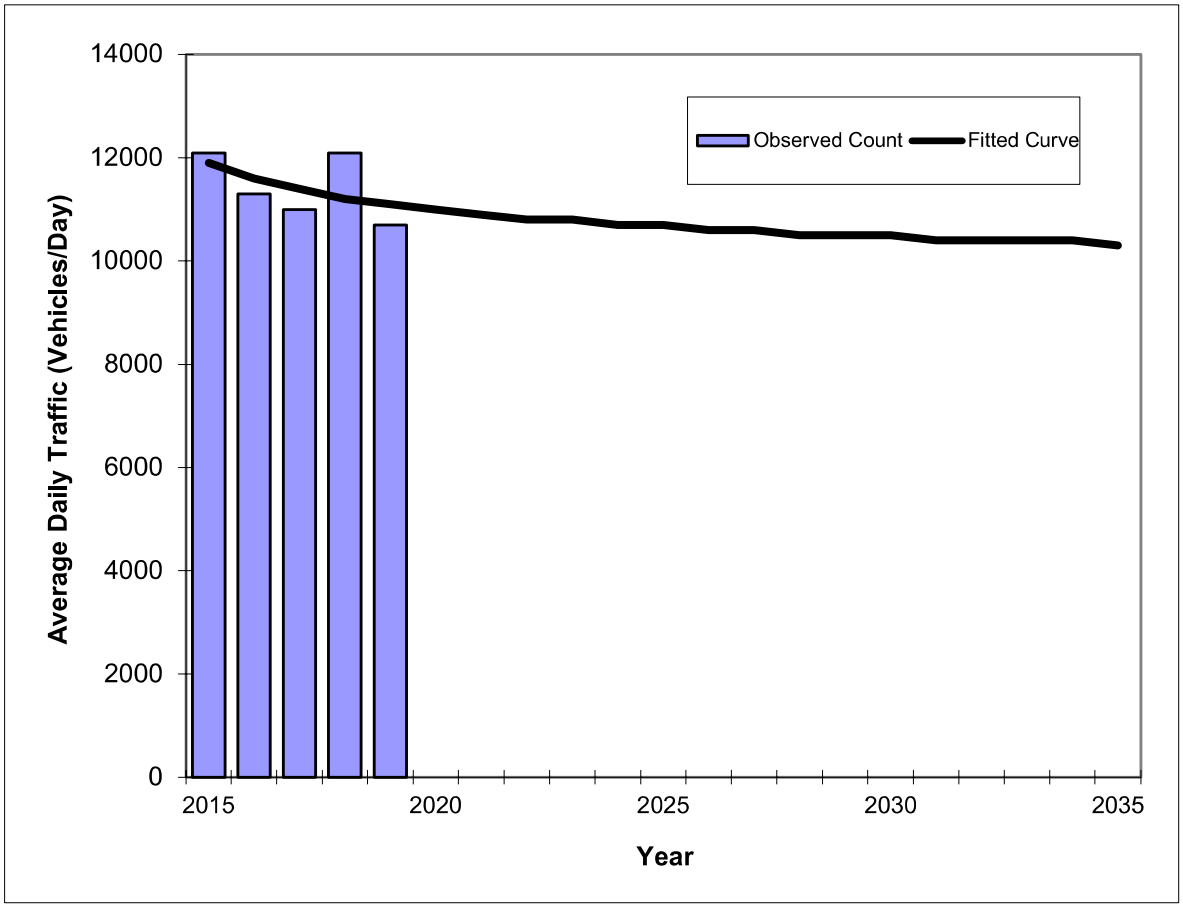
***Axle-Adjusted**

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12100	11900
2016	11300	11600
2017	11000	11400
2018	12100	11200
2019	10700	11100
2027 Opening Year Trend		
2027	N/A	10600
2033 Mid-Year Trend		
2033	N/A	10400
2034 Design Year Trend		
2034	N/A	10400
TRANPLAN Forecasts/Trends		

Trend R-squared:	27.82%
Compounded Annual Historic Growth Rate:	-1.72%
Compounded Growth Rate (2019 to Design Year):	-0.43%
Printed:	19-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

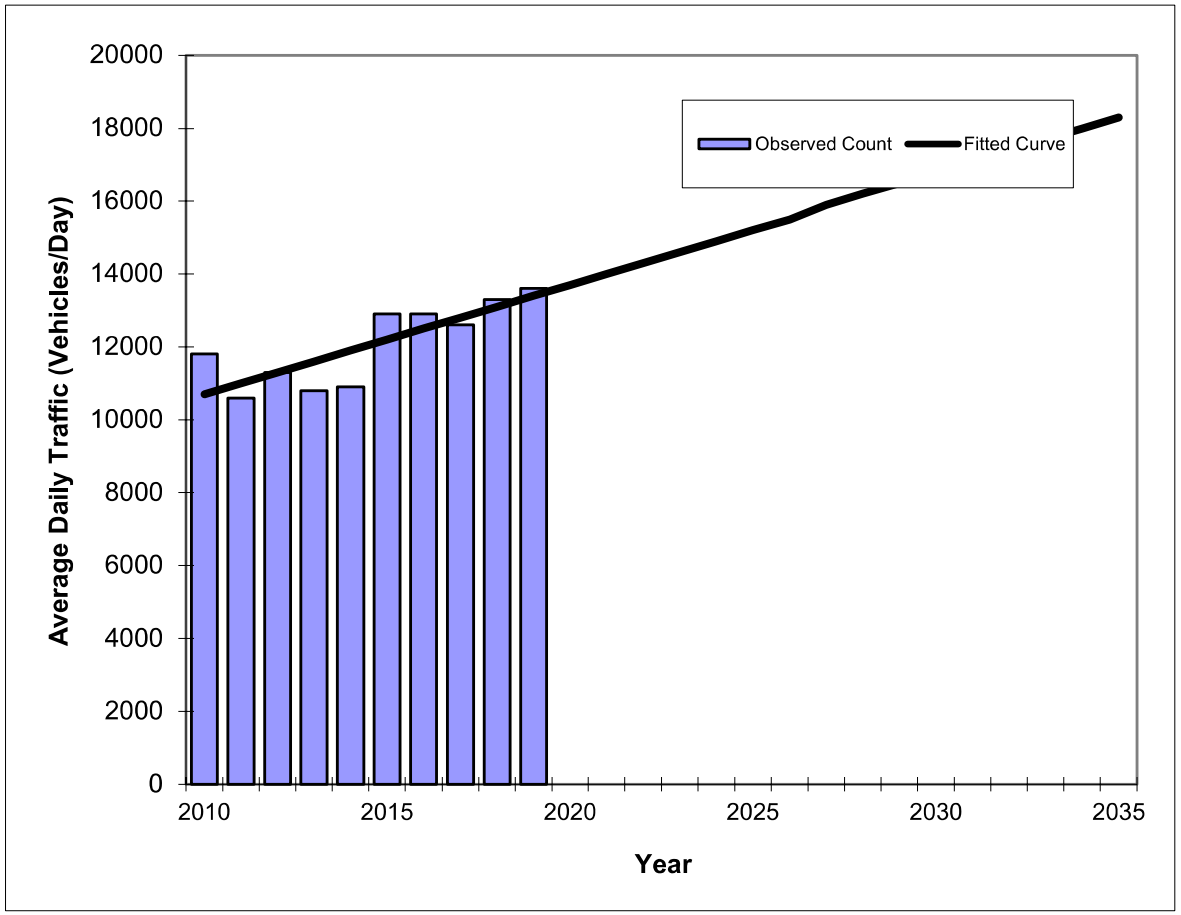
Ten Year Trends

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11800	10700
2011	10600	11000
2012	11300	11300
2013	10800	11600
2014	10900	11900
2015	12900	12200
2016	12900	12500
2017	12600	12800
2018	13300	13100
2019	13600	13400
2022 Opening Year Trend		
2022	N/A	14300
2024 Mid-Year Trend		
2024	N/A	14900
2027 Design Year Trend		
2027	N/A	15900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	302
Trend R-squared:	66.65%
Trend Annual Historic Growth Rate:	2.80%
Trend Growth Rate (2019 to Design Year):	2.33%
Printed:	18-Jan-23
Straight Line Growth Option	

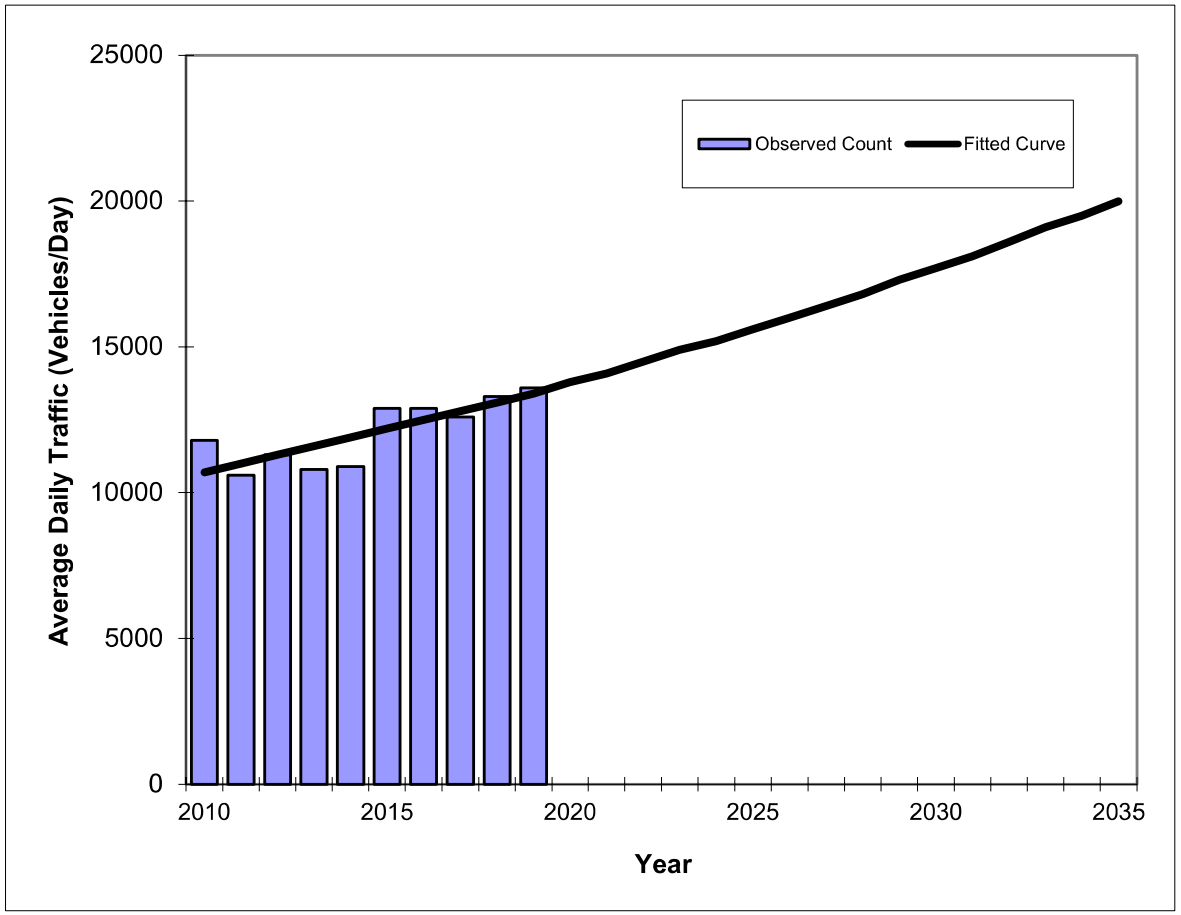
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11800	10700
2011	10600	11000
2012	11300	11300
2013	10800	11600
2014	10900	11900
2015	12900	12200
2016	12900	12500
2017	12600	12800
2018	13300	13100
2019	13600	13400
2022 Opening Year Trend		
2022	N/A	14500
2024 Mid-Year Trend		
2024	N/A	15200
2027 Design Year Trend		
2027	N/A	16400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	65.13%
Compounded Annual Historic Growth Rate:	2.53%
Compounded Growth Rate (2019 to Design Year):	2.56%
Printed:	18-Jan-23

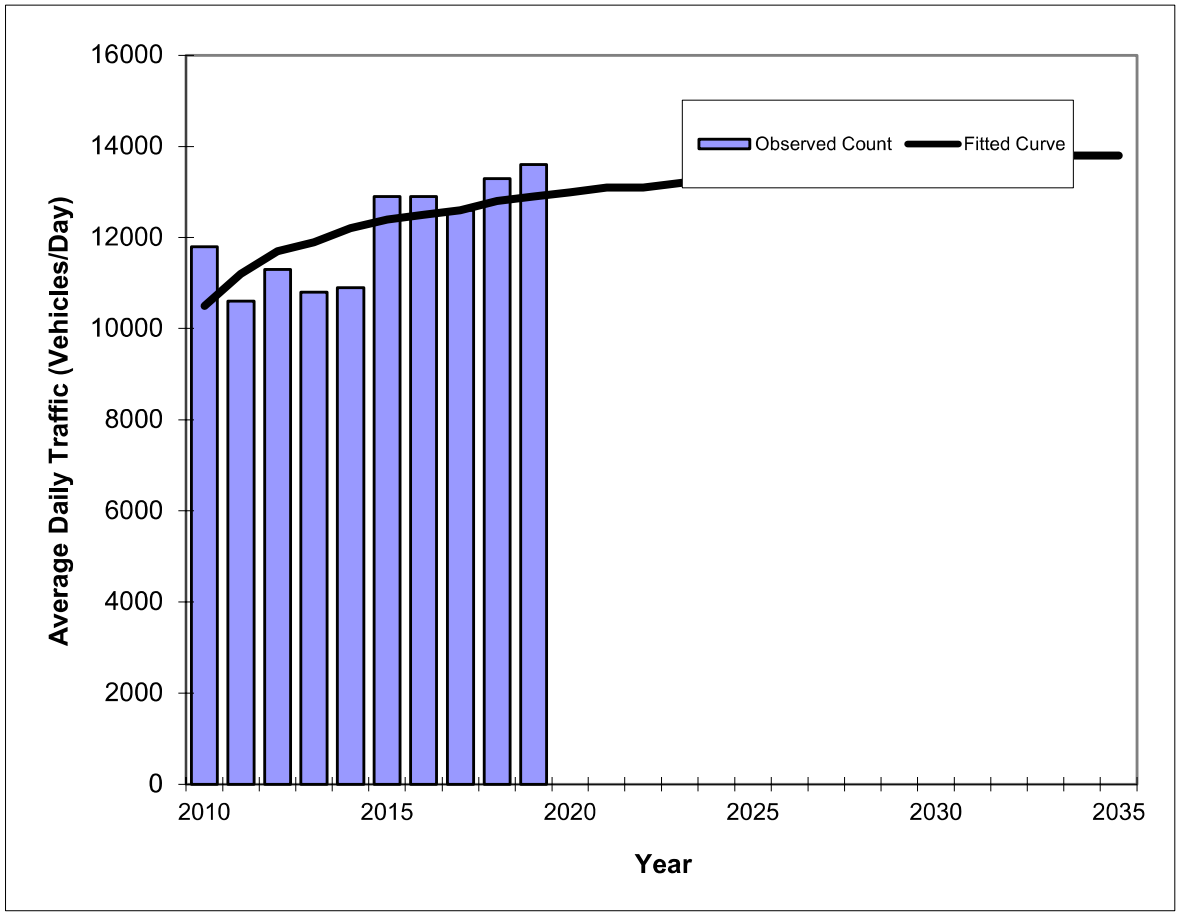
Exponential Growth Option

Traffic Trends - V03.a

DR ML KING JR BLTWY -- SR 472 to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11800	10500
2011	10600	11200
2012	11300	11700
2013	10800	11900
2014	10900	12200
2015	12900	12400
2016	12900	12500
2017	12600	12600
2018	13300	12800
2019	13600	12900
2022 Opening Year Trend		
2022	N/A	13100
2024 Mid-Year Trend		
2024	N/A	13300
2027 Design Year Trend		
2027	N/A	13500
TRANPLAN Forecasts/Trends		

Trend R-squared:	44.24%
Compounded Annual Historic Growth Rate:	2.31%
Compounded Growth Rate (2019 to Design Year):	0.57%
Printed:	18-Jan-23

Decaying Exponential Growth Option

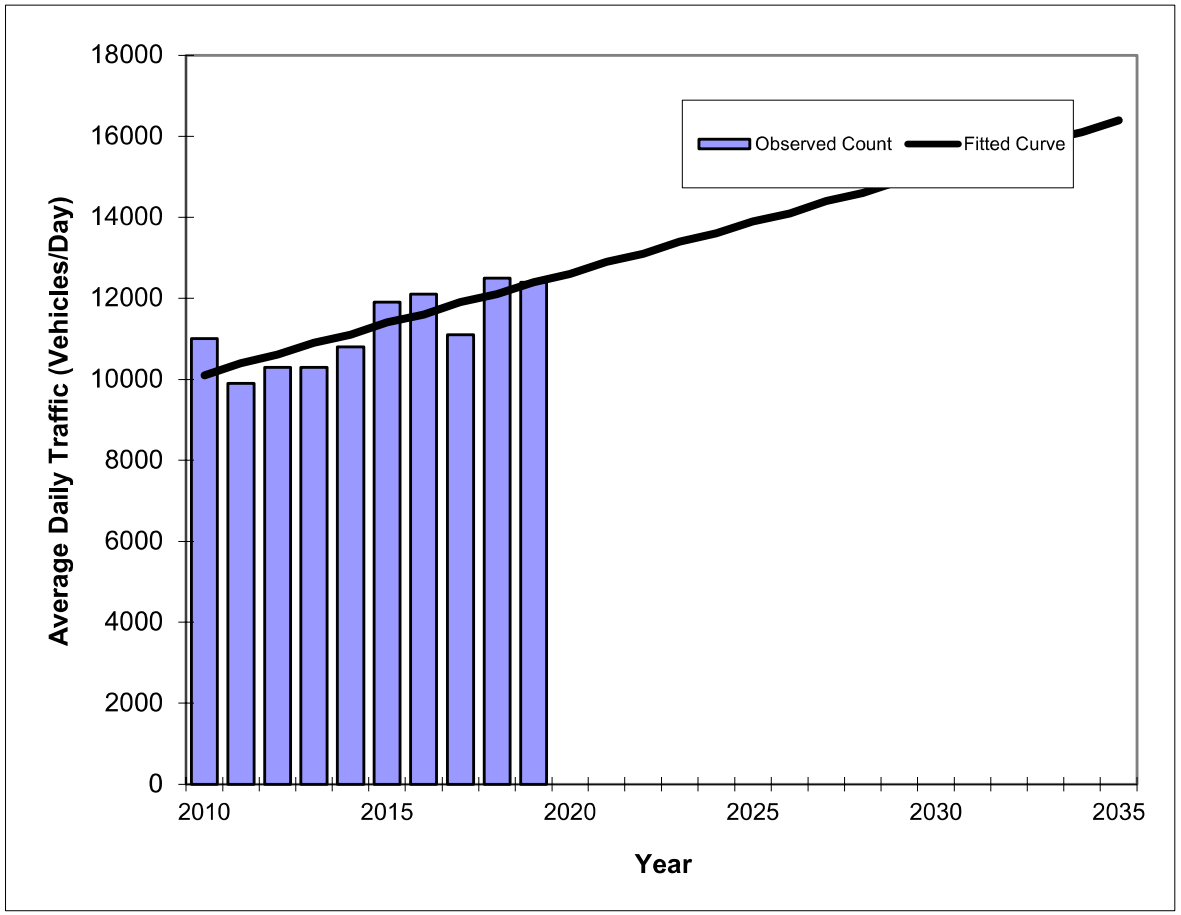
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga Rd to Orange Camp Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11000	10100
2011	9900	10400
2012	10300	10600
2013	10300	10900
2014	10800	11100
2015	11900	11400
2016	12100	11600
2017	11100	11900
2018	12500	12100
2019	12400	12400
2022 Opening Year Trend		
2022	N/A	13100
2024 Mid-Year Trend		
2024	N/A	13600
2027 Design Year Trend		
2027	N/A	14400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

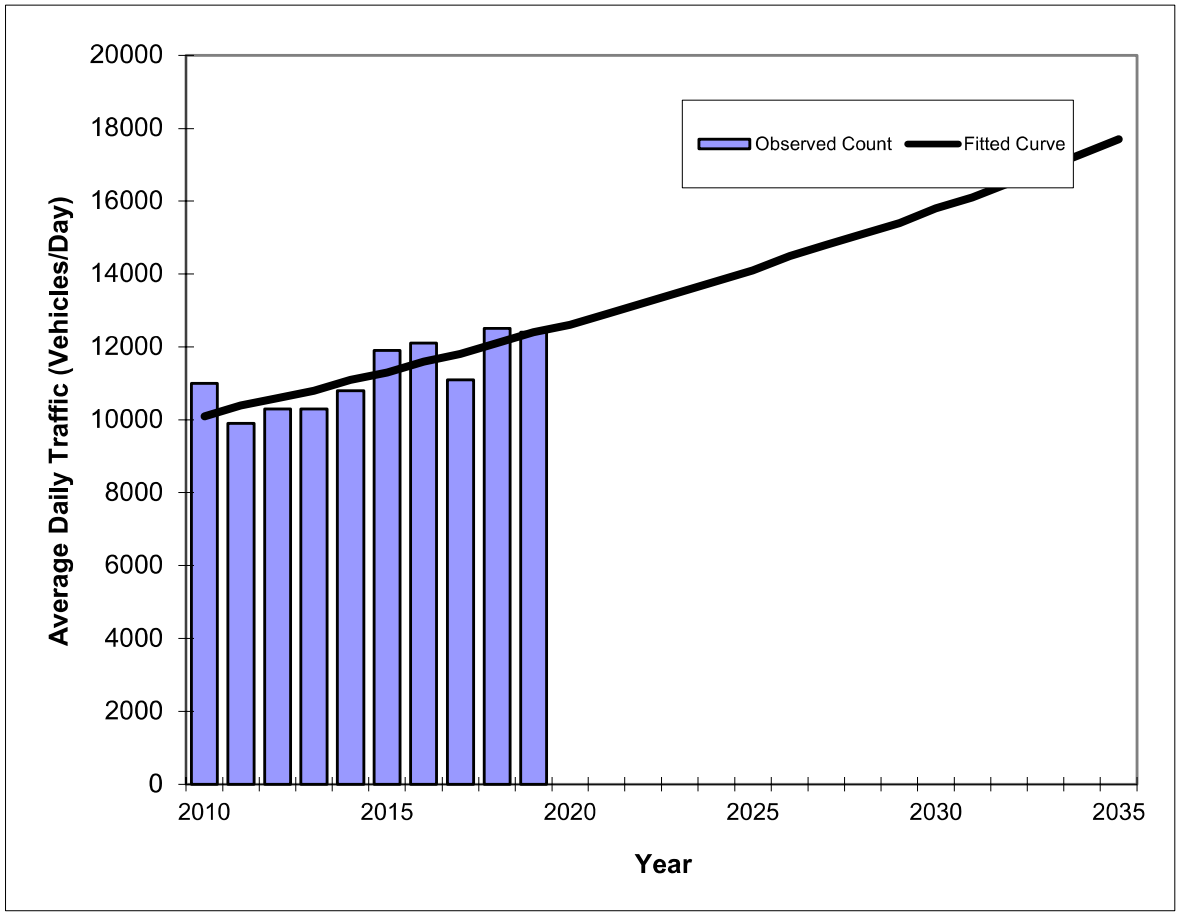
** Annual Trend Increase:	250
Trend R-squared:	65.09%
Trend Annual Historic Growth Rate:	2.53%
Trend Growth Rate (2019 to Design Year):	2.02%
Printed:	18-Jan-23
Straight Line Growth Option	

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga Rd to Orange Camp Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11000	10100
2011	9900	10400
2012	10300	10600
2013	10300	10800
2014	10800	11100
2015	11900	11300
2016	12100	11600
2017	11100	11800
2018	12500	12100
2019	12400	12400
2022 Opening Year Trend		
2022	N/A	13200
2024 Mid-Year Trend		
2024	N/A	13800
2027 Design Year Trend		
2027	N/A	14800
TRANPLAN Forecasts/Trends		

Trend R-squared:	64.55%
Compounded Annual Historic Growth Rate:	2.31%
Compounded Growth Rate (2019 to Design Year):	2.24%
Printed:	18-Jan-23

Exponential Growth Option

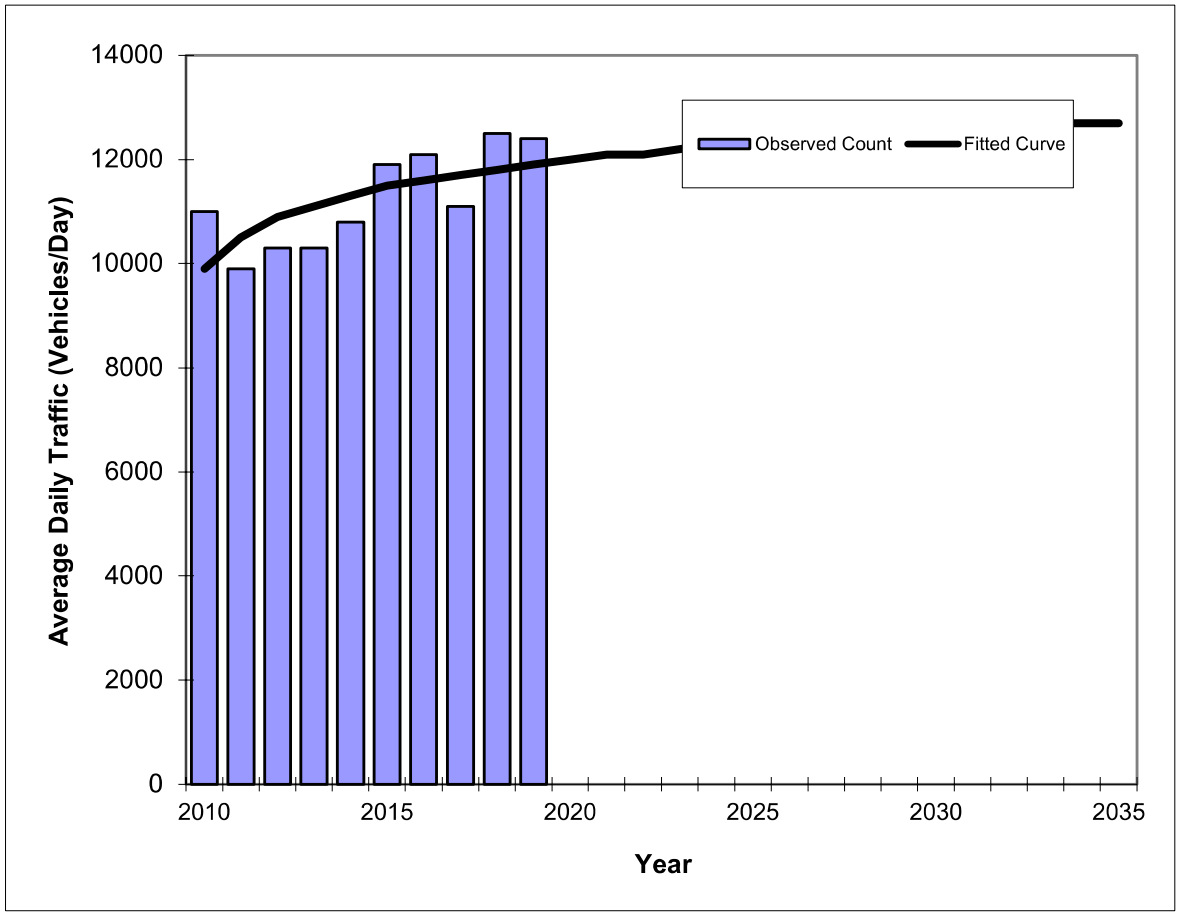
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Cassadaga Rd to Orange Camp Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11000	9900
2011	9900	10500
2012	10300	10900
2013	10300	11100
2014	10800	11300
2015	11900	11500
2016	12100	11600
2017	11100	11700
2018	12500	11800
2019	12400	11900
2022 Opening Year Trend		
2022	N/A	12100
2024 Mid-Year Trend		
2024	N/A	12300
2027 Design Year Trend		
2027	N/A	12400
TRANPLAN Forecasts/Trends		

Trend R-squared:	45.56%
Compounded Annual Historic Growth Rate:	2.07%
Compounded Growth Rate (2019 to Design Year):	0.52%
Printed:	19-Jan-23

Decaying Exponential Growth Option

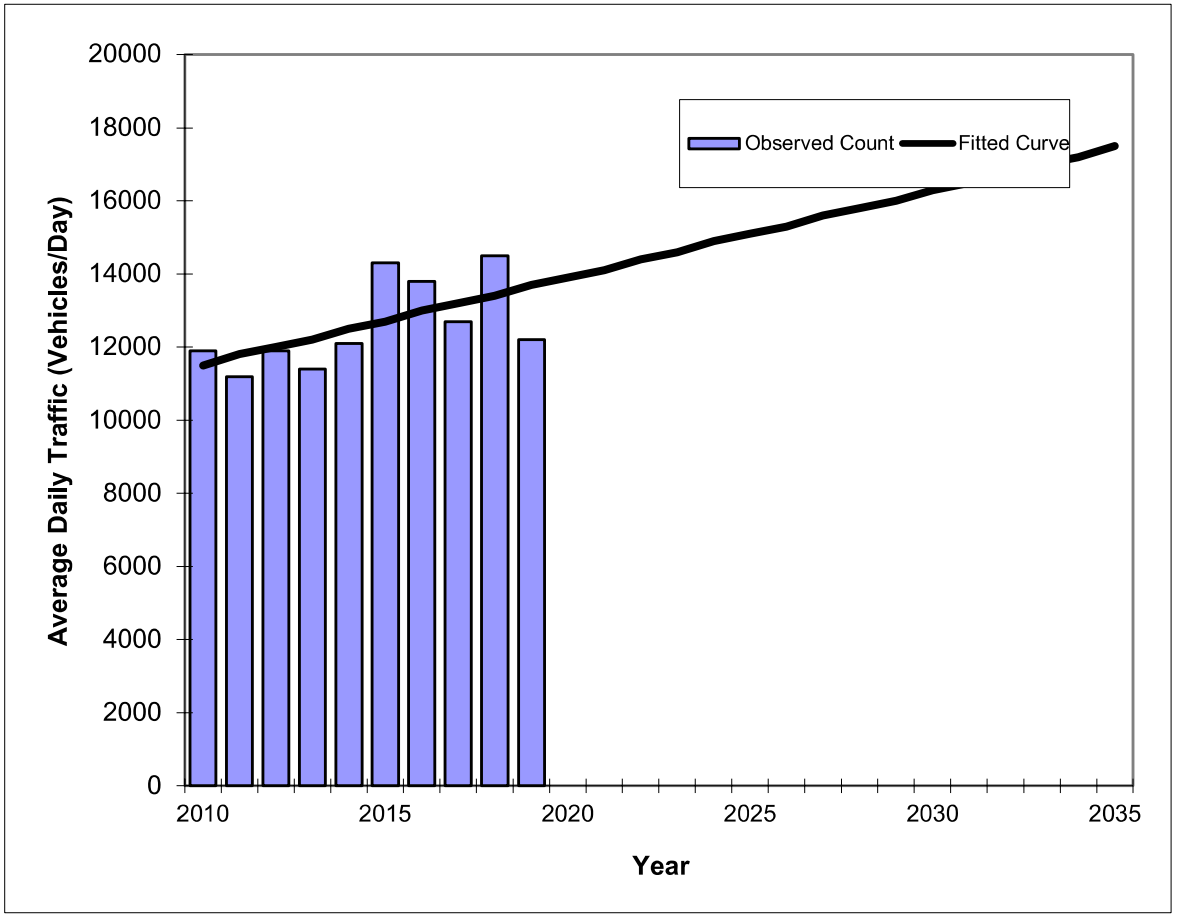
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11900	11500
2011	11200	11800
2012	11900	12000
2013	11400	12200
2014	12100	12500
2015	14300	12700
2016	13800	13000
2017	12700	13200
2018	14500	13400
2019	12200	13700
2027 Opening Year Trend		
2027	N/A	15600
2033 Mid-Year Trend		
2033	N/A	17000
2034 Design Year Trend		
2034	N/A	17200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	238
Trend R-squared:	36.55%
Trend Annual Historic Growth Rate:	2.13%
Trend Growth Rate (2019 to Design Year):	1.70%
Printed:	19-Jan-23

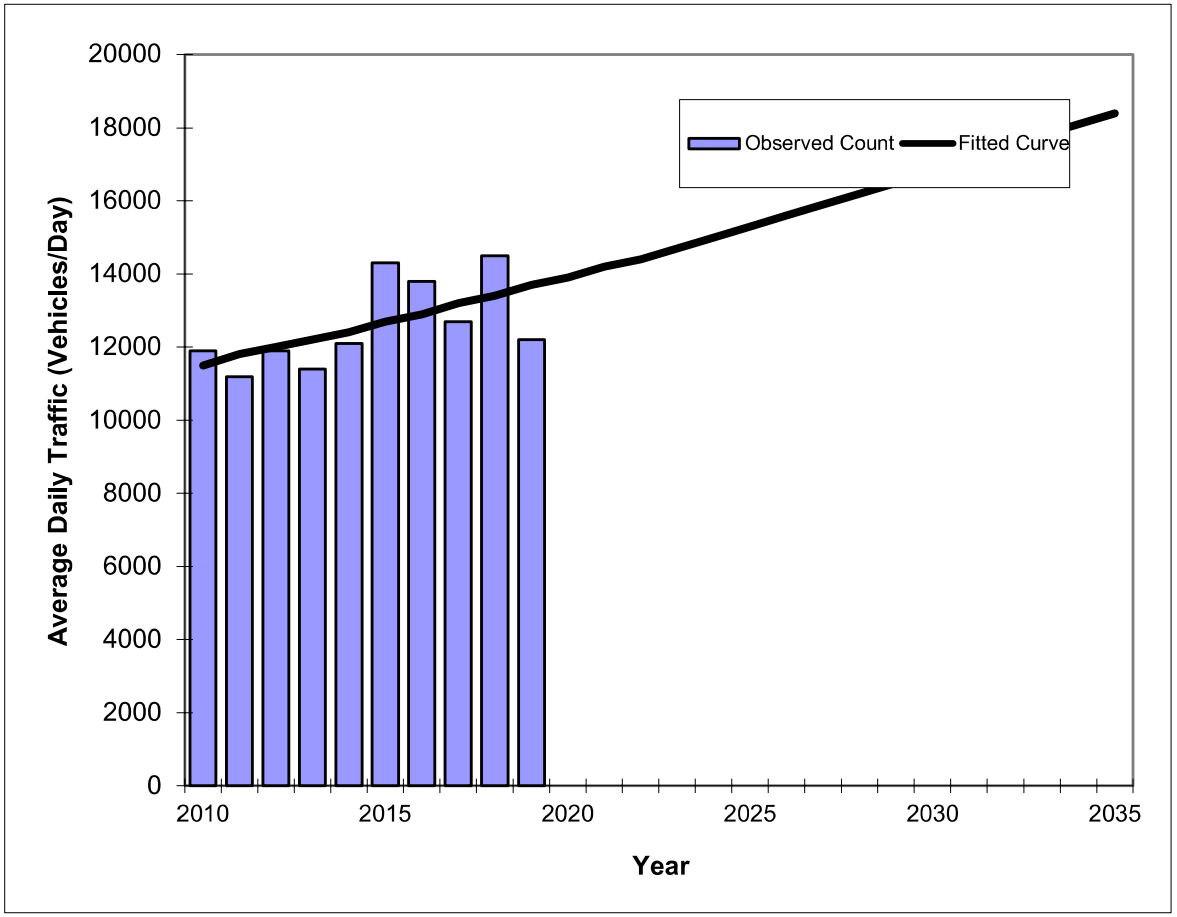
Straight Line Growth Option

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11900	11500
2011	11200	11800
2012	11900	12000
2013	11400	12200
2014	12100	12400
2015	14300	12700
2016	13800	12900
2017	12700	13200
2018	14500	13400
2019	12200	13700
2027 Opening Year Trend		
2027	N/A	15900
2033 Mid-Year Trend		
2033	N/A	17800
2034 Design Year Trend		
2034	N/A	18100
TRANPLAN Forecasts/Trends		

Trend R-squared:	37.74%
Compounded Annual Historic Growth Rate:	1.96%
Compounded Growth Rate (2019 to Design Year):	1.87%
Printed:	19-Jan-23

Exponential Growth Option

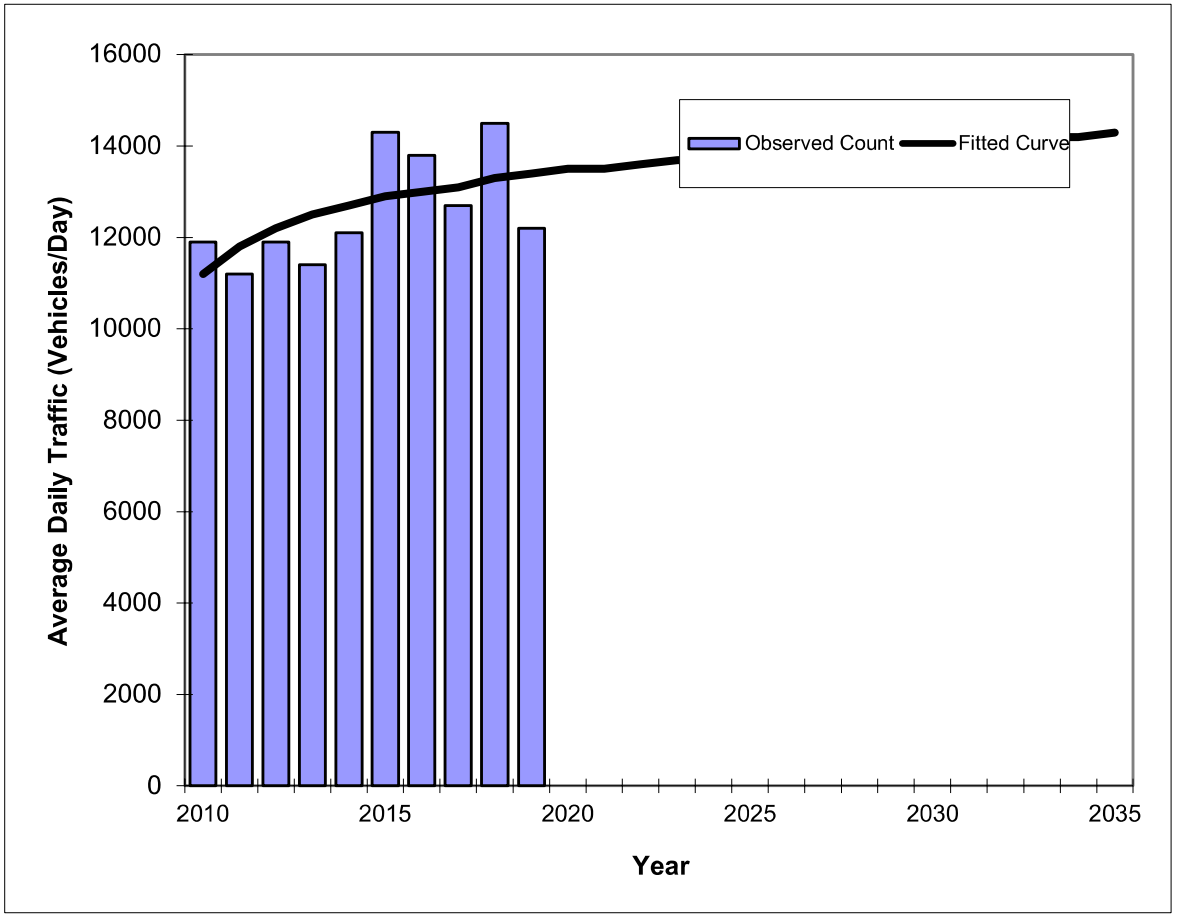
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Orange Camp Rd to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11900	11200
2011	11200	11800
2012	11900	12200
2013	11400	12500
2014	12100	12700
2015	14300	12900
2016	13800	13000
2017	12700	13100
2018	14500	13300
2019	12200	13400
2027 Opening Year Trend		
2027	N/A	13900
2033 Mid-Year Trend		
2033	N/A	14200
2034 Design Year Trend		
2034	N/A	14200
TRANPLAN Forecasts/Trends		

Trend R-squared:	34.87%
Compounded Annual Historic Growth Rate:	2.01%
Compounded Growth Rate (2019 to Design Year):	0.39%
Printed:	19-Jan-23

Decaying Exponential Growth Option

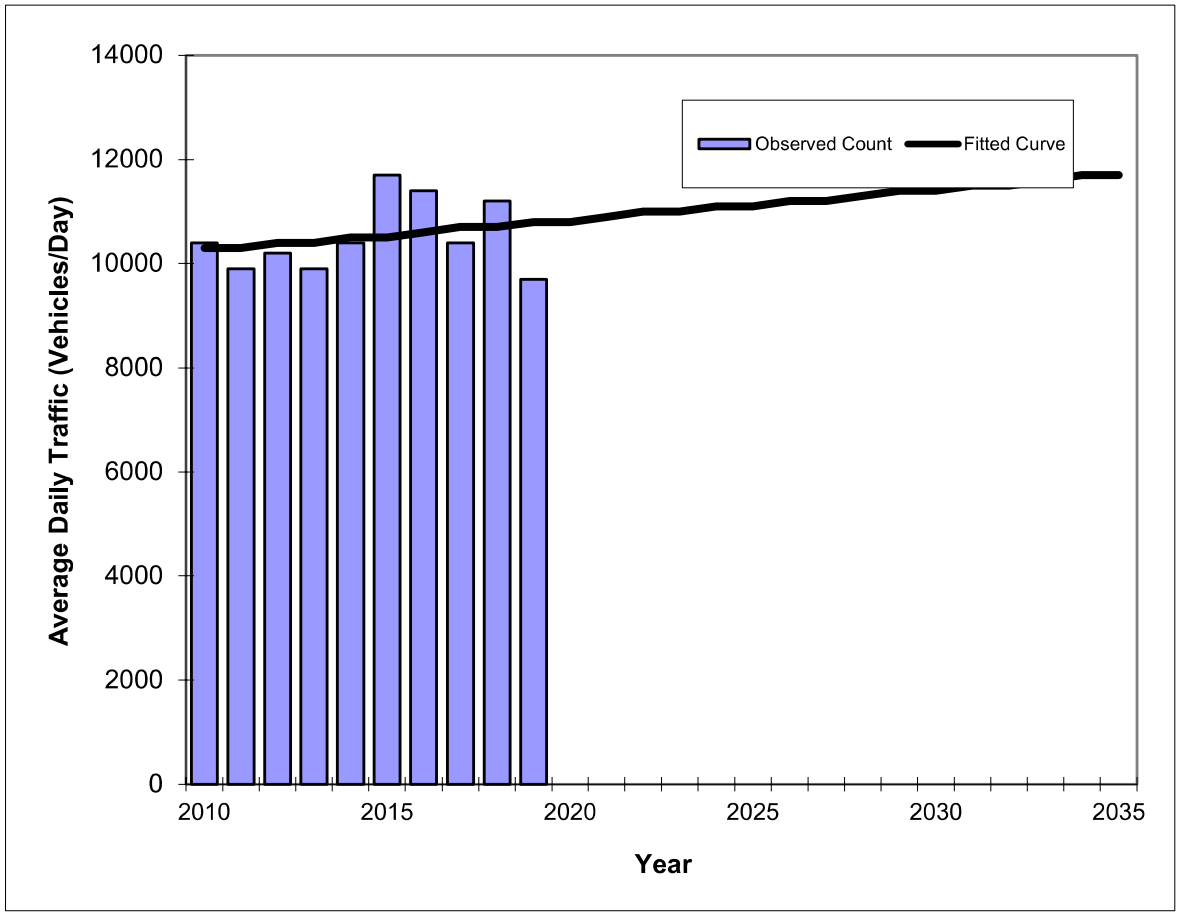
***Axle-Adjusted**

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10400	10300
2011	9900	10300
2012	10200	10400
2013	9900	10400
2014	10400	10500
2015	11700	10500
2016	11400	10600
2017	10400	10700
2018	11200	10700
2019	9700	10800
2022 Opening Year Trend		
2022	N/A	11000
2024 Mid-Year Trend		
2024	N/A	11100
2027 Design Year Trend		
2027	N/A	11200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	58
Trend R-squared:	6.62%
Trend Annual Historic Growth Rate:	0.54%
Trend Growth Rate (2019 to Design Year):	0.46%
Printed:	19-Jan-23

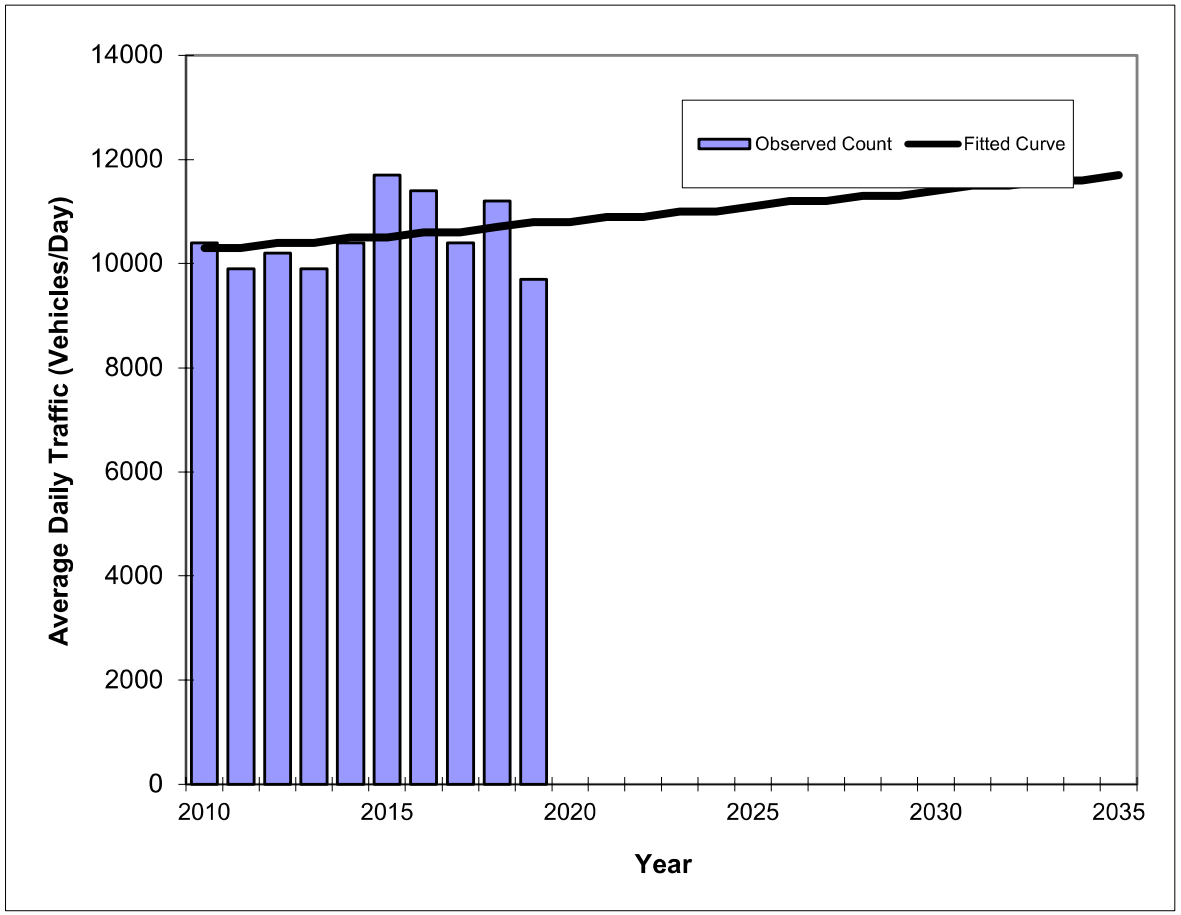
Straight Line Growth Option

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10400	10300
2011	9900	10300
2012	10200	10400
2013	9900	10400
2014	10400	10500
2015	11700	10500
2016	11400	10600
2017	10400	10600
2018	11200	10700
2019	9700	10800
2022 Opening Year Trend		
2022	N/A	10900
2024 Mid-Year Trend		
2024	N/A	11000
2027 Design Year Trend		
2027	N/A	11200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	6.27%
Compounded Annual Historic Growth Rate:	0.53%
Compounded Growth Rate (2019 to Design Year):	0.46%
Printed:	19-Jan-23

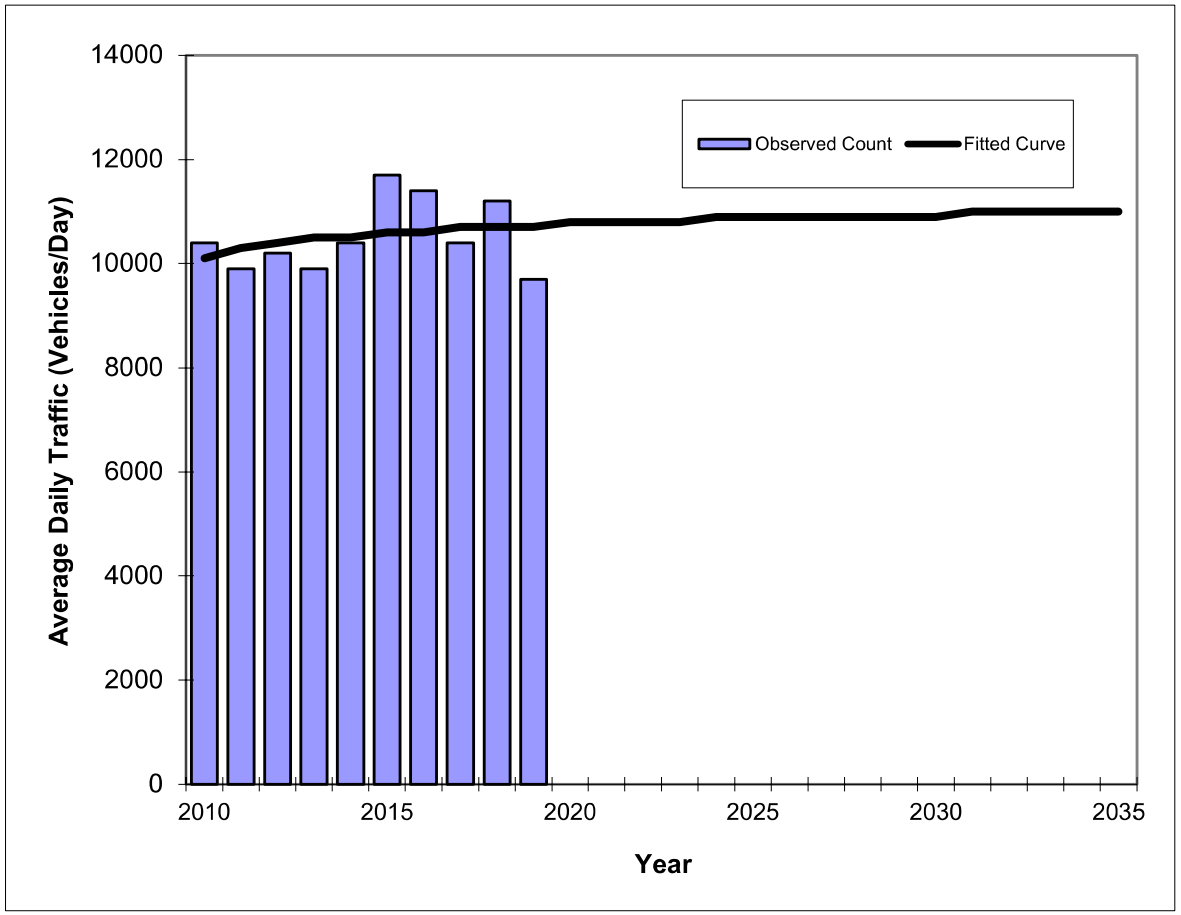
Exponential Growth Option

Traffic Trends - V03.a

DR ML KING JR BLTWY -- Taylor Rd to Beresford Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	DR ML KING JR BLTWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10400	10100
2011	9900	10300
2012	10200	10400
2013	9900	10500
2014	10400	10500
2015	11700	10600
2016	11400	10600
2017	10400	10700
2018	11200	10700
2019	9700	10700
2022 Opening Year Trend		
2022	N/A	10800
2024 Mid-Year Trend		
2024	N/A	10900
2027 Design Year Trend		
2027	N/A	10900
TRANPLAN Forecasts/Trends		

Trend R-squared:	8.93%
Compounded Annual Historic Growth Rate:	0.64%
Compounded Growth Rate (2019 to Design Year):	0.23%
Printed:	19-Jan-23

Decaying Exponential Growth Option

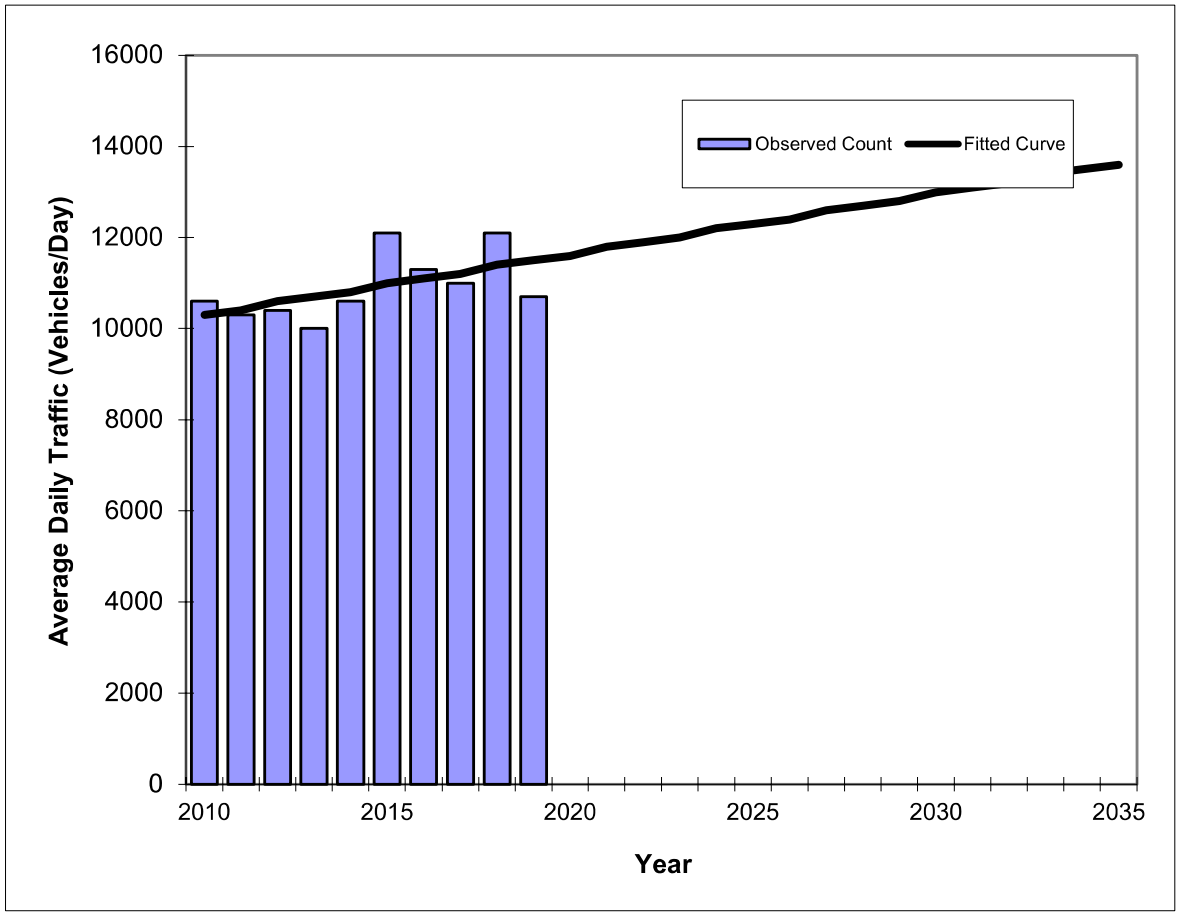
***Axle-Adjusted**

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10600	10300
2011	10300	10400
2012	10400	10600
2013	10000	10700
2014	10600	10800
2015	12100	11000
2016	11300	11100
2017	11000	11200
2018	12100	11400
2019	10700	11500
2022 Opening Year Trend		
2022	N/A	11900
2024 Mid-Year Trend		
2024	N/A	12200
2027 Design Year Trend		
2027	N/A	12600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

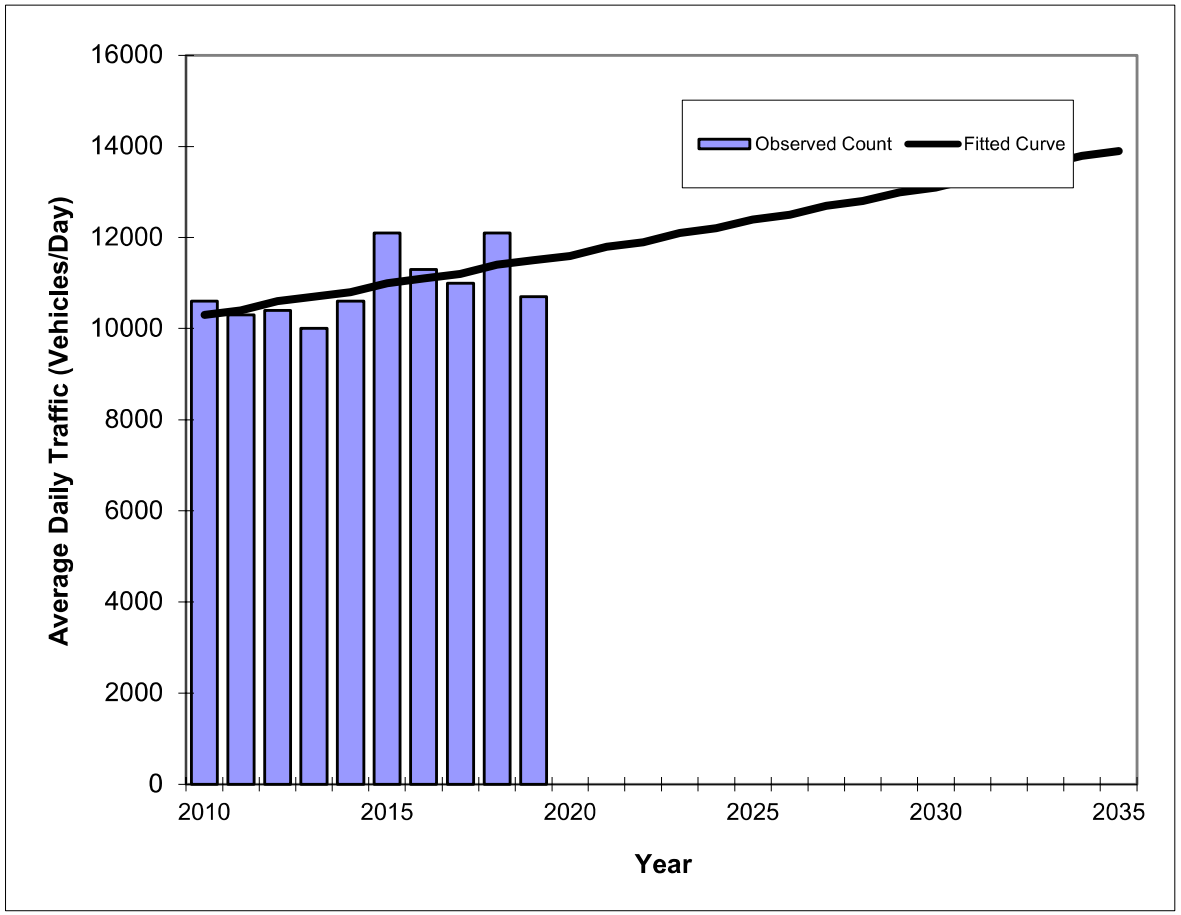
**** Annual Trend Increase:**	133
Trend R-squared:	31.00%
Trend Annual Historic Growth Rate:	1.29%
Trend Growth Rate (2019 to Design Year):	1.20%
Printed:	19-Jan-23
Straight Line Growth Option	

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10600	10300
2011	10300	10400
2012	10400	10600
2013	10000	10700
2014	10600	10800
2015	12100	11000
2016	11300	11100
2017	11000	11200
2018	12100	11400
2019	10700	11500
2022 Opening Year Trend		
2022	N/A	11900
2024 Mid-Year Trend		
2024	N/A	12200
2027 Design Year Trend		
2027	N/A	12700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	31.68%
Compounded Annual Historic Growth Rate:	1.23%
Compounded Growth Rate (2019 to Design Year):	1.25%
Printed:	19-Jan-23

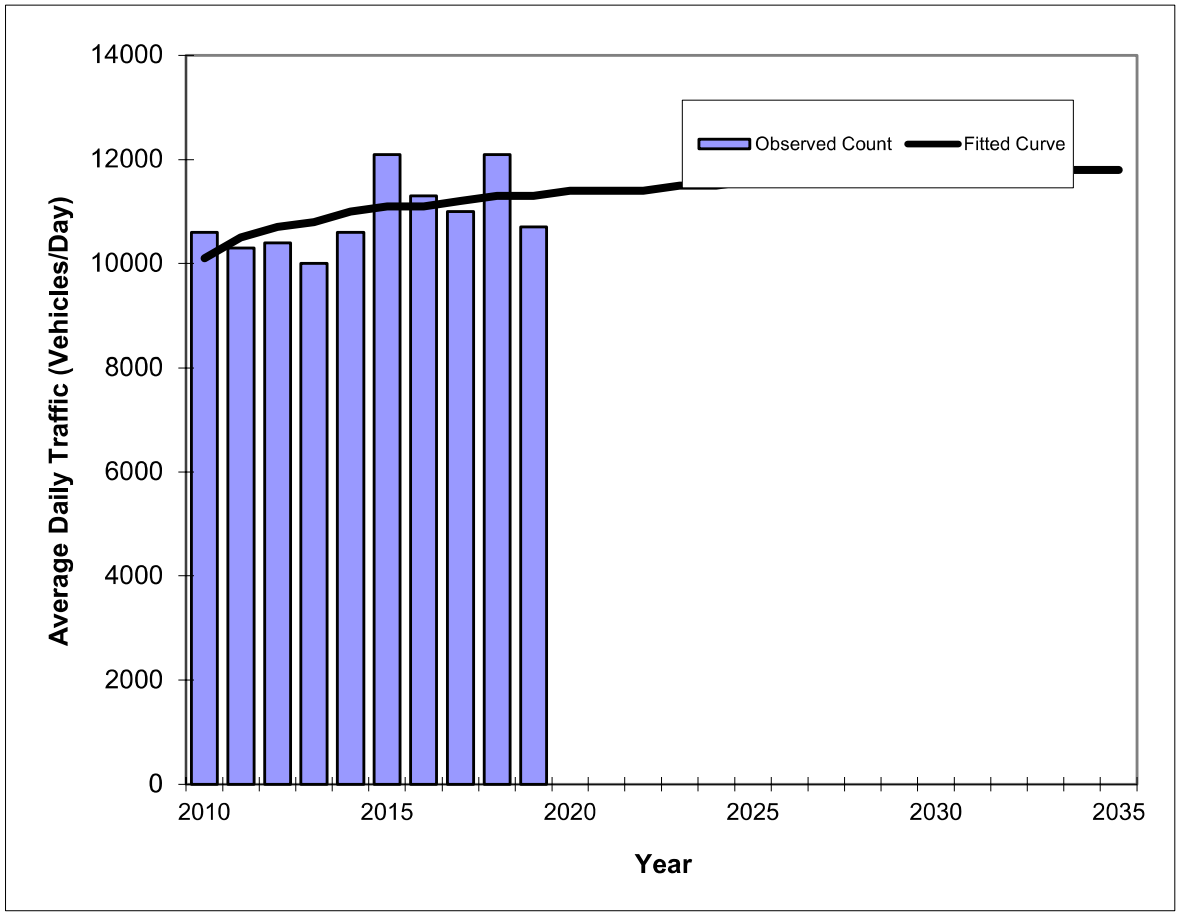
Exponential Growth Option

Traffic Trends - V03.a

KEPLER RD -- Beresford Ave to SR 44

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KEPLER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	10600	10100
2011	10300	10500
2012	10400	10700
2013	10000	10800
2014	10600	11000
2015	12100	11100
2016	11300	11100
2017	11000	11200
2018	12100	11300
2019	10700	11300
2022 Opening Year Trend		
2022	N/A	11400
2024 Mid-Year Trend		
2024	N/A	11500
2027 Design Year Trend		
2027	N/A	11600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	26.81%
Compounded Annual Historic Growth Rate:	1.26%
Compounded Growth Rate (2019 to Design Year):	0.33%
Printed:	19-Jan-23

Decaying Exponential Growth Option

Kentucky Avenue

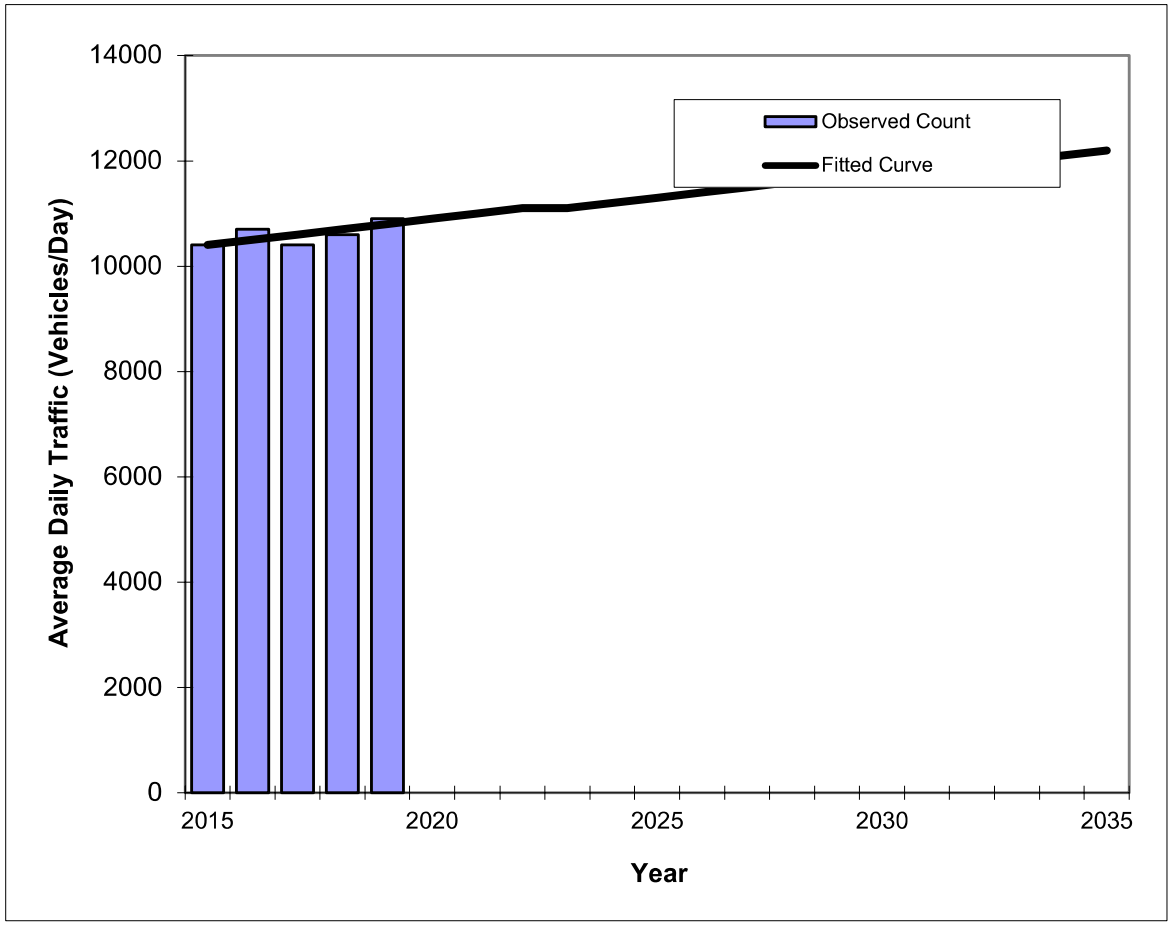
Five Year Trends

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	10400	10400
2016	10700	10500
2017	10400	10600
2018	10600	10700
2019	10900	10800
2027 Opening Year Trend		
2027	N/A	11500
2033 Mid-Year Trend		
2033	N/A	12000
2034 Design Year Trend		
2034	N/A	12100
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	90
Trend R-squared:	45.00%
Trend Annual Historic Growth Rate:	0.96%
Trend Growth Rate (2019 to Design Year):	0.80%
Printed:	18-Jan-23

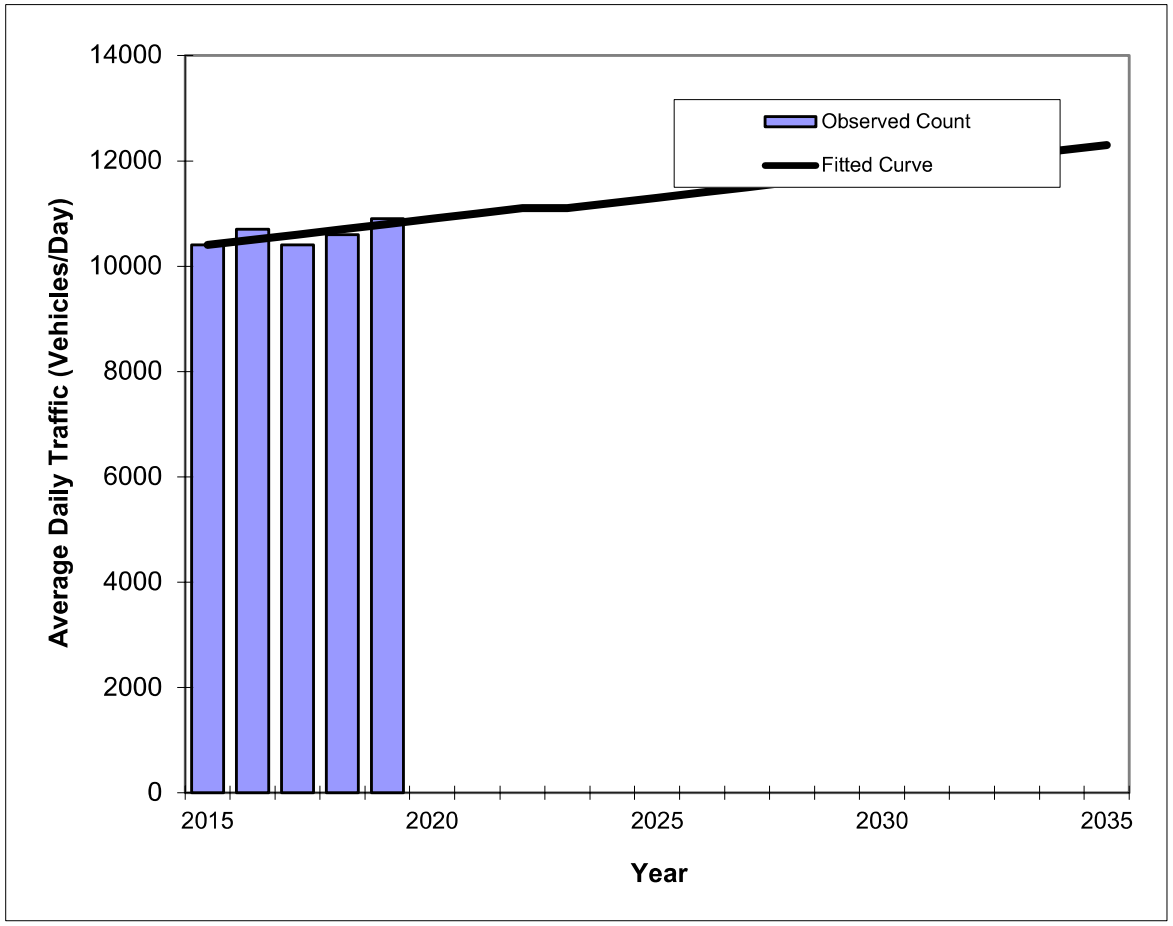
Straight Line Growth Option

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	10400	10400
2016	10700	10500
2017	10400	10600
2018	10600	10700
2019	10900	10800
2027 Opening Year Trend		
2027	N/A	11500
2033 Mid-Year Trend		
2033	N/A	12100
2034 Design Year Trend		
2034	N/A	12200
TRANPLAN Forecasts/Trends		

Trend R-squared:	44.86%
Compounded Annual Historic Growth Rate:	0.95%
Compounded Growth Rate (2019 to Design Year):	0.82%
Printed:	18-Jan-23

Exponential Growth Option

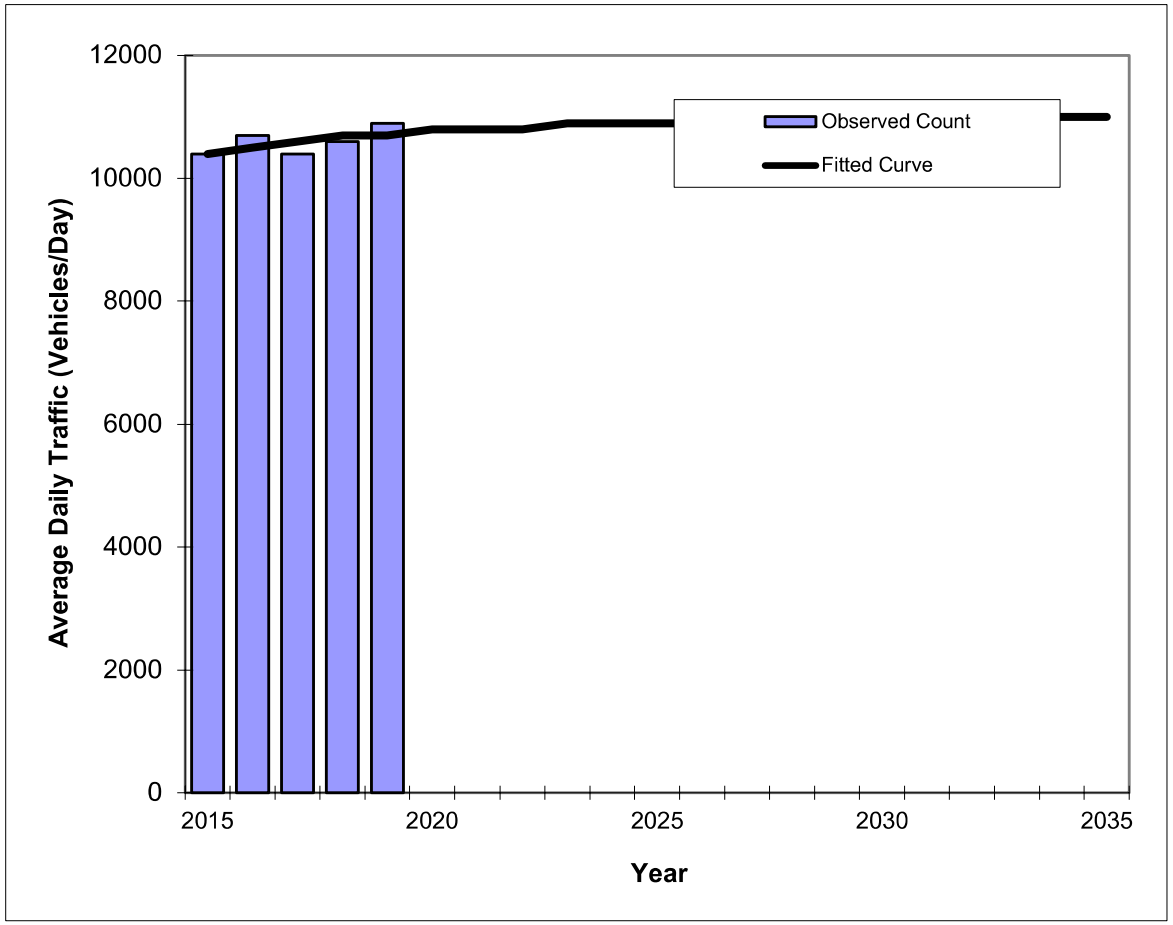
***Axle-Adjusted**

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	10400	10400
2016	10700	10500
2017	10400	10600
2018	10600	10700
2019	10900	10700
2027 Opening Year Trend		
2027	N/A	10900
2033 Mid-Year Trend		
2033	N/A	11000
2034 Design Year Trend		
2034	N/A	11000
TRANPLAN Forecasts/Trends		

Trend R-squared:	38.00%
Compounded Annual Historic Growth Rate:	0.71%
Compounded Growth Rate (2019 to Design Year):	0.18%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

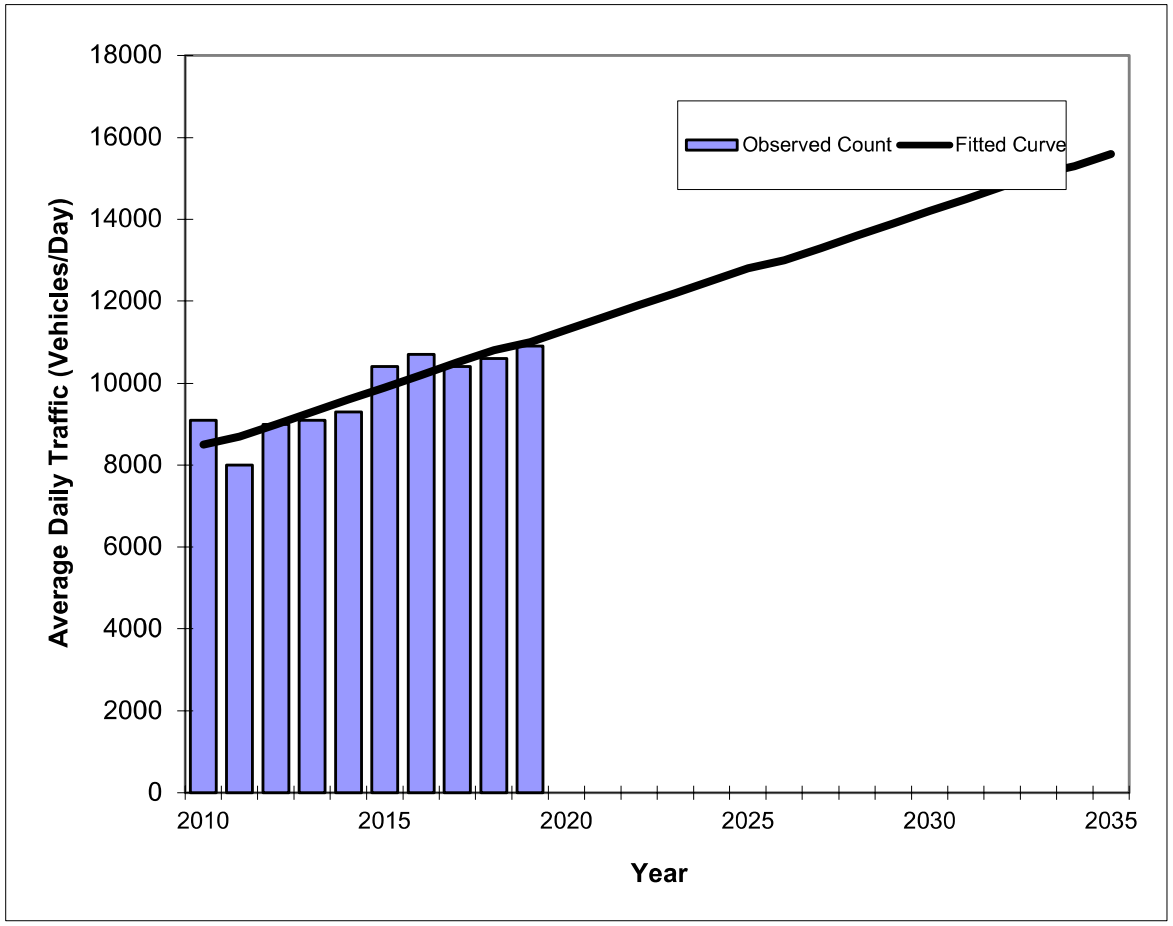
Ten Year Trends

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	9100	8500
2011	8000	8700
2012	9000	9000
2013	9100	9300
2014	9300	9600
2015	10400	9900
2016	10700	10200
2017	10400	10500
2018	10600	10800
2019	10900	11000
2027 Opening Year Trend		
2027	N/A	13300
2033 Mid-Year Trend		
2033	N/A	15100
2034 Design Year Trend		
2034	N/A	15300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	287
Trend R-squared:	80.09%
Trend Annual Historic Growth Rate:	3.27%
Trend Growth Rate (2019 to Design Year):	2.61%
Printed:	19-Jan-23

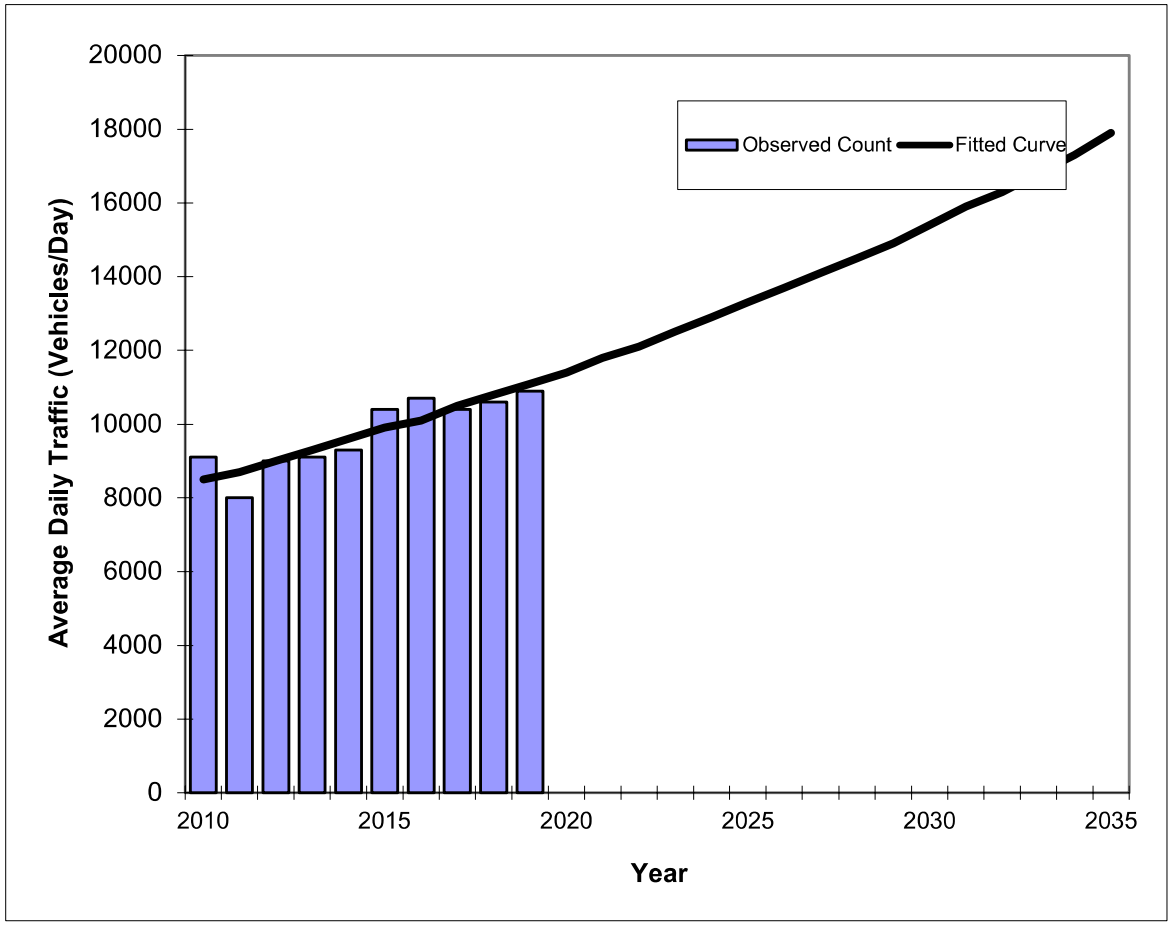
Straight Line Growth Option

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	9100	8500
2011	8000	8700
2012	9000	9000
2013	9100	9300
2014	9300	9600
2015	10400	9900
2016	10700	10100
2017	10400	10500
2018	10600	10800
2019	10900	11100
2027 Opening Year Trend		
2027	N/A	14100
2033 Mid-Year Trend		
2033	N/A	16800
2034 Design Year Trend		
2034	N/A	17300
TRANPLAN Forecasts/Trends		

Trend R-squared:	78.31%
Compounded Annual Historic Growth Rate:	3.01%
Compounded Growth Rate (2019 to Design Year):	3.00%
Printed:	19-Jan-23

Exponential Growth Option

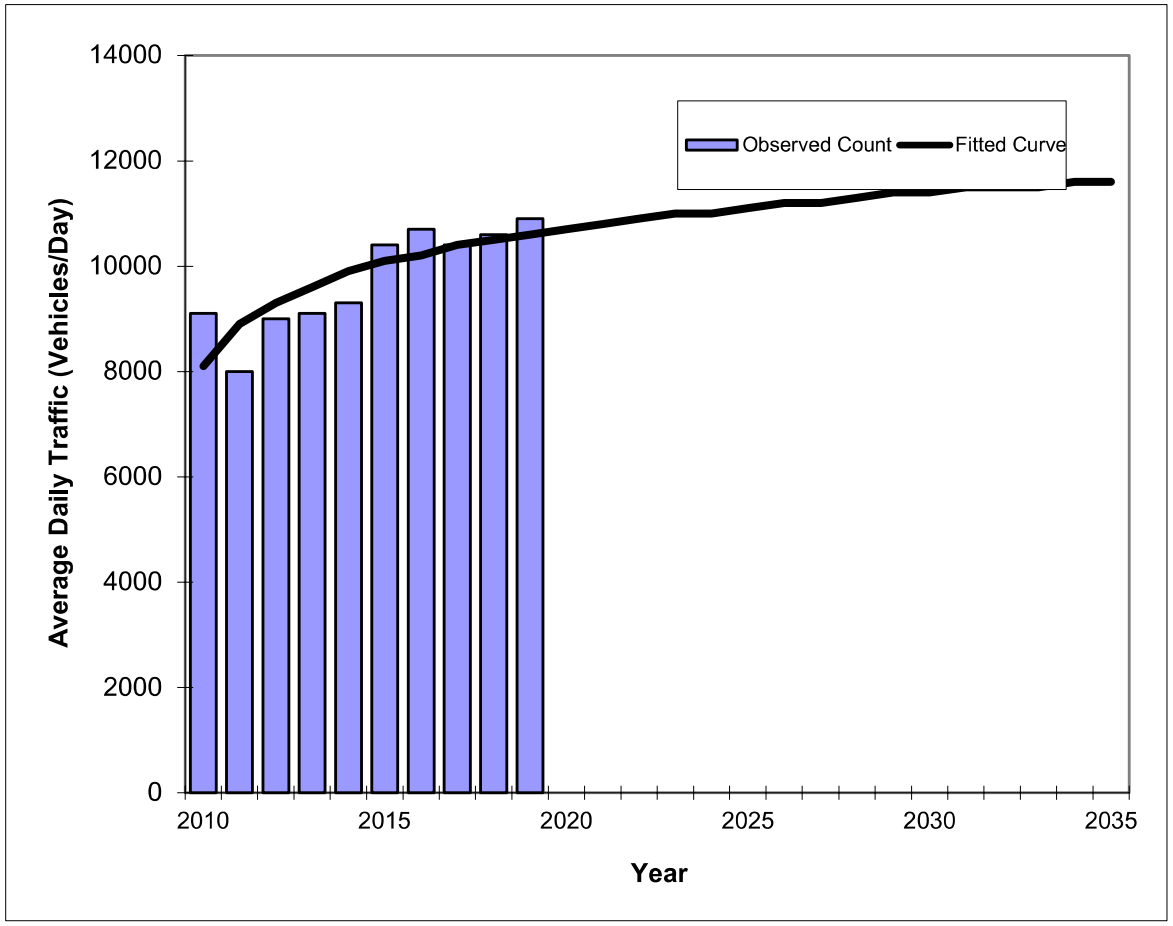
***Axle-Adjusted**

Traffic Trends - V03.a

KENTUCKY AVE -- Graves Ave to SR 472

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KENTUCKY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	9100	8100
2011	8000	8900
2012	9000	9300
2013	9100	9600
2014	9300	9900
2015	10400	10100
2016	10700	10200
2017	10400	10400
2018	10600	10500
2019	10900	10600
2027 Opening Year Trend		
2027	N/A	11200
2033 Mid-Year Trend		
2033	N/A	11500
2034 Design Year Trend		
2034	N/A	11600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	66.52%
Compounded Annual Historic Growth Rate:	3.03%
Compounded Growth Rate (2019 to Design Year):	0.60%
Printed:	19-Jan-23

Decaying Exponential Growth Option

Veteran's Memorial Parkway

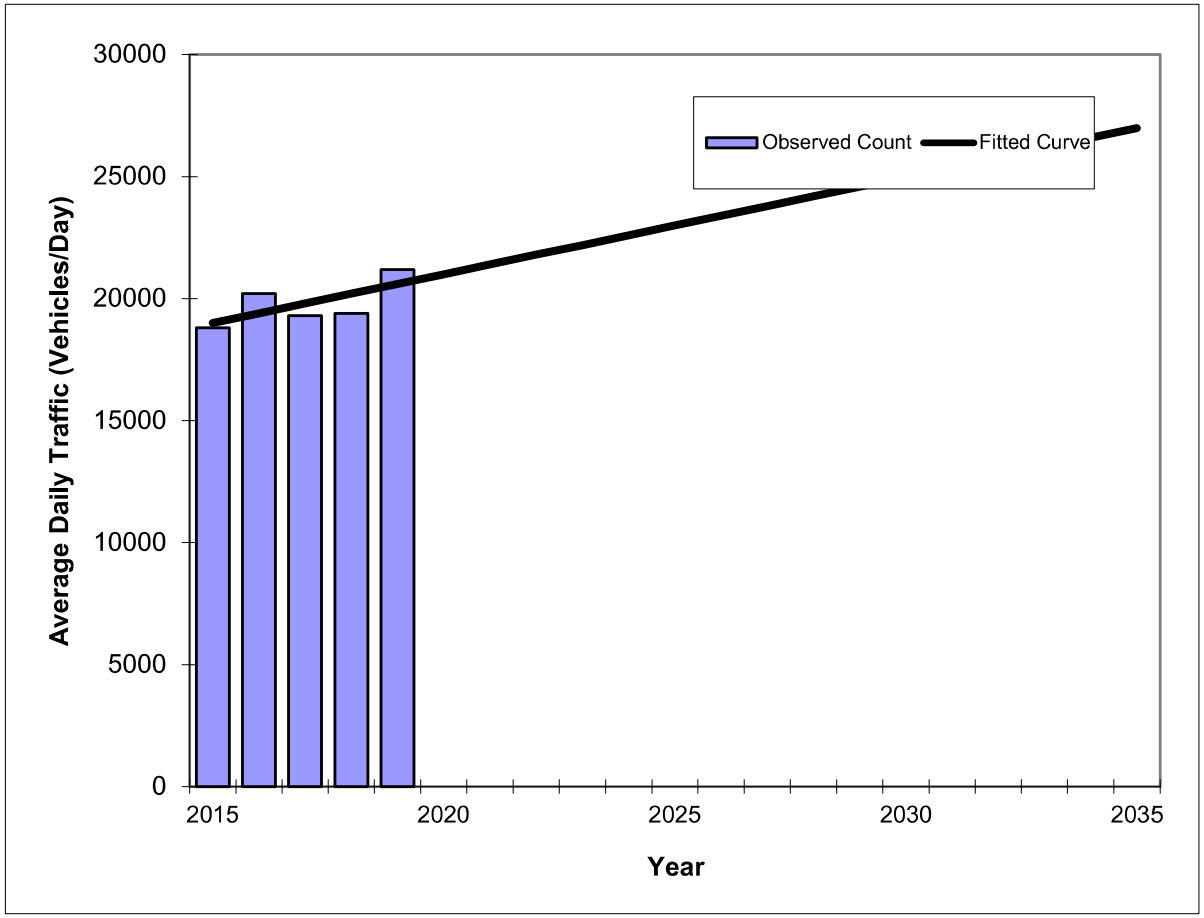
Five Year Trends

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	19000
2016	20200	19400
2017	19300	19800
2018	19400	20200
2019	21200	20600
2027 Opening Year Trend		
2027	N/A	23800
2033 Mid-Year Trend		
2033	N/A	26200
2034 Design Year Trend		
2034	N/A	26600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	400
Trend R-squared:	45.35%
Trend Annual Historic Growth Rate:	2.11%
Trend Growth Rate (2019 to Design Year):	1.94%
Printed:	20-Jan-23
Straight Line Growth Option	

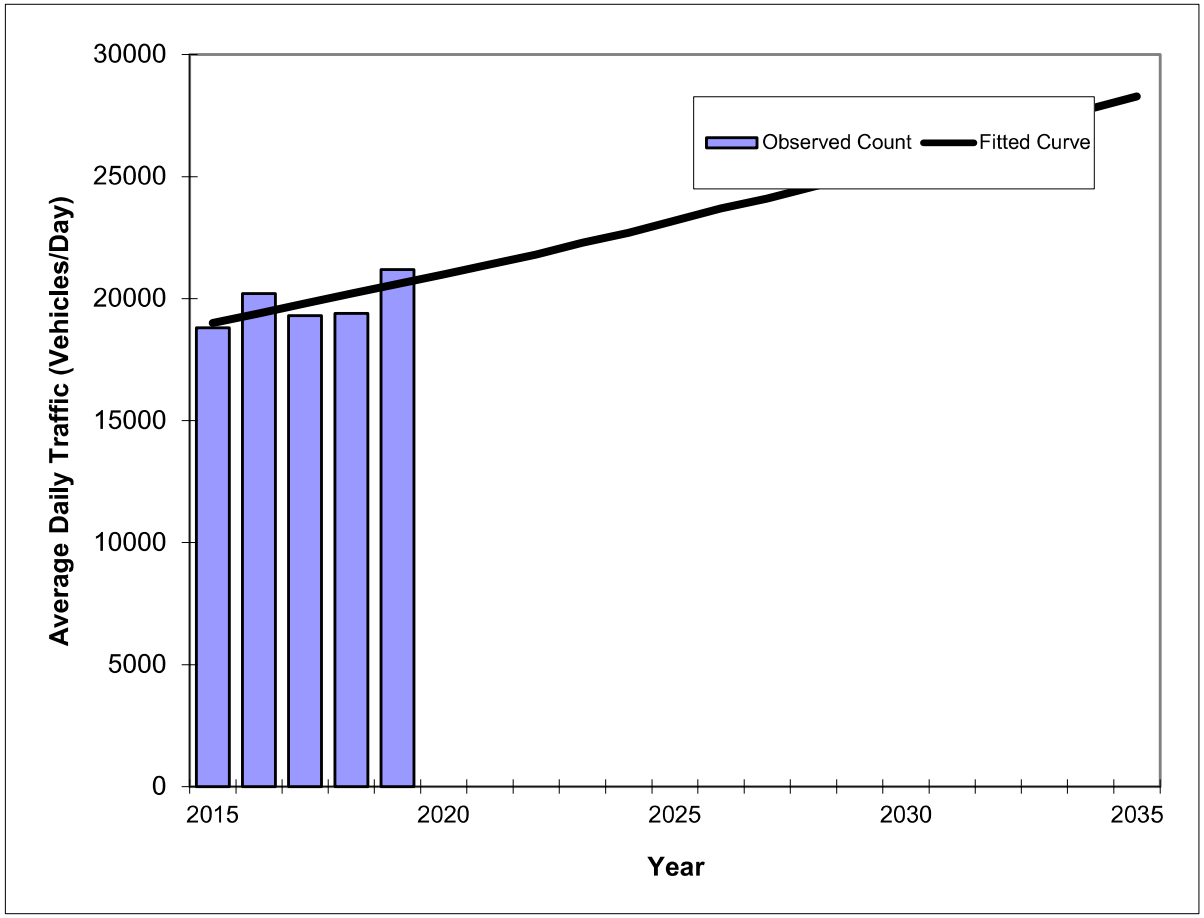
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	19000
2016	20200	19400
2017	19300	19800
2018	19400	20200
2019	21200	20600
2027 Opening Year Trend		
2027	N/A	24100
2033 Mid-Year Trend		
2033	N/A	27200
2034 Design Year Trend		
2034	N/A	27800
TRANPLAN Forecasts/Trends		

Trend R-squared:	45.37%
Compounded Annual Historic Growth Rate:	2.04%
Compounded Growth Rate (2019 to Design Year):	2.02%
Printed:	20-Jan-23

Exponential Growth Option

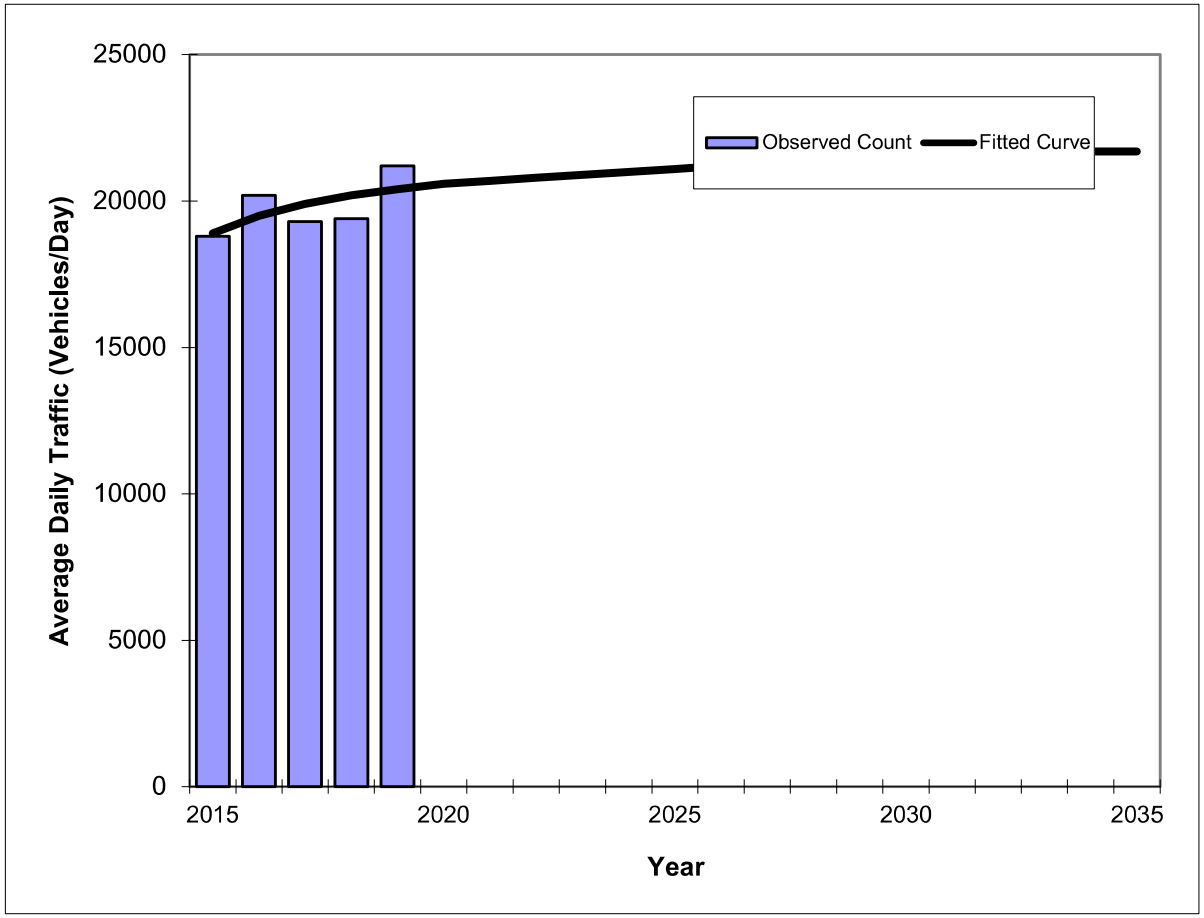
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	18900
2016	20200	19500
2017	19300	19900
2018	19400	20200
2019	21200	20400
2027 Opening Year Trend		
2027	N/A	21300
2033 Mid-Year Trend		
2033	N/A	21700
2034 Design Year Trend		
2034	N/A	21700
TRANPLAN Forecasts/Trends		

Trend R-squared:	40.67%
Compounded Annual Historic Growth Rate:	1.93%
Compounded Growth Rate (2019 to Design Year):	0.41%
Printed:	20-Jan-23

Decaying Exponential Growth Option

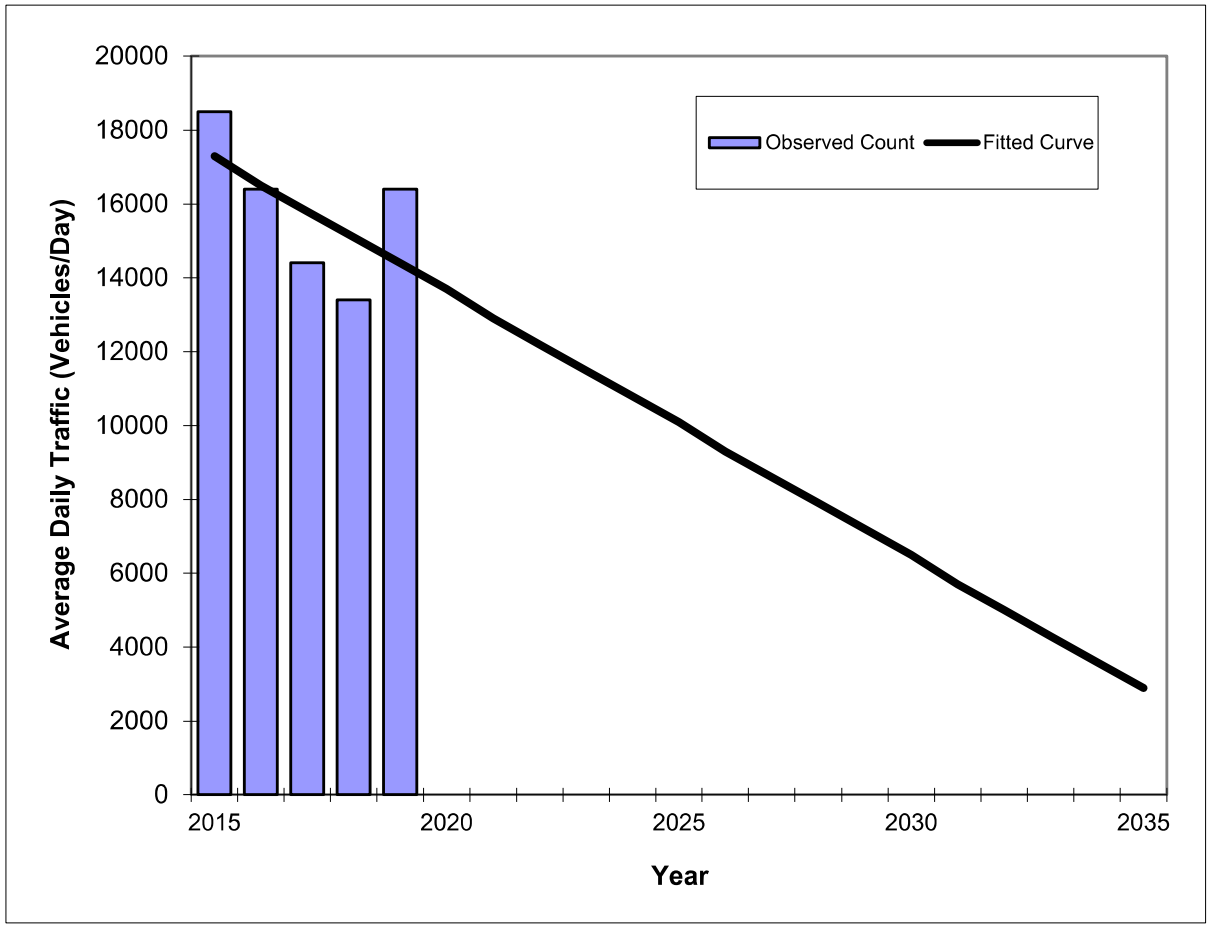
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18500	17300
2016	16400	16500
2017	14400	15800
2018	13400	15100
2019	16400	14400
2027 Opening Year Trend		
2027	N/A	8600
2033 Mid-Year Trend		
2033	N/A	4300
2034 Design Year Trend		
2034	N/A	3600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	-720
Trend R-squared:	32.96%
Trend Annual Historic Growth Rate:	-4.19%
Trend Growth Rate (2019 to Design Year):	-5.00%
Printed:	15-Nov-22

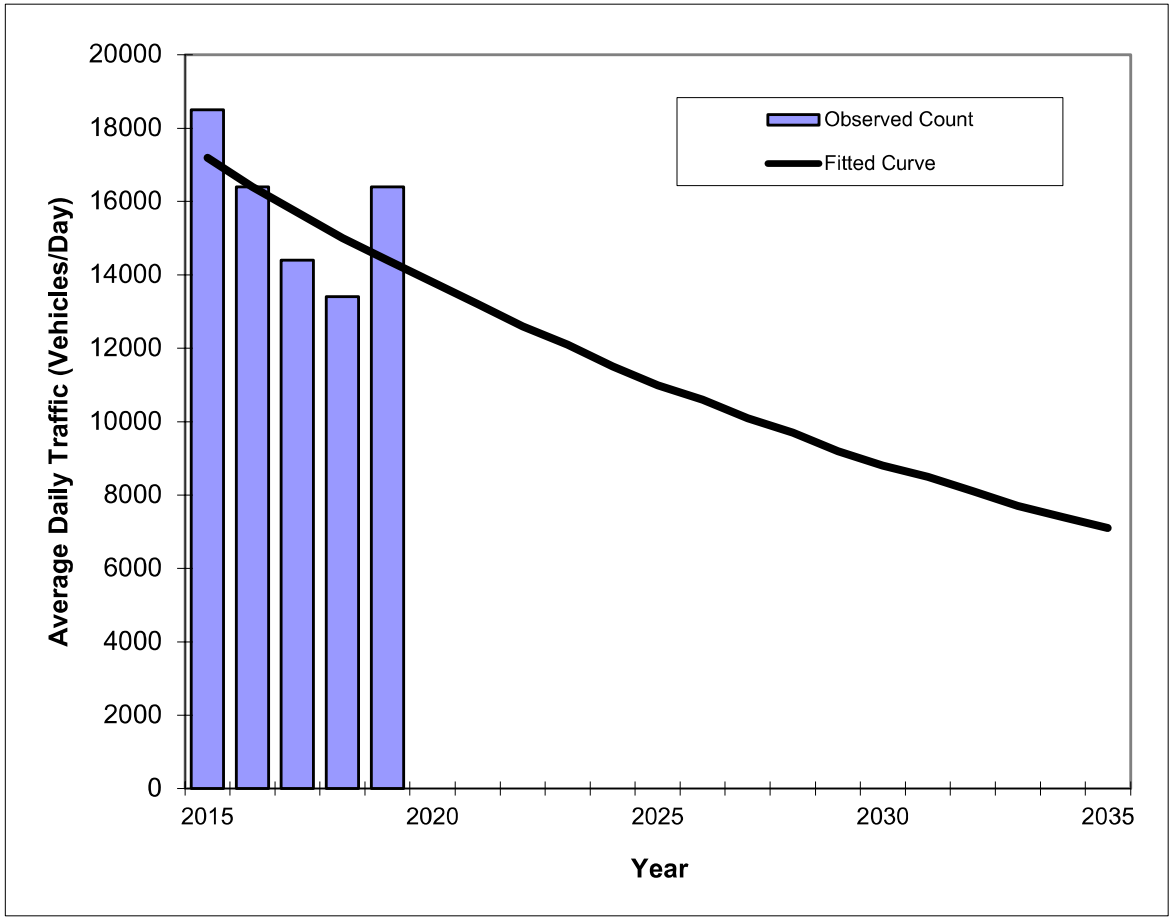
Straight Line Growth Option

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18500	17200
2016	16400	16400
2017	14400	15700
2018	13400	15000
2019	16400	14400
2027 Opening Year Trend		
2027	N/A	10100
2033 Mid-Year Trend		
2033	N/A	7700
2034 Design Year Trend		
2034	N/A	7400
TRANPLAN Forecasts/Trends		

Trend R-squared:	31.01%
Compounded Annual Historic Growth Rate:	-4.34%
Compounded Growth Rate (2019 to Design Year):	-4.34%
Printed:	18-Jan-23

Exponential Growth Option

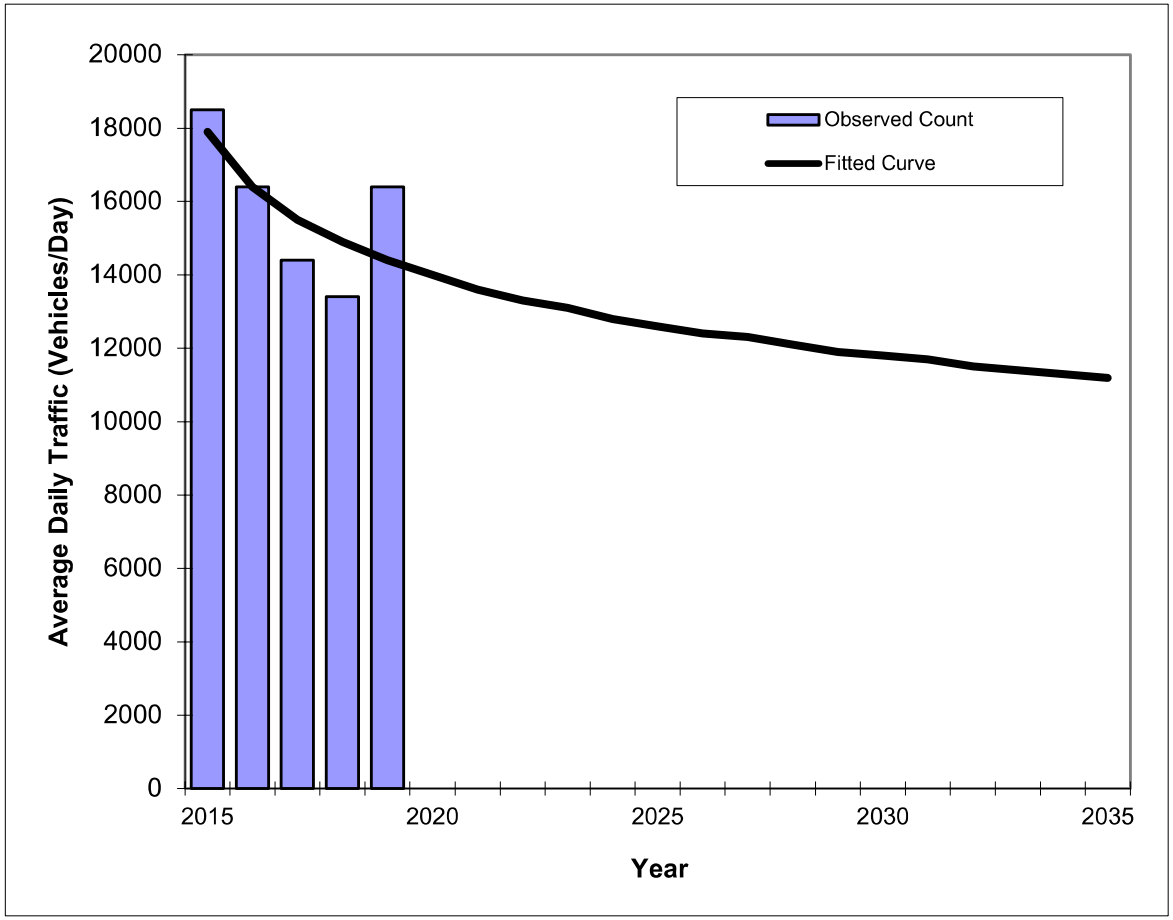
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18500	17900
2016	16400	16400
2017	14400	15500
2018	13400	14900
2019	16400	14400
2027 Opening Year Trend		
2027	N/A	12300
2033 Mid-Year Trend		
2033	N/A	11400
2034 Design Year Trend		
2034	N/A	11300
TRANPLAN Forecasts/Trends		

Trend R-squared:	50.42%
Compounded Annual Historic Growth Rate:	-5.29%
Compounded Growth Rate (2019 to Design Year):	-1.60%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

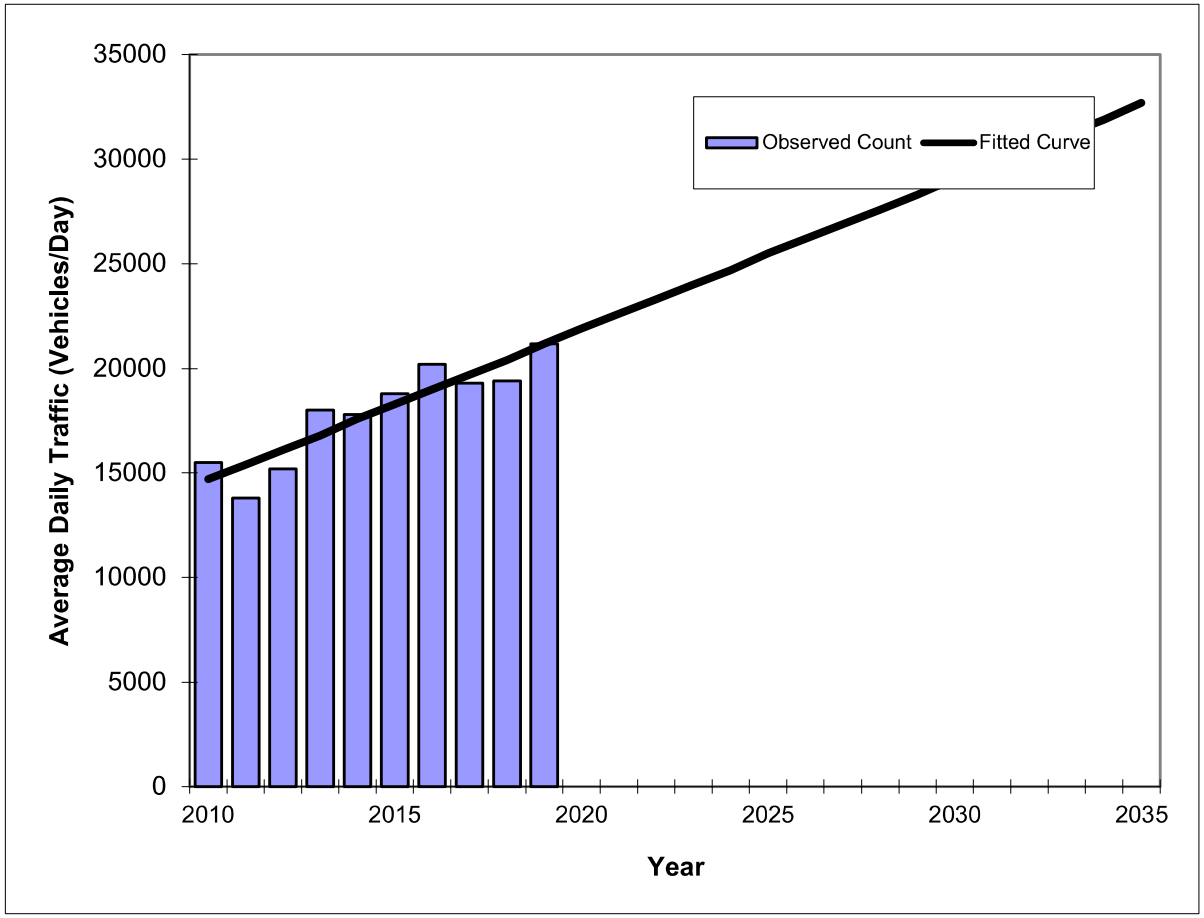
Ten Year Trends

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15500	14700
2011	13800	15400
2012	15200	16100
2013	18000	16800
2014	17800	17600
2015	18800	18300
2016	20200	19000
2017	19300	19700
2018	19400	20400
2019	21200	21200
2027 Opening Year Trend		
2027	N/A	26900
2033 Mid-Year Trend		
2033	N/A	31200
2034 Design Year Trend		
2034	N/A	31900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

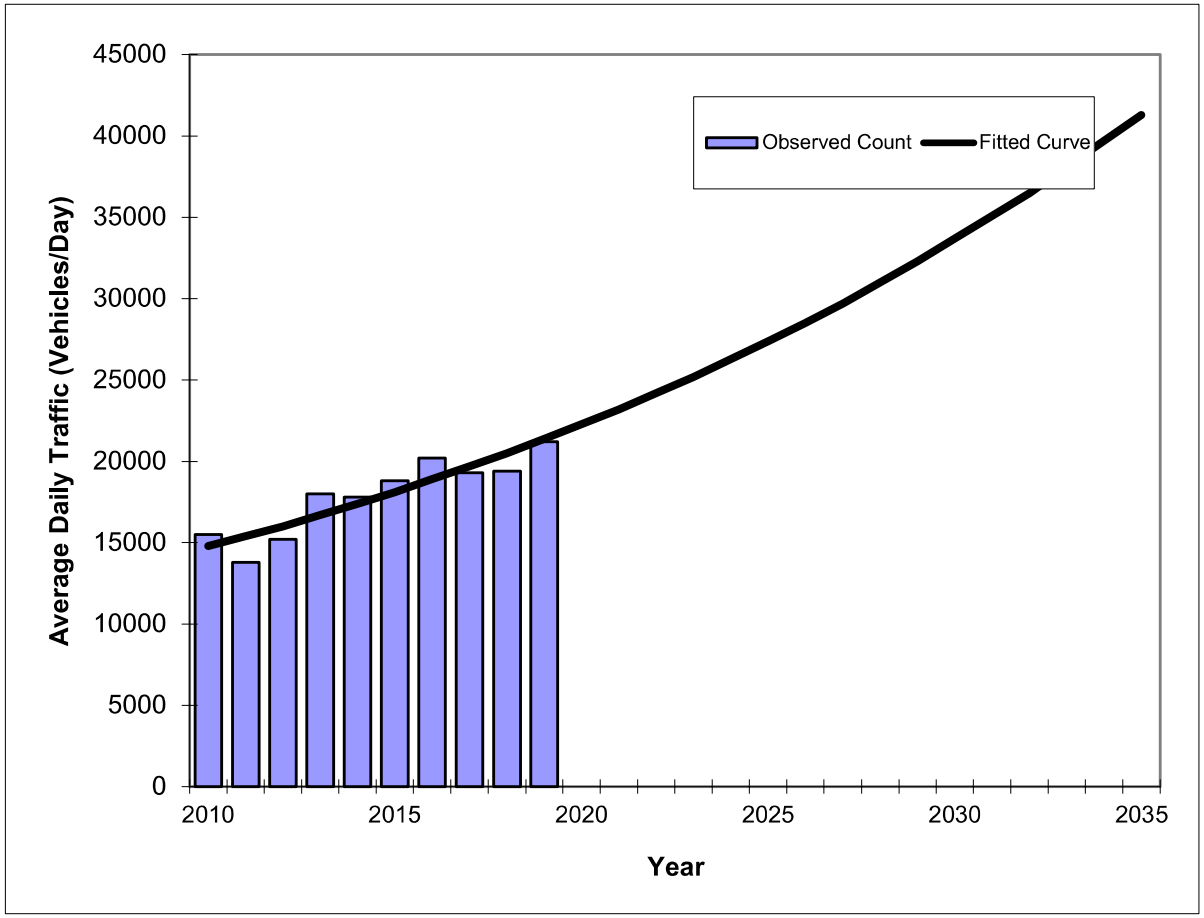
** Annual Trend Increase:	719
Trend R-squared:	83.45%
Trend Annual Historic Growth Rate:	4.91%
Trend Growth Rate (2019 to Design Year):	3.36%
Printed:	20-Jan-23
Straight Line Growth Option	

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15500	14800
2011	13800	15400
2012	15200	16000
2013	18000	16700
2014	17800	17400
2015	18800	18100
2016	20200	18900
2017	19300	19700
2018	19400	20500
2019	21200	21400
2027 Opening Year Trend		
2027	N/A	29700
2033 Mid-Year Trend		
2033	N/A	38100
2034 Design Year Trend		
2034	N/A	39700
TRANPLAN Forecasts/Trends		

Trend R-squared:	81.19%
Compounded Annual Historic Growth Rate:	4.18%
Compounded Growth Rate (2019 to Design Year):	4.21%
Printed:	20-Jan-23

Exponential Growth Option

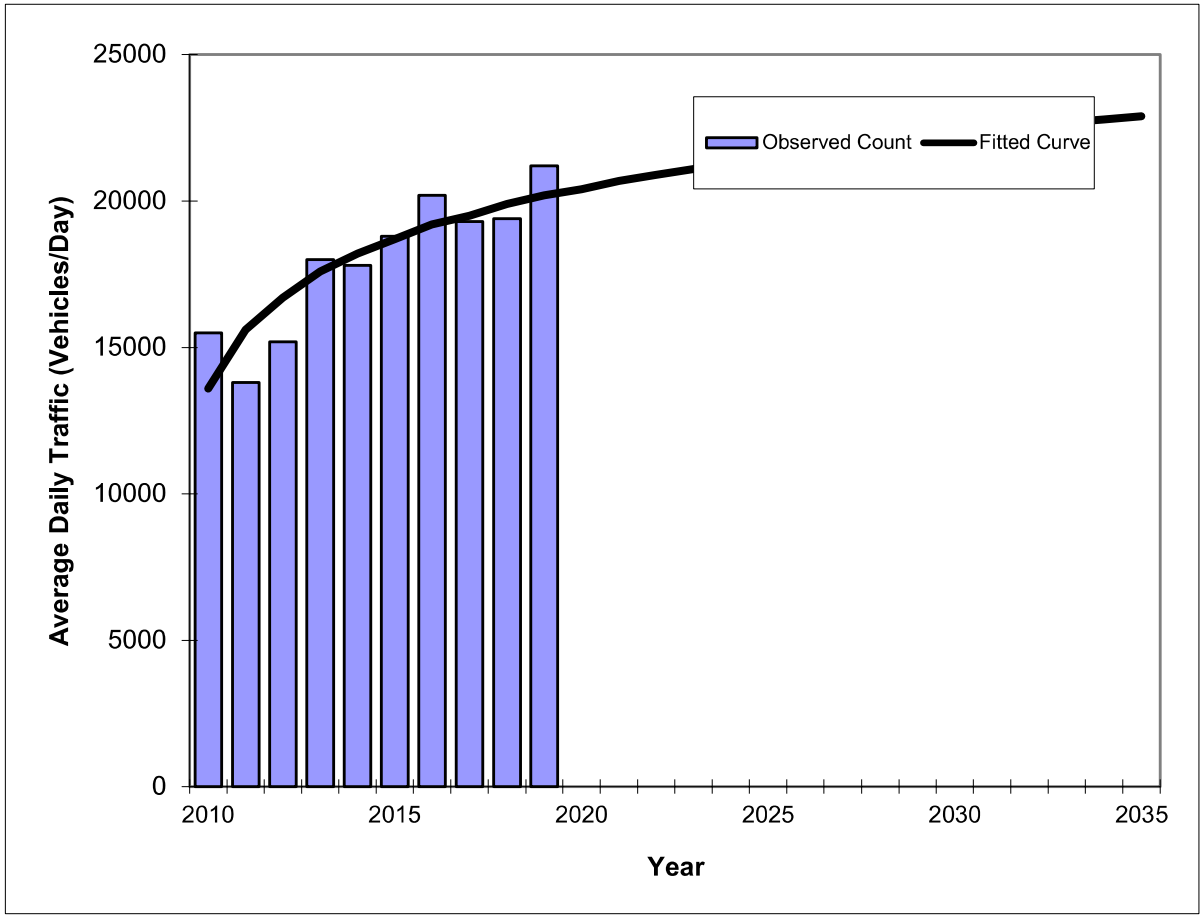
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Harley Strickland Blvd to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15500	13600
2011	13800	15600
2012	15200	16700
2013	18000	17600
2014	17800	18200
2015	18800	18700
2016	20200	19200
2017	19300	19500
2018	19400	19900
2019	21200	20200
2027 Opening Year Trend		
2027	N/A	21800
2033 Mid-Year Trend		
2033	N/A	22700
2034 Design Year Trend		
2034	N/A	22800
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.67%
Compounded Annual Historic Growth Rate:	4.49%
Compounded Growth Rate (2019 to Design Year):	0.81%
Printed:	20-Jan-23

Decaying Exponential Growth Option

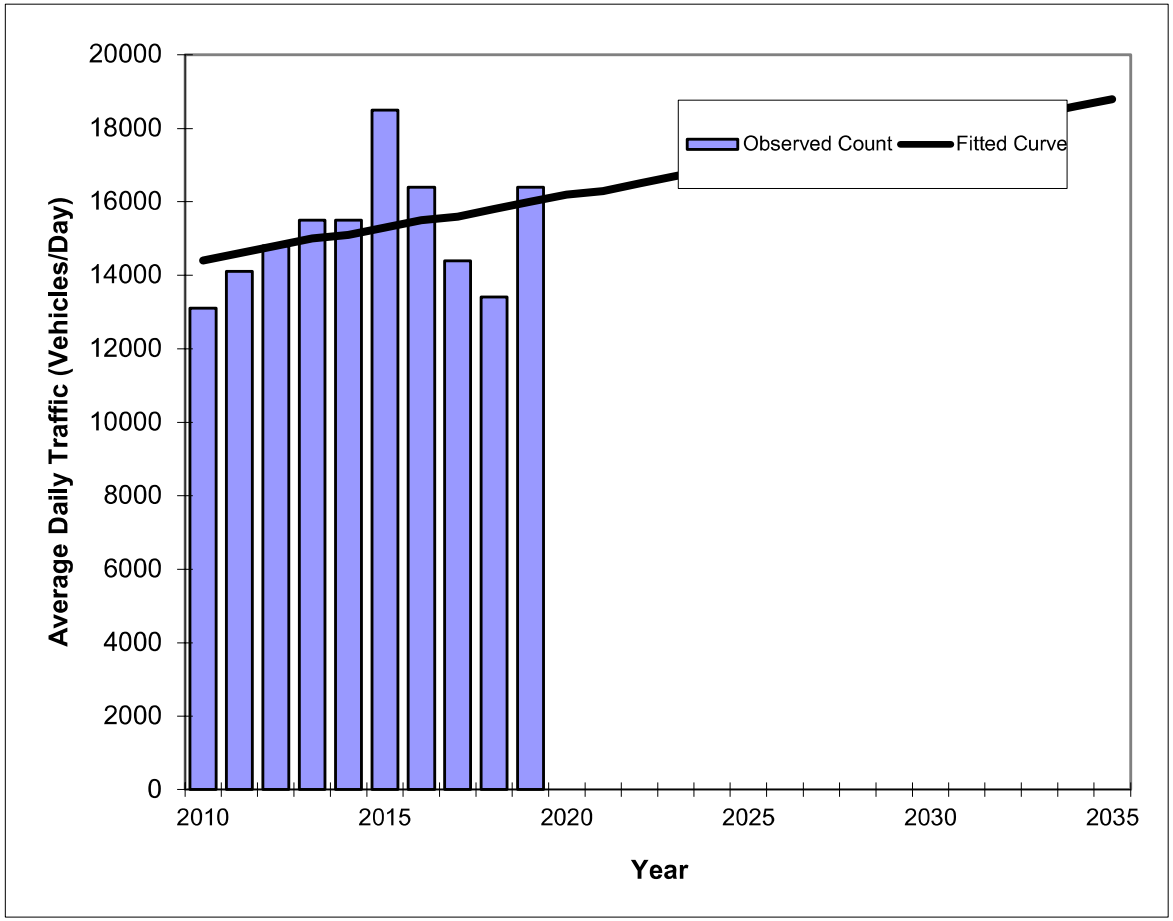
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	13100	14400
2011	14100	14600
2012	14800	14800
2013	15500	15000
2014	15500	15100
2015	18500	15300
2016	16400	15500
2017	14400	15600
2018	13400	15800
2019	16400	16000
2027 Opening Year Trend		
2027	N/A	17400
2033 Mid-Year Trend		
2033	N/A	18400
2034 Design Year Trend		
2034	N/A	18600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	173
Trend R-squared:	10.43%
Trend Annual Historic Growth Rate:	1.23%
Trend Growth Rate (2019 to Design Year):	1.08%
Printed:	19-Jan-23

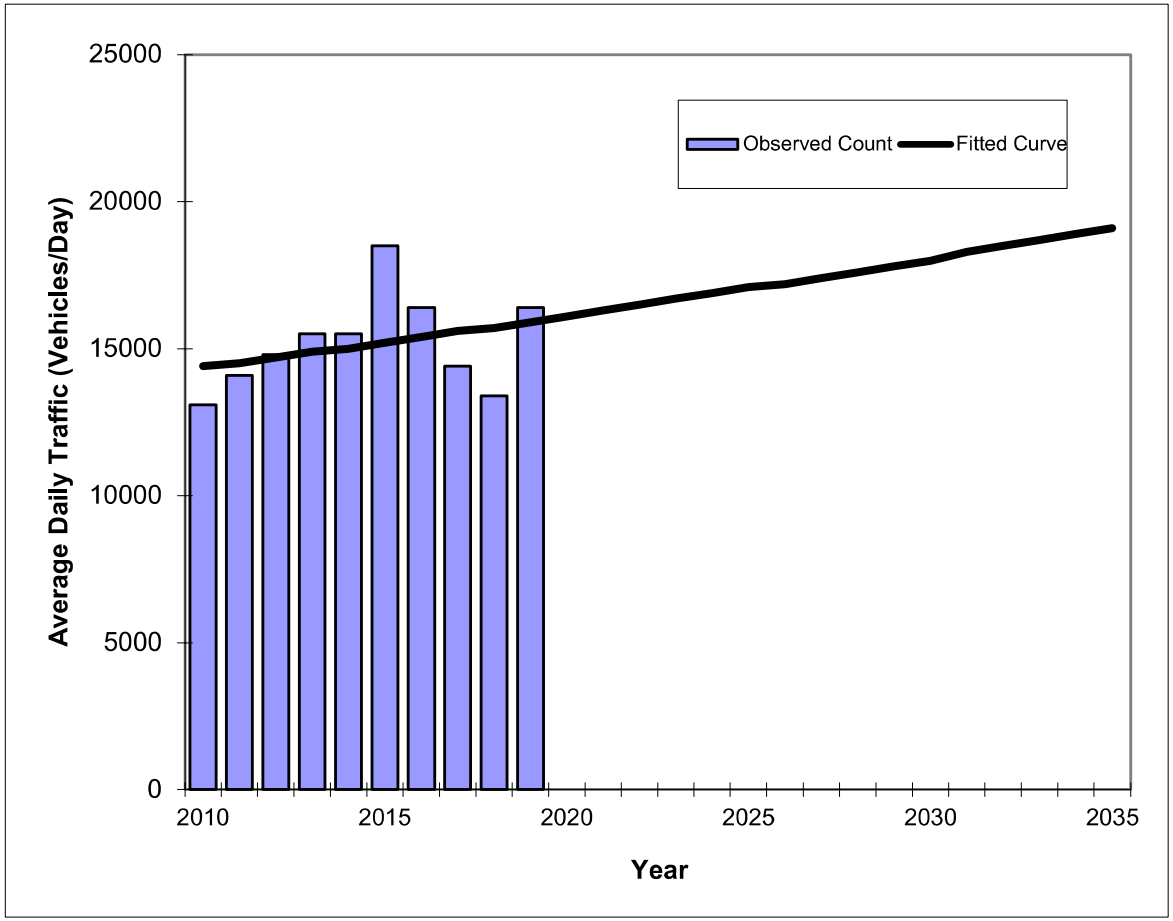
Straight Line Growth Option

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	13100	14400
2011	14100	14500
2012	14800	14700
2013	15500	14900
2014	15500	15000
2015	18500	15200
2016	16400	15400
2017	14400	15600
2018	13400	15700
2019	16400	15900
2027 Opening Year Trend		
2027	N/A	17400
2033 Mid-Year Trend		
2033	N/A	18700
2034 Design Year Trend		
2034	N/A	18900
TRANPLAN Forecasts/Trends		

Trend R-squared:	10.87%
Compounded Annual Historic Growth Rate:	1.11%
Compounded Growth Rate (2019 to Design Year):	1.16%
Printed:	19-Jan-23

Exponential Growth Option

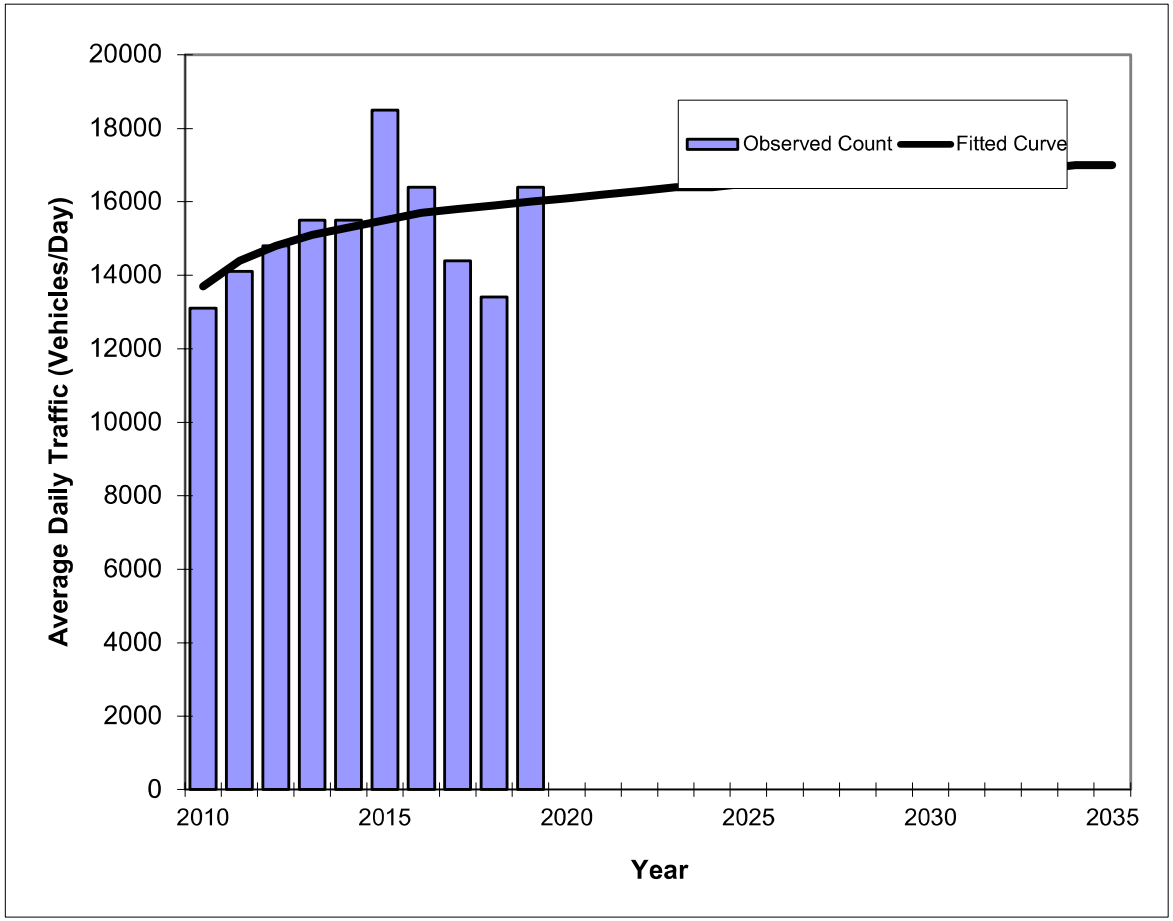
***Axle-Adjusted**

Traffic Trends - V03.a

VETERANS MEM PRKWY -- Rhode Island Ave to Graves Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	VETERANS MEM PRKWY



Year	Traffic (ADT/AADT) Count*	Trend**
2010	13100	13700
2011	14100	14400
2012	14800	14800
2013	15500	15100
2014	15500	15300
2015	18500	15500
2016	16400	15700
2017	14400	15800
2018	13400	15900
2019	16400	16000
2027 Opening Year Trend		
2027	N/A	16600
2033 Mid-Year Trend		
2033	N/A	16900
2034 Design Year Trend		
2034	N/A	17000
TRANPLAN Forecasts/Trends		

Trend R-squared:	21.36%
Compounded Annual Historic Growth Rate:	1.74%
Compounded Growth Rate (2019 to Design Year):	0.40%
Printed:	19-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Cassadaga Road

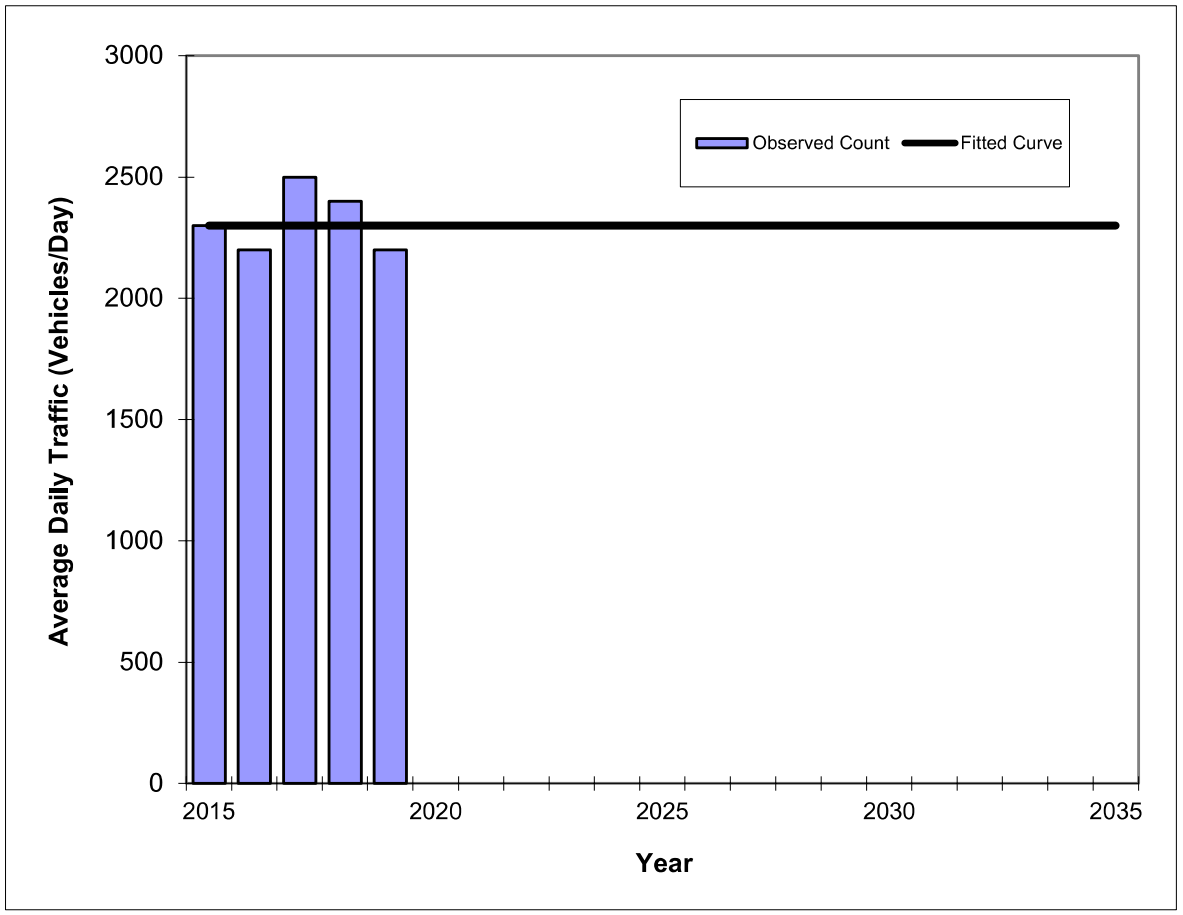
Five Year Trends

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	2300	2300
2016	2200	2300
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2300
2024 Mid-Year Trend		
2024	N/A	2300
2027 Design Year Trend		
2027	N/A	2300
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	0
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2019 to Design Year):	0.00%
Printed:	11-Jan-23

Straight Line Growth Option

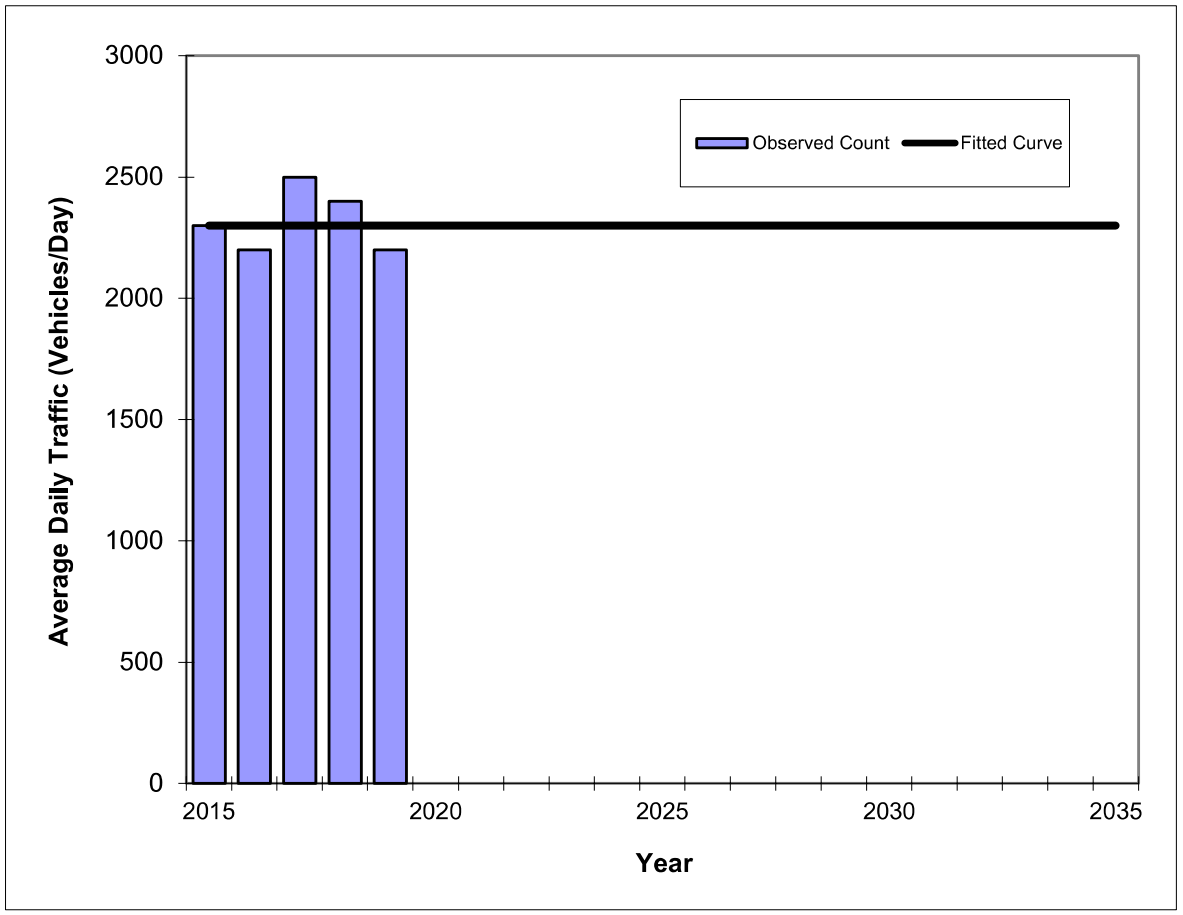
***Axle-Adjusted**

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	2300	2300
2016	2200	2300
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2300
2024 Mid-Year Trend		
2024	N/A	2300
2027 Design Year Trend		
2027	N/A	2300
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.00%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	0.00%
Printed:	18-Jan-23

Exponential Growth Option

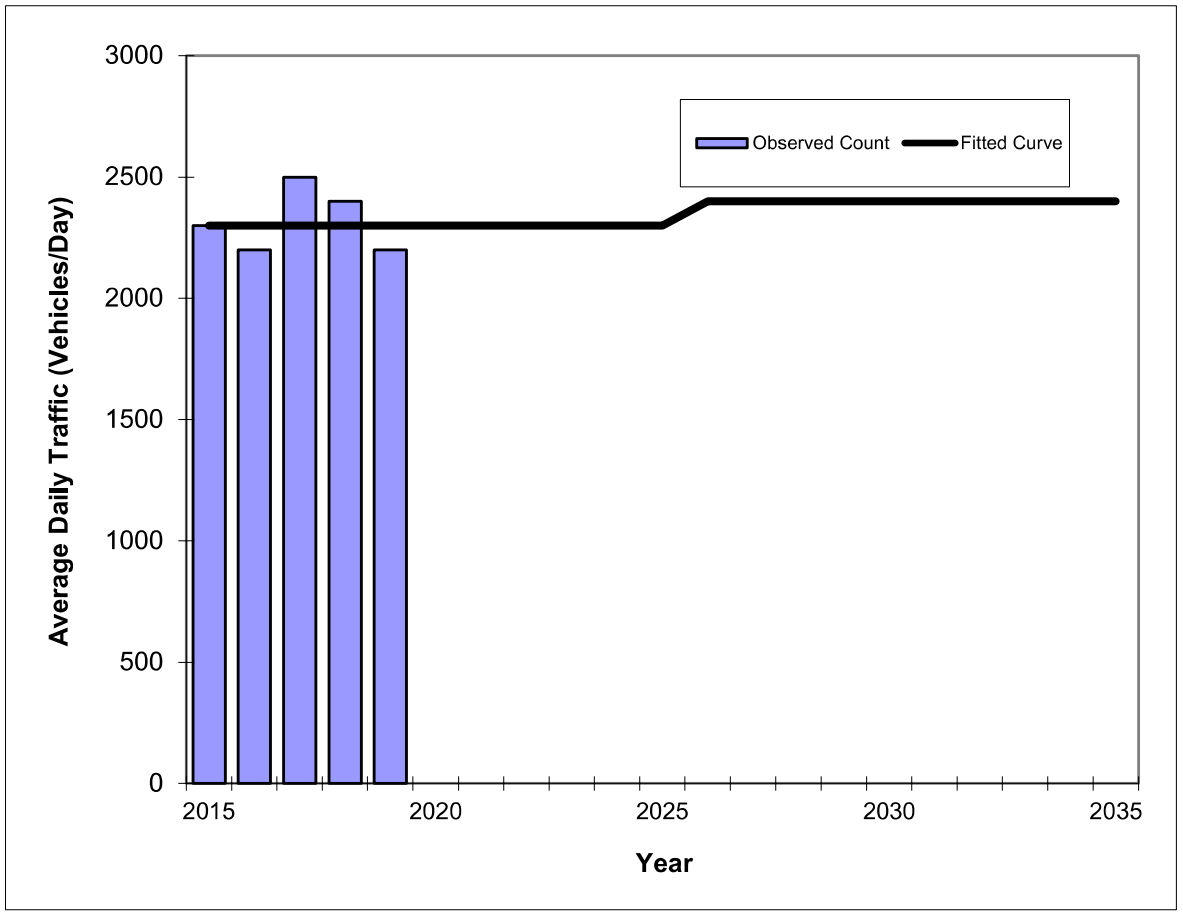
***Axle-Adjusted**

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	2300	2300
2016	2200	2300
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2300
2024 Mid-Year Trend		
2024	N/A	2300
2027 Design Year Trend		
2027	N/A	2400
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.95%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	0.53%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

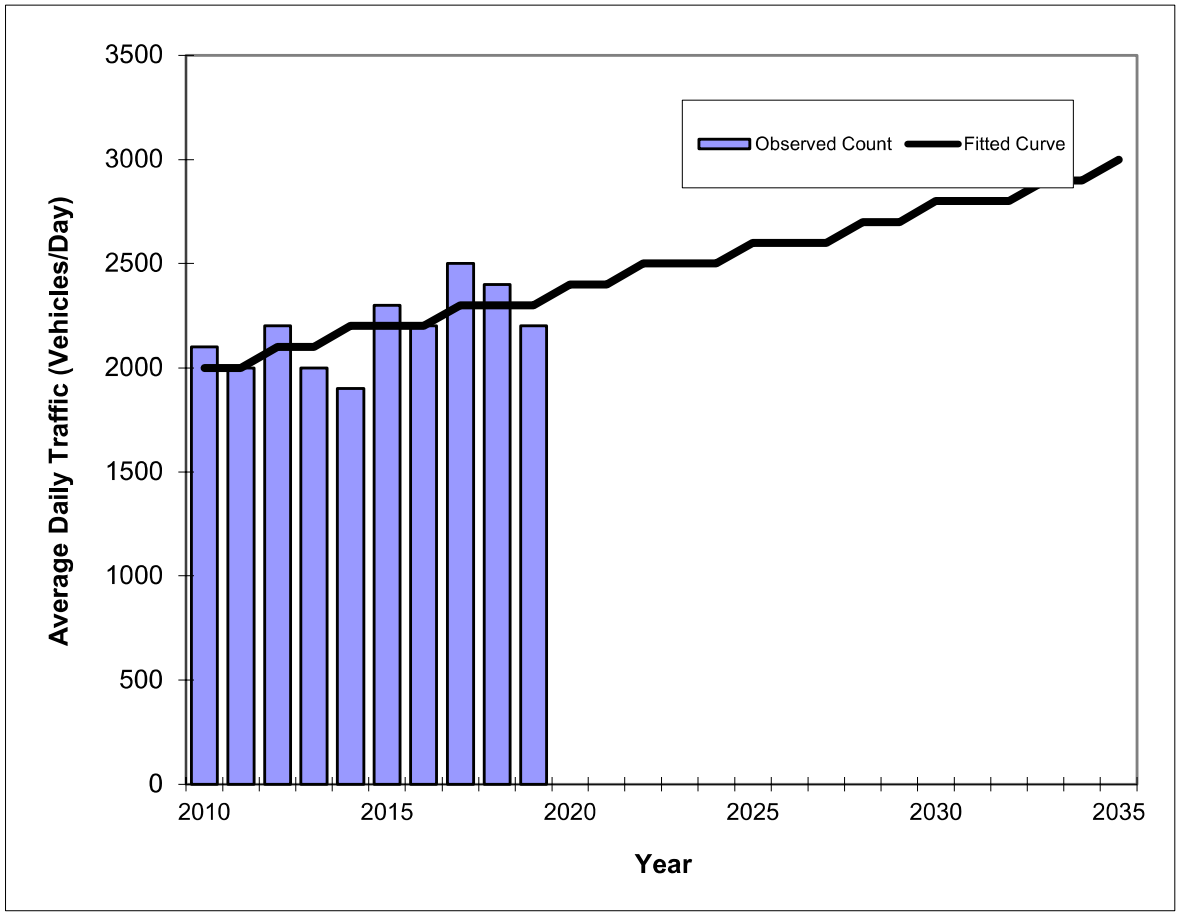
Ten Year Trends

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	2100	2000
2011	2000	2000
2012	2200	2100
2013	2000	2100
2014	1900	2200
2015	2300	2200
2016	2200	2200
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2500
2024 Mid-Year Trend		
2024	N/A	2500
2027 Design Year Trend		
2027	N/A	2600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

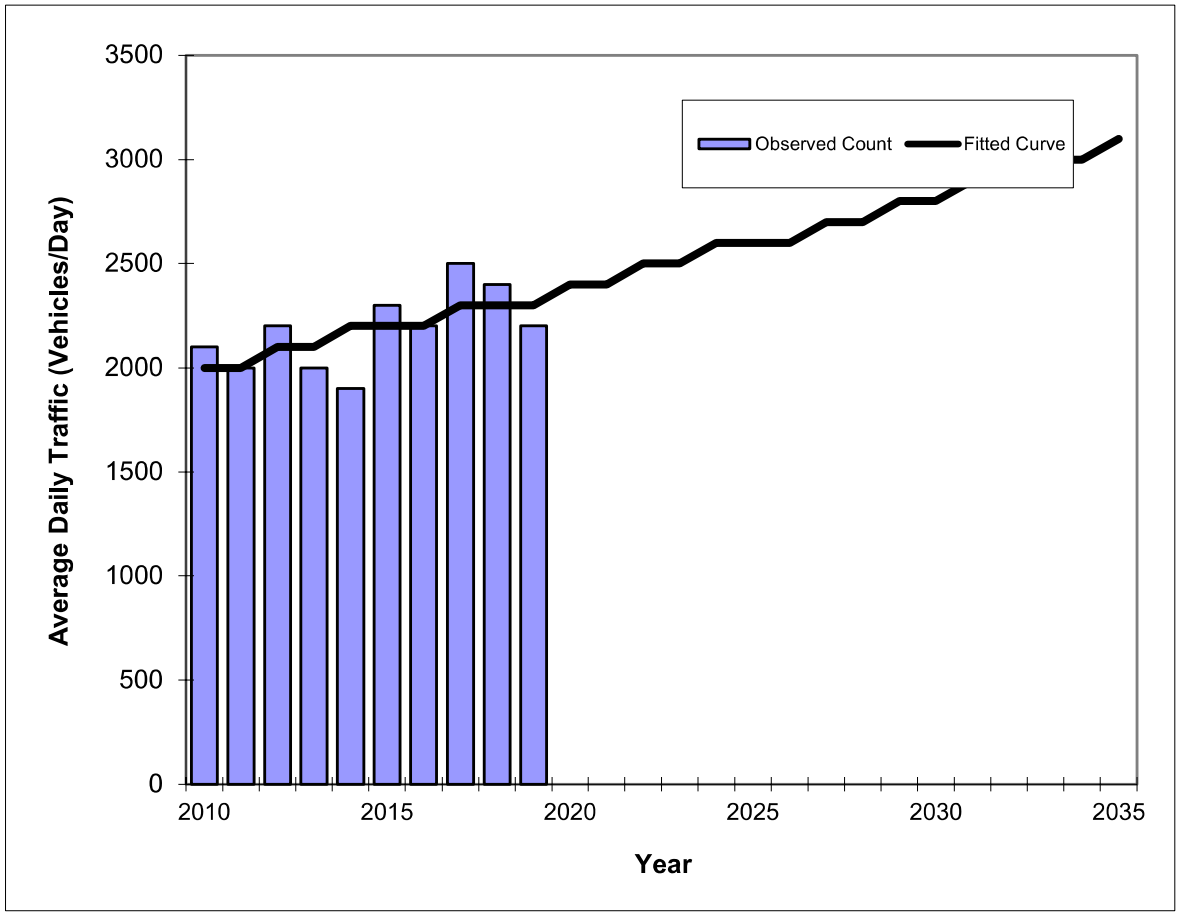
**** Annual Trend Increase:**	38
Trend R-squared:	36.86%
Trend Annual Historic Growth Rate:	1.67%
Trend Growth Rate (2019 to Design Year):	1.63%
Printed:	19-Jan-23
Straight Line Growth Option	

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	2100	2000
2011	2000	2000
2012	2200	2100
2013	2000	2100
2014	1900	2200
2015	2300	2200
2016	2200	2200
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2500
2024 Mid-Year Trend		
2024	N/A	2600
2027 Design Year Trend		
2027	N/A	2700
TRANPLAN Forecasts/Trends		

Trend R-squared:	36.19%
Compounded Annual Historic Growth Rate:	1.57%
Compounded Growth Rate (2019 to Design Year):	2.02%
Printed:	19-Jan-23

Exponential Growth Option

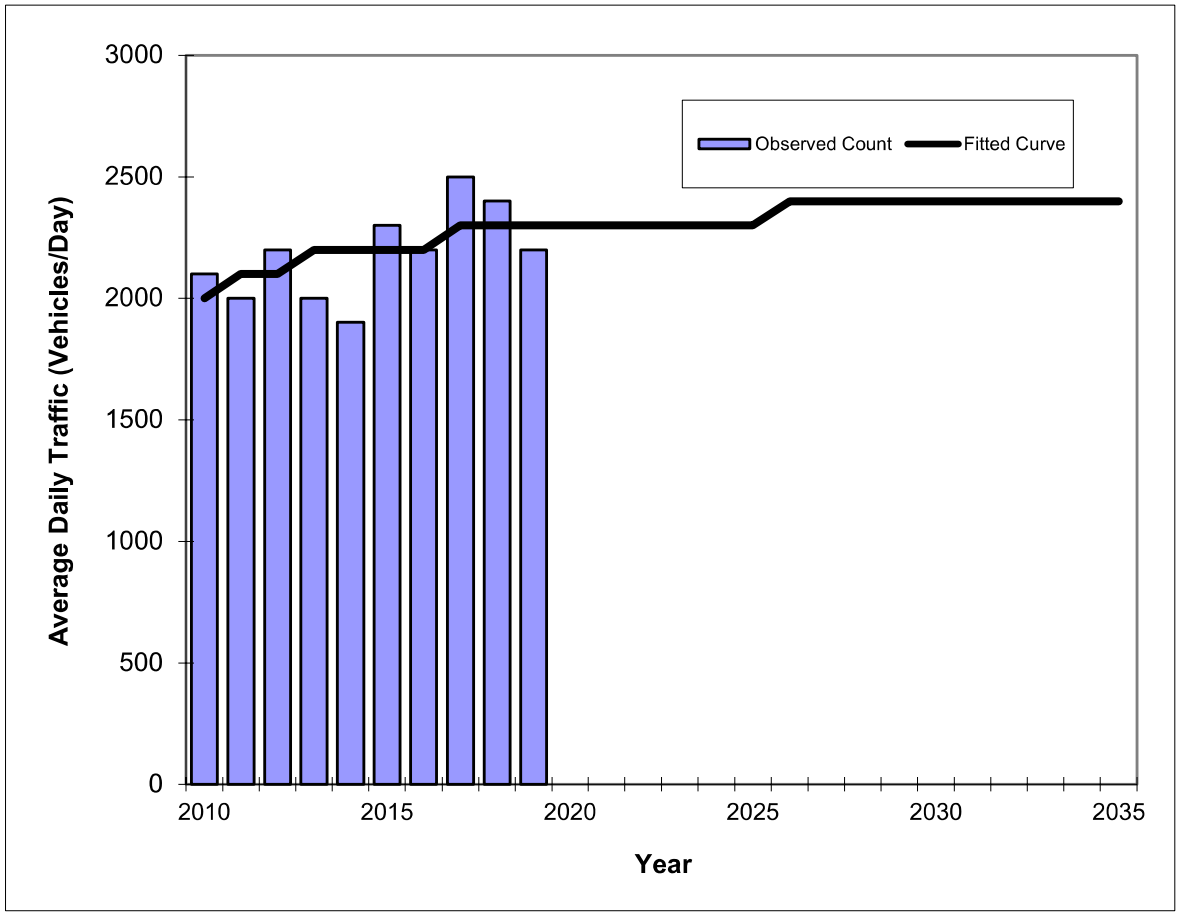
***Axle-Adjusted**

Traffic Trends - V03.a

CASSADAGA RD -- W Volusia Bltwy to Macy Ave

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	2100	2000
2011	2000	2100
2012	2200	2100
2013	2000	2200
2014	1900	2200
2015	2300	2200
2016	2200	2200
2017	2500	2300
2018	2400	2300
2019	2200	2300
2022 Opening Year Trend		
2022	N/A	2300
2024 Mid-Year Trend		
2024	N/A	2300
2027 Design Year Trend		
2027	N/A	2400
TRANPLAN Forecasts/Trends		

Trend R-squared:	27.29%
Compounded Annual Historic Growth Rate:	1.57%
Compounded Growth Rate (2019 to Design Year):	0.53%
Printed:	19-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Orange Camp Road

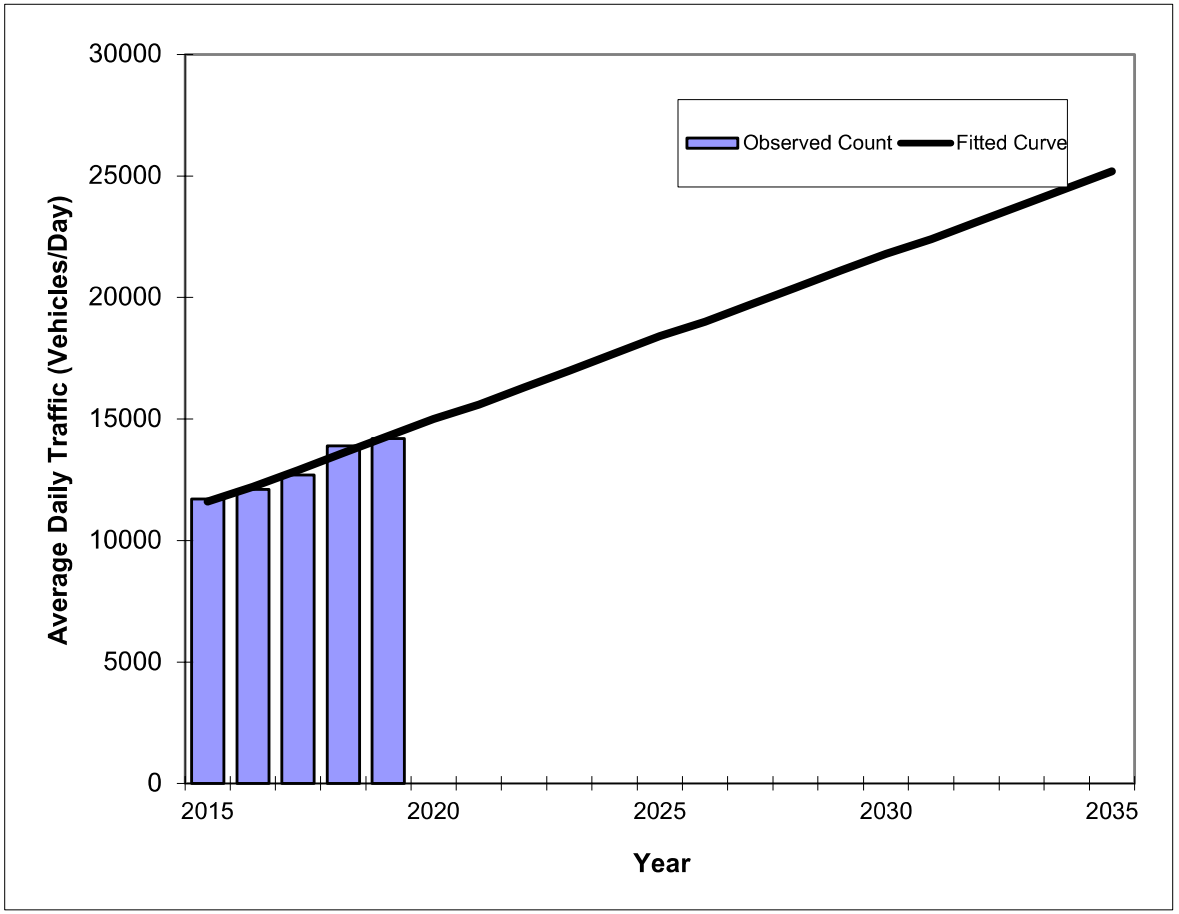
Five Year Trends

Traffic Trends - V03.a

ORANGE CAMP RD -- Blue Lake Ave to W Volusia Bltwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11600
2016	12100	12200
2017	12700	12900
2018	13900	13600
2019	14200	14300
2027 Opening Year Trend		
2027	N/A	19700
2033 Mid-Year Trend		
2033	N/A	23800
2034 Design Year Trend		
2034	N/A	24500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	680
Trend R-squared:	96.17%
Trend Annual Historic Growth Rate:	5.82%
Trend Growth Rate (2019 to Design Year):	4.76%
Printed:	18-Jan-23

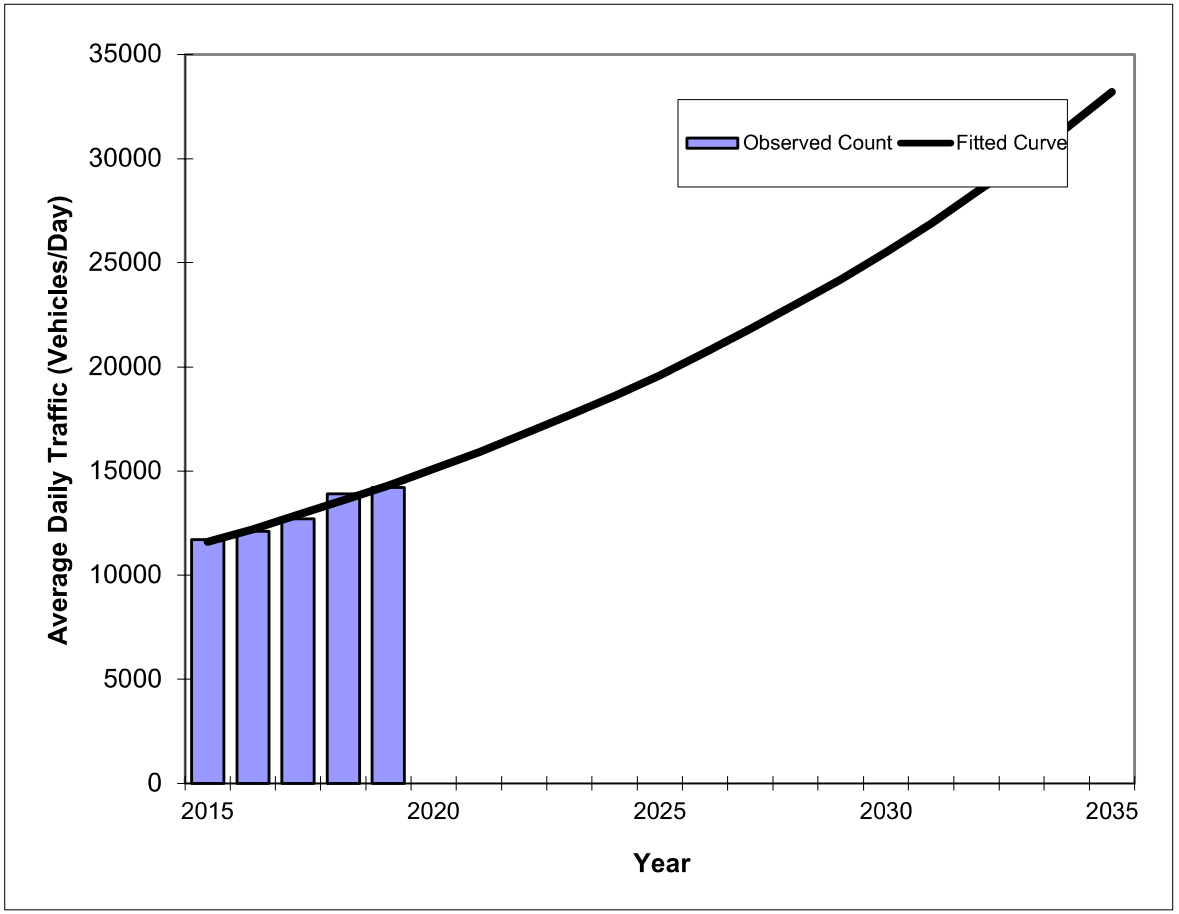
Straight Line Growth Option

Traffic Trends - V03.a

ORANGE CAMP RD -- Blue Lake Ave to W Volusia Bltwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11600
2016	12100	12200
2017	12700	12900
2018	13900	13600
2019	14200	14300
2027 Opening Year Trend		
2027	N/A	21800
2033 Mid-Year Trend		
2033	N/A	29900
2034 Design Year Trend		
2034	N/A	31500
TRANPLAN Forecasts/Trends		

Trend R-squared:	96.53%
Compounded Annual Historic Growth Rate:	5.37%
Compounded Growth Rate (2019 to Design Year):	5.41%
Printed:	18-Jan-23

Exponential Growth Option

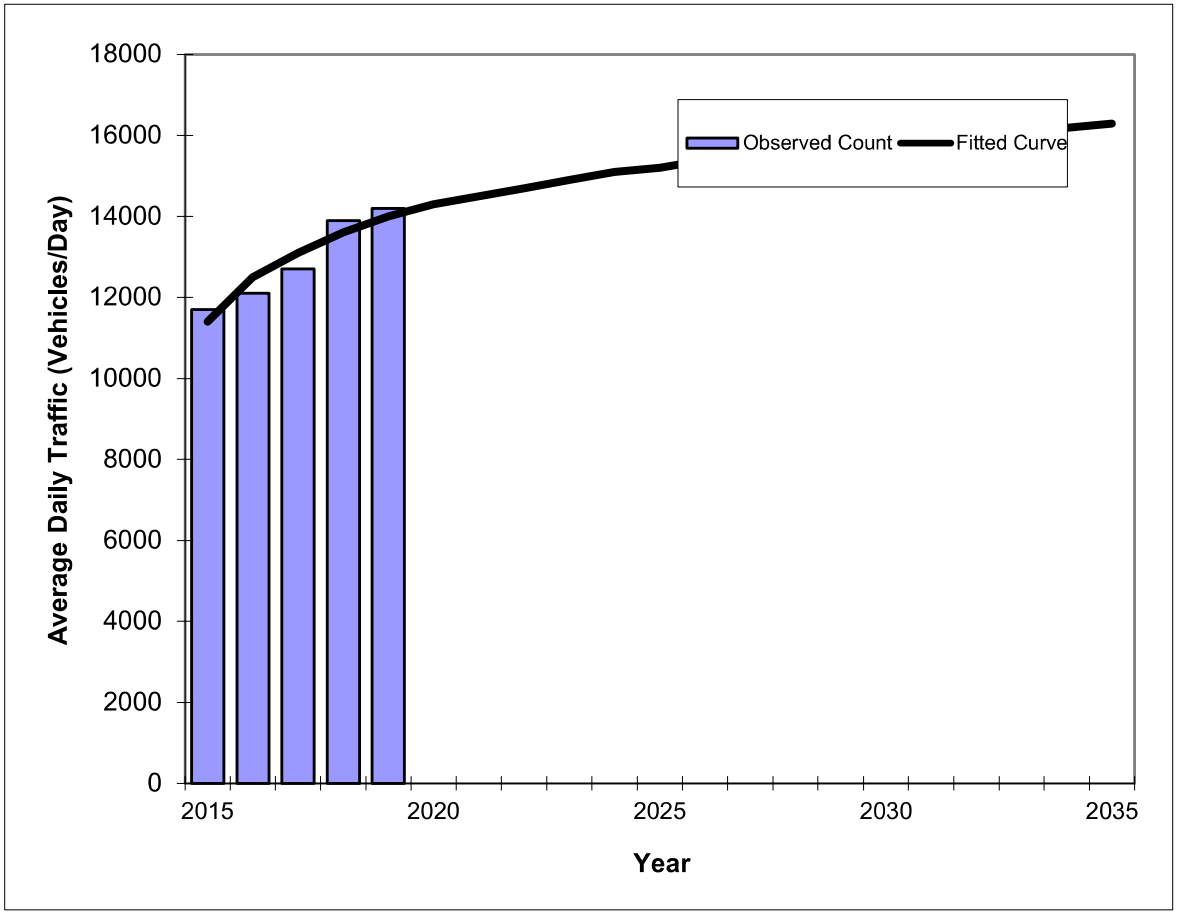
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD -- Blue Lake Ave to W Volusia Bltwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	11700	11400
2016	12100	12500
2017	12700	13100
2018	13900	13600
2019	14200	14000
2027 Opening Year Trend		
2027	N/A	15500
2033 Mid-Year Trend		
2033	N/A	16100
2034 Design Year Trend		
2034	N/A	16200
TRANPLAN Forecasts/Trends		

Trend R-squared:	87.61%
Compounded Annual Historic Growth Rate:	5.27%
Compounded Growth Rate (2019 to Design Year):	0.98%
Printed:	18-Jan-23

Decaying Exponential Growth Option

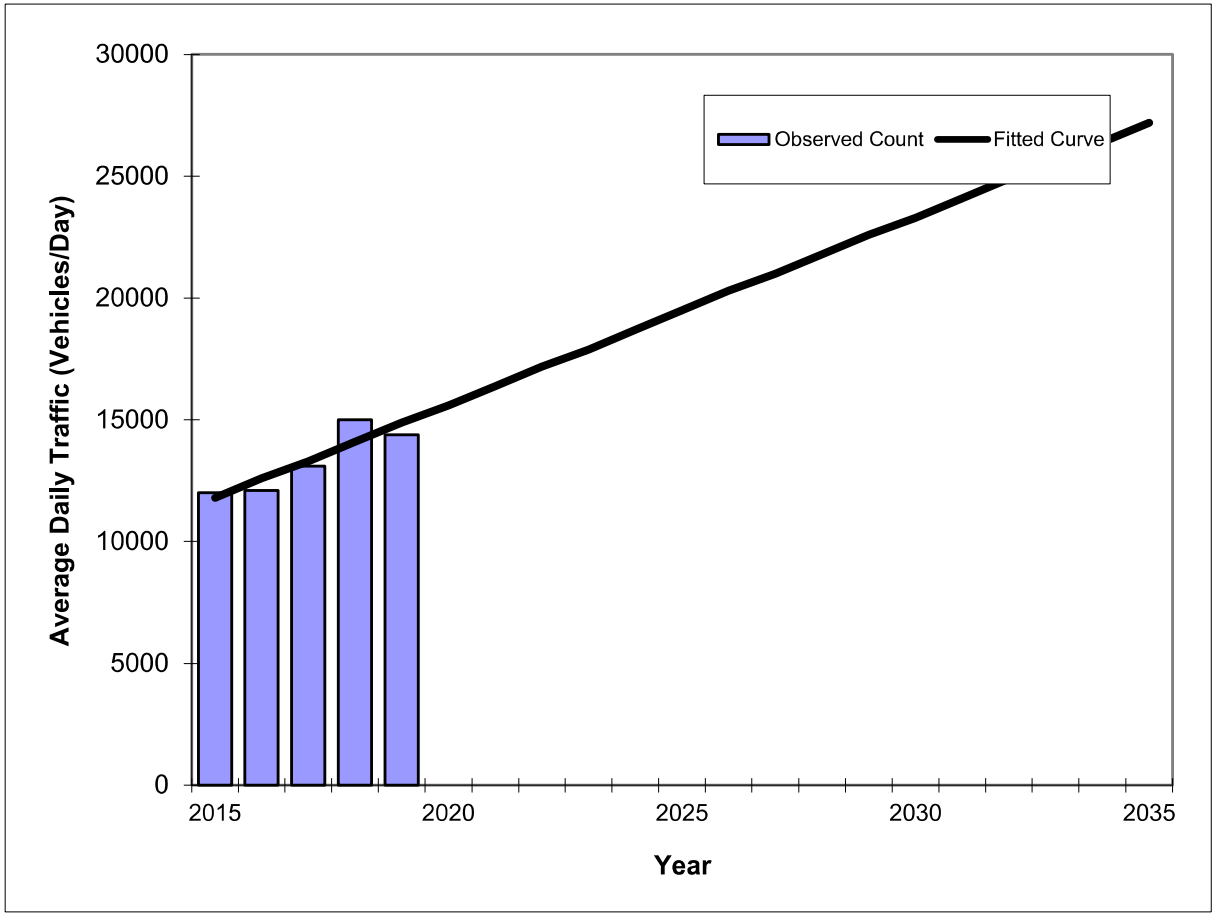
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD -- W Volusia Bltwy to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12000	11800
2016	12100	12600
2017	13100	13300
2018	15000	14100
2019	14400	14900
2027 Opening Year Trend		
2027	N/A	21000
2033 Mid-Year Trend		
2033	N/A	25600
2034 Design Year Trend		
2034	N/A	26400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	770
Trend R-squared:	81.58%
Trend Annual Historic Growth Rate:	6.57%
Trend Growth Rate (2019 to Design Year):	5.15%
Printed:	15-Nov-22

Straight Line Growth Option

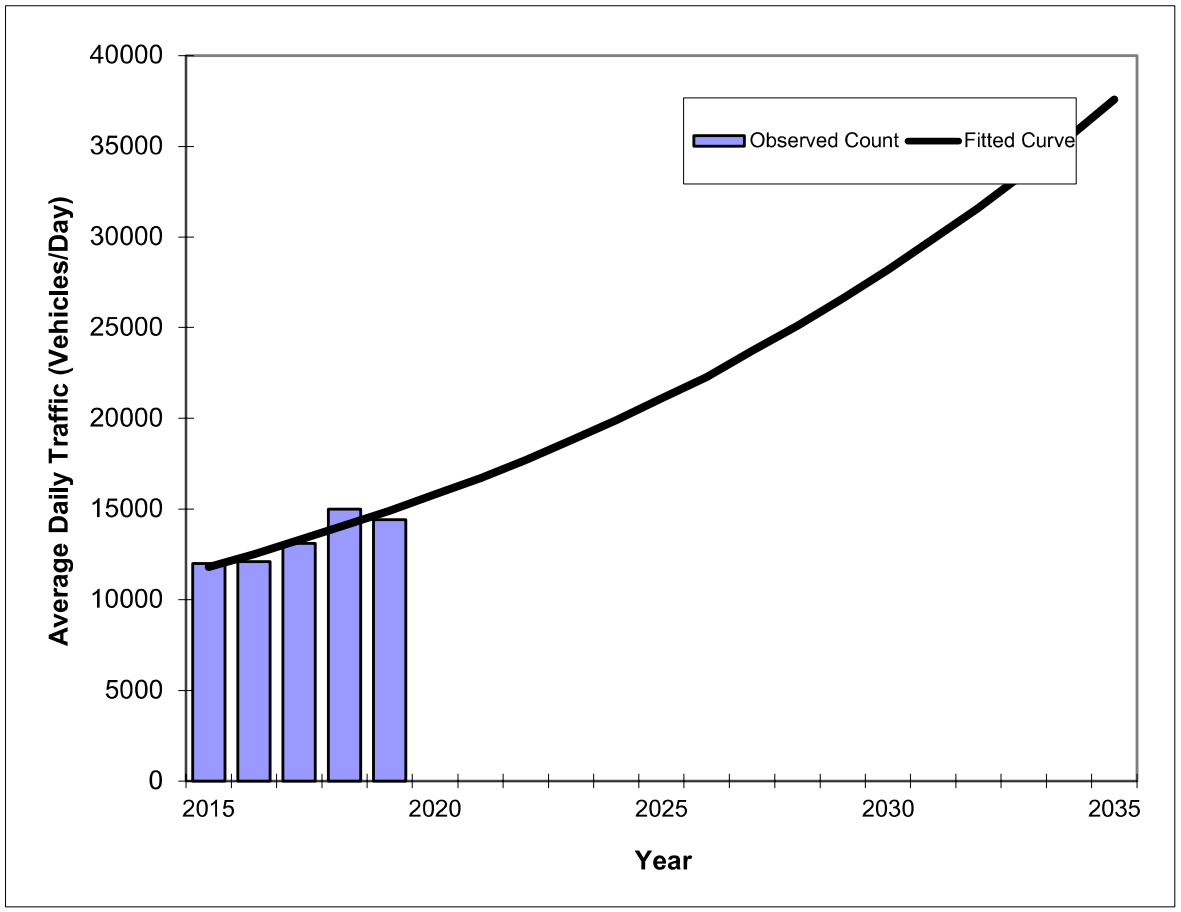
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD -- W Volusia Bltwy to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12000	11800
2016	12100	12500
2017	13100	13300
2018	15000	14100
2019	14400	14900
2027 Opening Year Trend		
2027	N/A	23700
2033 Mid-Year Trend		
2033	N/A	33500
2034 Design Year Trend		
2034	N/A	35500
TRANPLAN Forecasts/Trends		

Trend R-squared:	82.91%
Compounded Annual Historic Growth Rate:	6.00%
Compounded Growth Rate (2019 to Design Year):	5.96%
Printed:	18-Jan-23

Exponential Growth Option

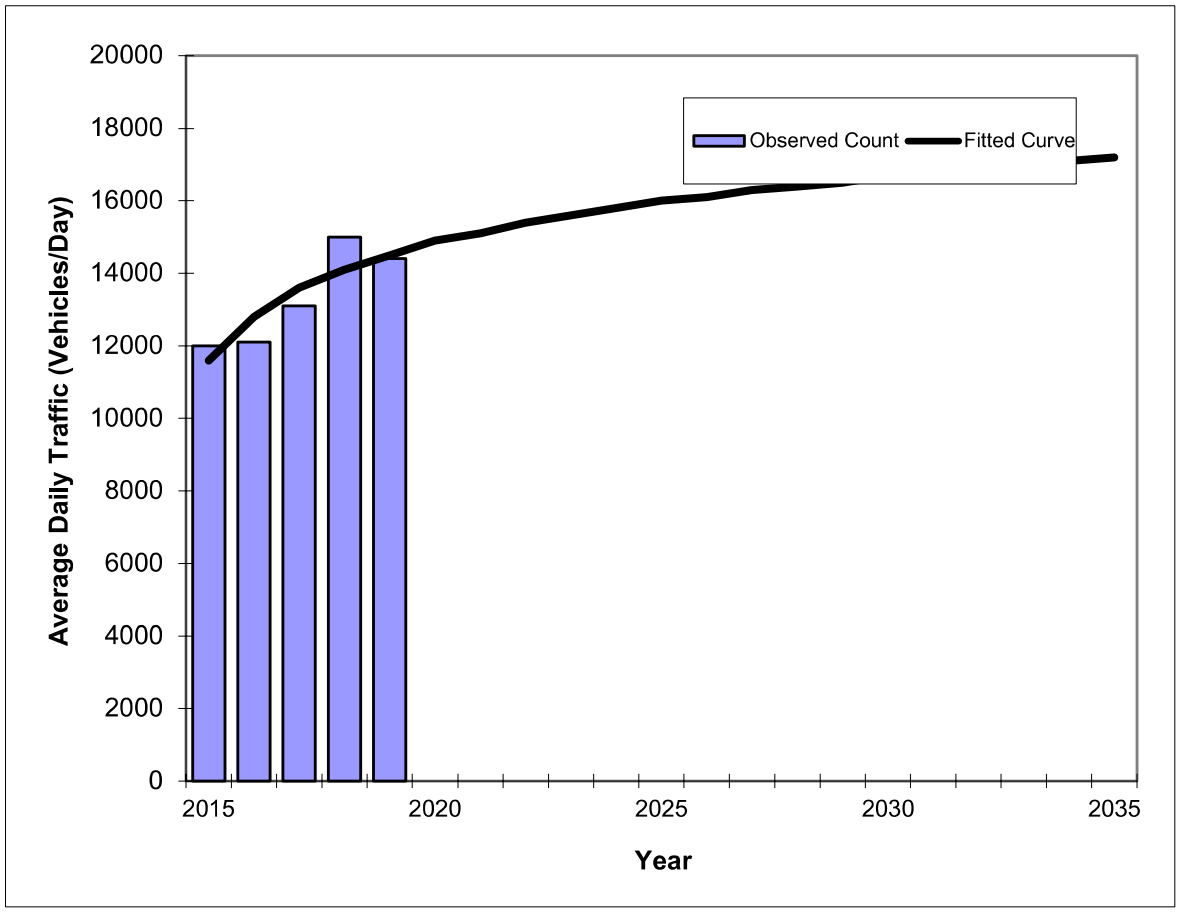
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD -- W Volusia Bltwy to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12000	11600
2016	12100	12800
2017	13100	13600
2018	15000	14100
2019	14400	14500
2027 Opening Year Trend		
2027	N/A	16300
2033 Mid-Year Trend		
2033	N/A	17000
2034 Design Year Trend		
2034	N/A	17100
TRANPLAN Forecasts/Trends		

Trend R-squared:	75.62%
Compounded Annual Historic Growth Rate:	5.74%
Compounded Growth Rate (2019 to Design Year):	1.11%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

US 17/92

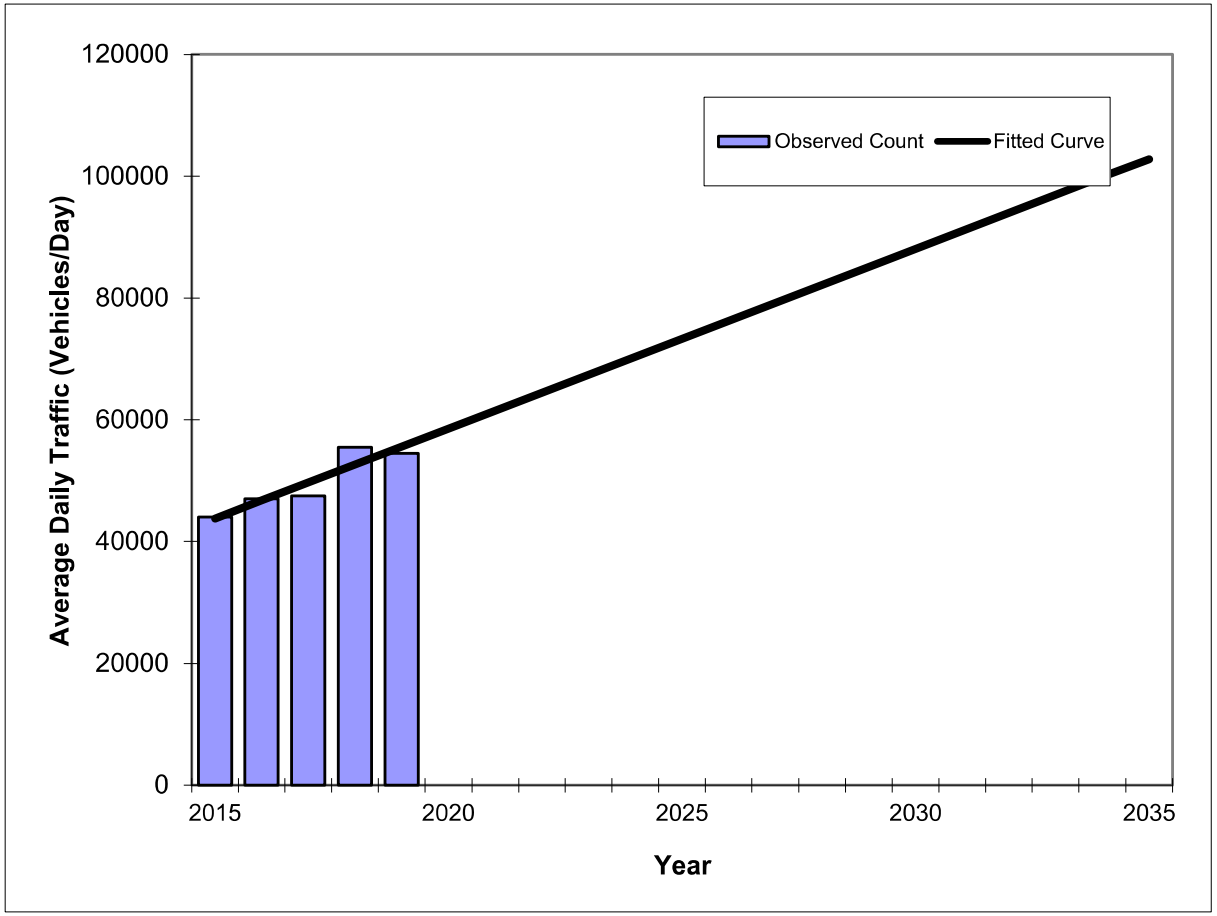
Five Year Trends

Traffic Trends - V03.a

US 17/92 -- SR 472 to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	US 17/92



Year	Traffic (ADT/AADT) Count*	Trend**
2015	44000	43800
2016	47000	46800
2017	47500	49700
2018	55500	52700
2019	54500	55600
2027 Opening Year Trend		
2027	N/A	79200
2033 Mid-Year Trend		
2033	N/A	96900
2034 Design Year Trend		
2034	N/A	99900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	2,950
Trend R-squared:	85.91%
Trend Annual Historic Growth Rate:	6.74%
Trend Growth Rate (2019 to Design Year):	5.31%
Printed:	15-Nov-22

Straight Line Growth Option

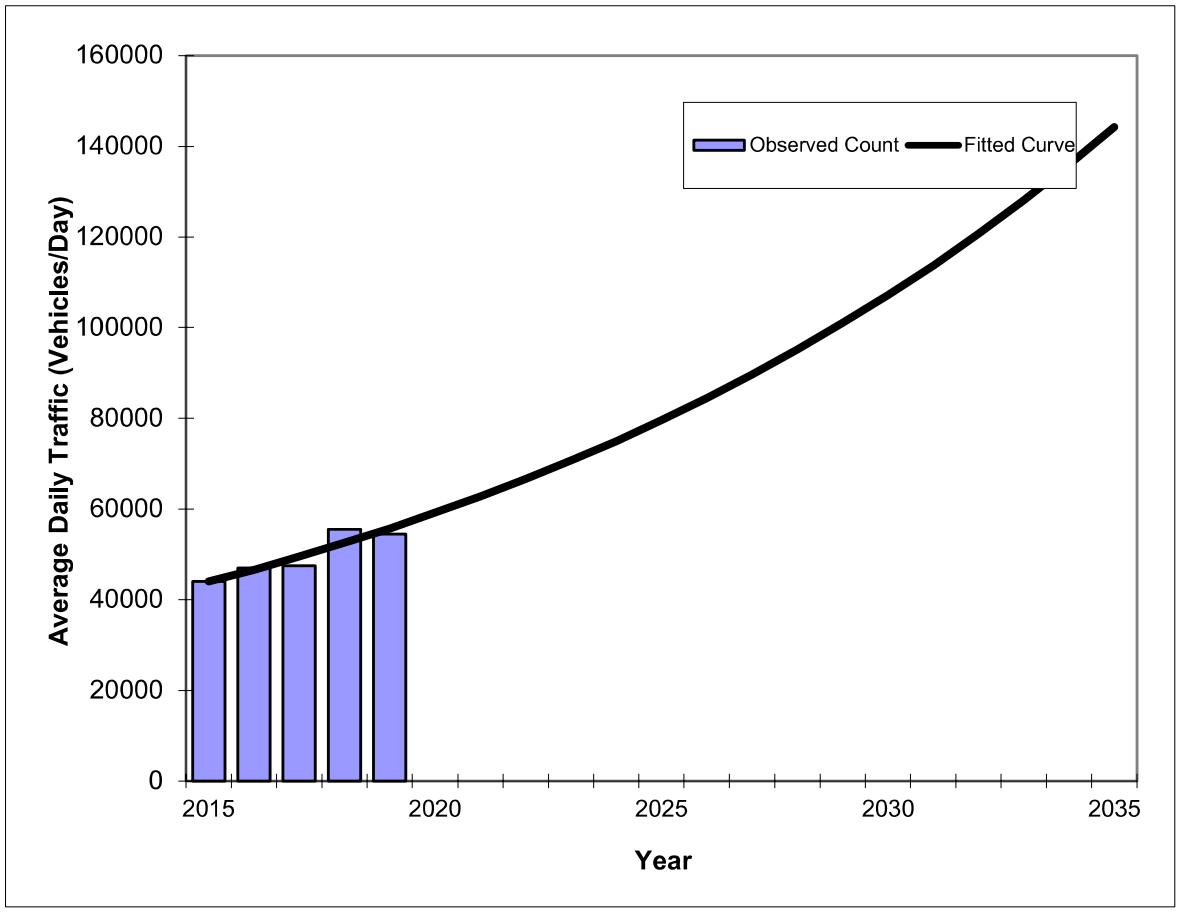
***Axle-Adjusted**

Traffic Trends - V03.a

US 17/92 -- SR 472 to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	US 17/92



Year	Traffic (ADT/AADT) Count*	Trend**
2015	44000	44000
2016	47000	46600
2017	47500	49500
2018	55500	52500
2019	54500	55700
2027 Opening Year Trend		
2027	N/A	89700
2033 Mid-Year Trend		
2033	N/A	128100
2034 Design Year Trend		
2034	N/A	135900
TRANPLAN Forecasts/Trends		

Trend R-squared:	86.96%
Compounded Annual Historic Growth Rate:	6.07%
Compounded Growth Rate (2019 to Design Year):	6.13%
Printed:	18-Jan-23

Exponential Growth Option

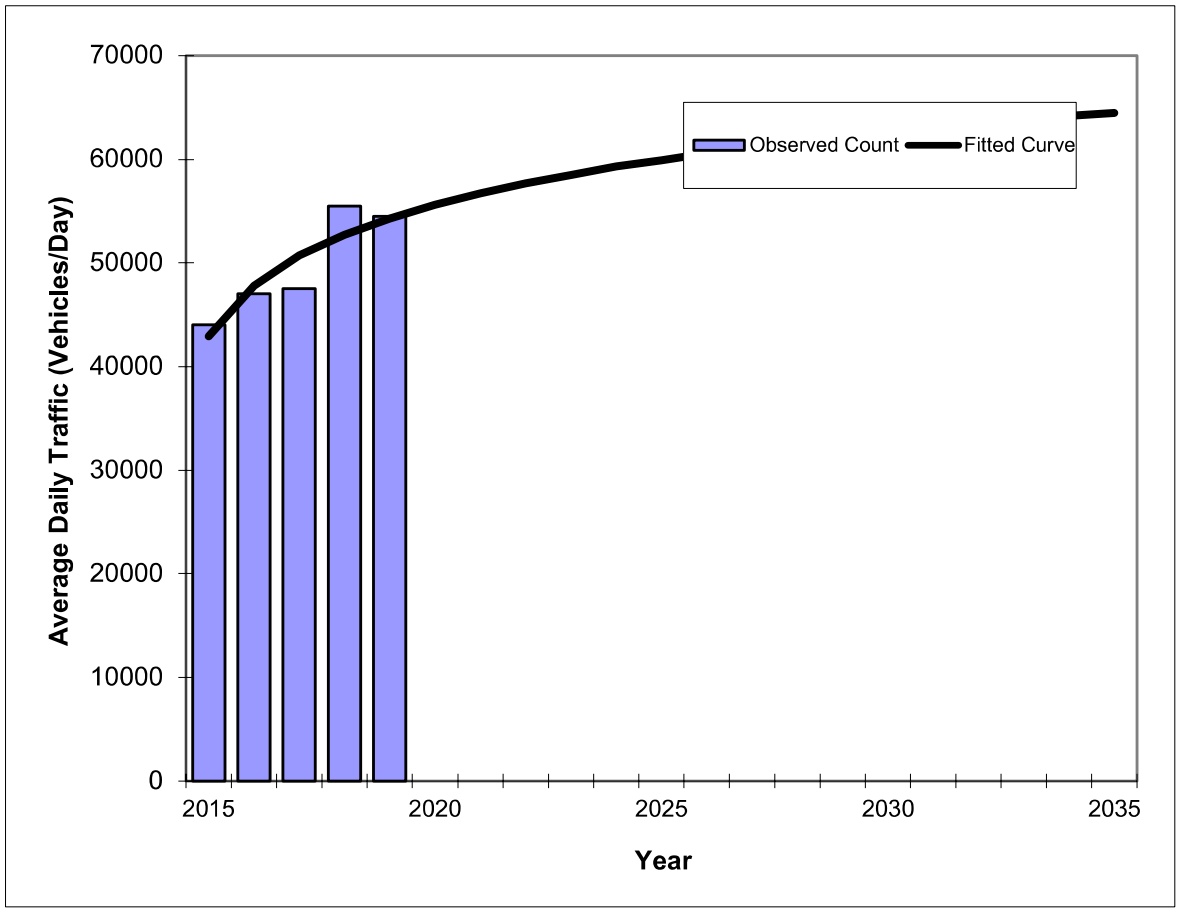
***Axle-Adjusted**

Traffic Trends - V03.a

US 17/92 -- SR 472 to Taylor Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	US 17/92



Year	Traffic (ADT/AADT) Count*	Trend**
2015	44000	42900
2016	47000	47800
2017	47500	50700
2018	55500	52700
2019	54500	54300
2027 Opening Year Trend		
2027	N/A	61100
2033 Mid-Year Trend		
2033	N/A	63800
2034 Design Year Trend		
2034	N/A	64200
TRANPLAN Forecasts/Trends		

Trend R-squared:	80.50%
Compounded Annual Historic Growth Rate:	6.07%
Compounded Growth Rate (2019 to Design Year):	1.12%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Graves Avenue

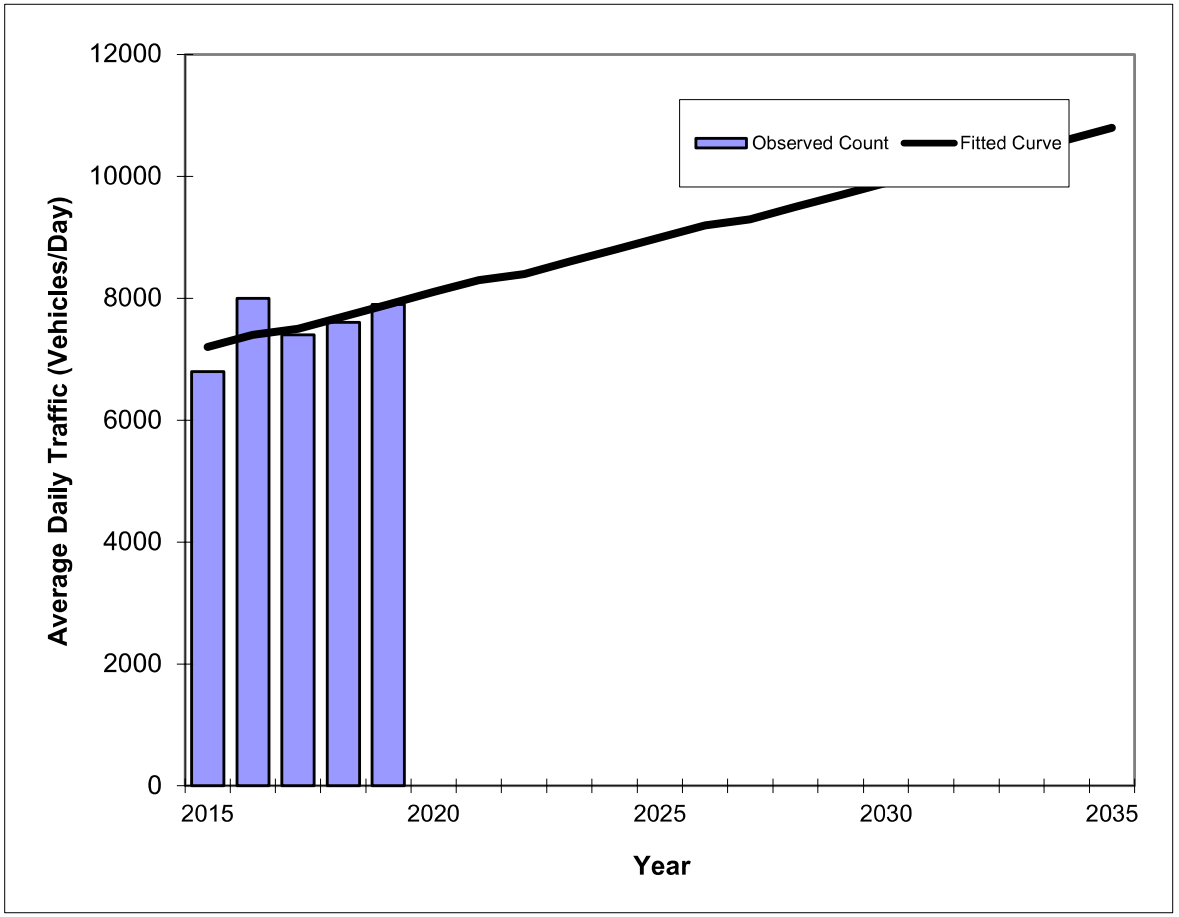
Five Year Trends

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	6800	7200
2016	8000	7400
2017	7400	7500
2018	7600	7700
2019	7900	7900
2027 Opening Year Trend		
2027	N/A	9300
2033 Mid-Year Trend		
2033	N/A	10400
2034 Design Year Trend		
2034	N/A	10600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	180
Trend R-squared:	35.53%
Trend Annual Historic Growth Rate:	2.43%
Trend Growth Rate (2019 to Design Year):	2.28%
Printed:	26-Jan-23

Straight Line Growth Option

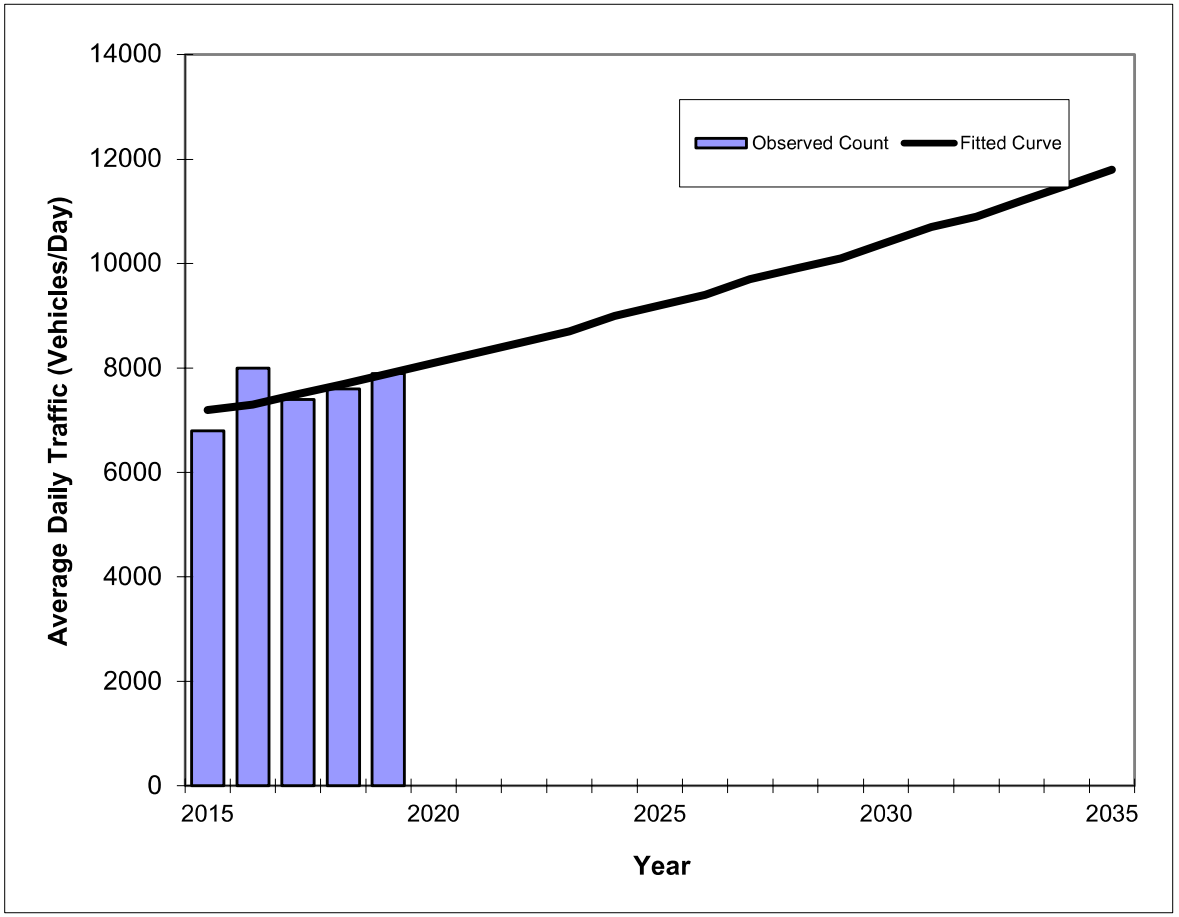
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	6800	7200
2016	8000	7300
2017	7400	7500
2018	7600	7700
2019	7900	7900
2027 Opening Year Trend		
2027	N/A	9700
2033 Mid-Year Trend		
2033	N/A	11200
2034 Design Year Trend		
2034	N/A	11500
TRANPLAN Forecasts/Trends		

Trend R-squared:	36.89%
Compounded Annual Historic Growth Rate:	2.35%
Compounded Growth Rate (2019 to Design Year):	2.53%
Printed:	26-Jan-23

Exponential Growth Option

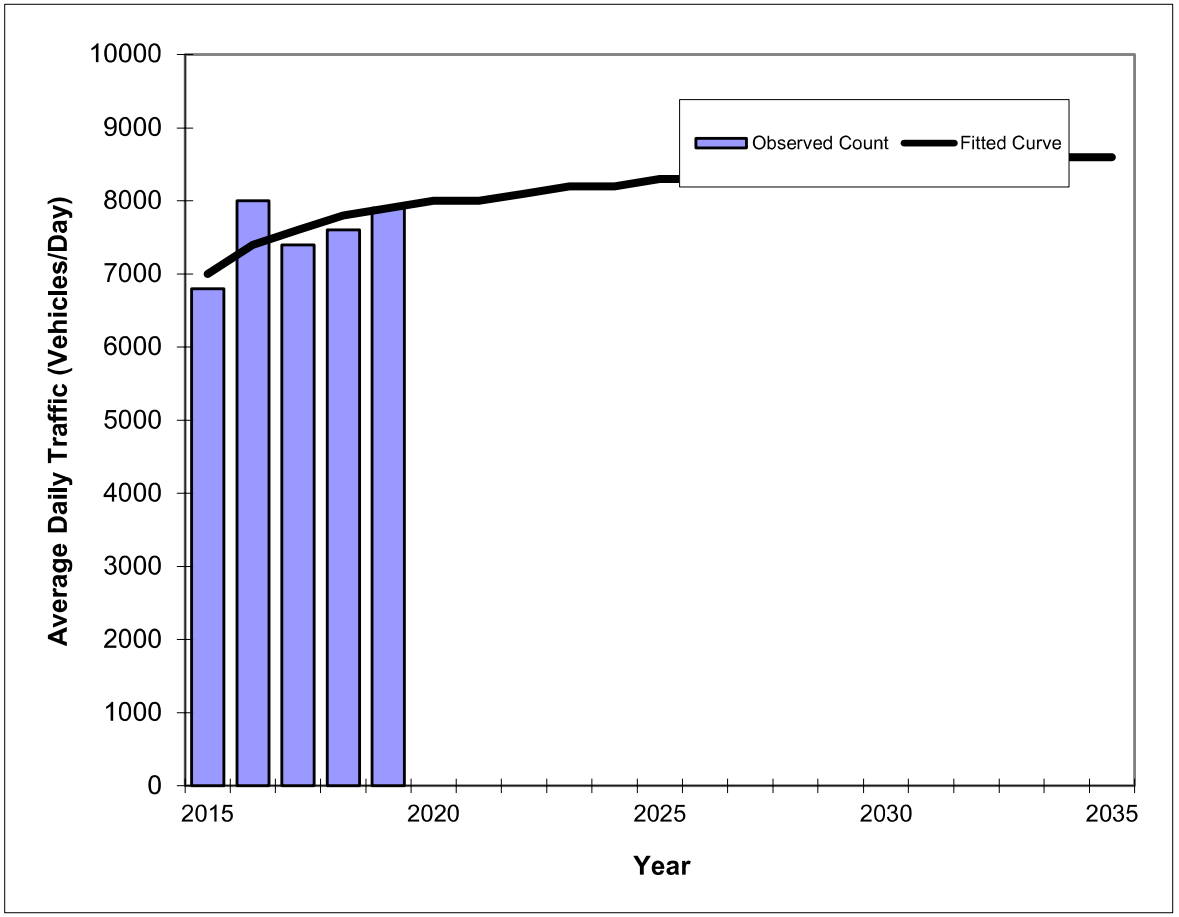
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	6800	7000
2016	8000	7400
2017	7400	7600
2018	7600	7800
2019	7900	7900
2027 Opening Year Trend		
2027	N/A	8400
2033 Mid-Year Trend		
2033	N/A	8600
2034 Design Year Trend		
2034	N/A	8600
TRANPLAN Forecasts/Trends		

Trend R-squared:	46.49%
Compounded Annual Historic Growth Rate:	3.07%
Compounded Growth Rate (2019 to Design Year):	0.57%
Printed:	26-Jan-23

Decaying Exponential Growth Option

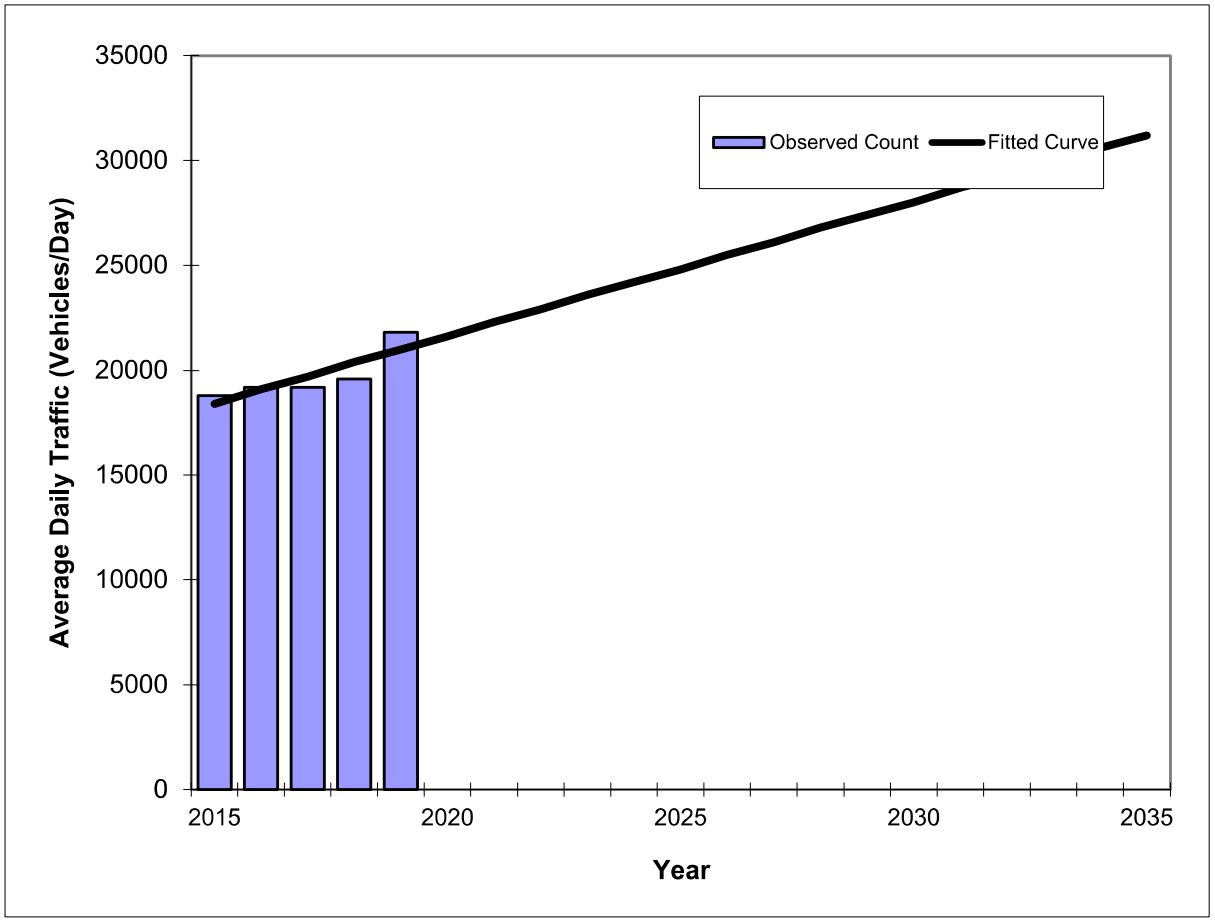
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Veteran's Memorial Pkwy to Kentucky Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	18400
2016	19200	19100
2017	19200	19700
2018	19600	20400
2019	21800	21000
2027 Opening Year Trend		
2027	N/A	26100
2033 Mid-Year Trend		
2033	N/A	30000
2034 Design Year Trend		
2034	N/A	30600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	640
Trend R-squared:	71.51%
Trend Annual Historic Growth Rate:	3.53%
Trend Growth Rate (2019 to Design Year):	3.05%
Printed:	15-Nov-22

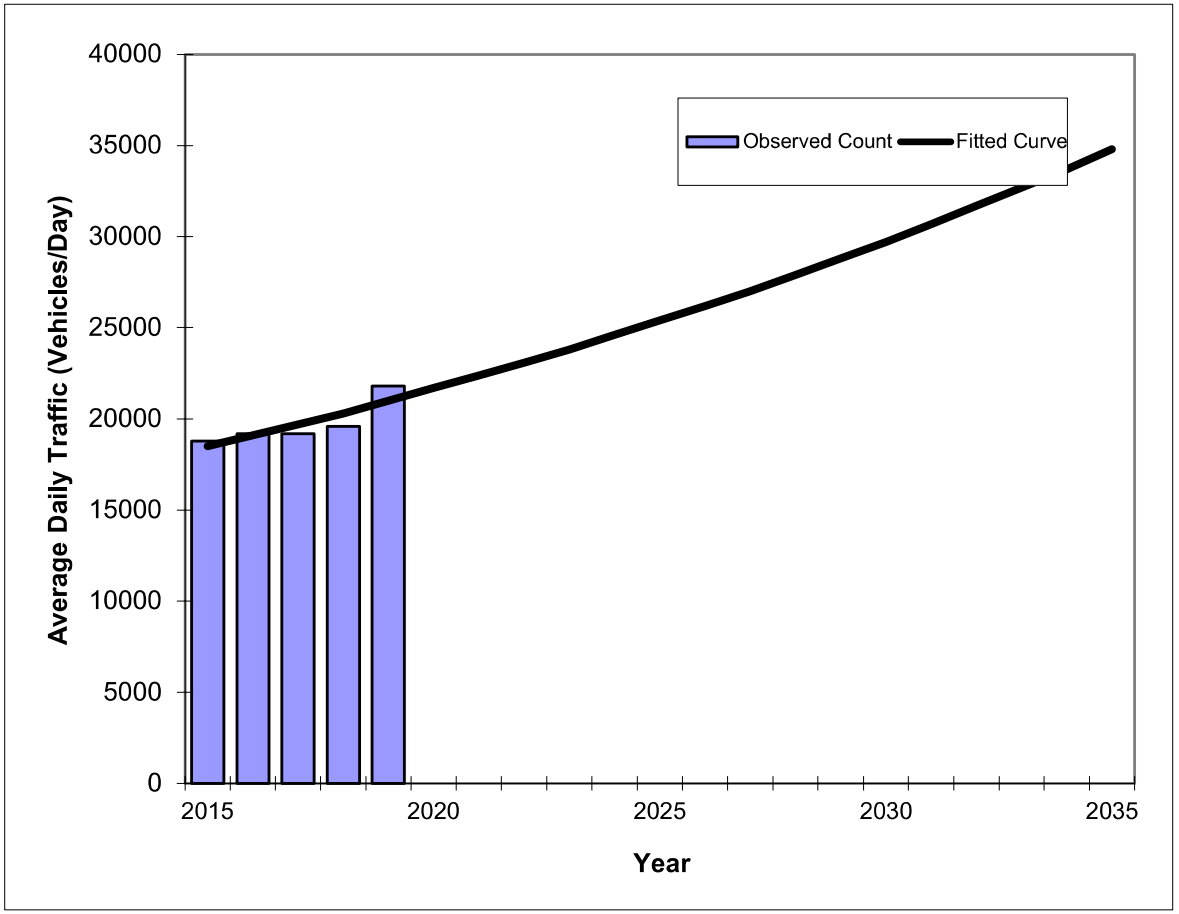
Straight Line Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Veteran's Memorial Pkwy to Kentucky Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	18500
2016	19200	19100
2017	19200	19700
2018	19600	20300
2019	21800	21000
2027 Opening Year Trend		
2027	N/A	27000
2033 Mid-Year Trend		
2033	N/A	32700
2034 Design Year Trend		
2034	N/A	33700
TRANPLAN Forecasts/Trends		

Trend R-squared:	72.73%
Compounded Annual Historic Growth Rate:	3.22%
Compounded Growth Rate (2019 to Design Year):	3.20%
Printed:	18-Jan-23

Exponential Growth Option

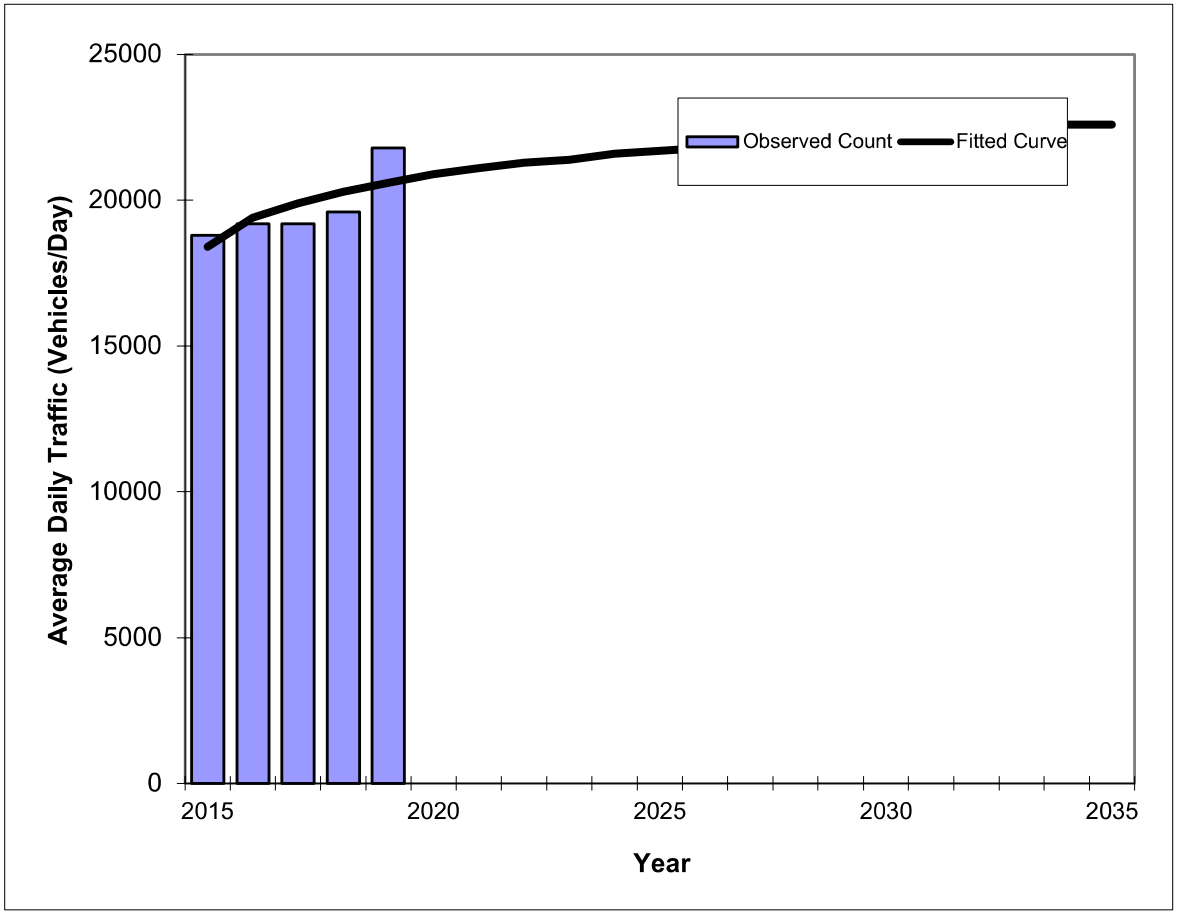
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Veteran's Memorial Pkwy to Kentucky Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	18800	18400
2016	19200	19400
2017	19200	19900
2018	19600	20300
2019	21800	20600
2027 Opening Year Trend		
2027	N/A	22000
2033 Mid-Year Trend		
2033	N/A	22500
2034 Design Year Trend		
2034	N/A	22600
TRANPLAN Forecasts/Trends		

Trend R-squared:	54.69%
Compounded Annual Historic Growth Rate:	2.86%
Compounded Growth Rate (2019 to Design Year):	0.62%
Printed:	18-Jan-23

Decaying Exponential Growth Option

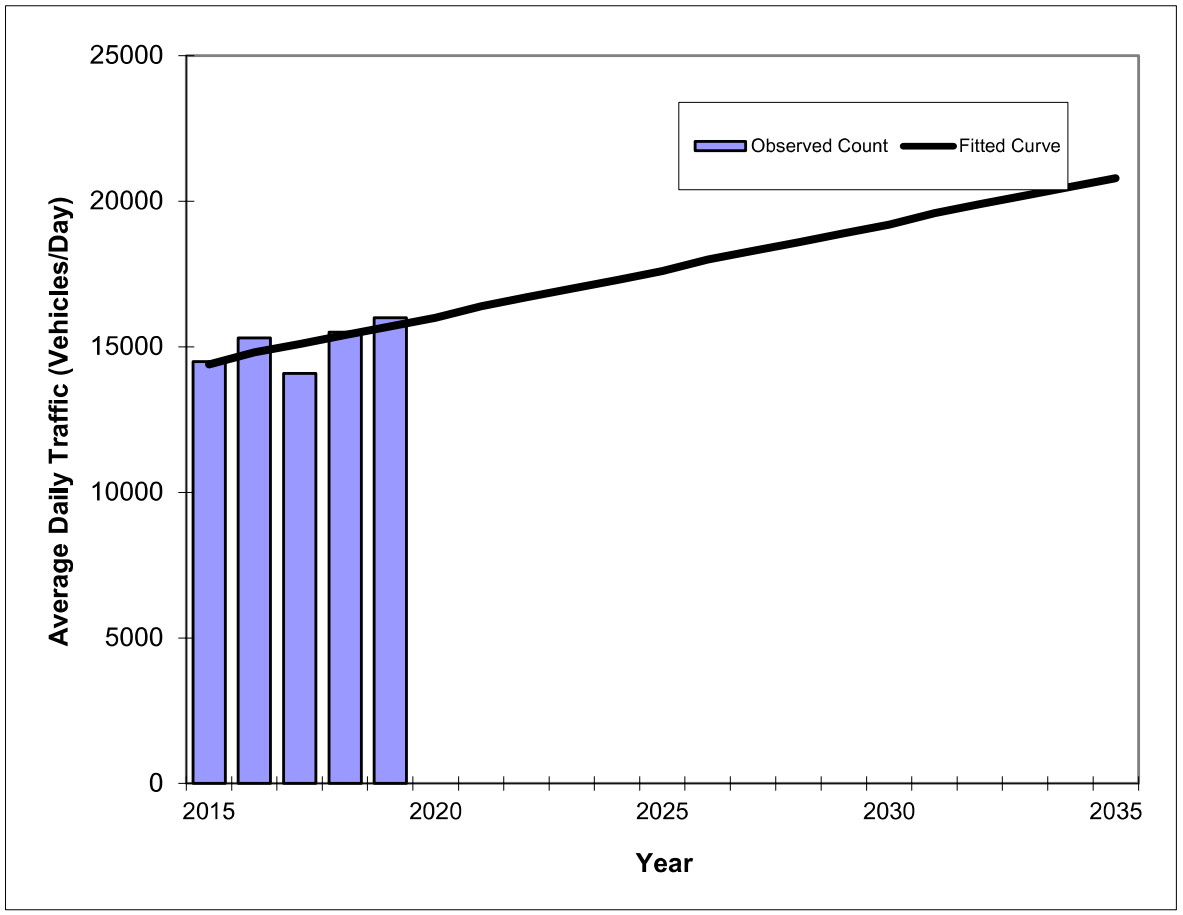
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14800
2017	14100	15100
2018	15500	15400
2019	16000	15700
2027 Opening Year Trend		
2027	N/A	18300
2033 Mid-Year Trend		
2033	N/A	20200
2034 Design Year Trend		
2034	N/A	20500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	320
Trend R-squared:	43.24%
Trend Annual Historic Growth Rate:	2.26%
Trend Growth Rate (2019 to Design Year):	2.04%
Printed:	26-Jan-23

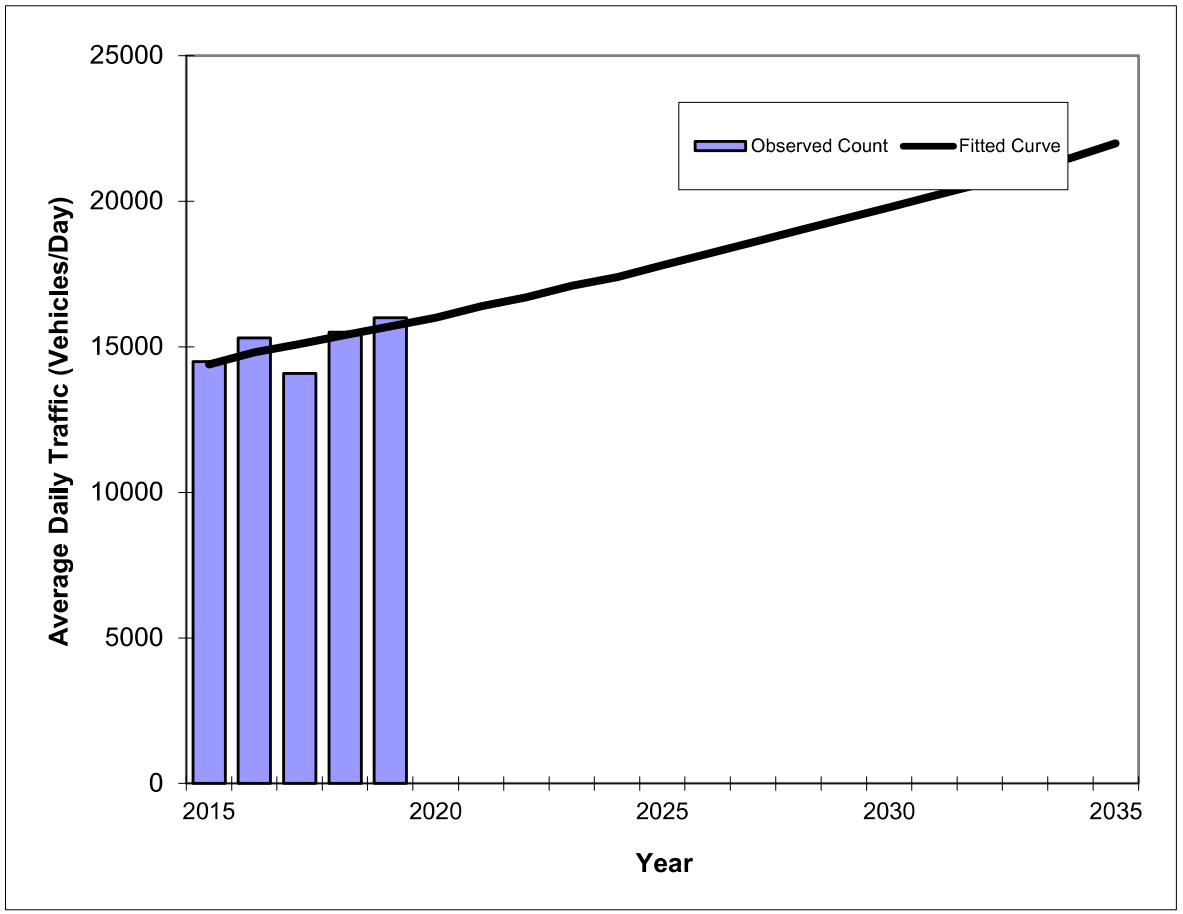
Straight Line Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14800
2017	14100	15100
2018	15500	15400
2019	16000	15700
2027 Opening Year Trend		
2027	N/A	18600
2033 Mid-Year Trend		
2033	N/A	21100
2034 Design Year Trend		
2034	N/A	21500
TRANPLAN Forecasts/Trends		

Trend R-squared:	41.87%
Compounded Annual Historic Growth Rate:	2.18%
Compounded Growth Rate (2019 to Design Year):	2.12%
Printed:	26-Jan-23

Exponential Growth Option

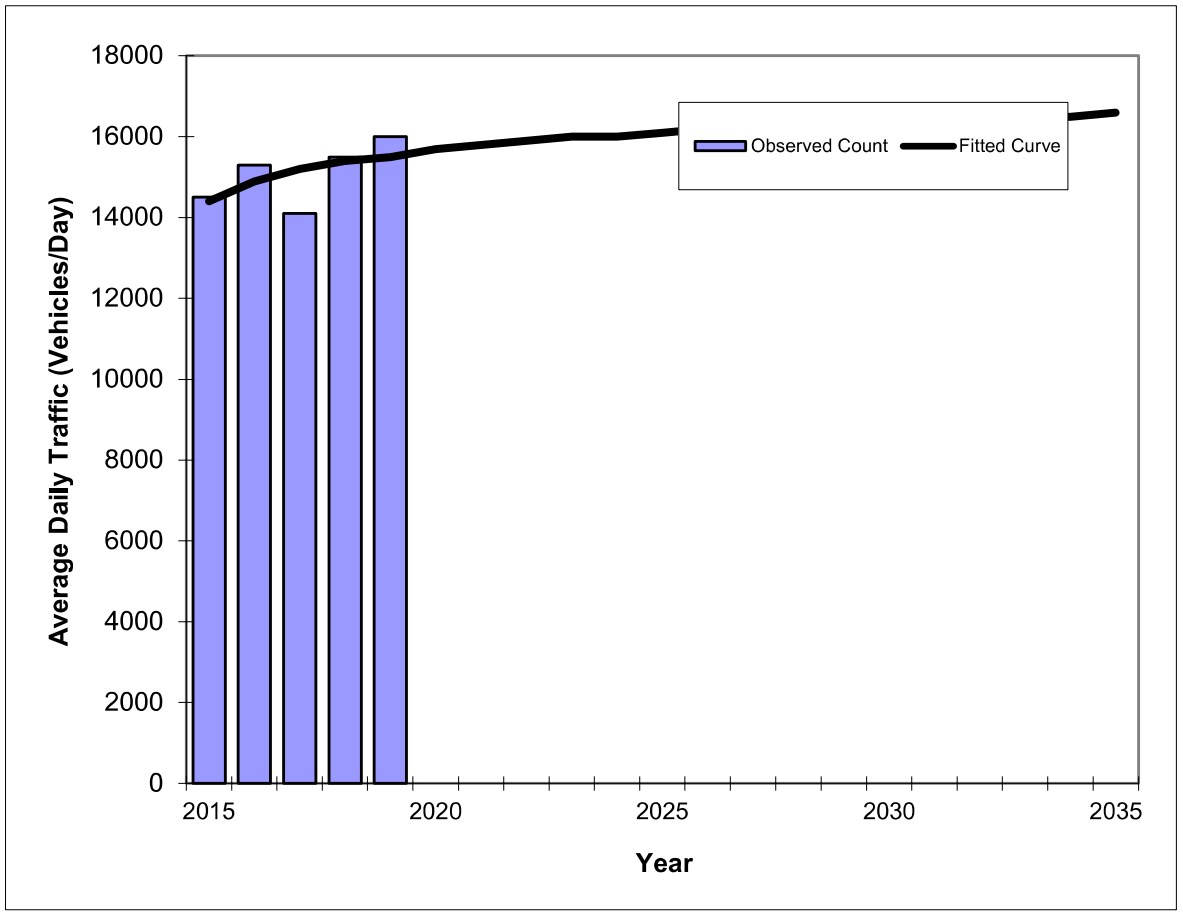
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14900
2017	14100	15200
2018	15500	15400
2019	16000	15500
2027 Opening Year Trend		
2027	N/A	16200
2033 Mid-Year Trend		
2033	N/A	16500
2034 Design Year Trend		
2034	N/A	16500
TRANPLAN Forecasts/Trends		

Trend R-squared:	33.90%
Compounded Annual Historic Growth Rate:	1.86%
Compounded Growth Rate (2019 to Design Year):	0.42%
Printed:	26-Jan-23

Decaying Exponential Growth Option

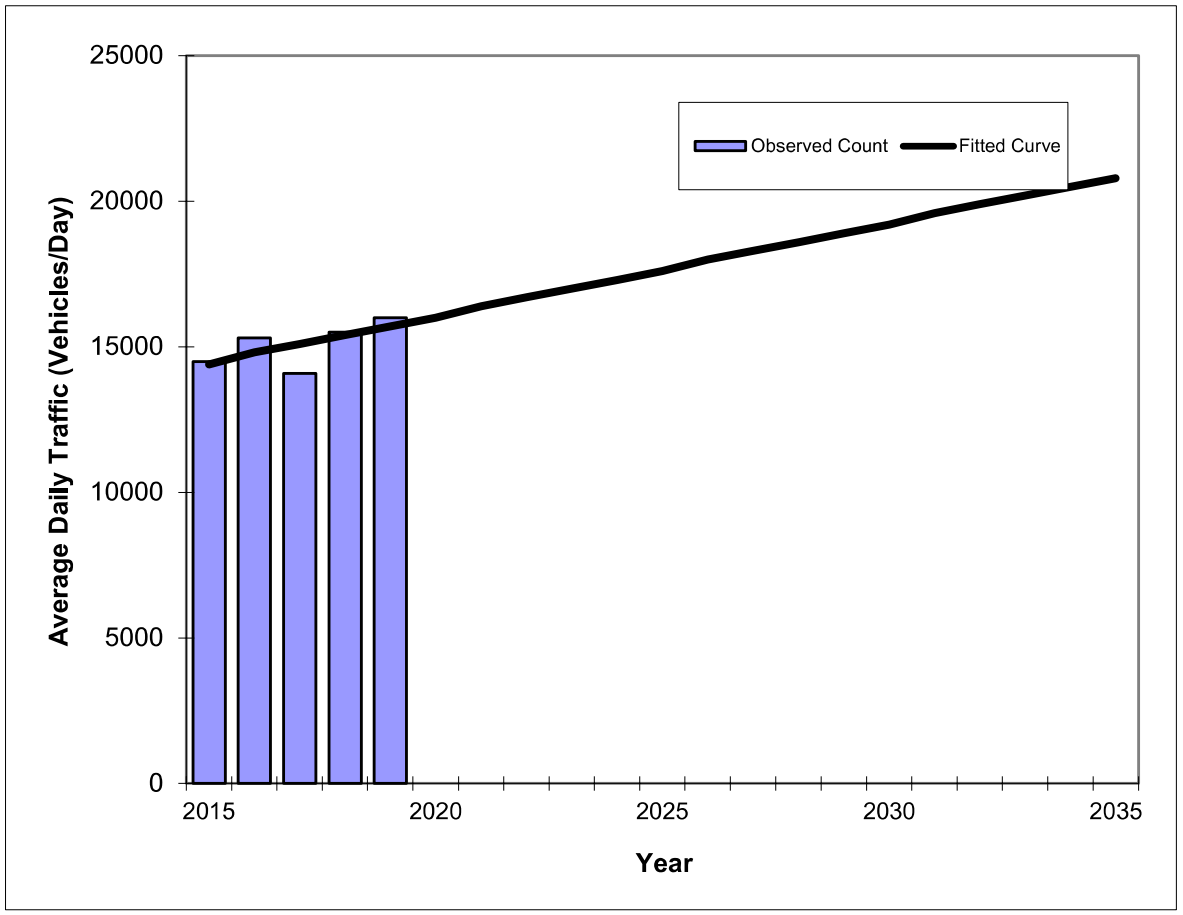
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14800
2017	14100	15100
2018	15500	15400
2019	16000	15700
2027 Opening Year Trend		
2027	N/A	18300
2033 Mid-Year Trend		
2033	N/A	20200
2034 Design Year Trend		
2034	N/A	20500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	320
Trend R-squared:	43.24%
Trend Annual Historic Growth Rate:	2.26%
Trend Growth Rate (2019 to Design Year):	2.04%
Printed:	26-Jan-23

Straight Line Growth Option

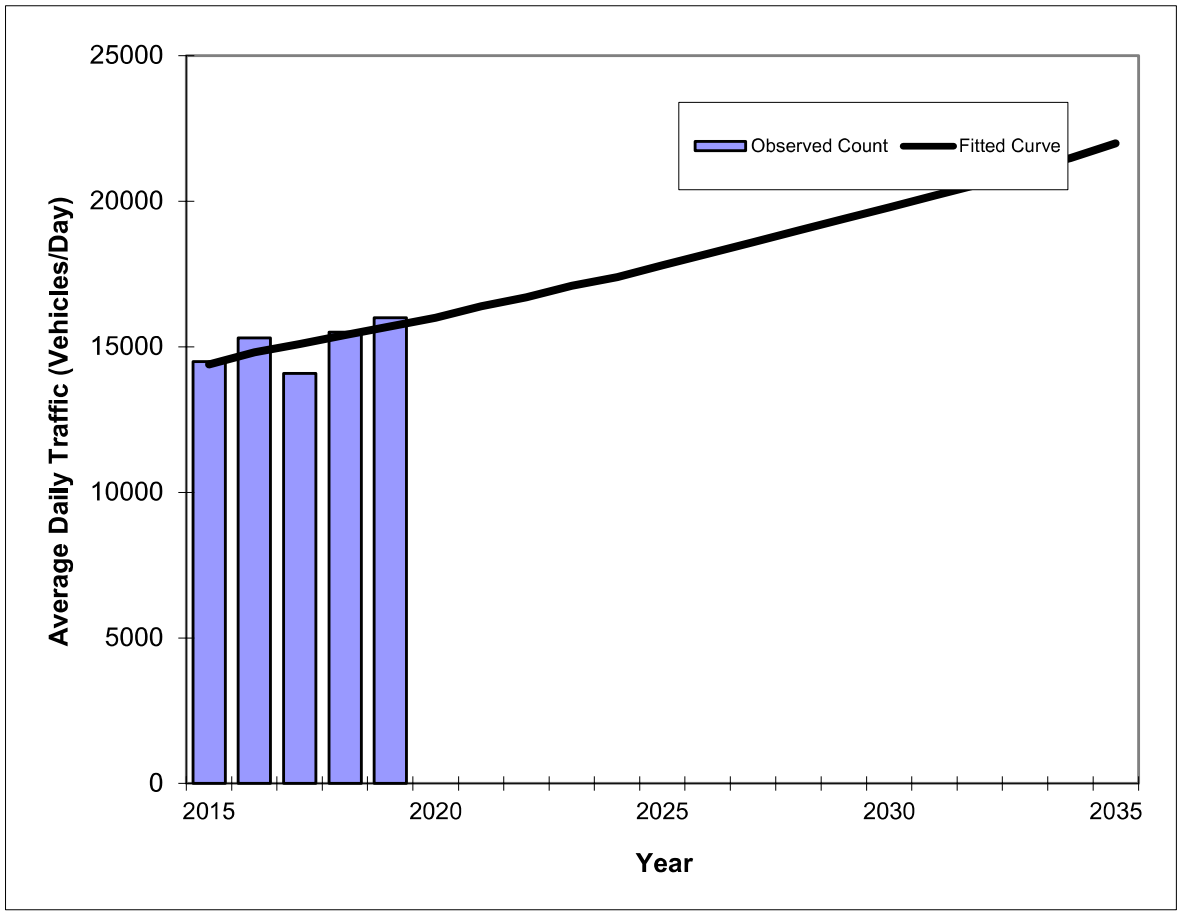
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14800
2017	14100	15100
2018	15500	15400
2019	16000	15700
2027 Opening Year Trend		
2027	N/A	18600
2033 Mid-Year Trend		
2033	N/A	21100
2034 Design Year Trend		
2034	N/A	21500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	41.87%
Compounded Annual Historic Growth Rate:	2.18%
Compounded Growth Rate (2019 to Design Year):	2.12%
Printed:	26-Jan-23

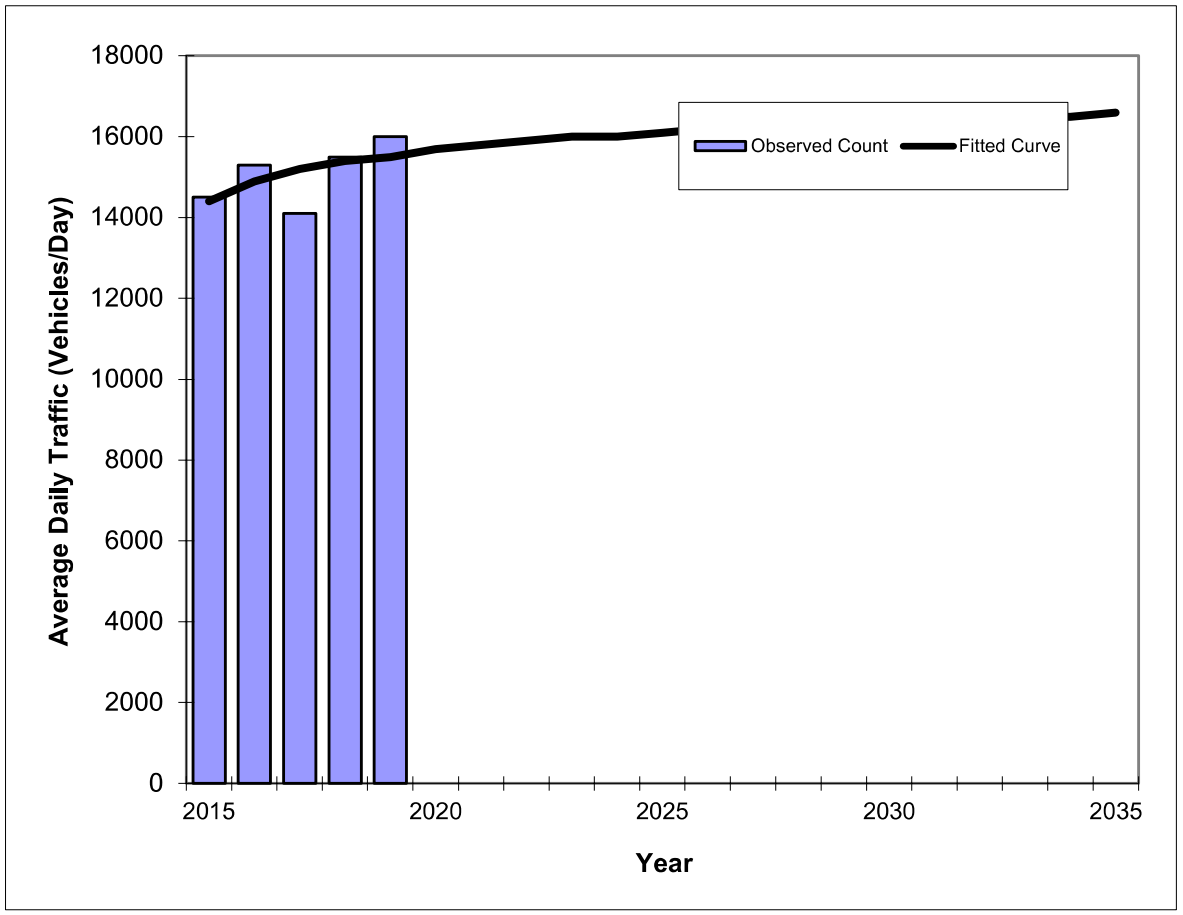
Exponential Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14500	14400
2016	15300	14900
2017	14100	15200
2018	15500	15400
2019	16000	15500
2027 Opening Year Trend		
2027	N/A	16200
2033 Mid-Year Trend		
2033	N/A	16500
2034 Design Year Trend		
2034	N/A	16500
TRANPLAN Forecasts/Trends		

Trend R-squared:	33.90%
Compounded Annual Historic Growth Rate:	1.86%
Compounded Growth Rate (2019 to Design Year):	0.42%
Printed:	26-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

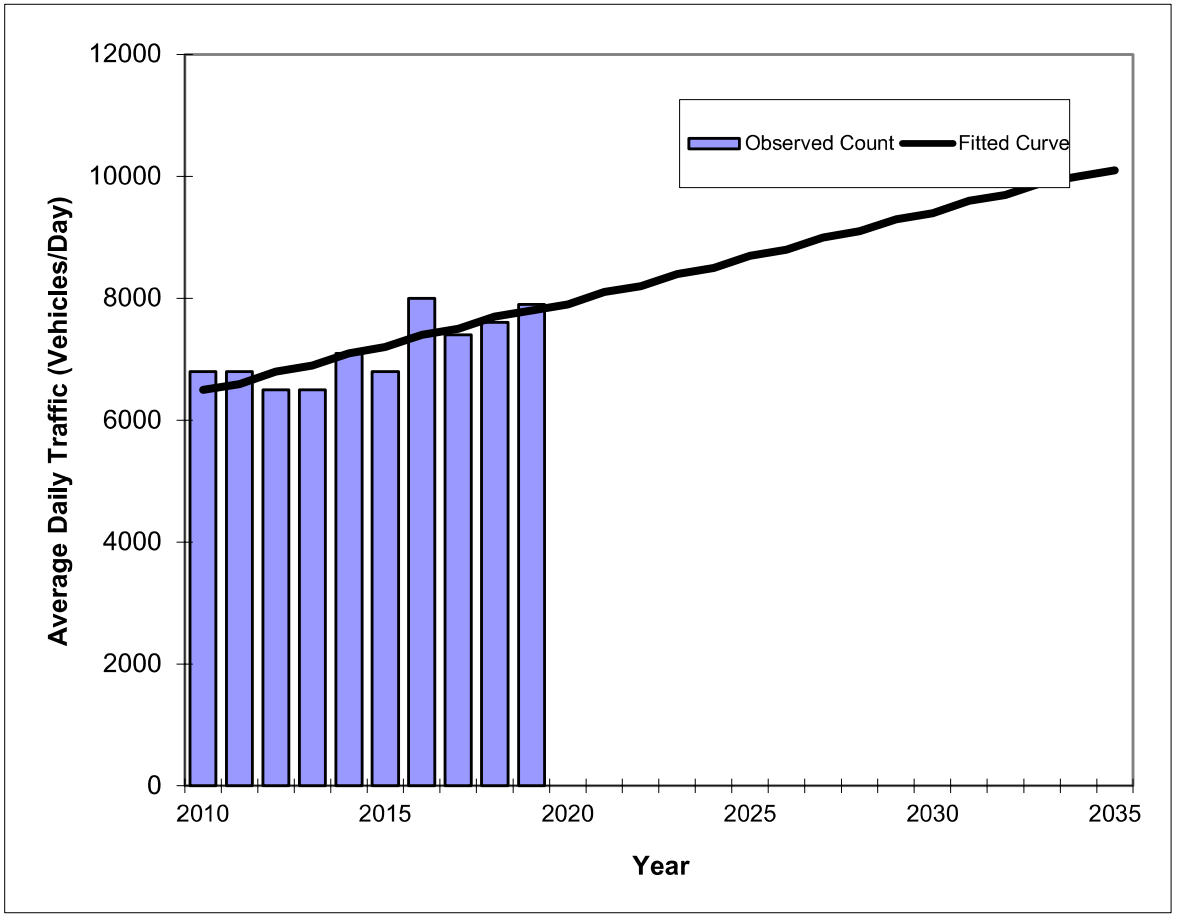
Ten Year Trends

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	6800	6500
2011	6800	6600
2012	6500	6800
2013	6500	6900
2014	7100	7100
2015	6800	7200
2016	8000	7400
2017	7400	7500
2018	7600	7700
2019	7900	7800
2027 Opening Year Trend		
2027	N/A	9000
2033 Mid-Year Trend		
2033	N/A	9900
2034 Design Year Trend		
2034	N/A	10000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	147
Trend R-squared:	64.21%
Trend Annual Historic Growth Rate:	2.22%
Trend Growth Rate (2019 to Design Year):	1.88%
Printed:	26-Jan-23
Straight Line Growth Option	

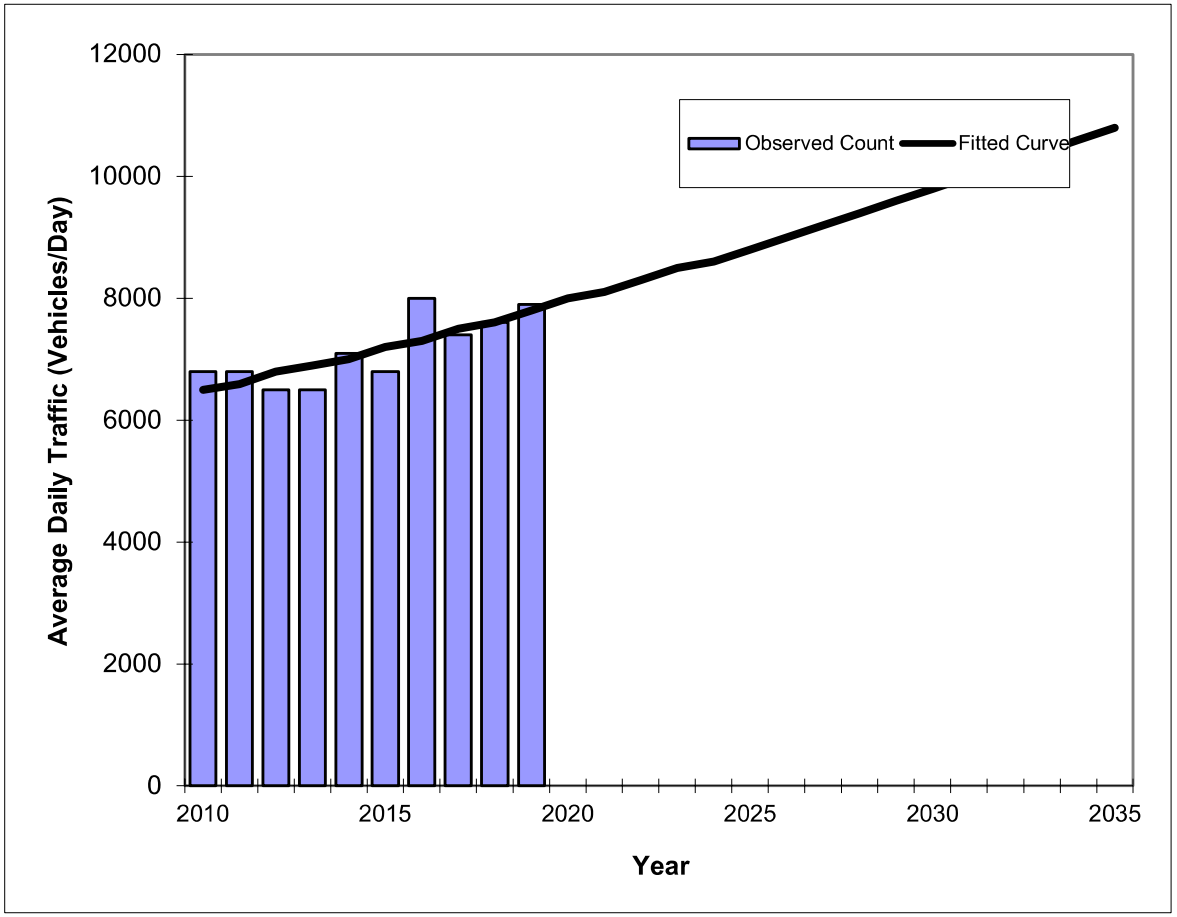
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	6800	6500
2011	6800	6600
2012	6500	6800
2013	6500	6900
2014	7100	7000
2015	6800	7200
2016	8000	7300
2017	7400	7500
2018	7600	7600
2019	7900	7800
2027 Opening Year Trend		
2027	N/A	9200
2033 Mid-Year Trend		
2033	N/A	10400
2034 Design Year Trend		
2034	N/A	10600
TRANPLAN Forecasts/Trends		

Trend R-squared:	64.30%
Compounded Annual Historic Growth Rate:	2.05%
Compounded Growth Rate (2019 to Design Year):	2.07%
Printed:	26-Jan-23

Exponential Growth Option

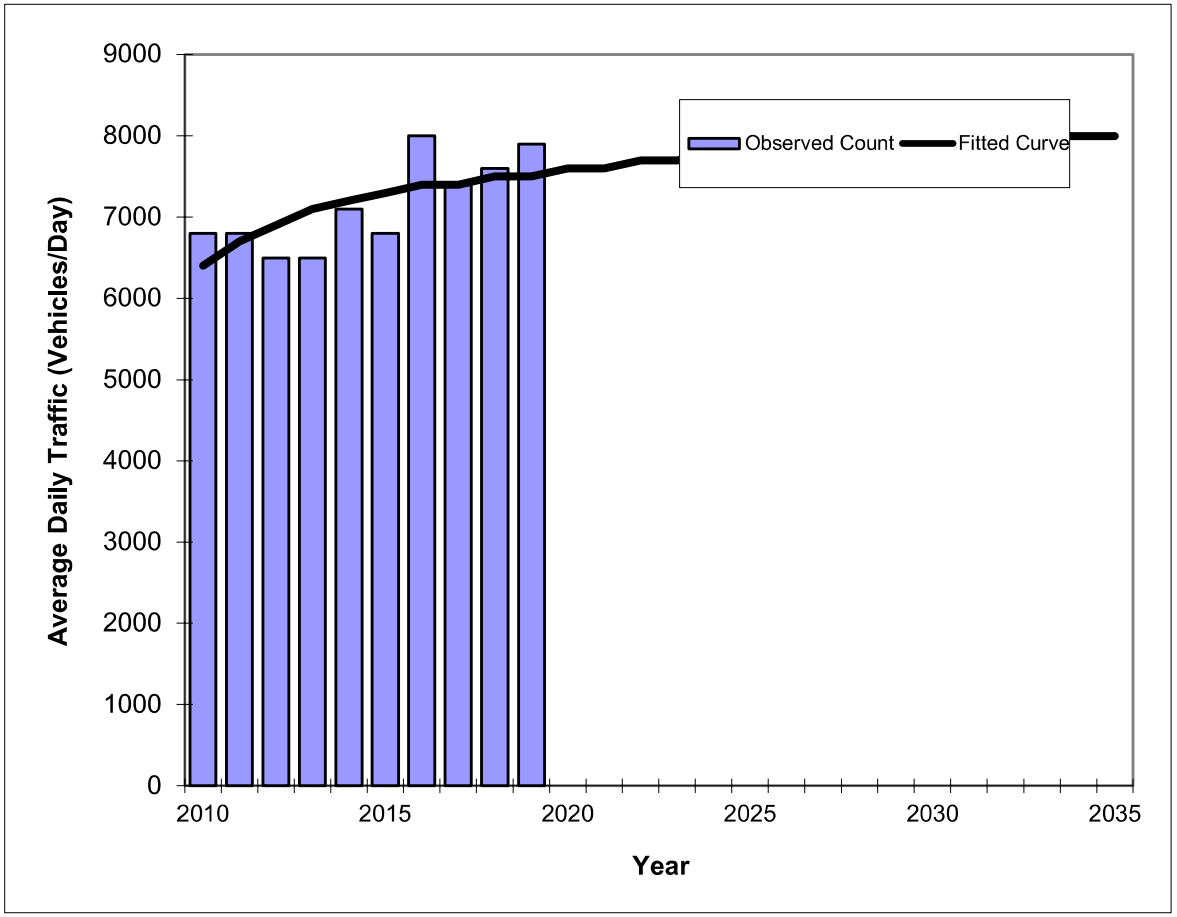
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Leavitt Ave to Veteran's Memorial Pkwy

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	6800	6400
2011	6800	6700
2012	6500	6900
2013	6500	7100
2014	7100	7200
2015	6800	7300
2016	8000	7400
2017	7400	7400
2018	7600	7500
2019	7900	7500
2027 Opening Year Trend		
2027	N/A	7800
2033 Mid-Year Trend		
2033	N/A	8000
2034 Design Year Trend		
2034	N/A	8000
TRANPLAN Forecasts/Trends		

Trend R-squared:	45.84%
Compounded Annual Historic Growth Rate:	1.78%
Compounded Growth Rate (2019 to Design Year):	0.43%
Printed:	26-Jan-23

Decaying Exponential Growth Option

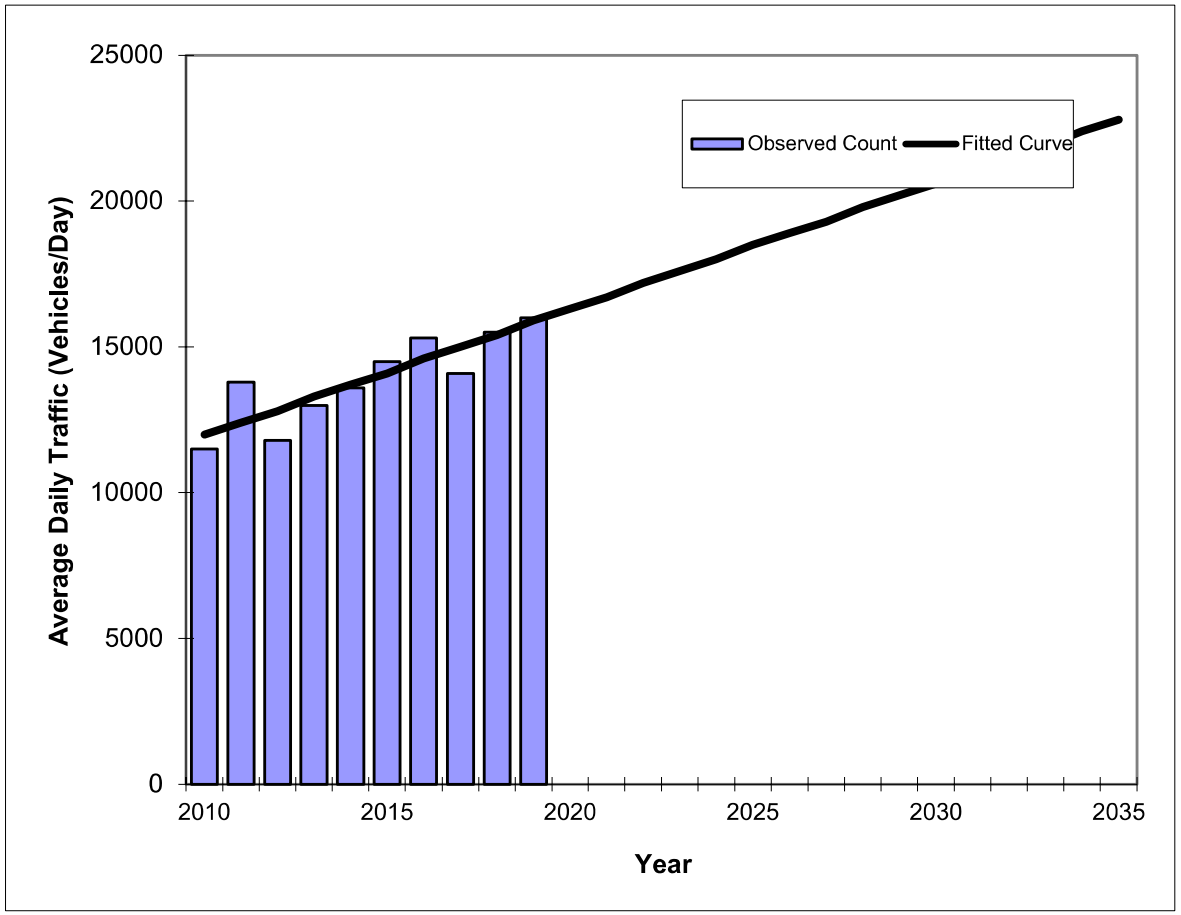
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	12000
2011	13800	12400
2012	11800	12800
2013	13000	13300
2014	13600	13700
2015	14500	14100
2016	15300	14600
2017	14100	15000
2018	15500	15400
2019	16000	15900
2027 Opening Year Trend		
2027	N/A	19300
2033 Mid-Year Trend		
2033	N/A	21900
2034 Design Year Trend		
2034	N/A	22400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	435
Trend R-squared:	76.33%
Trend Annual Historic Growth Rate:	3.61%
Trend Growth Rate (2019 to Design Year):	2.73%
Printed:	26-Jan-23

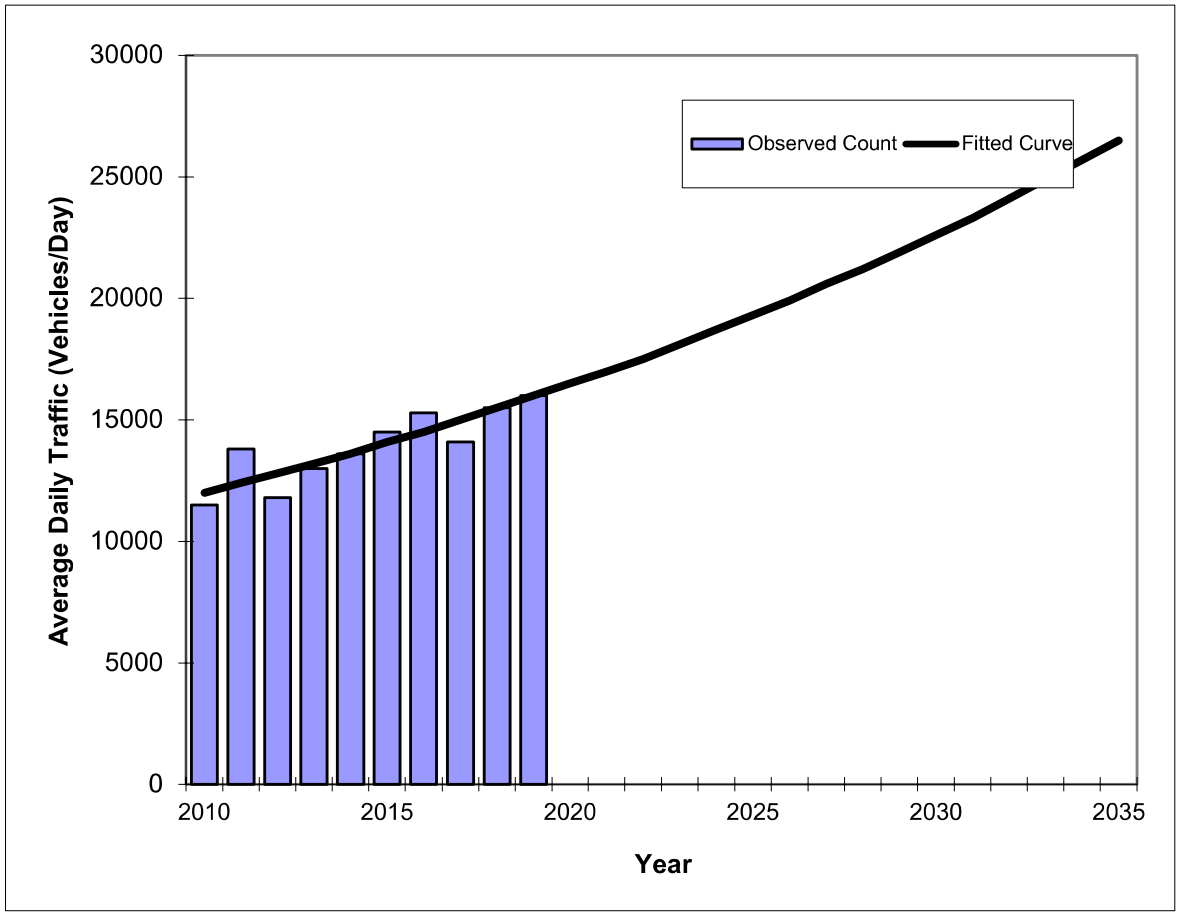
Straight Line Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	12000
2011	13800	12400
2012	11800	12800
2013	13000	13200
2014	13600	13600
2015	14500	14100
2016	15300	14500
2017	14100	15000
2018	15500	15500
2019	16000	16000
2027 Opening Year Trend		
2027	N/A	20600
2033 Mid-Year Trend		
2033	N/A	24900
2034 Design Year Trend		
2034	N/A	25700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	75.03%
Compounded Annual Historic Growth Rate:	3.25%
Compounded Growth Rate (2019 to Design Year):	3.21%
Printed:	26-Jan-23

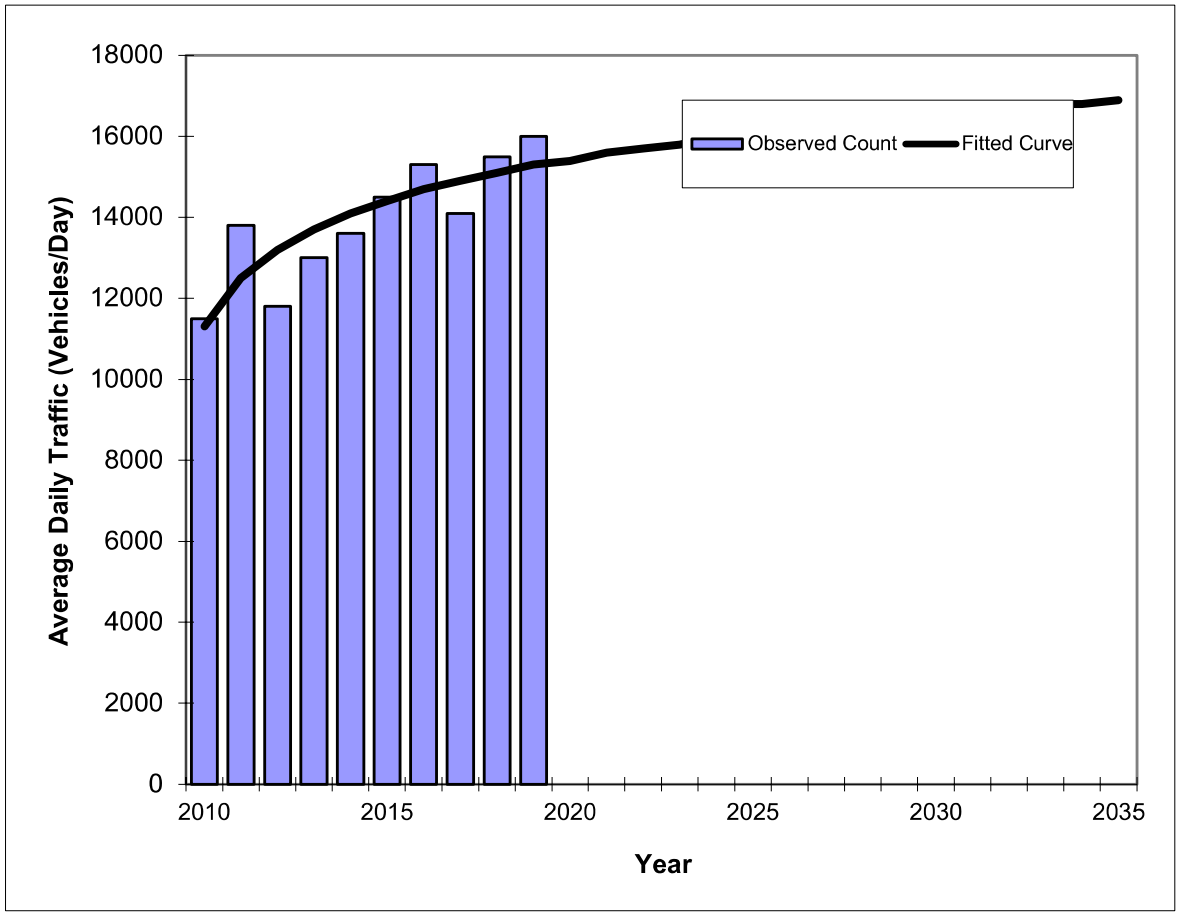
Exponential Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Kentucky Ave to Normandy Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	11300
2011	13800	12500
2012	11800	13200
2013	13000	13700
2014	13600	14100
2015	14500	14400
2016	15300	14700
2017	14100	14900
2018	15500	15100
2019	16000	15300
2027 Opening Year Trend		
2027	N/A	16300
2033 Mid-Year Trend		
2033	N/A	16800
2034 Design Year Trend		
2034	N/A	16800
TRANPLAN Forecasts/Trends		

Trend R-squared:	69.94%
Compounded Annual Historic Growth Rate:	3.42%
Compounded Growth Rate (2019 to Design Year):	0.63%
Printed:	7-Feb-23

Decaying Exponential Growth Option

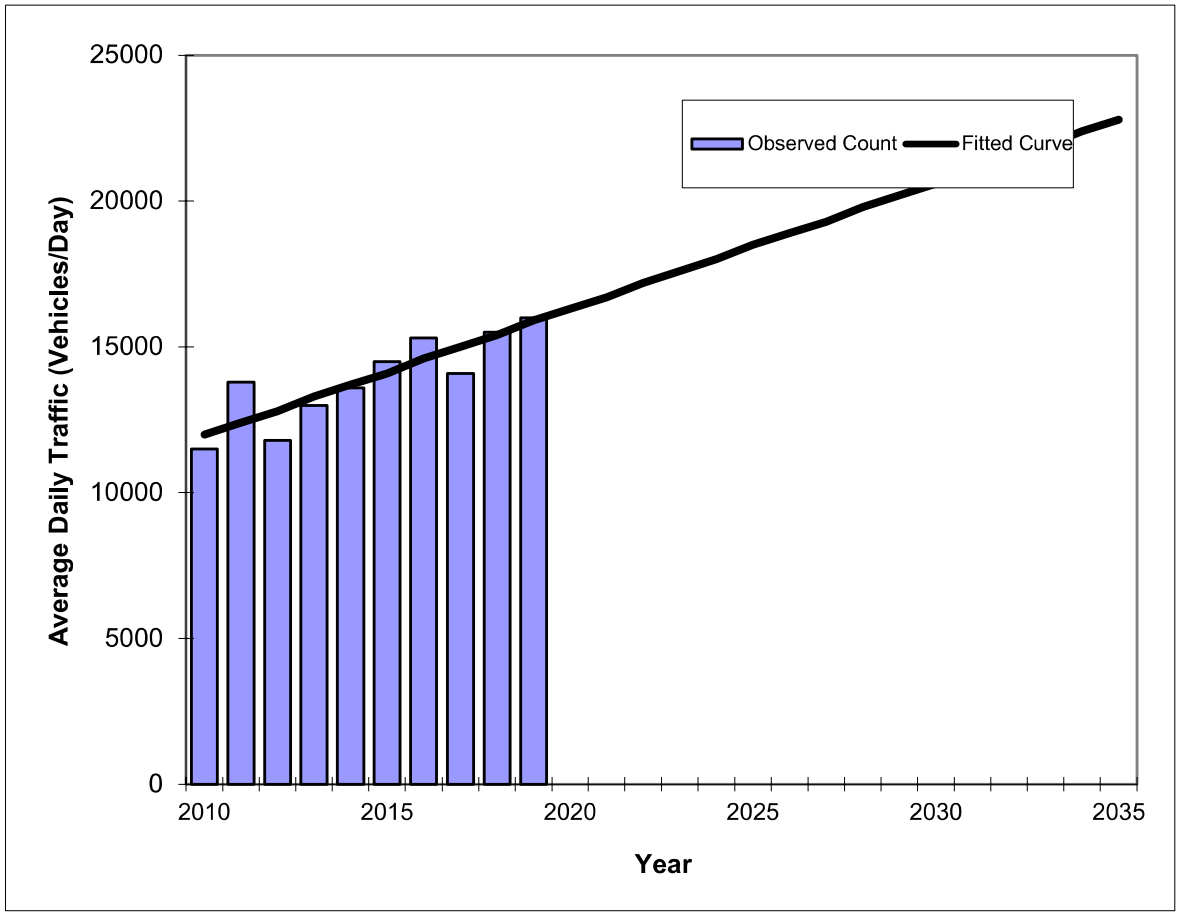
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	12000
2011	13800	12400
2012	11800	12800
2013	13000	13300
2014	13600	13700
2015	14500	14100
2016	15300	14600
2017	14100	15000
2018	15500	15400
2019	16000	15900
2027 Opening Year Trend		
2027	N/A	19300
2033 Mid-Year Trend		
2033	N/A	21900
2034 Design Year Trend		
2034	N/A	22400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	435
Trend R-squared:	76.33%
Trend Annual Historic Growth Rate:	3.61%
Trend Growth Rate (2019 to Design Year):	2.73%
Printed:	26-Jan-23

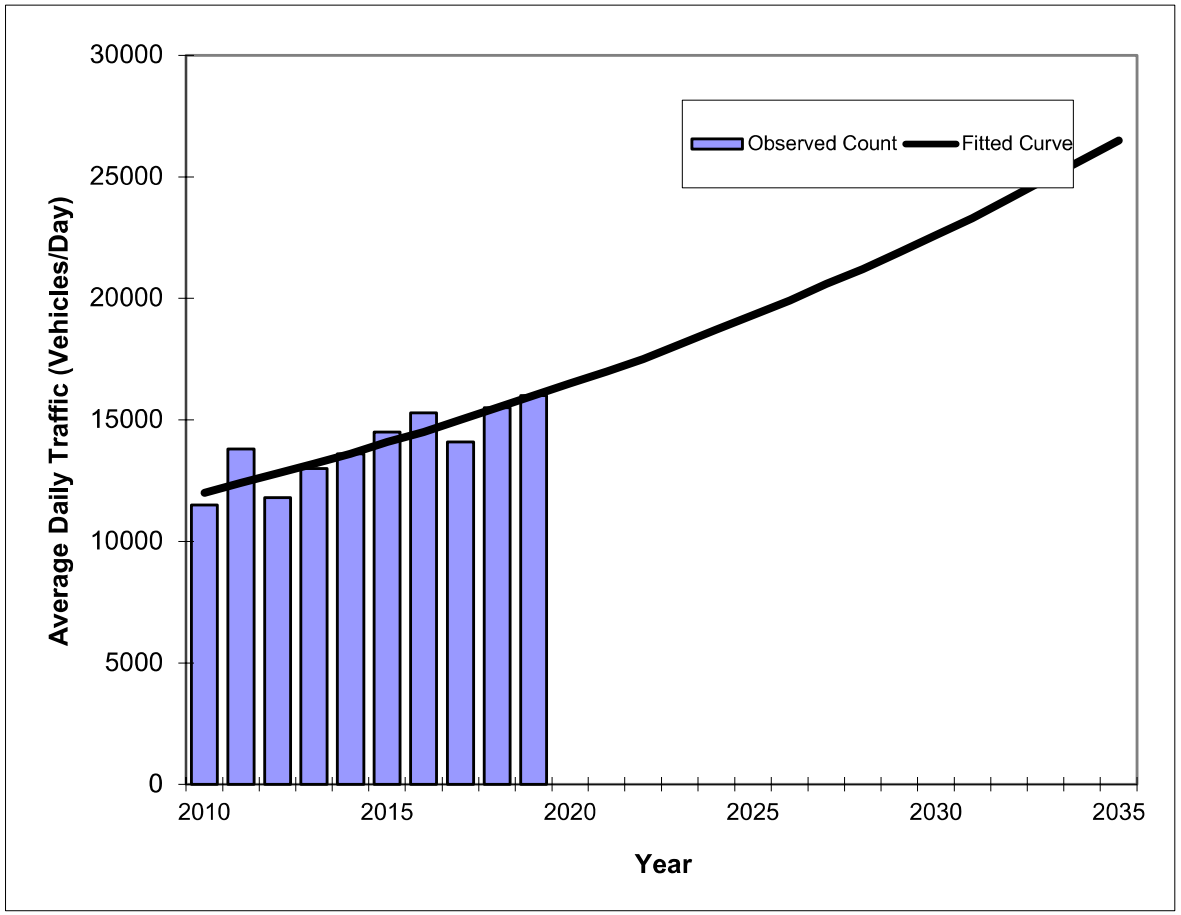
Straight Line Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	12000
2011	13800	12400
2012	11800	12800
2013	13000	13200
2014	13600	13600
2015	14500	14100
2016	15300	14500
2017	14100	15000
2018	15500	15500
2019	16000	16000
2027 Opening Year Trend		
2027	N/A	20600
2033 Mid-Year Trend		
2033	N/A	24900
2034 Design Year Trend		
2034	N/A	25700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	75.03%
Compounded Annual Historic Growth Rate:	3.25%
Compounded Growth Rate (2019 to Design Year):	3.21%
Printed:	26-Jan-23

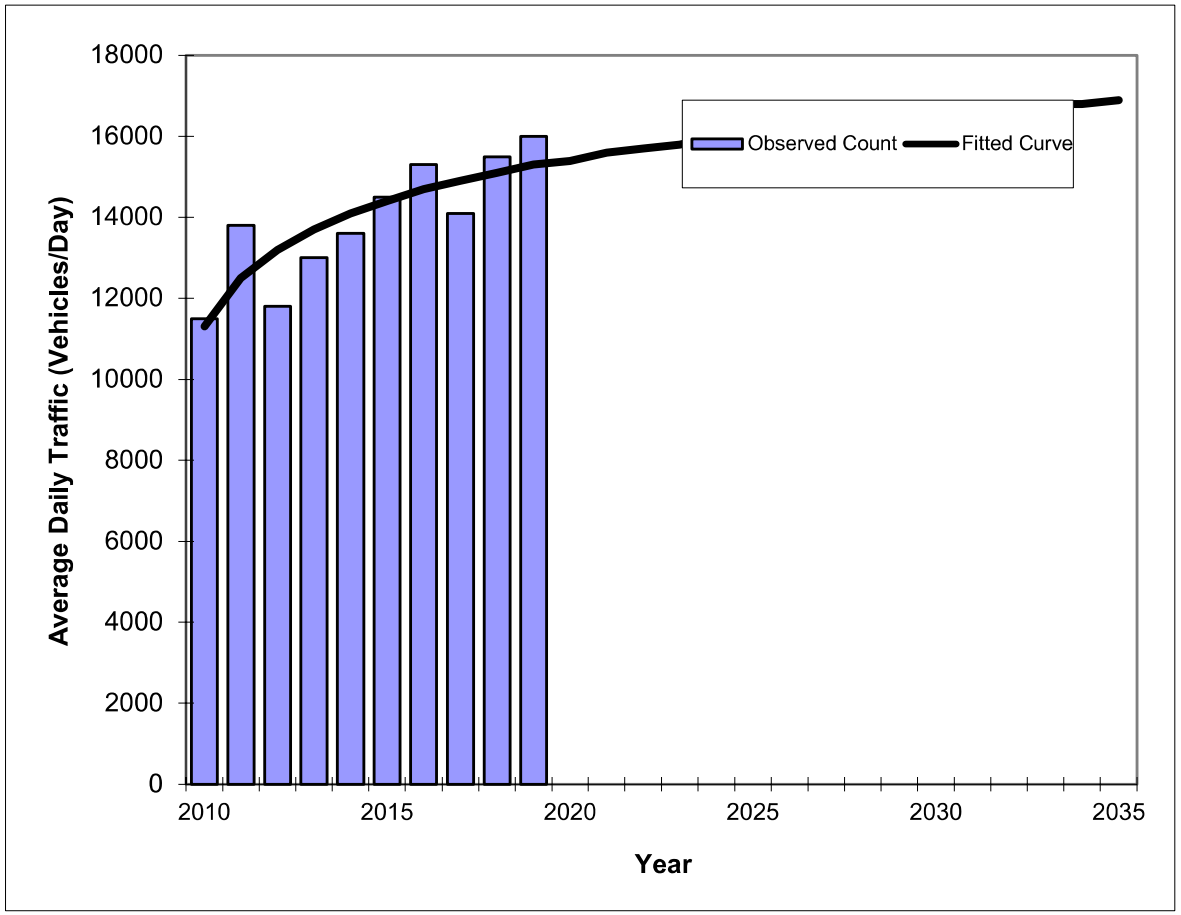
Exponential Growth Option

Traffic Trends - V03.a

GRAVES AVE -- Normandy Blvd to Howland Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	11500	11300
2011	13800	12500
2012	11800	13200
2013	13000	13700
2014	13600	14100
2015	14500	14400
2016	15300	14700
2017	14100	14900
2018	15500	15100
2019	16000	15300
2027 Opening Year Trend		
2027	N/A	16300
2033 Mid-Year Trend		
2033	N/A	16800
2034 Design Year Trend		
2034	N/A	16800
TRANPLAN Forecasts/Trends		

Trend R-squared:	69.94%
Compounded Annual Historic Growth Rate:	3.42%
Compounded Growth Rate (2019 to Design Year):	0.63%
Printed:	26-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Howland Boulevard

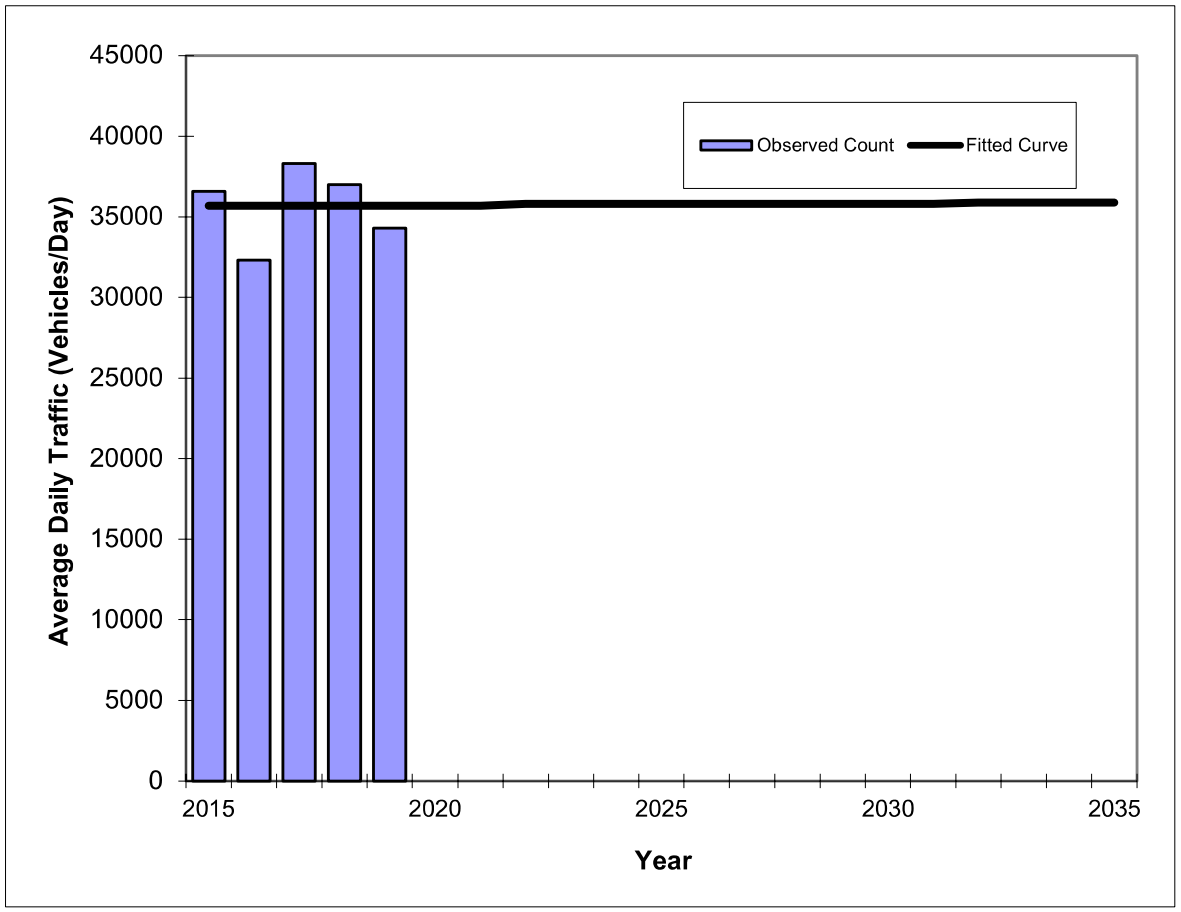
Five Year Trends

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	36600	35700
2016	32300	35700
2017	38300	35700
2018	37000	35700
2019	34300	35700
2027 Opening Year Trend		
2027	N/A	35800
2033 Mid-Year Trend		
2033	N/A	35900
2034 Design Year Trend		
2034	N/A	35900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	10
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2019 to Design Year):	0.04%
Printed:	7-Feb-23

Straight Line Growth Option

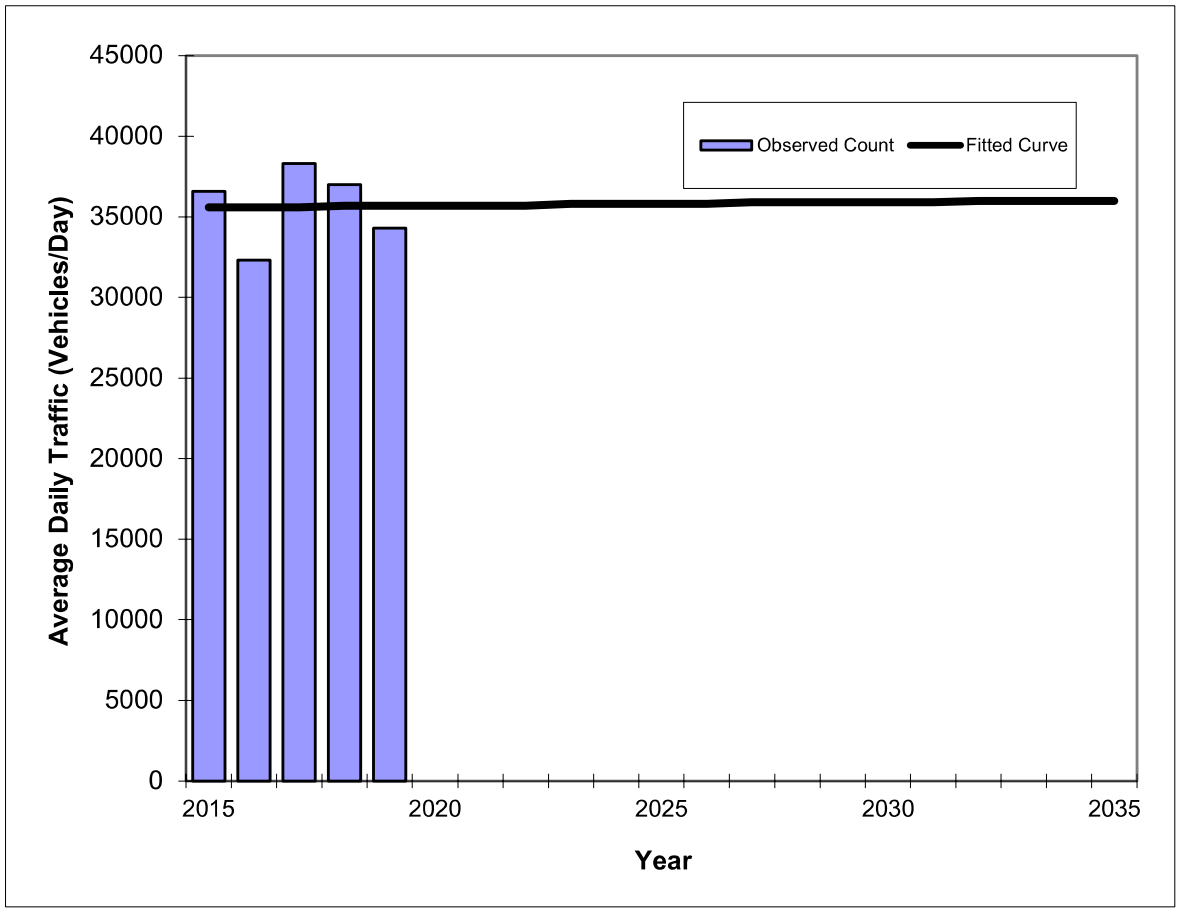
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	36600	35600
2016	32300	35600
2017	38300	35600
2018	37000	35700
2019	34300	35700
2027 Opening Year Trend		
2027	N/A	35900
2033 Mid-Year Trend		
2033	N/A	36000
2034 Design Year Trend		
2034	N/A	36000
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.02%
Compounded Annual Historic Growth Rate:	0.07%
Compounded Growth Rate (2019 to Design Year):	0.06%
Printed:	7-Feb-23

Exponential Growth Option

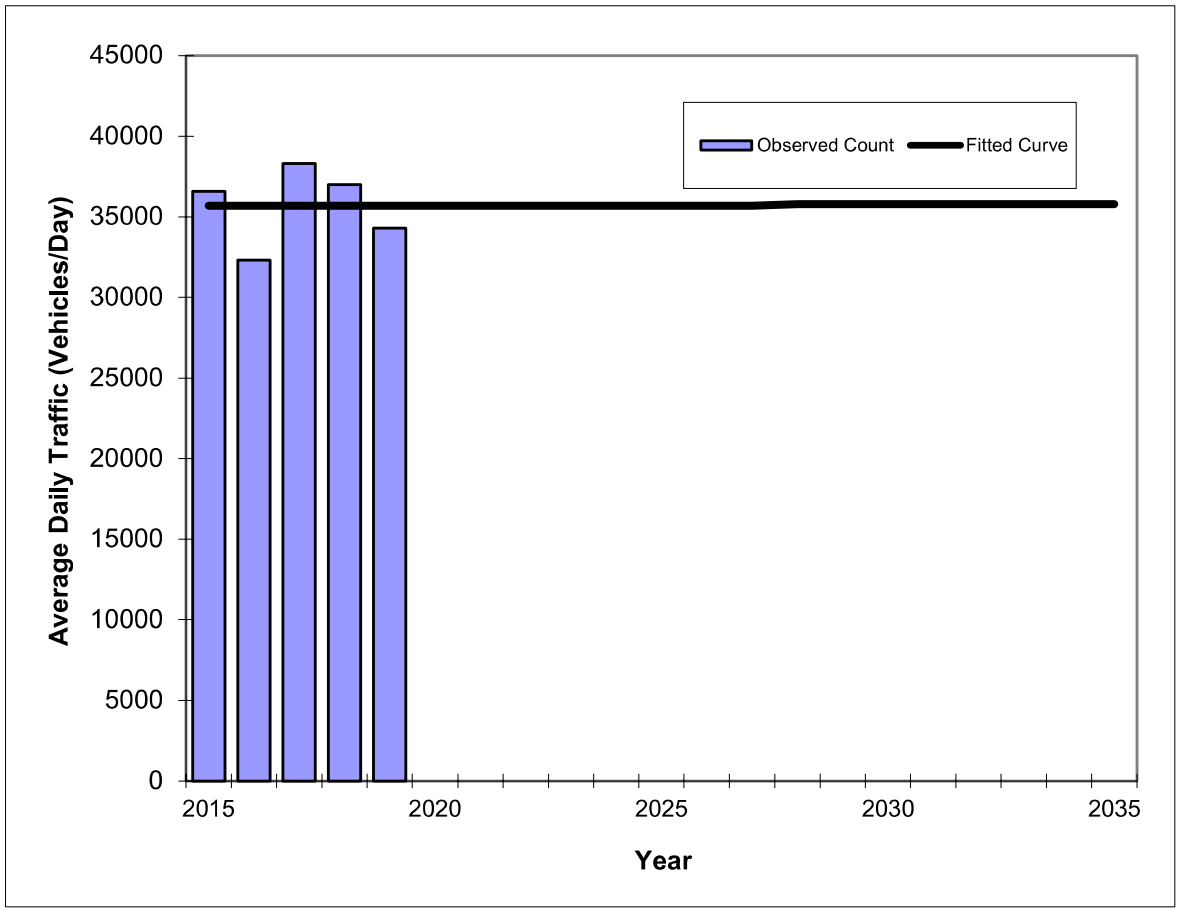
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	36600	35700
2016	32300	35700
2017	38300	35700
2018	37000	35700
2019	34300	35700
2027 Opening Year Trend		
2027	N/A	35700
2033 Mid-Year Trend		
2033	N/A	35800
2034 Design Year Trend		
2034	N/A	35800
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.01%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	0.02%
Printed:	7-Feb-23

Decaying Exponential Growth Option

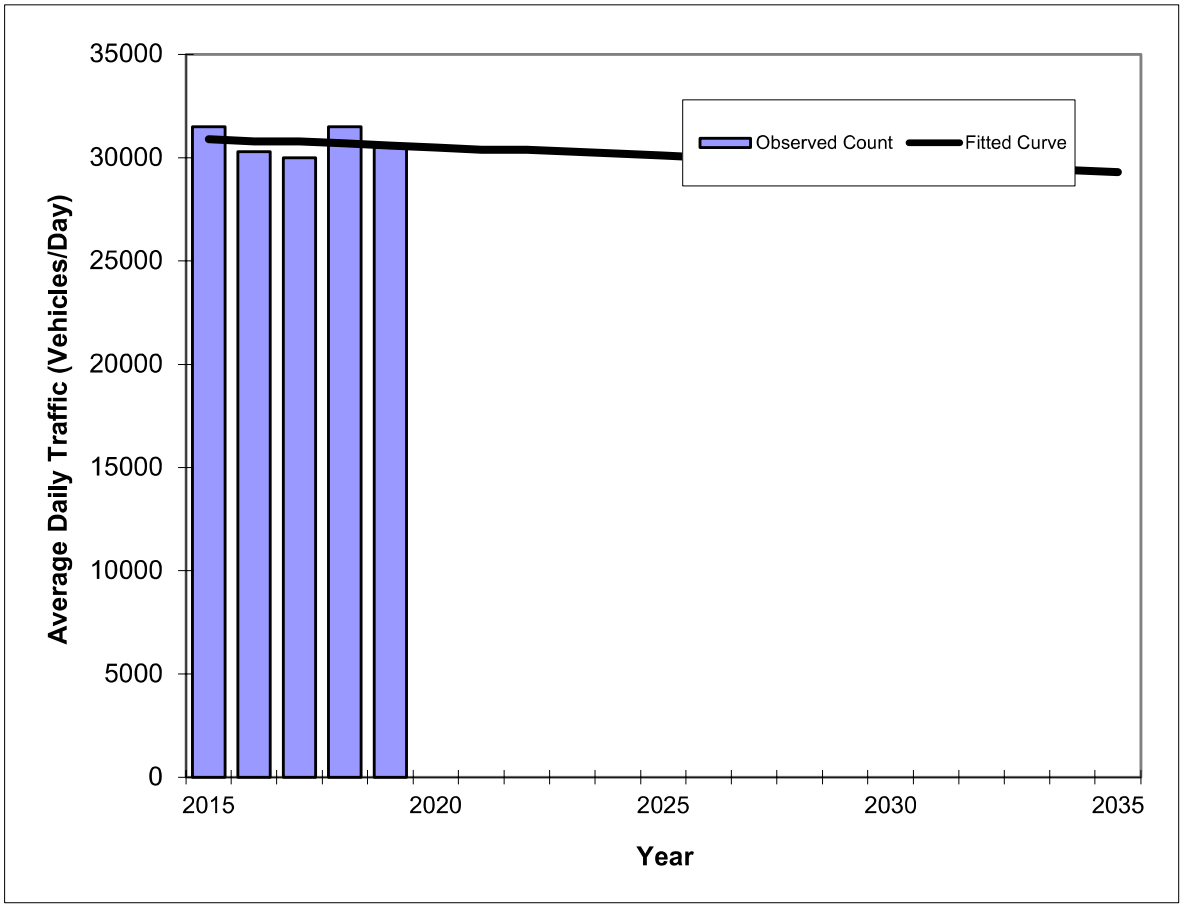
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	31500	30900
2016	30300	30800
2017	30000	30800
2018	31500	30700
2019	30500	30600
2027 Opening Year Trend		
2027	N/A	30000
2033 Mid-Year Trend		
2033	N/A	29500
2034 Design Year Trend		
2034	N/A	29400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-80
Trend R-squared:	3.28%
Trend Annual Historic Growth Rate:	-0.24%
Trend Growth Rate (2019 to Design Year):	-0.26%
Printed:	7-Feb-23
Straight Line Growth Option	

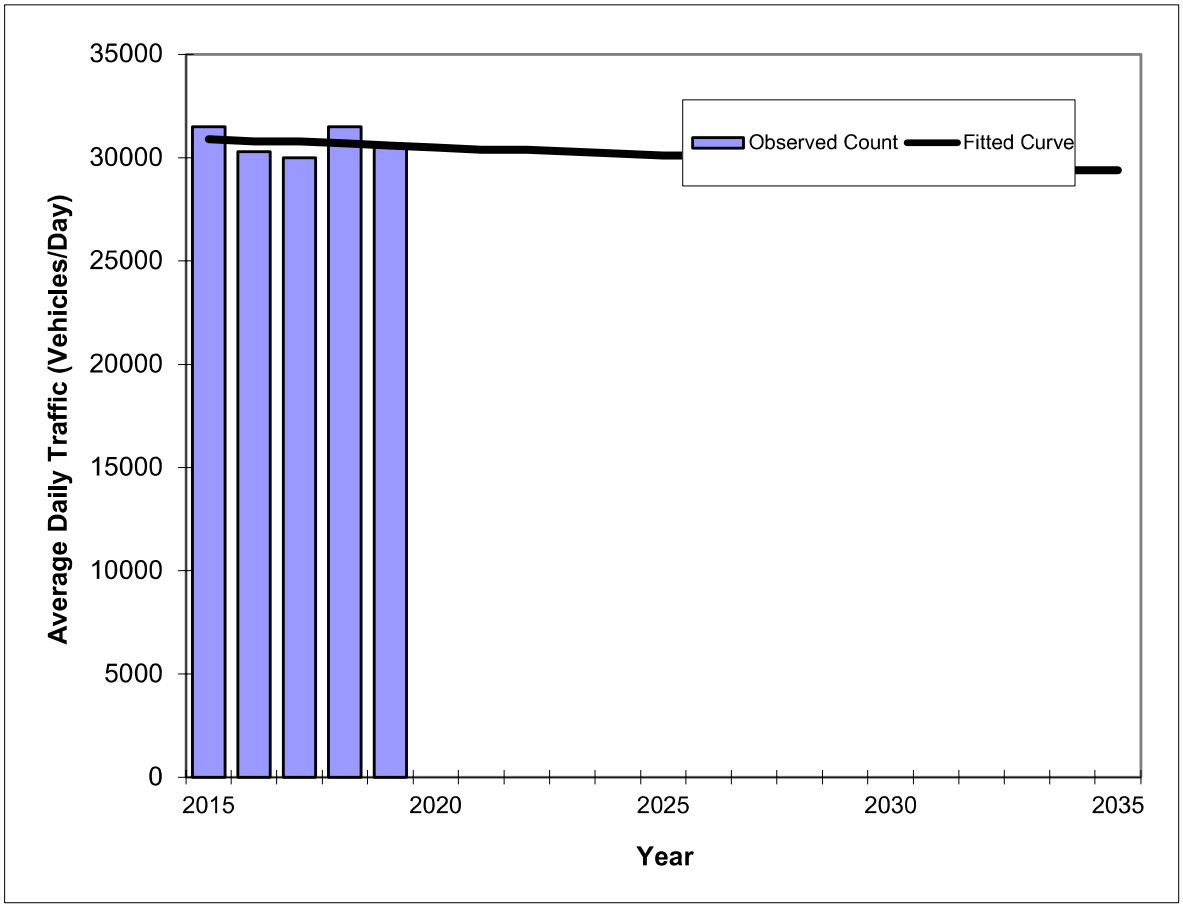
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	31500	30900
2016	30300	30800
2017	30000	30800
2018	31500	30700
2019	30500	30600
2027 Opening Year Trend		
2027	N/A	30000
2033 Mid-Year Trend		
2033	N/A	29500
2034 Design Year Trend		
2034	N/A	29400
TRANPLAN Forecasts/Trends		

Trend R-squared:	3.21%
Compounded Annual Historic Growth Rate:	-0.24%
Compounded Growth Rate (2019 to Design Year):	-0.27%
Printed:	18-Jan-23

Exponential Growth Option

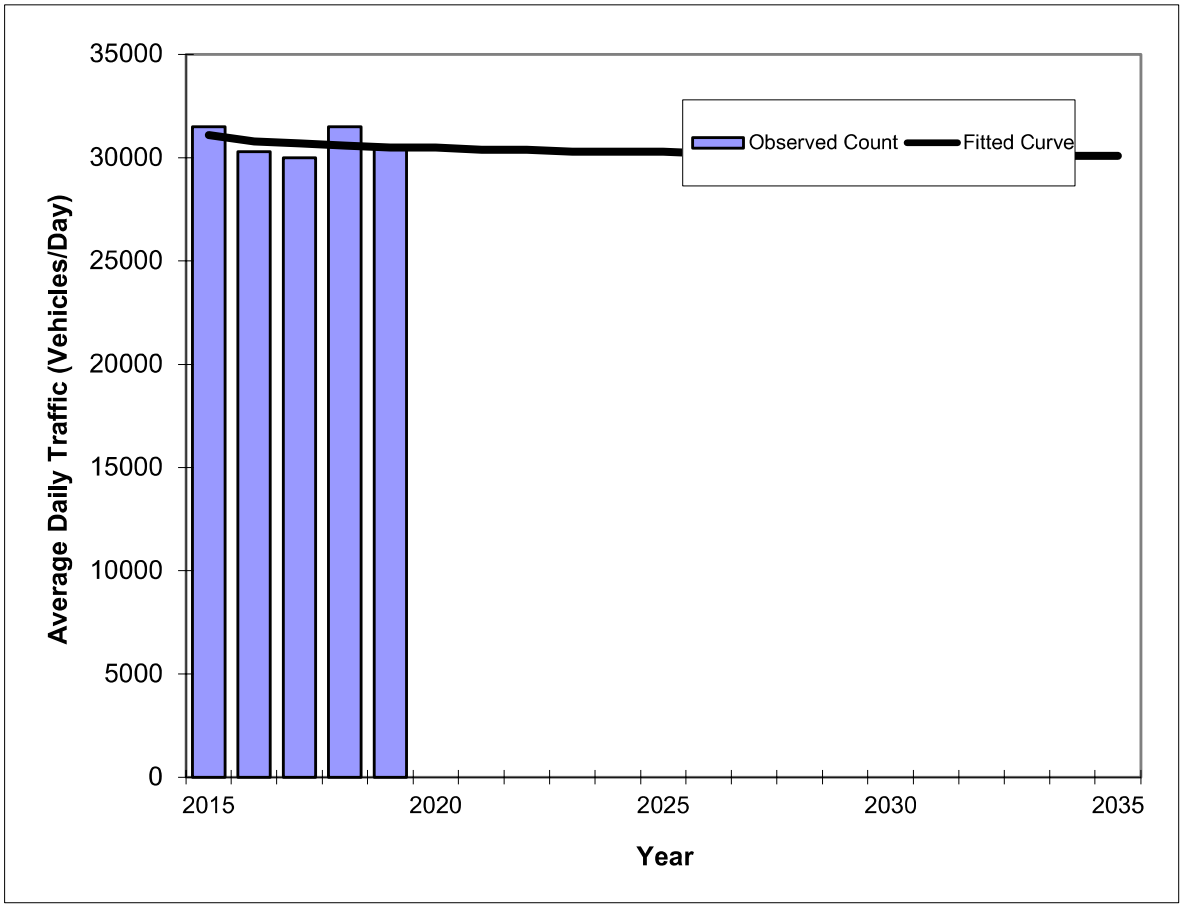
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	31500	31100
2016	30300	30800
2017	30000	30700
2018	31500	30600
2019	30500	30500
2027 Opening Year Trend		
2027	N/A	30200
2033 Mid-Year Trend		
2033	N/A	30100
2034 Design Year Trend		
2034	N/A	30100
TRANPLAN Forecasts/Trends		

Trend R-squared:	9.47%
Compounded Annual Historic Growth Rate:	-0.49%
Compounded Growth Rate (2019 to Design Year):	-0.09%
Printed:	18-Jan-23

Decaying Exponential Growth Option

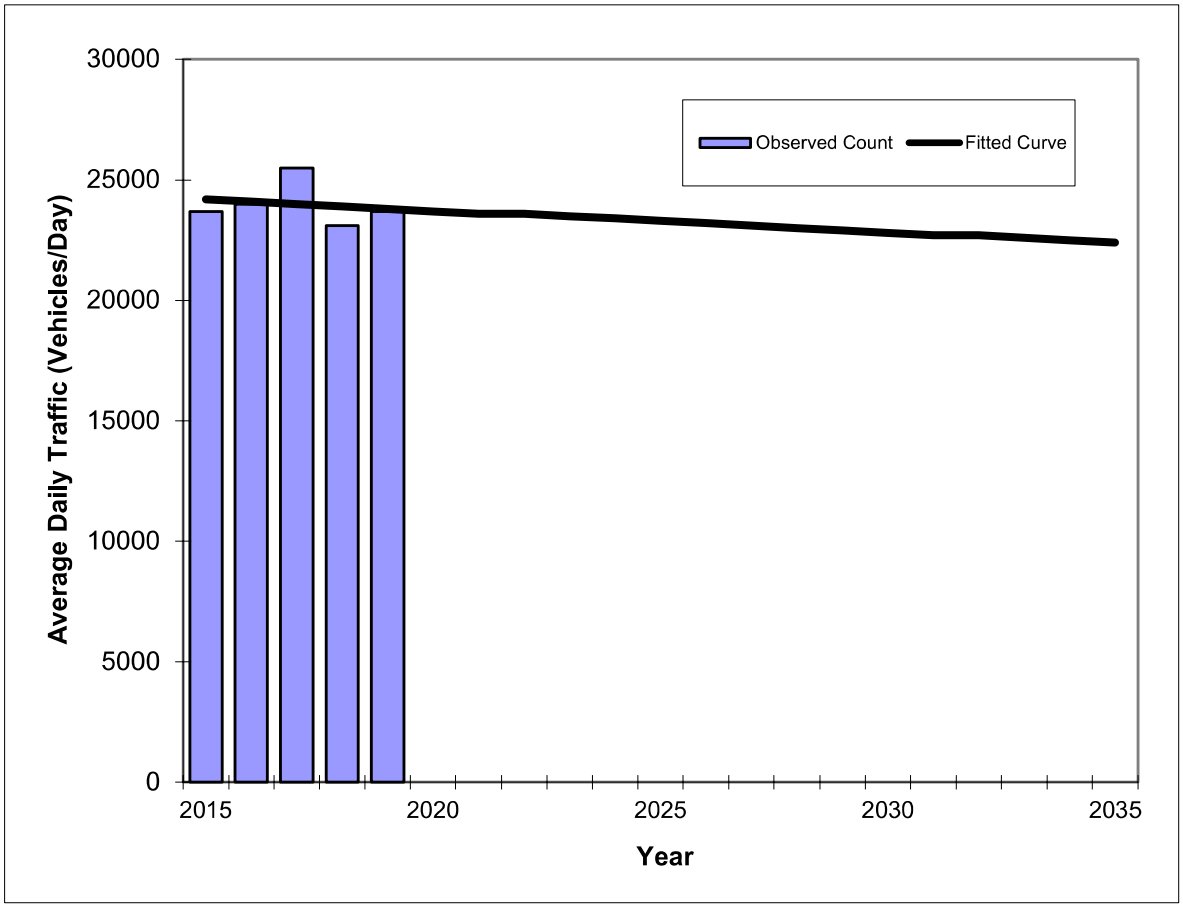
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23700	24200
2016	24000	24100
2017	25500	24000
2018	23100	23900
2019	23700	23800
2027 Opening Year Trend		
2027	N/A	23100
2033 Mid-Year Trend		
2033	N/A	22600
2034 Design Year Trend		
2034	N/A	22500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-90
Trend R-squared:	2.50%
Trend Annual Historic Growth Rate:	-0.41%
Trend Growth Rate (2019 to Design Year):	-0.36%
Printed:	7-Feb-23
Straight Line Growth Option	

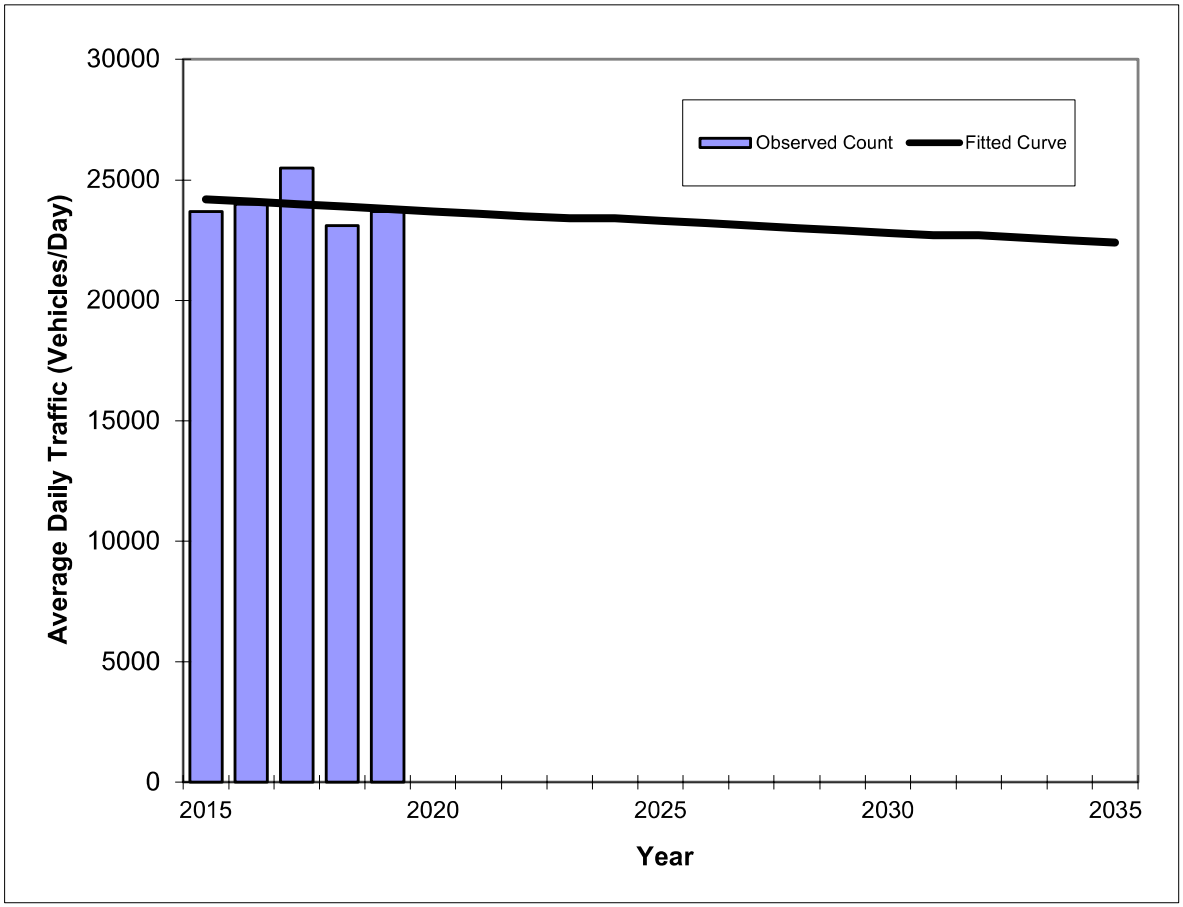
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23700	24200
2016	24000	24100
2017	25500	24000
2018	23100	23900
2019	23700	23800
2027 Opening Year Trend		
2027	N/A	23100
2033 Mid-Year Trend		
2033	N/A	22600
2034 Design Year Trend		
2034	N/A	22500
TRANPLAN Forecasts/Trends		

Trend R-squared:	2.68%
Compounded Annual Historic Growth Rate:	-0.42%
Compounded Growth Rate (2019 to Design Year):	-0.37%
Printed:	7-Feb-23

Exponential Growth Option

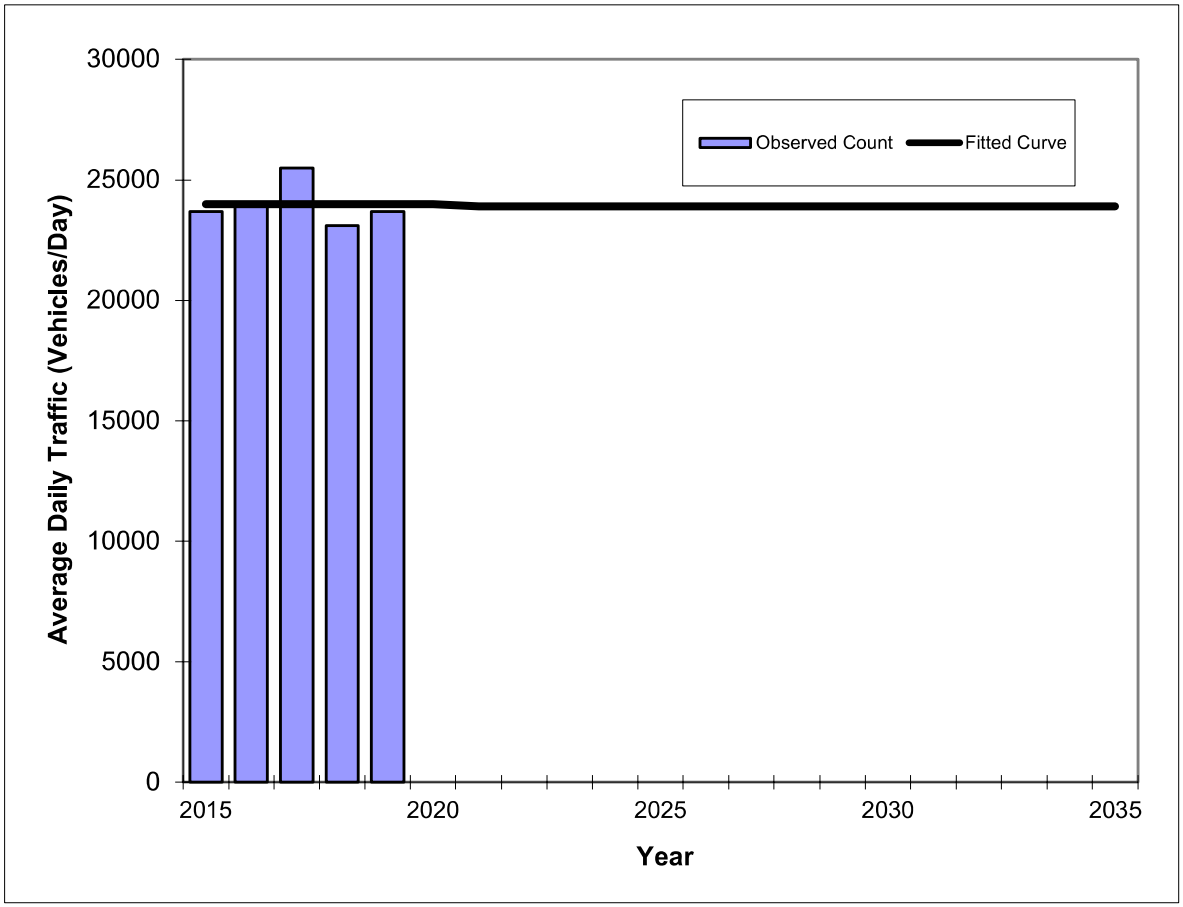
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23700	24000
2016	24000	24000
2017	25500	24000
2018	23100	24000
2019	23700	24000
2027 Opening Year Trend		
2027	N/A	23900
2033 Mid-Year Trend		
2033	N/A	23900
2034 Design Year Trend		
2034	N/A	23900
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.13%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	-0.03%
Printed:	7-Feb-23

Decaying Exponential Growth Option

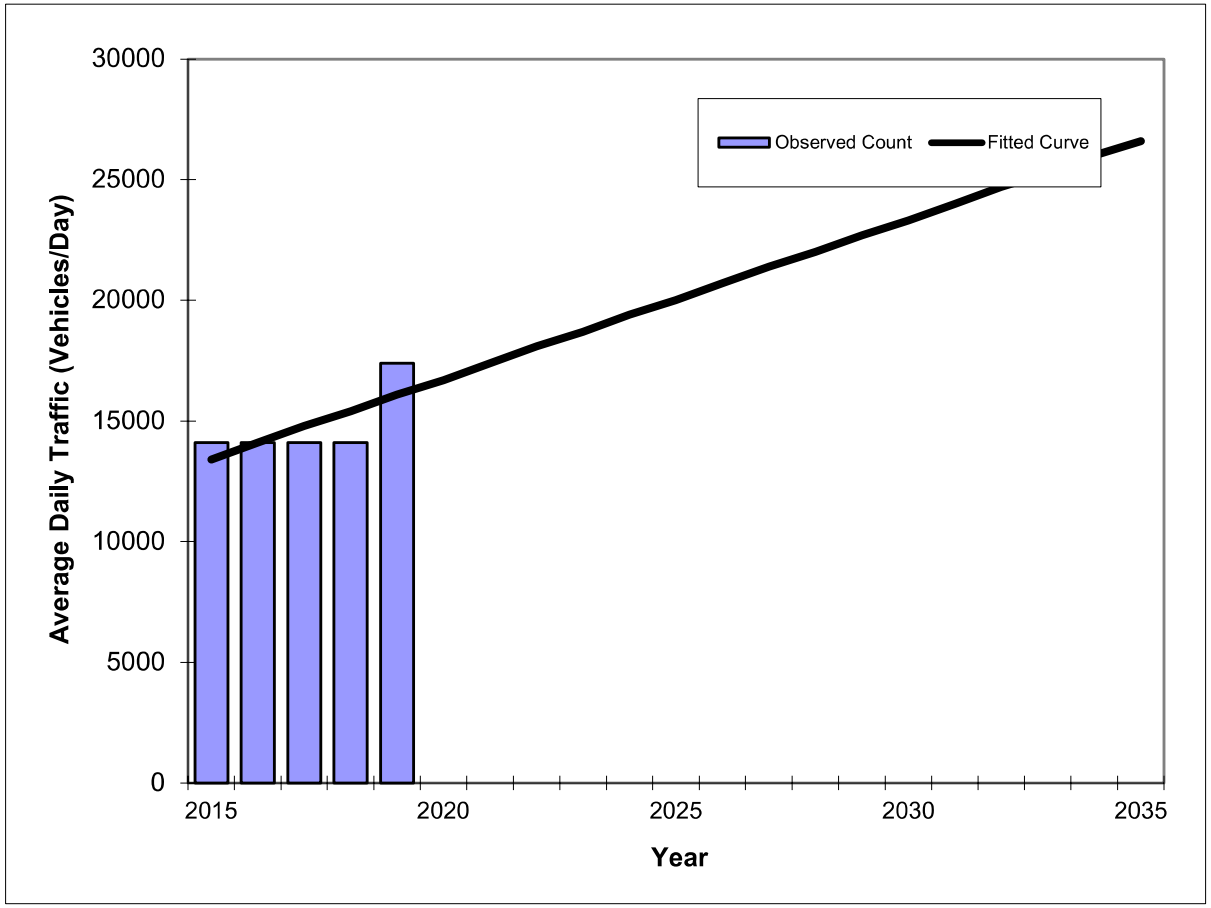
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14100	13400
2016	14100	14100
2017	14100	14800
2018	14100	15400
2019	17400	16100
2027 Opening Year Trend		
2027	N/A	21400
2033 Mid-Year Trend		
2033	N/A	25300
2034 Design Year Trend		
2034	N/A	26000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	660
Trend R-squared:	50.00%
Trend Annual Historic Growth Rate:	5.04%
Trend Growth Rate (2019 to Design Year):	4.10%
Printed:	20-Jan-23
Straight Line Growth Option	

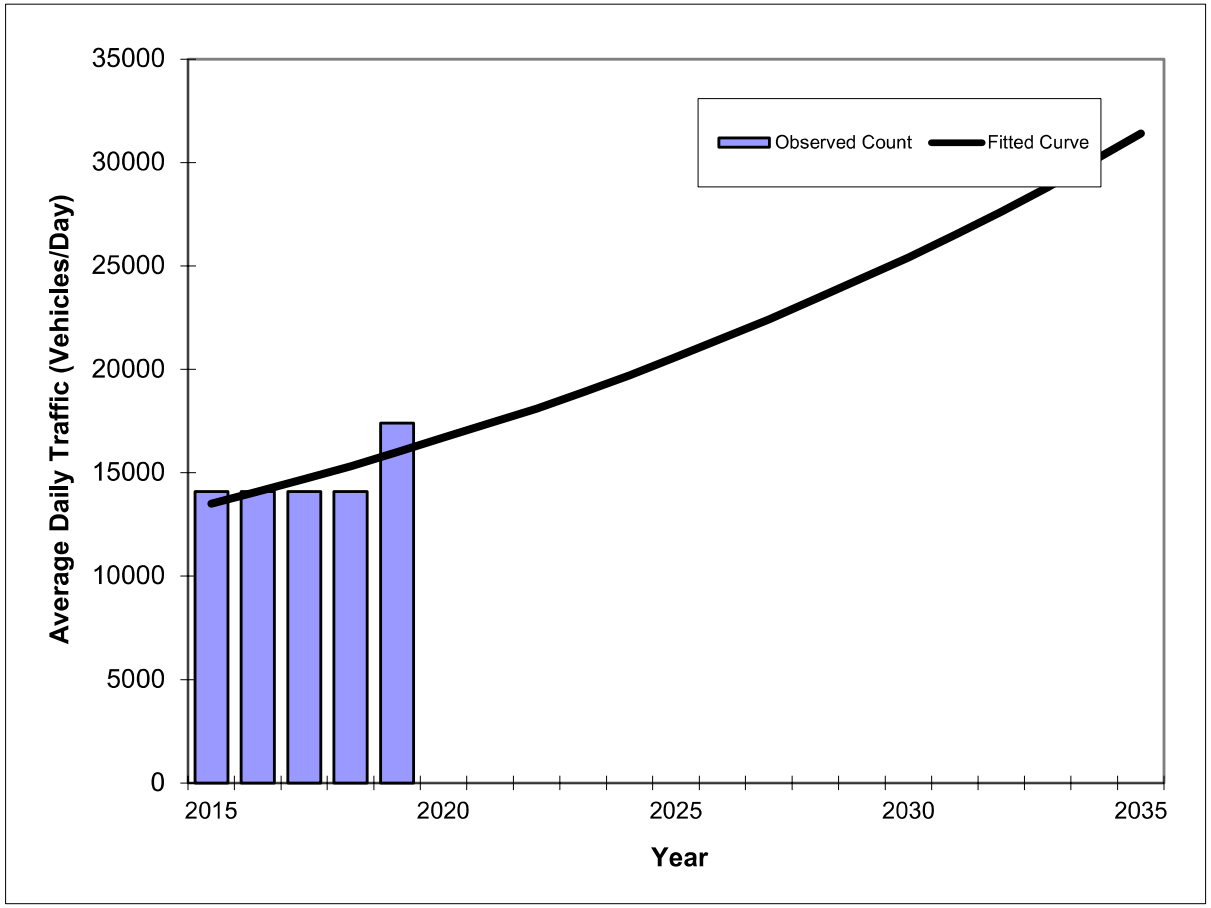
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14100	13500
2016	14100	14100
2017	14100	14700
2018	14100	15300
2019	17400	16000
2027 Opening Year Trend		
2027	N/A	22400
2033 Mid-Year Trend		
2033	N/A	28800
2034 Design Year Trend		
2034	N/A	30100
TRANPLAN Forecasts/Trends		

Trend R-squared:	50.00%
Compounded Annual Historic Growth Rate:	4.34%
Compounded Growth Rate (2019 to Design Year):	4.30%
Printed:	20-Jan-23

Exponential Growth Option

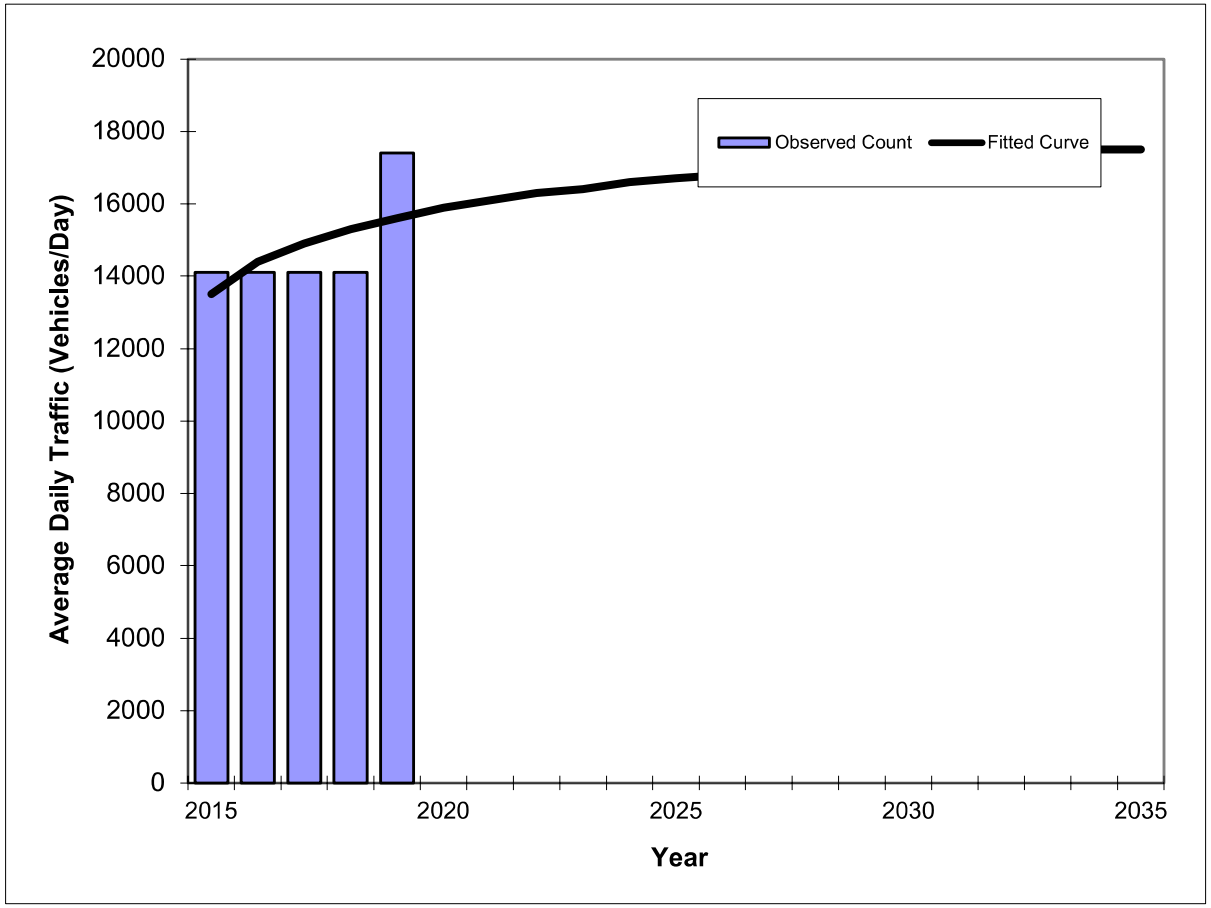
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	14100	13500
2016	14100	14400
2017	14100	14900
2018	14100	15300
2019	17400	15600
2027 Opening Year Trend		
2027	N/A	16900
2033 Mid-Year Trend		
2033	N/A	17400
2034 Design Year Trend		
2034	N/A	17500
TRANPLAN Forecasts/Trends		

Trend R-squared:	32.89%
Compounded Annual Historic Growth Rate:	3.68%
Compounded Growth Rate (2019 to Design Year):	0.77%
Printed:	20-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

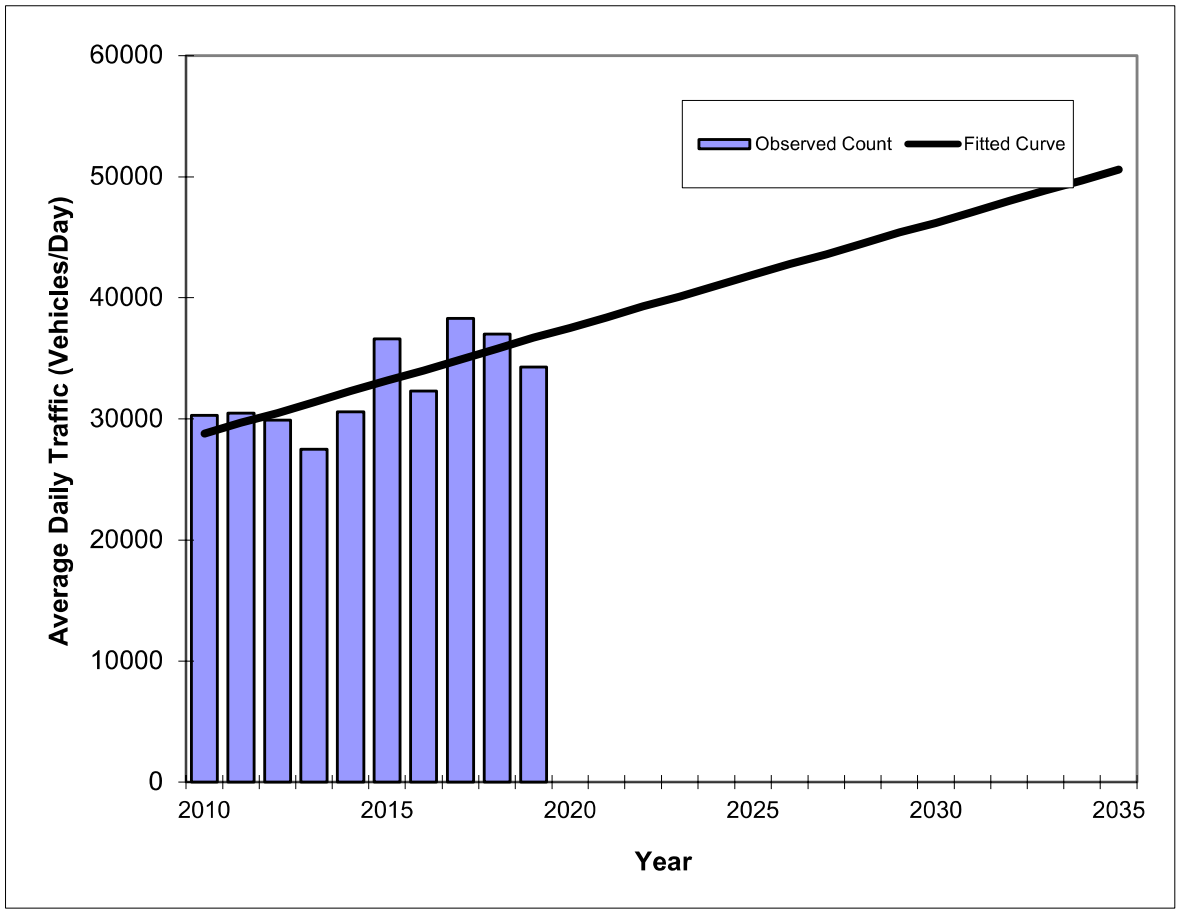
Ten Year Trends

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	30300	28800
2011	30500	29700
2012	29900	30500
2013	27500	31400
2014	30600	32300
2015	36600	33200
2016	32300	34000
2017	38300	34900
2018	37000	35800
2019	34300	36700
2027 Opening Year Trend		
2027	N/A	43600
2033 Mid-Year Trend		
2033	N/A	48900
2034 Design Year Trend		
2034	N/A	49700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	872
Trend R-squared:	53.33%
Trend Annual Historic Growth Rate:	3.05%
Trend Growth Rate (2019 to Design Year):	2.36%
Printed:	7-Feb-23

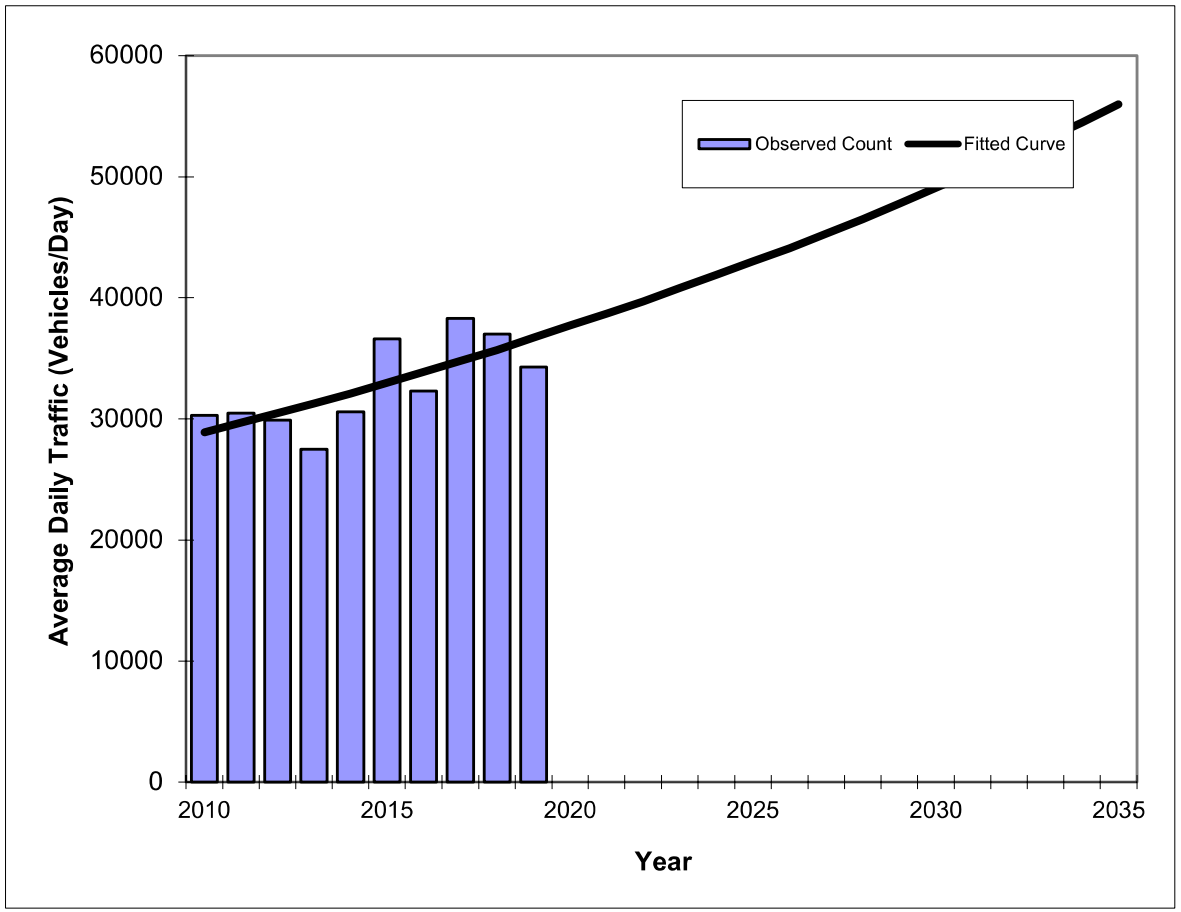
Straight Line Growth Option

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	30300	28900
2011	30500	29700
2012	29900	30500
2013	27500	31300
2014	30600	32100
2015	36600	33000
2016	32300	33900
2017	38300	34800
2018	37000	35700
2019	34300	36700
2027 Opening Year Trend		
2027	N/A	45300
2033 Mid-Year Trend		
2033	N/A	53100
2034 Design Year Trend		
2034	N/A	54500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	53.41%
Compounded Annual Historic Growth Rate:	2.69%
Compounded Growth Rate (2019 to Design Year):	2.67%
Printed:	7-Feb-23

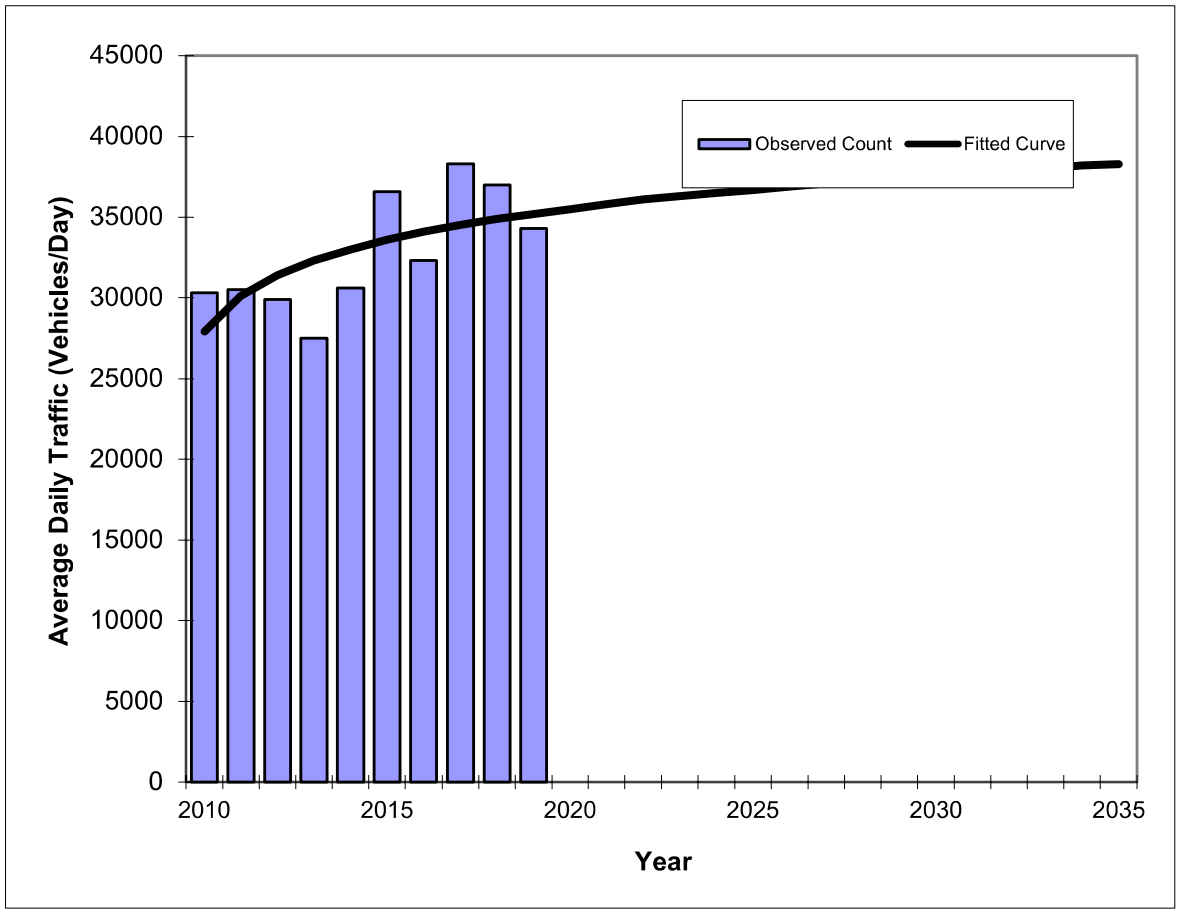
Exponential Growth Option

Traffic Trends - V03.a

HOWLAND BLVD -- I-4 to Wolf Pack Run

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	30300	27900
2011	30500	30100
2012	29900	31400
2013	27500	32300
2014	30600	33000
2015	36600	33600
2016	32300	34100
2017	38300	34500
2018	37000	34900
2019	34300	35200
2027 Opening Year Trend		
2027	N/A	37100
2033 Mid-Year Trend		
2033	N/A	38000
2034 Design Year Trend		
2034	N/A	38200
TRANPLAN Forecasts/Trends		

Trend R-squared:	41.38%
Compounded Annual Historic Growth Rate:	2.62%
Compounded Growth Rate (2019 to Design Year):	0.55%
Printed:	7-Feb-23

Decaying Exponential Growth Option

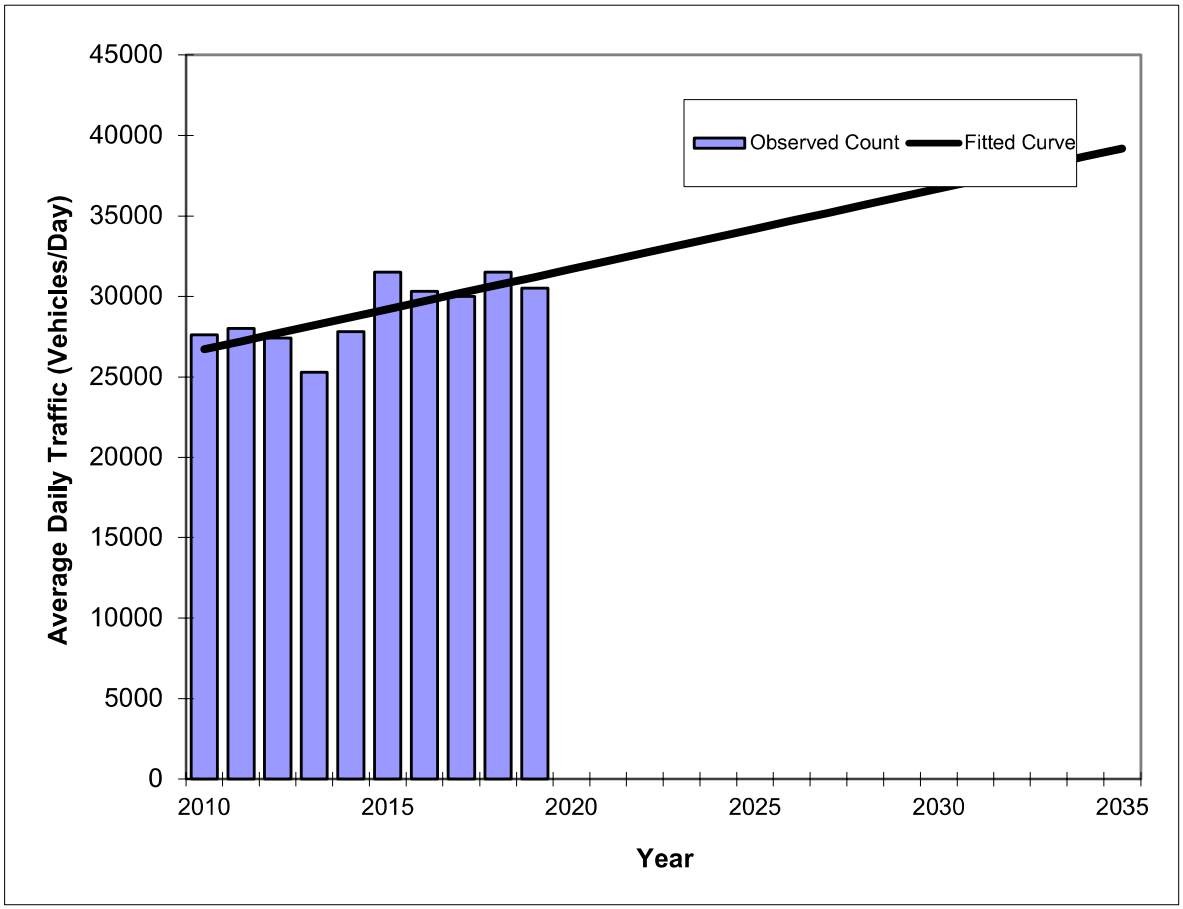
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	27600	26700
2011	28000	27200
2012	27400	27700
2013	25300	28200
2014	27800	28700
2015	31500	29200
2016	30300	29700
2017	30000	30200
2018	31500	30700
2019	30500	31200
2027 Opening Year Trend		
2027	N/A	35200
2033 Mid-Year Trend		
2033	N/A	38200
2034 Design Year Trend		
2034	N/A	38700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	499
Trend R-squared:	53.89%
Trend Annual Historic Growth Rate:	1.87%
Trend Growth Rate (2019 to Design Year):	1.60%
Printed:	7-Feb-23

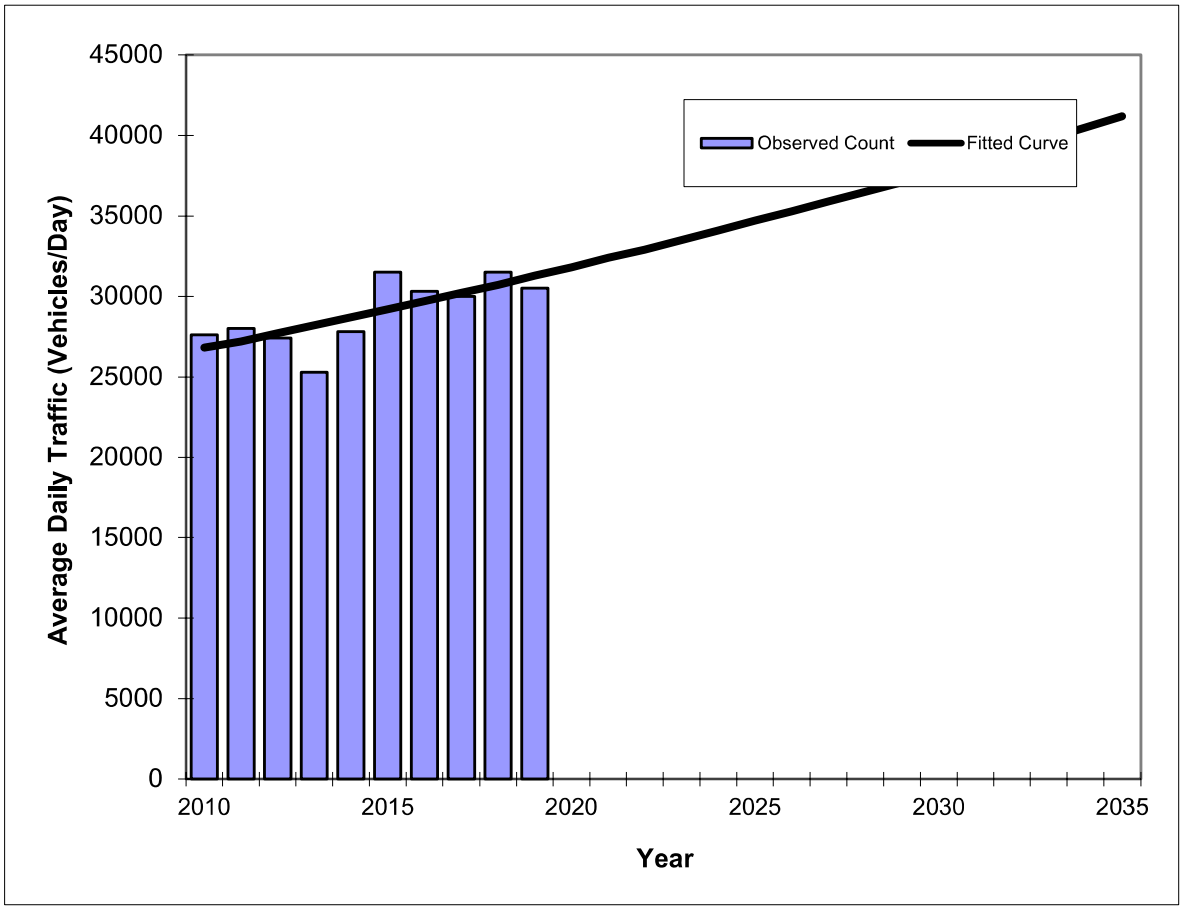
Straight Line Growth Option

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	27600	26800
2011	28000	27200
2012	27400	27700
2013	25300	28200
2014	27800	28700
2015	31500	29200
2016	30300	29700
2017	30000	30200
2018	31500	30700
2019	30500	31300
2027 Opening Year Trend		
2027	N/A	35900
2033 Mid-Year Trend		
2033	N/A	39800
2034 Design Year Trend		
2034	N/A	40500
TRANPLAN Forecasts/Trends		

Trend R-squared:	52.63%
Compounded Annual Historic Growth Rate:	1.74%
Compounded Growth Rate (2019 to Design Year):	1.73%
Printed:	7-Feb-23

Exponential Growth Option

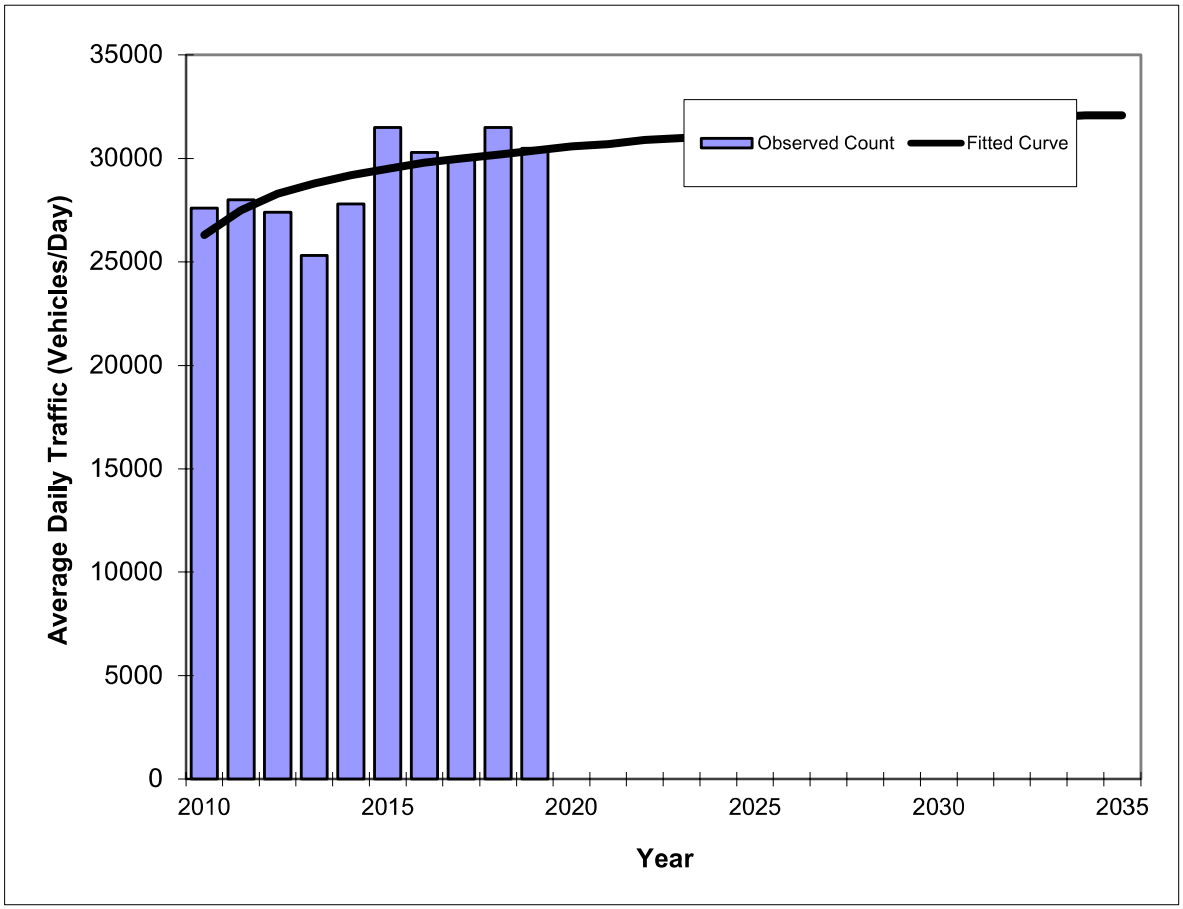
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Wolf Pack Run to Catalina Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	27600	26300
2011	28000	27500
2012	27400	28300
2013	25300	28800
2014	27800	29200
2015	31500	29500
2016	30300	29800
2017	30000	30000
2018	31500	30200
2019	30500	30400
2027 Opening Year Trend		
2027	N/A	31500
2033 Mid-Year Trend		
2033	N/A	32000
2034 Design Year Trend		
2034	N/A	32100
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	40.86%
Compounded Annual Historic Growth Rate:	1.62%
Compounded Growth Rate (2019 to Design Year):	0.36%
Printed:	7-Feb-23

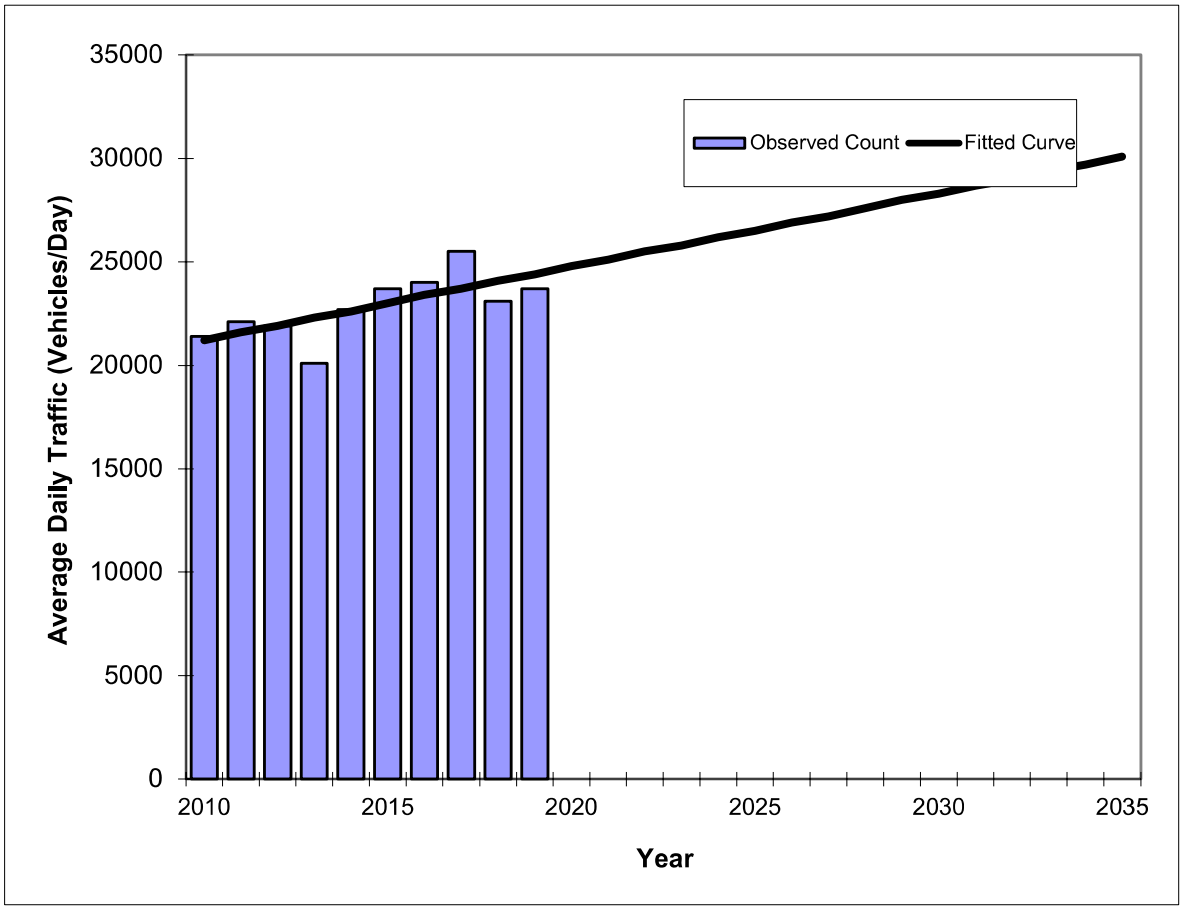
Decaying Exponential Growth Option

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	21400	21200
2011	22100	21600
2012	21900	21900
2013	20100	22300
2014	22700	22600
2015	23700	23000
2016	24000	23400
2017	25500	23700
2018	23100	24100
2019	23700	24400
2027 Opening Year Trend		
2027	N/A	27200
2033 Mid-Year Trend		
2033	N/A	29400
2034 Design Year Trend		
2034	N/A	29700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	354
Trend R-squared:	49.22%
Trend Annual Historic Growth Rate:	1.68%
Trend Growth Rate (2019 to Design Year):	1.45%
Printed:	19-Jan-23
Straight Line Growth Option	

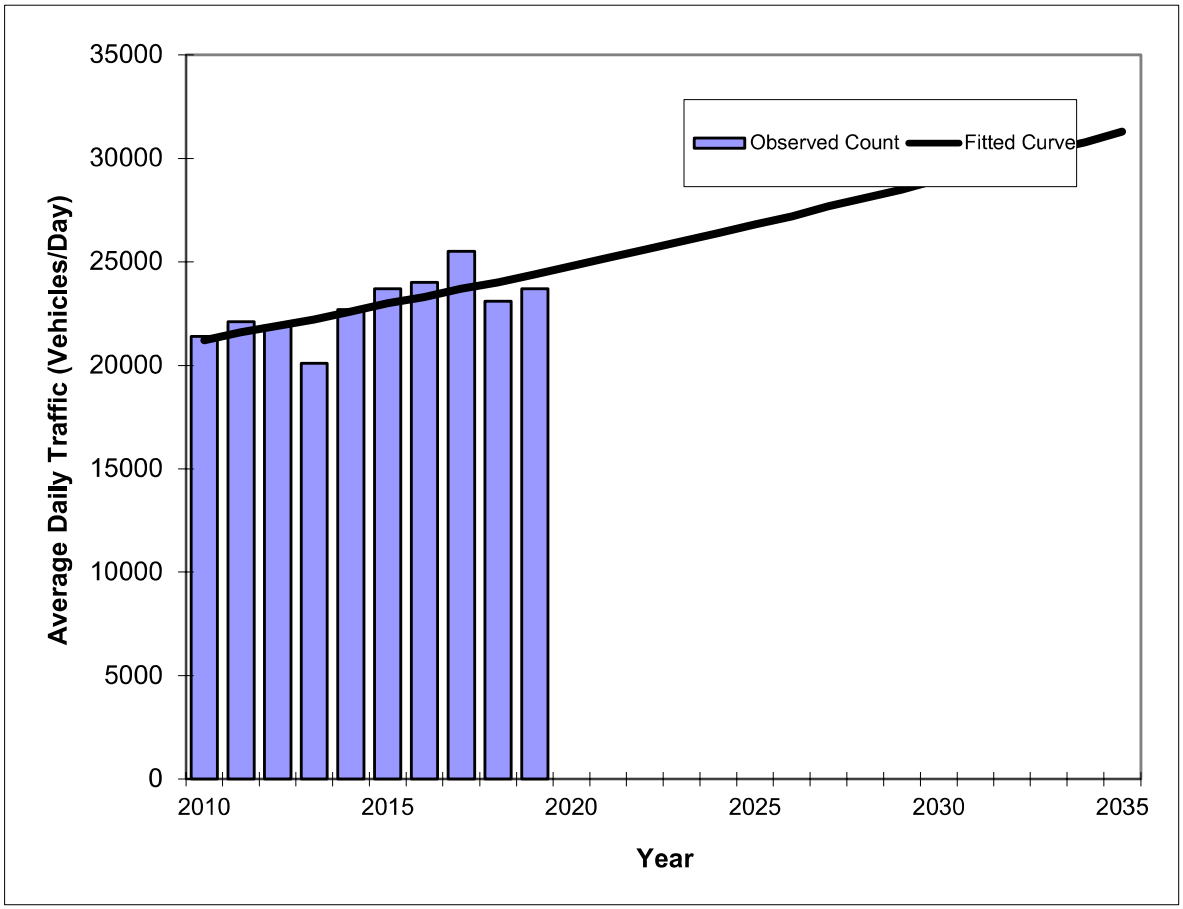
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	21400	21200
2011	22100	21600
2012	21900	21900
2013	20100	22200
2014	22700	22600
2015	23700	23000
2016	24000	23300
2017	25500	23700
2018	23100	24000
2019	23700	24400
2027 Opening Year Trend		
2027	N/A	27700
2033 Mid-Year Trend		
2033	N/A	30400
2034 Design Year Trend		
2034	N/A	30800
TRANPLAN Forecasts/Trends		

Trend R-squared:	48.82%
Compounded Annual Historic Growth Rate:	1.57%
Compounded Growth Rate (2019 to Design Year):	1.56%
Printed:	19-Jan-23

Exponential Growth Option

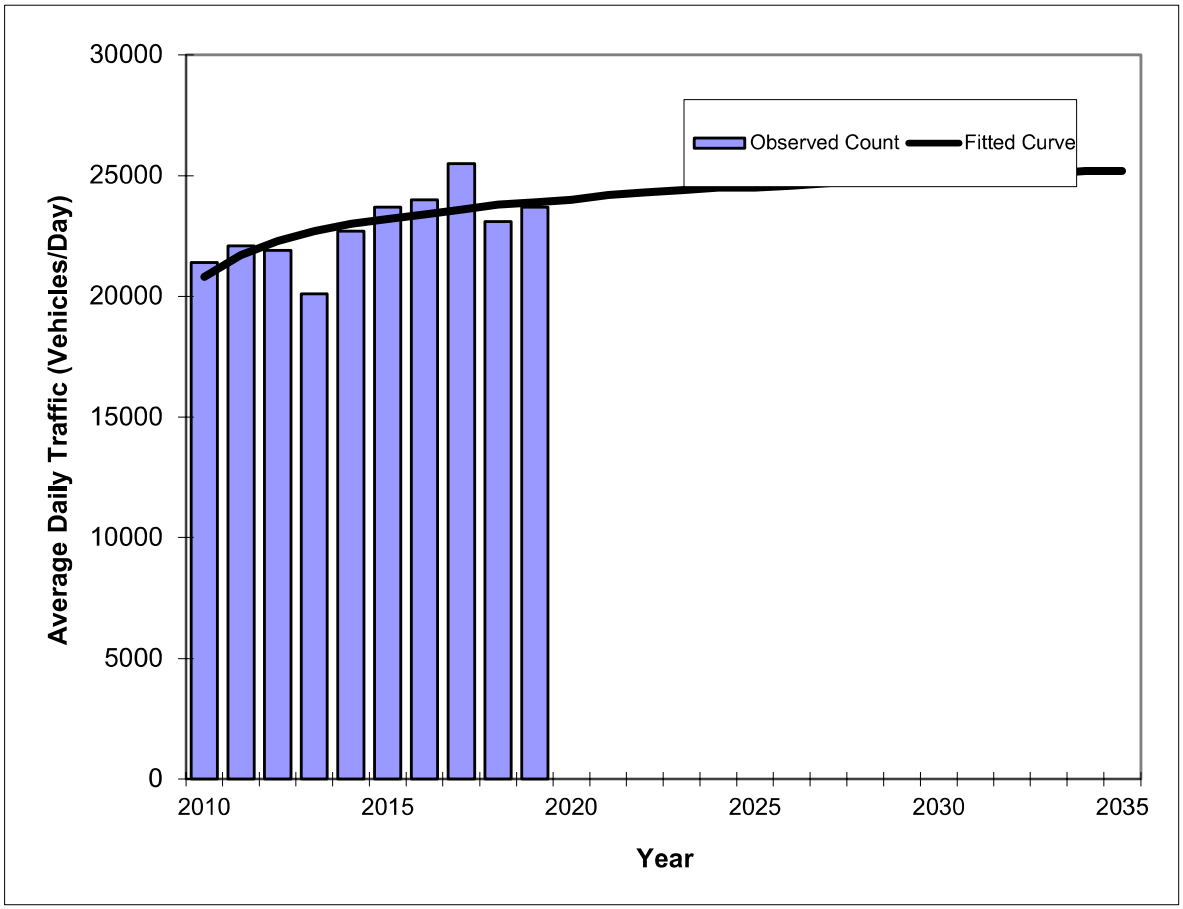
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Catalina Blvd to Providence Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	21400	20800
2011	22100	21700
2012	21900	22300
2013	20100	22700
2014	22700	23000
2015	23700	23200
2016	24000	23400
2017	25500	23600
2018	23100	23800
2019	23700	23900
2027 Opening Year Trend		
2027	N/A	24700
2033 Mid-Year Trend		
2033	N/A	25100
2034 Design Year Trend		
2034	N/A	25200
TRANPLAN Forecasts/Trends		

Trend R-squared:	43.08%
Compounded Annual Historic Growth Rate:	1.56%
Compounded Growth Rate (2019 to Design Year):	0.35%
Printed:	19-Jan-23

Decaying Exponential Growth Option

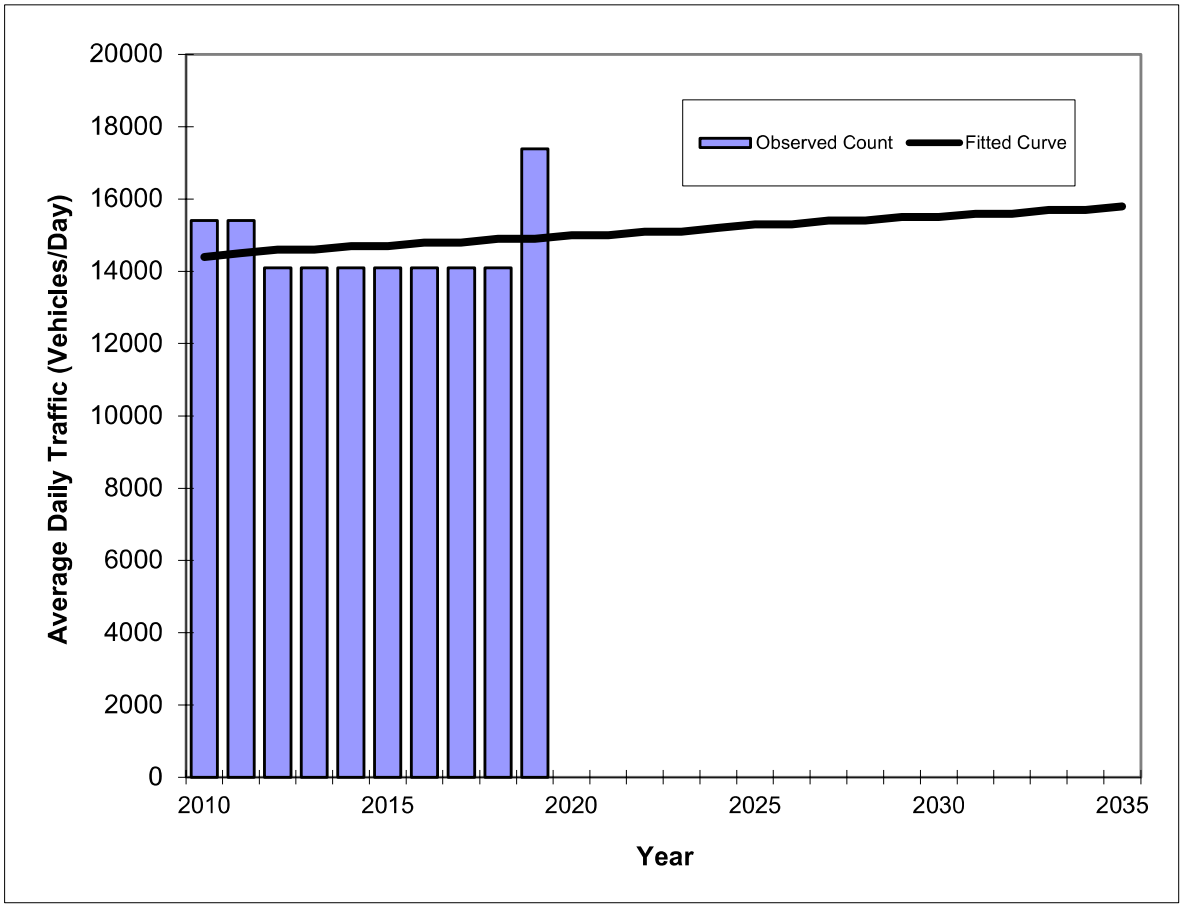
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15400	14400
2011	15400	14500
2012	14100	14600
2013	14100	14600
2014	14100	14700
2015	14100	14700
2016	14100	14800
2017	14100	14800
2018	14100	14900
2019	17400	14900
2027 Opening Year Trend		
2027	N/A	15400
2033 Mid-Year Trend		
2033	N/A	15700
2034 Design Year Trend		
2034	N/A	15700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	54
Trend R-squared:	2.22%
Trend Annual Historic Growth Rate:	0.39%
Trend Growth Rate (2019 to Design Year):	0.36%
Printed:	7-Feb-23

Straight Line Growth Option

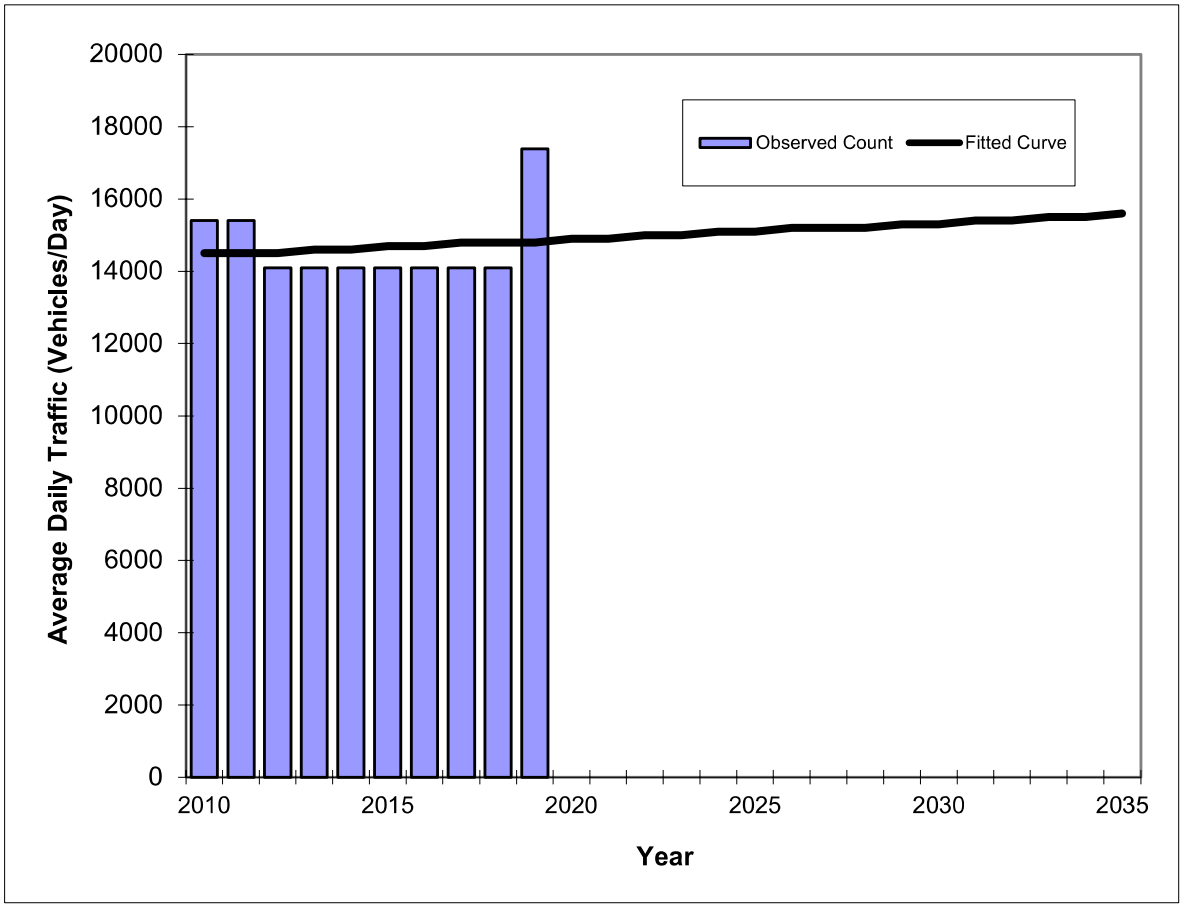
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15400	14500
2011	15400	14500
2012	14100	14500
2013	14100	14600
2014	14100	14600
2015	14100	14700
2016	14100	14700
2017	14100	14800
2018	14100	14800
2019	17400	14800
2027 Opening Year Trend		
2027	N/A	15200
2033 Mid-Year Trend		
2033	N/A	15500
2034 Design Year Trend		
2034	N/A	15500
TRANPLAN Forecasts/Trends		

Trend R-squared:	1.57%
Compounded Annual Historic Growth Rate:	0.23%
Compounded Growth Rate (2019 to Design Year):	0.31%
Printed:	7-Feb-23

Exponential Growth Option

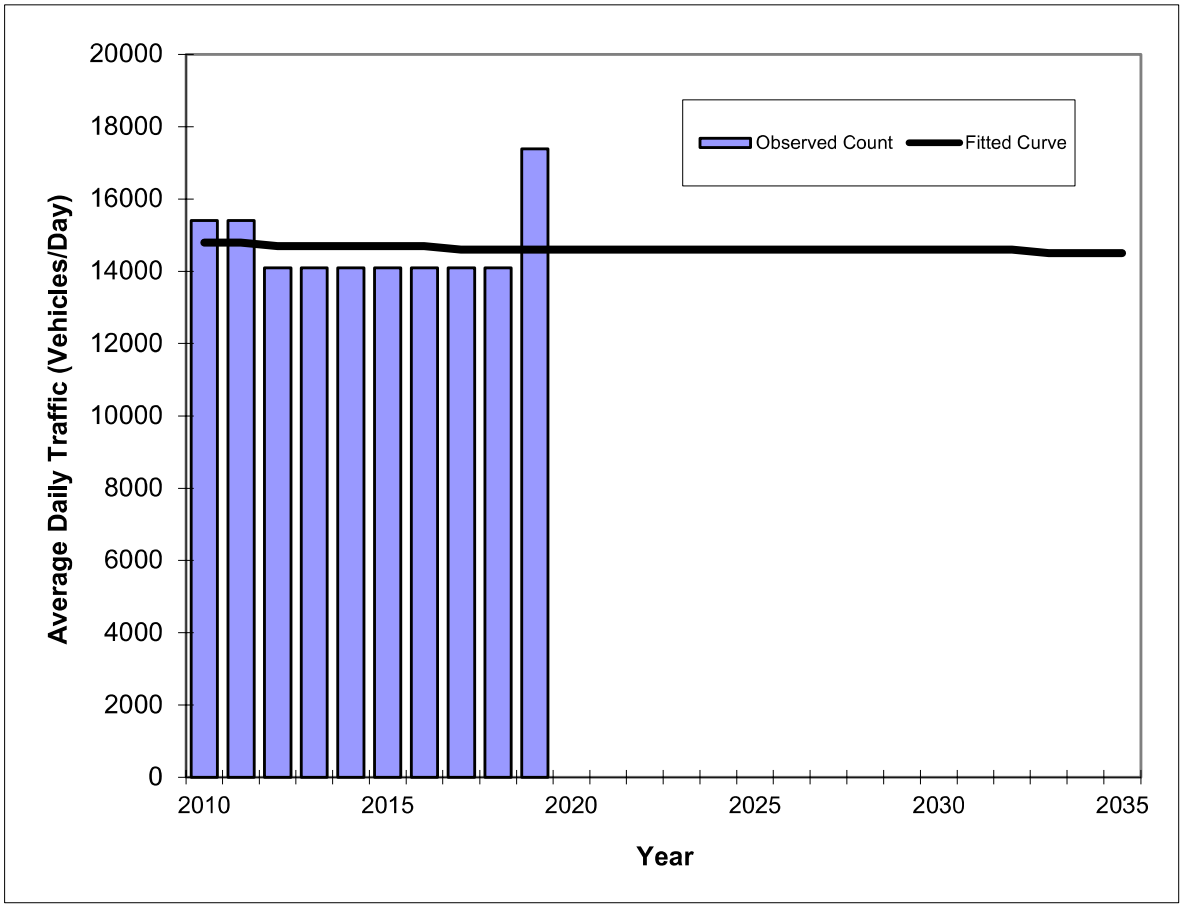
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD -- Providence Blvd to Elkcam Blvd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2010	15400	14800
2011	15400	14800
2012	14100	14700
2013	14100	14700
2014	14100	14700
2015	14100	14700
2016	14100	14700
2017	14100	14600
2018	14100	14600
2019	17400	14600
2027 Opening Year Trend		
2027	N/A	14600
2033 Mid-Year Trend		
2033	N/A	14500
2034 Design Year Trend		
2034	N/A	14500
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.33%
Compounded Annual Historic Growth Rate:	-0.15%
Compounded Growth Rate (2019 to Design Year):	-0.05%
Printed:	7-Feb-23

Decaying Exponential Growth Option

***Axle-Adjusted**

SR 472

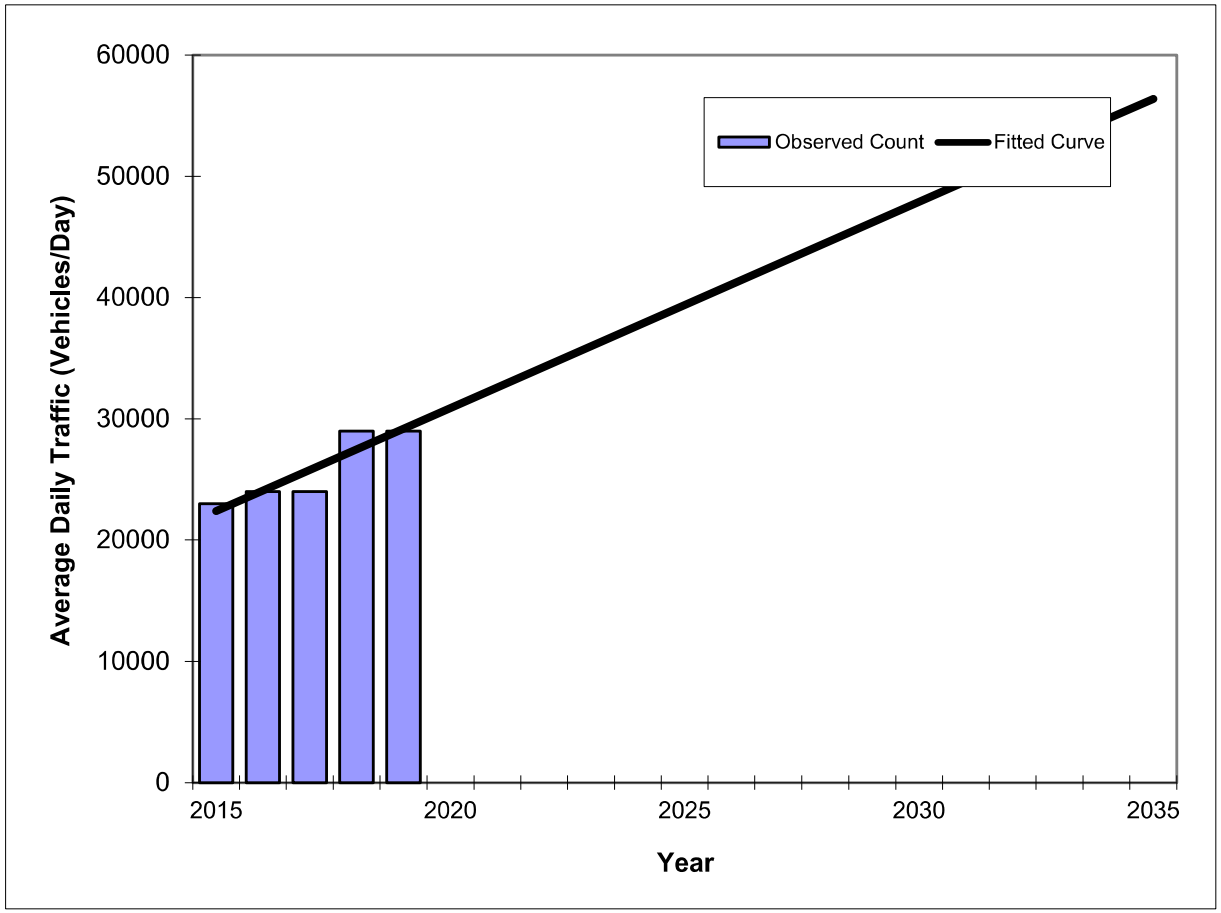
Five Year Trends

Traffic Trends - V03.a

SR 472 -- US 17-92 to MLK

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23000	22400
2016	24000	24100
2017	24000	25800
2018	29000	27500
2019	29000	29200
2027 Opening Year Trend		
2027	N/A	42800
2033 Mid-Year Trend		
2033	N/A	53000
2034 Design Year Trend		
2034	N/A	54700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	1,700
Trend R-squared:	83.05%
Trend Annual Historic Growth Rate:	7.59%
Trend Growth Rate (2019 to Design Year):	5.82%
Printed:	15-Nov-22

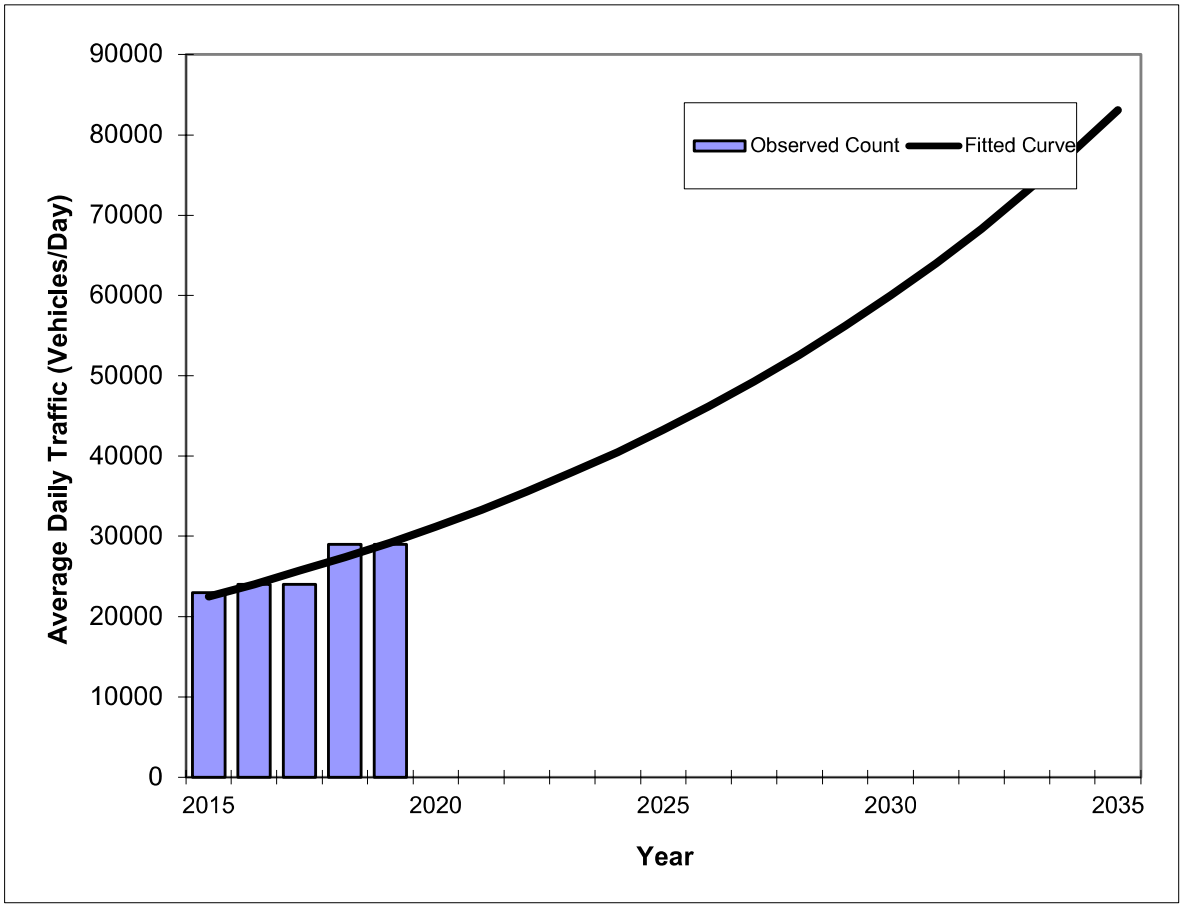
Straight Line Growth Option

Traffic Trends - V03.a

SR 472 -- US 17-92 to MLK

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23000	22500
2016	24000	24000
2017	24000	25700
2018	29000	27400
2019	29000	29200
2027 Opening Year Trend		
2027	N/A	49300
2033 Mid-Year Trend		
2033	N/A	73000
2034 Design Year Trend		
2034	N/A	77900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	83.79%
Compounded Annual Historic Growth Rate:	6.73%
Compounded Growth Rate (2019 to Design Year):	6.76%
Printed:	18-Jan-23

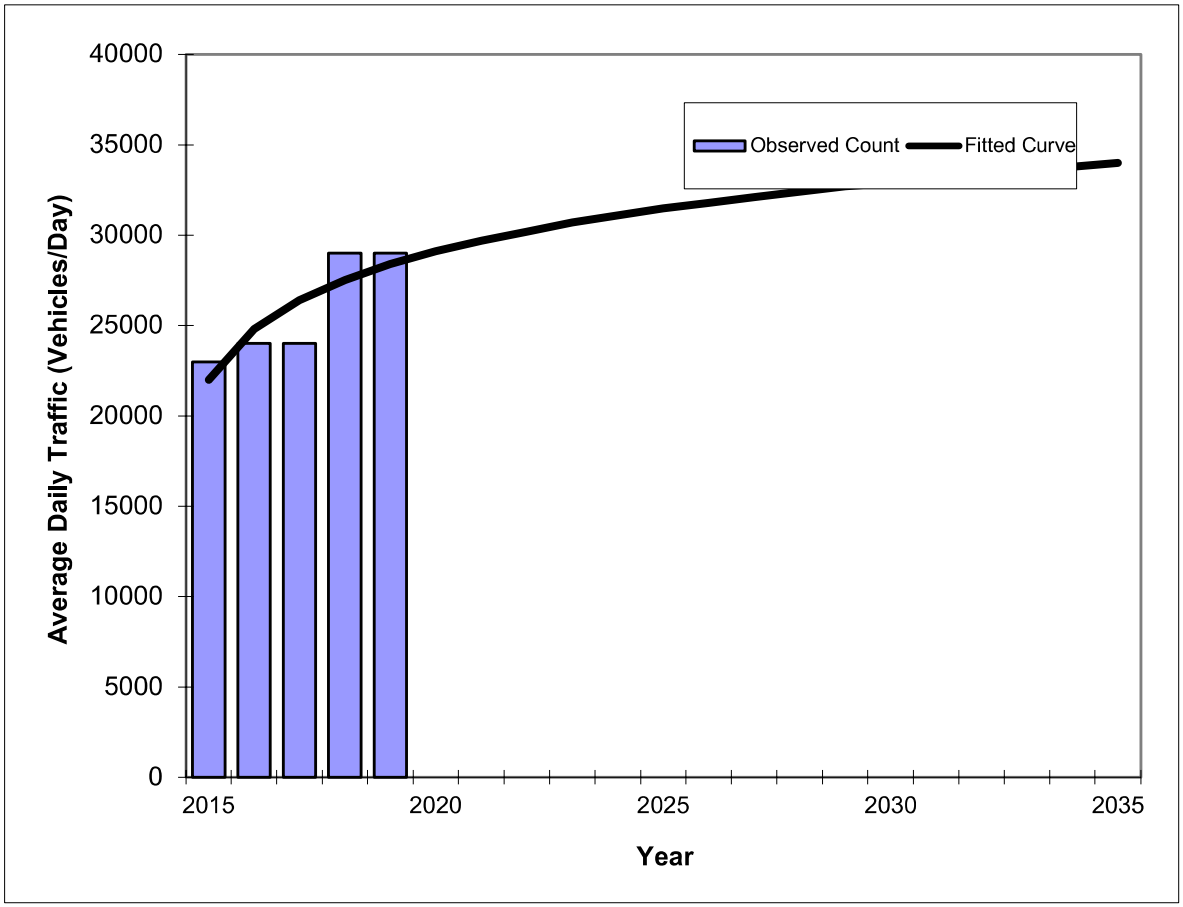
Exponential Growth Option

Traffic Trends - V03.a

SR 472 -- US 17-92 to MLK

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	23000	22000
2016	24000	24800
2017	24000	26400
2018	29000	27500
2019	29000	28400
2027 Opening Year Trend		
2027	N/A	32100
2033 Mid-Year Trend		
2033	N/A	33600
2034 Design Year Trend		
2034	N/A	33800
TRANPLAN Forecasts/Trends		

Trend R-squared:	71.98%
Compounded Annual Historic Growth Rate:	6.59%
Compounded Growth Rate (2019 to Design Year):	1.17%
Printed:	18-Jan-23

Decaying Exponential Growth Option

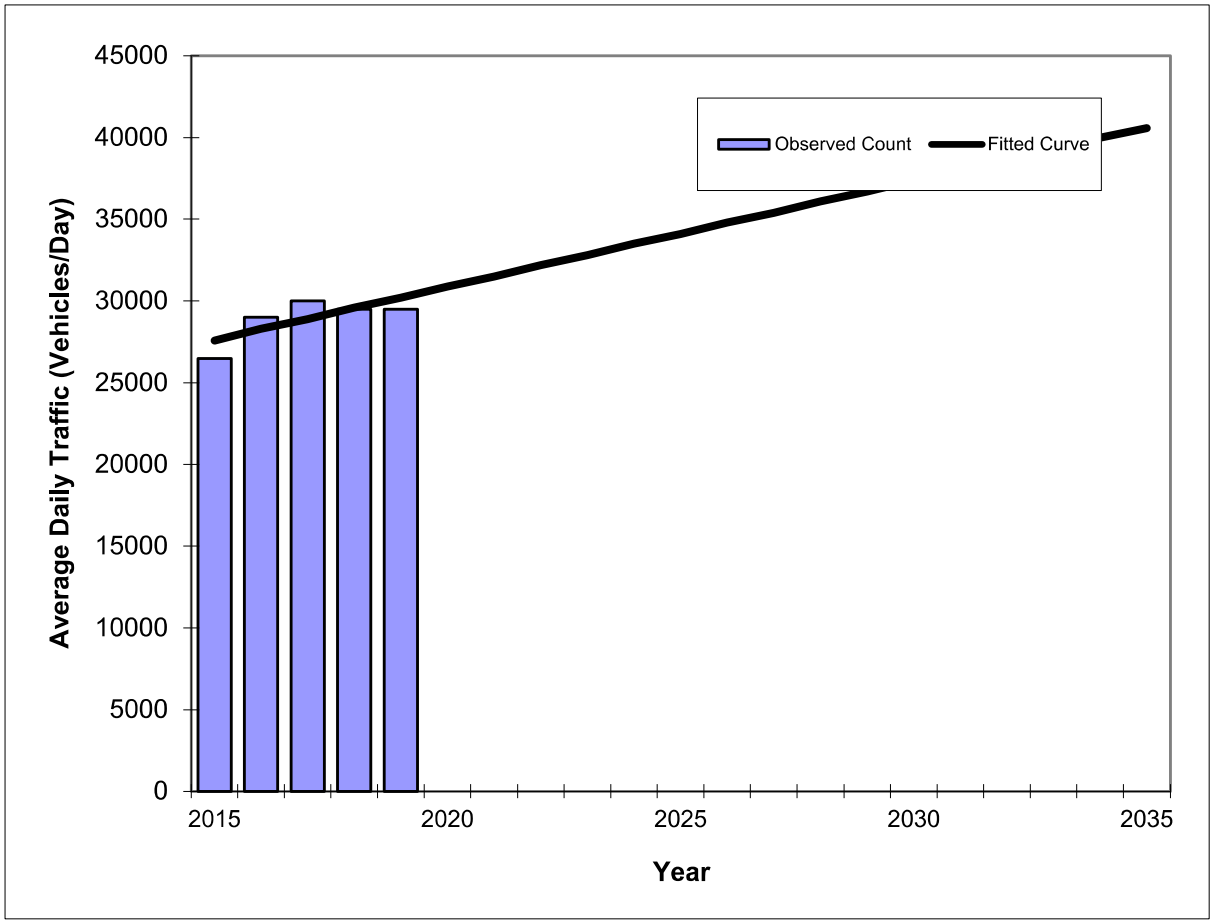
***Axle-Adjusted**

Traffic Trends - V03.a

SR 472 -- CR 4101/MLK Blvd to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	26500	27600
2016	29000	28300
2017	30000	28900
2018	29500	29600
2019	29500	30200
2022 Opening Year Trend		
2022	N/A	32200
2024 Mid-Year Trend		
2024	N/A	33500
2027 Design Year Trend		
2027	N/A	35400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	650
Trend R-squared:	54.87%
Trend Annual Historic Growth Rate:	2.36%
Trend Growth Rate (2019 to Design Year):	2.15%
Printed:	15-Nov-22

Straight Line Growth Option

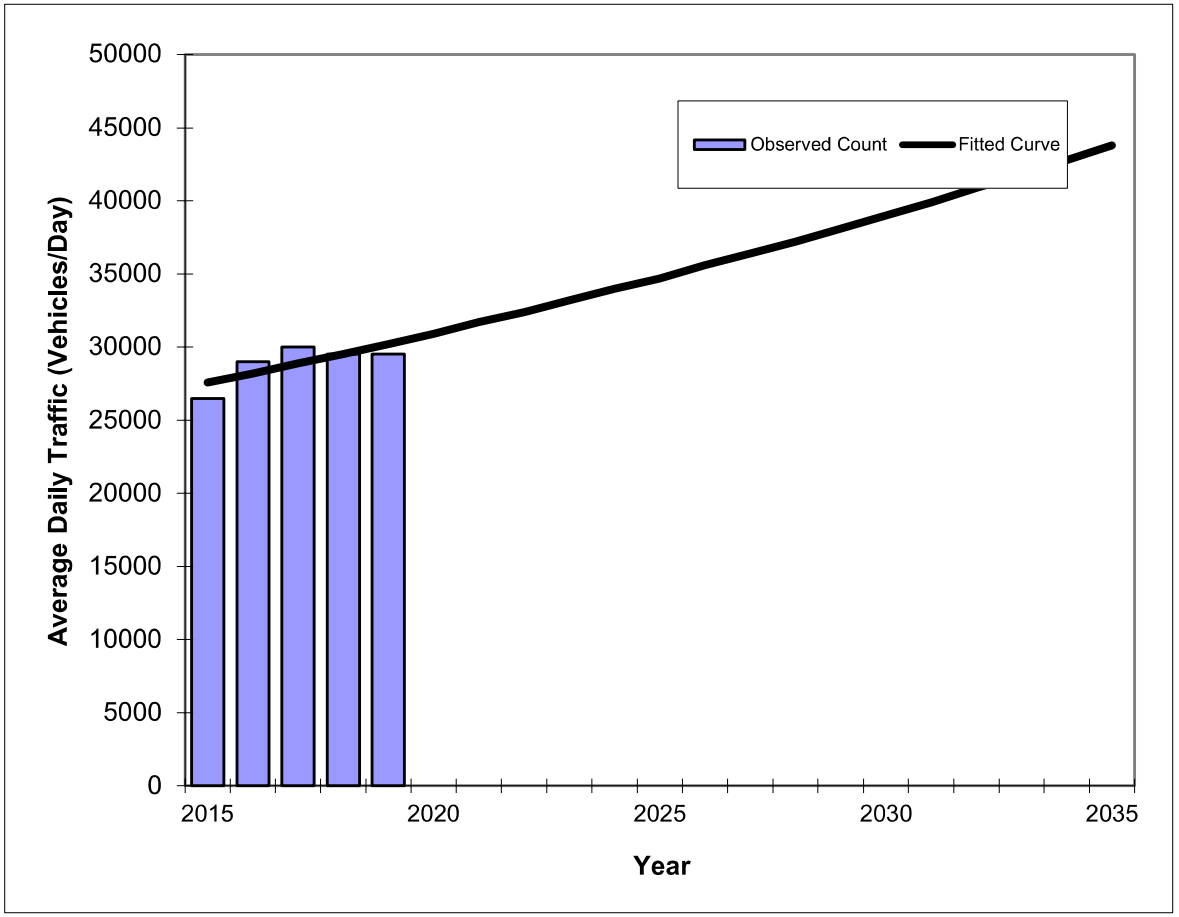
***Axle-Adjusted**

Traffic Trends - V03.a

SR 472 -- CR 4101/MLK Blvd to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	26500	27600
2016	29000	28200
2017	30000	28900
2018	29500	29500
2019	29500	30200
2022 Opening Year Trend		
2022	N/A	32400
2024 Mid-Year Trend		
2024	N/A	34000
2027 Design Year Trend		
2027	N/A	36400
TRANPLAN Forecasts/Trends		

Trend R-squared:	54.93%
Compounded Annual Historic Growth Rate:	2.28%
Compounded Growth Rate (2019 to Design Year):	2.36%
Printed:	18-Jan-23

Exponential Growth Option

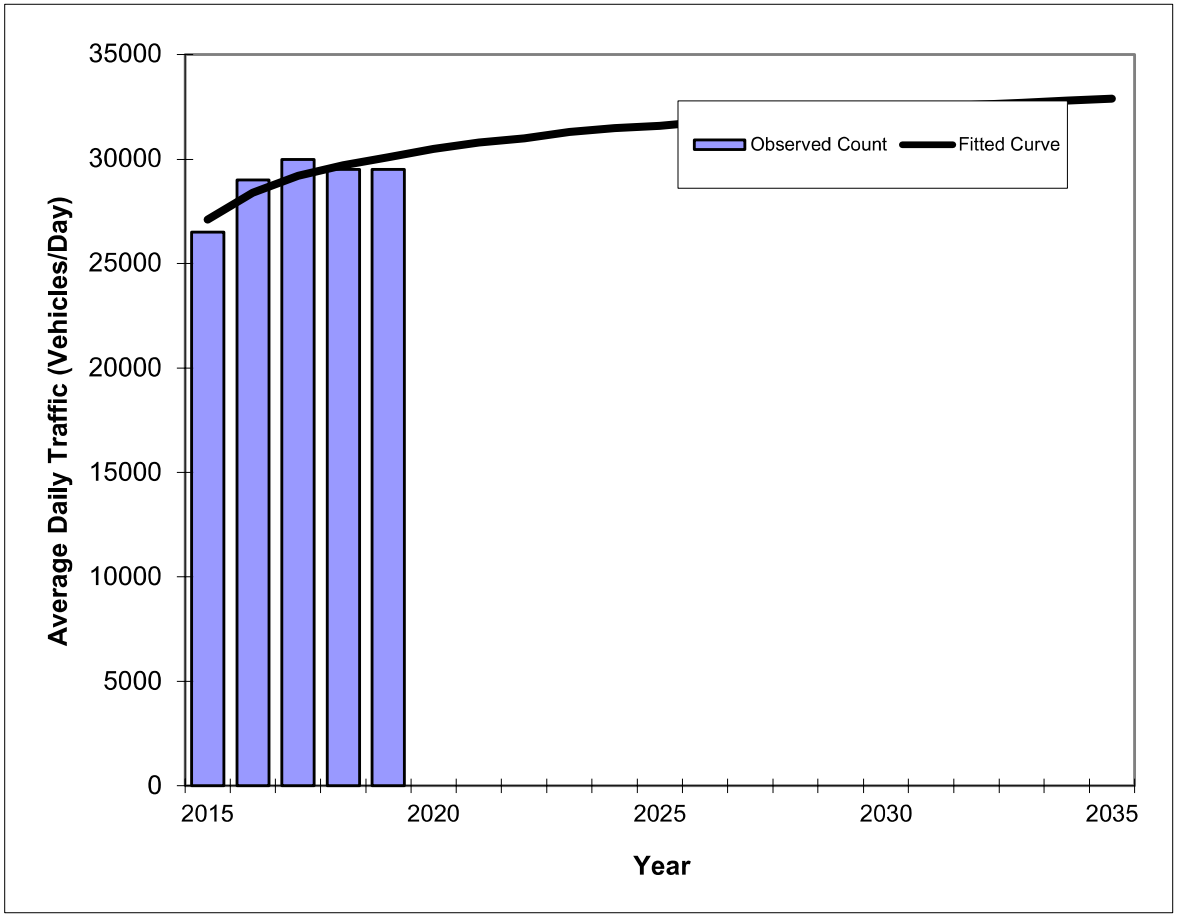
***Axle-Adjusted**

Traffic Trends - V03.a

SR 472 -- CR 4101/MLK Blvd to I-4

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	SR 472



Year	Traffic (ADT/AADT) Count*	Trend**
2015	26500	27100
2016	29000	28400
2017	30000	29200
2018	29500	29700
2019	29500	30100
2022 Opening Year Trend		
2022	N/A	31000
2024 Mid-Year Trend		
2024	N/A	31500
2027 Design Year Trend		
2027	N/A	32000
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.03%
Compounded Annual Historic Growth Rate:	2.66%
Compounded Growth Rate (2019 to Design Year):	0.77%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Macy Avenue

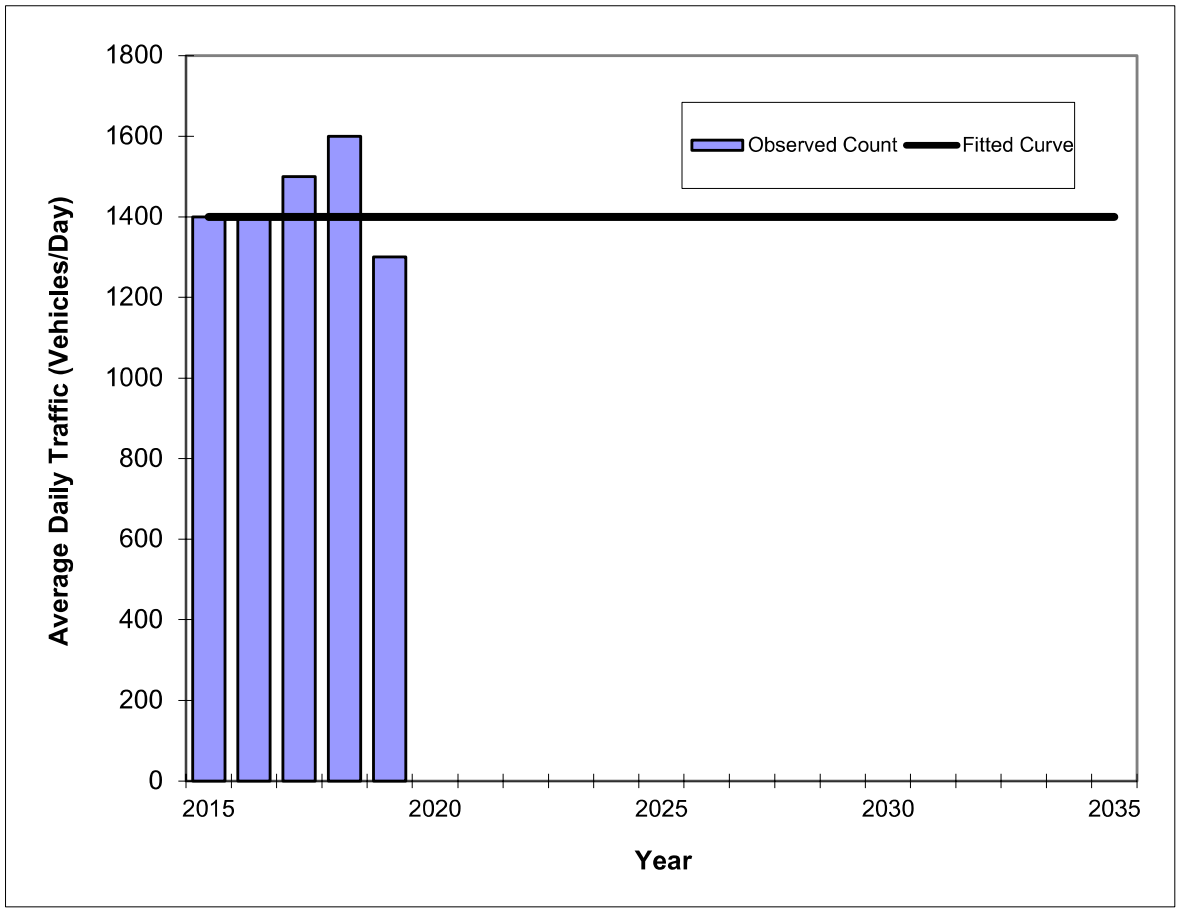
Five Year Trends

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1400	1400
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1400
2027 Opening Year Trend		
2027	N/A	1400
2033 Mid-Year Trend		
2033	N/A	1400
2034 Design Year Trend		
2034	N/A	1400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	0
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2019 to Design Year):	0.00%
Printed:	18-Jan-23

Straight Line Growth Option

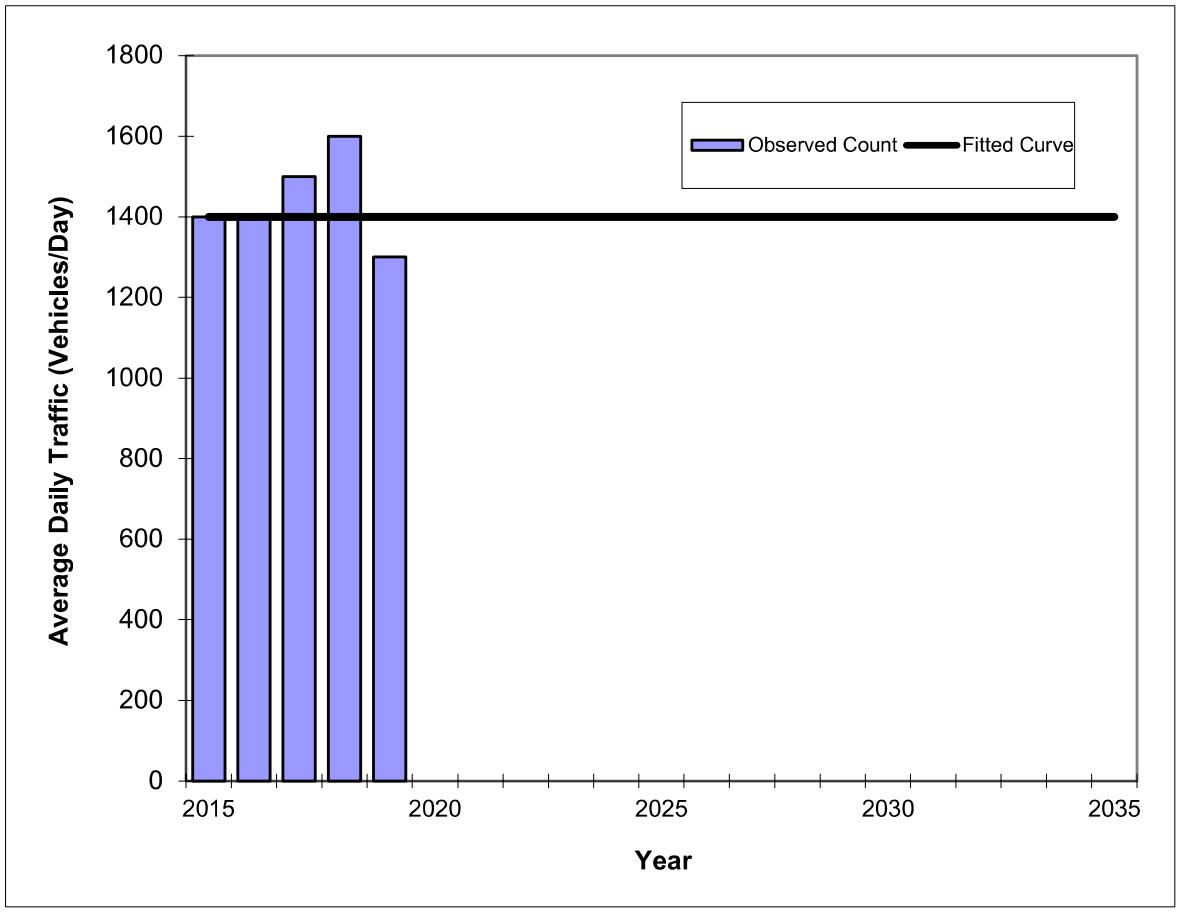
***Axle-Adjusted**

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1400	1400
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1400
2027 Opening Year Trend		
2027	N/A	1400
2033 Mid-Year Trend		
2033	N/A	1400
2034 Design Year Trend		
2034	N/A	1400
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.09%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	0.00%
Printed:	18-Jan-23

Exponential Growth Option

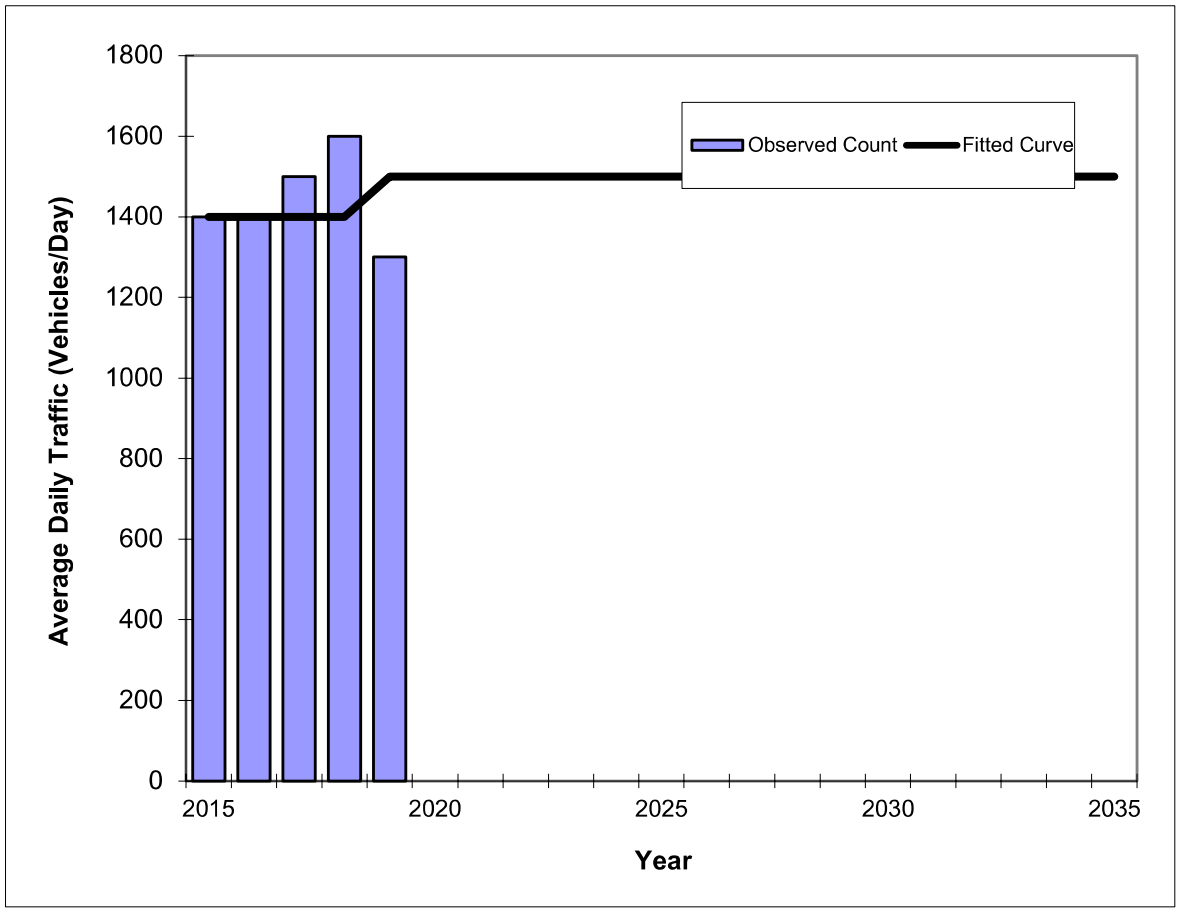
***Axle-Adjusted**

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1400	1400
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1500
2027 Opening Year Trend		
2027	N/A	1500
2033 Mid-Year Trend		
2033	N/A	1500
2034 Design Year Trend		
2034	N/A	1500
TRANPLAN Forecasts/Trends		

Trend R-squared:	1.43%
Compounded Annual Historic Growth Rate:	1.74%
Compounded Growth Rate (2019 to Design Year):	0.00%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

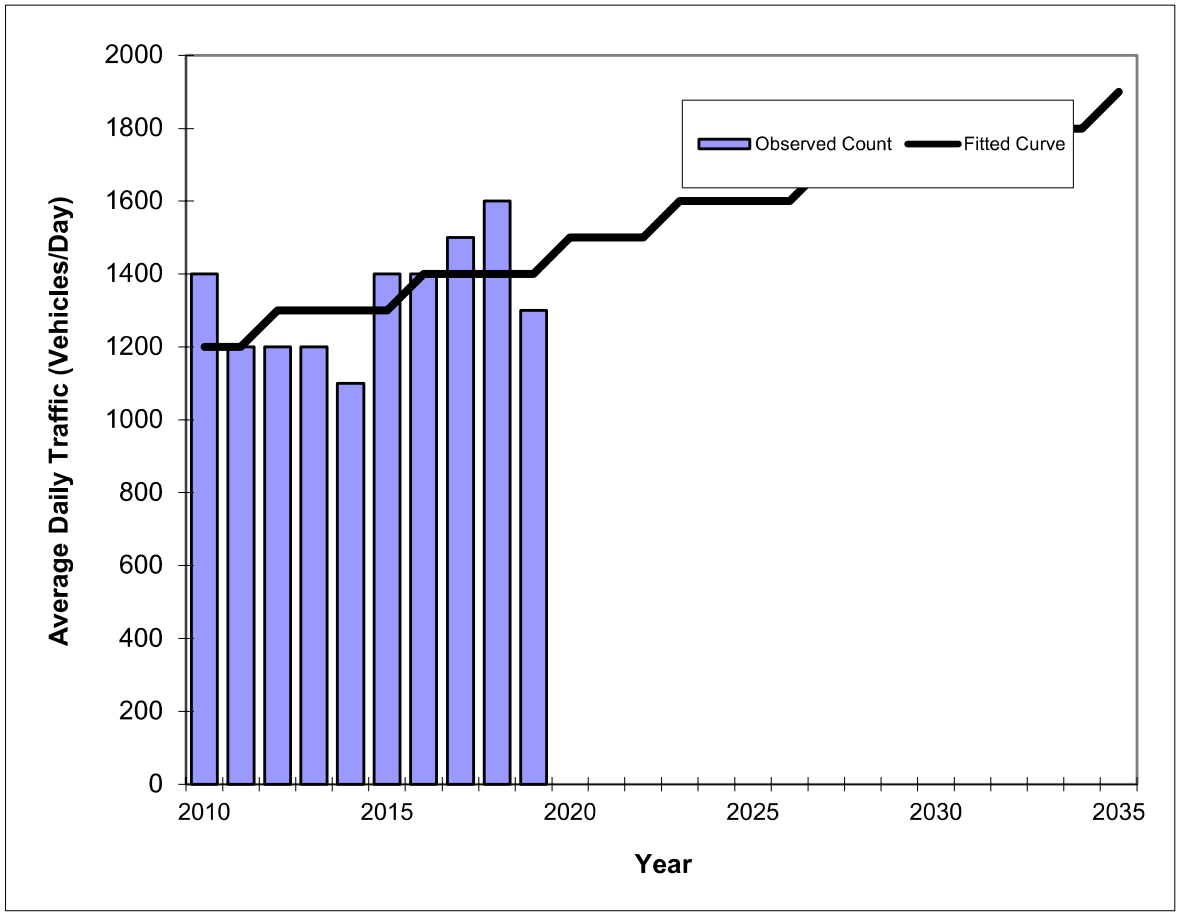
Ten Year Trends

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1400	1200
2011	1200	1200
2012	1200	1300
2013	1200	1300
2014	1100	1300
2015	1400	1300
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1400
2022 Opening Year Trend		
2022	N/A	1500
2024 Mid-Year Trend		
2024	N/A	1600
2027 Design Year Trend		
2027	N/A	1700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	26
Trend R-squared:	25.35%
Trend Annual Historic Growth Rate:	1.85%
Trend Growth Rate (2019 to Design Year):	2.68%
Printed:	19-Jan-23
Straight Line Growth Option	

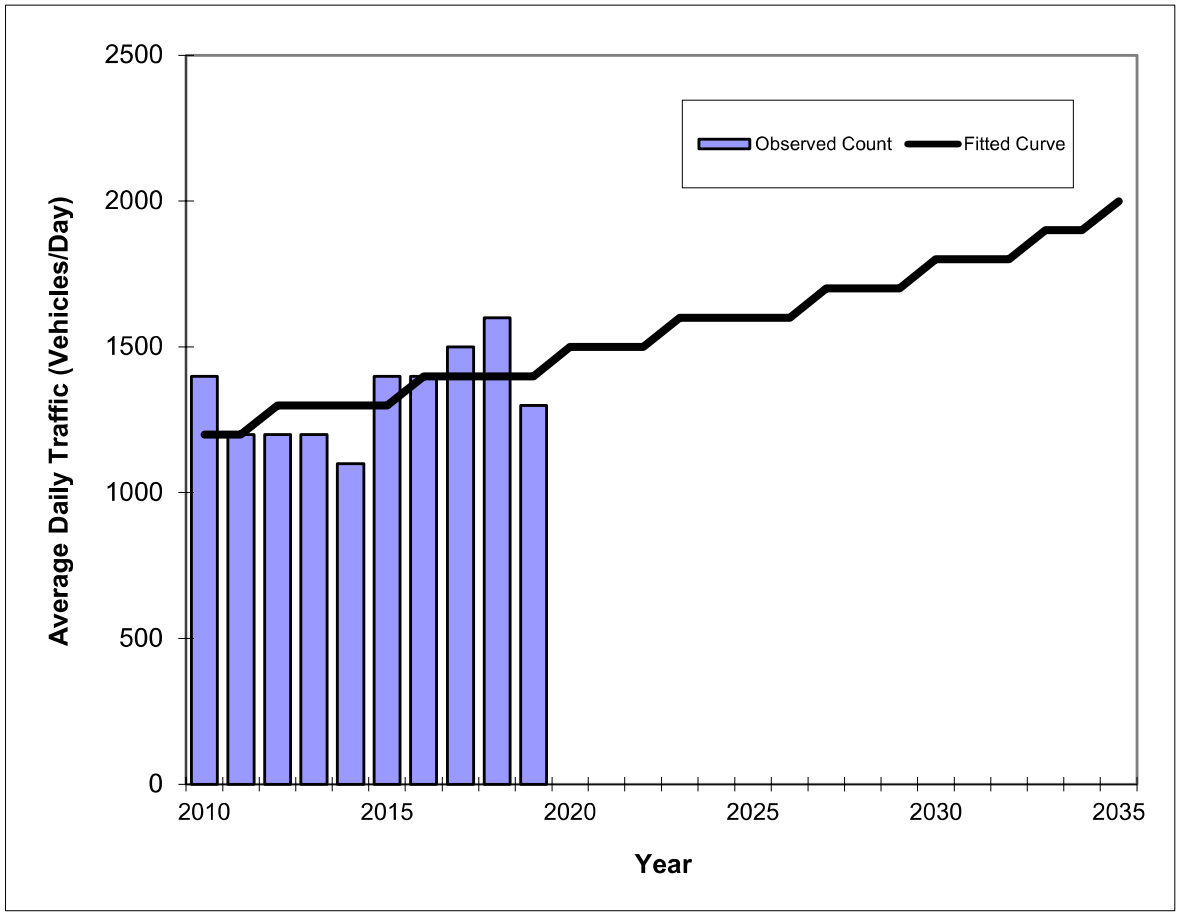
***Axle-Adjusted**

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1400	1200
2011	1200	1200
2012	1200	1300
2013	1200	1300
2014	1100	1300
2015	1400	1300
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1400
2022 Opening Year Trend		
2022	N/A	1500
2024 Mid-Year Trend		
2024	N/A	1600
2027 Design Year Trend		
2027	N/A	1700
TRANPLAN Forecasts/Trends		

Trend R-squared:	24.41%
Compounded Annual Historic Growth Rate:	1.73%
Compounded Growth Rate (2019 to Design Year):	2.46%
Printed:	19-Jan-23

Exponential Growth Option

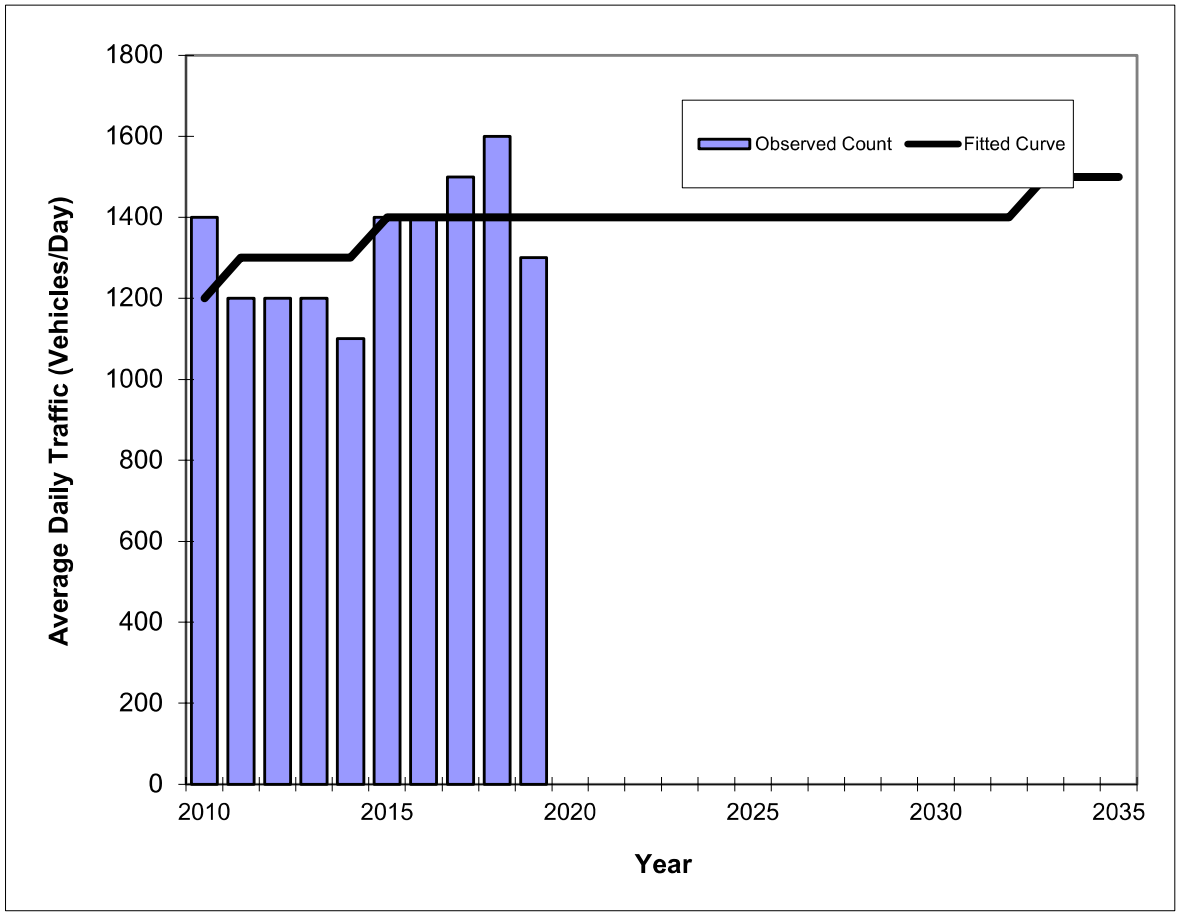
***Axle-Adjusted**

Traffic Trends - V03.a

MACY AVE -- Ohio St to Cassadaga Rd

FIN#	1234
Location	1

County:	Volusia (79)
Station #:	0
Highway:	MACY AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1400	1200
2011	1200	1300
2012	1200	1300
2013	1200	1300
2014	1100	1300
2015	1400	1400
2016	1400	1400
2017	1500	1400
2018	1600	1400
2019	1300	1400
2022 Opening Year Trend		
2022	N/A	1400
2024 Mid-Year Trend		
2024	N/A	1400
2027 Design Year Trend		
2027	N/A	1400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	11.86%
Compounded Annual Historic Growth Rate:	1.73%
Compounded Growth Rate (2019 to Design Year):	0.00%
Printed:	19-Jan-23

Decaying Exponential Growth Option

Kicklighter Road

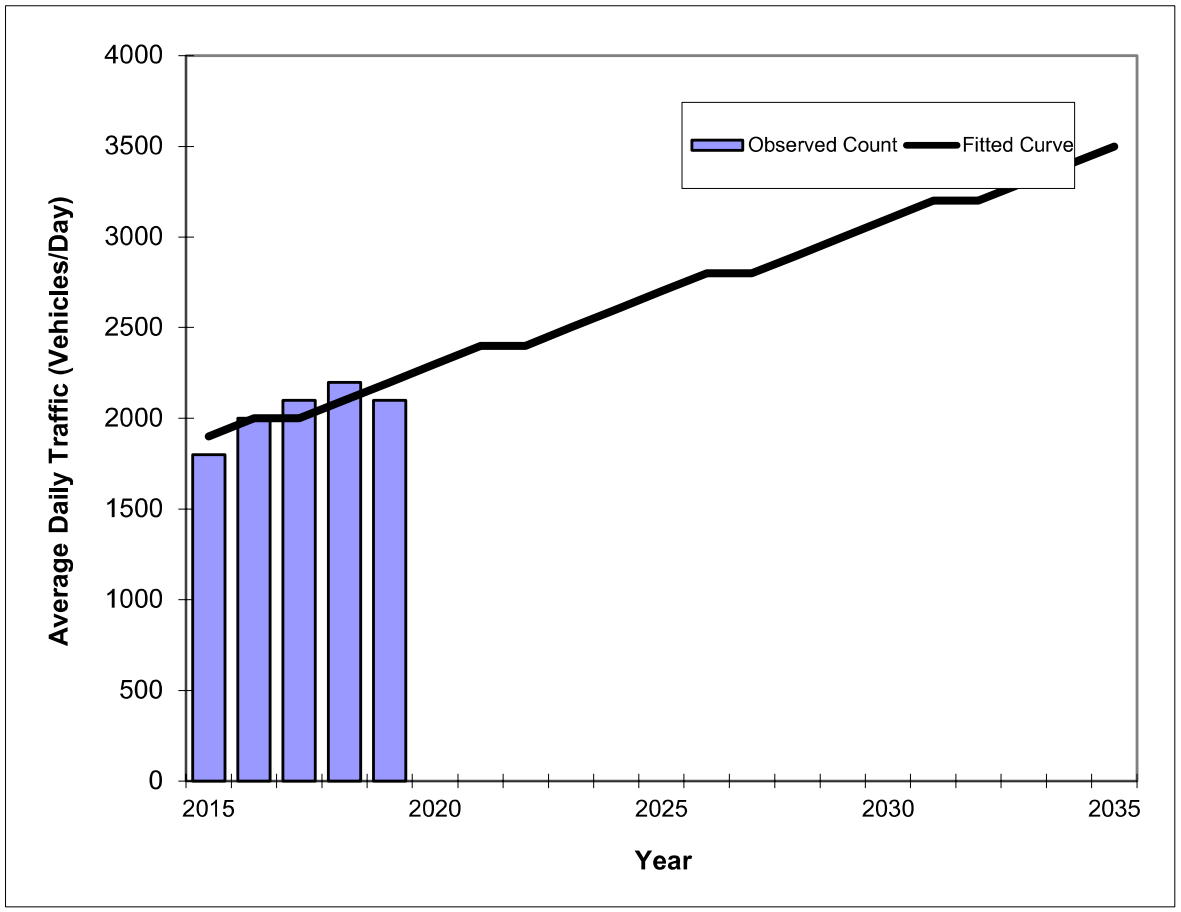
Five Year Trends

Traffic Trends - V03.a

KICKLIGHTER RD -- Macy Ave to Lake Helen-Osteen/Prevatt

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KICKLIGHTER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1800	1900
2016	2000	2000
2017	2100	2000
2018	2200	2100
2019	2100	2200
2027 Opening Year Trend		
2027	N/A	2800
2033 Mid-Year Trend		
2033	N/A	3300
2034 Design Year Trend		
2034	N/A	3400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	80
Trend R-squared:	69.57%
Trend Annual Historic Growth Rate:	3.95%
Trend Growth Rate (2019 to Design Year):	3.64%
Printed:	18-Jan-23

Straight Line Growth Option

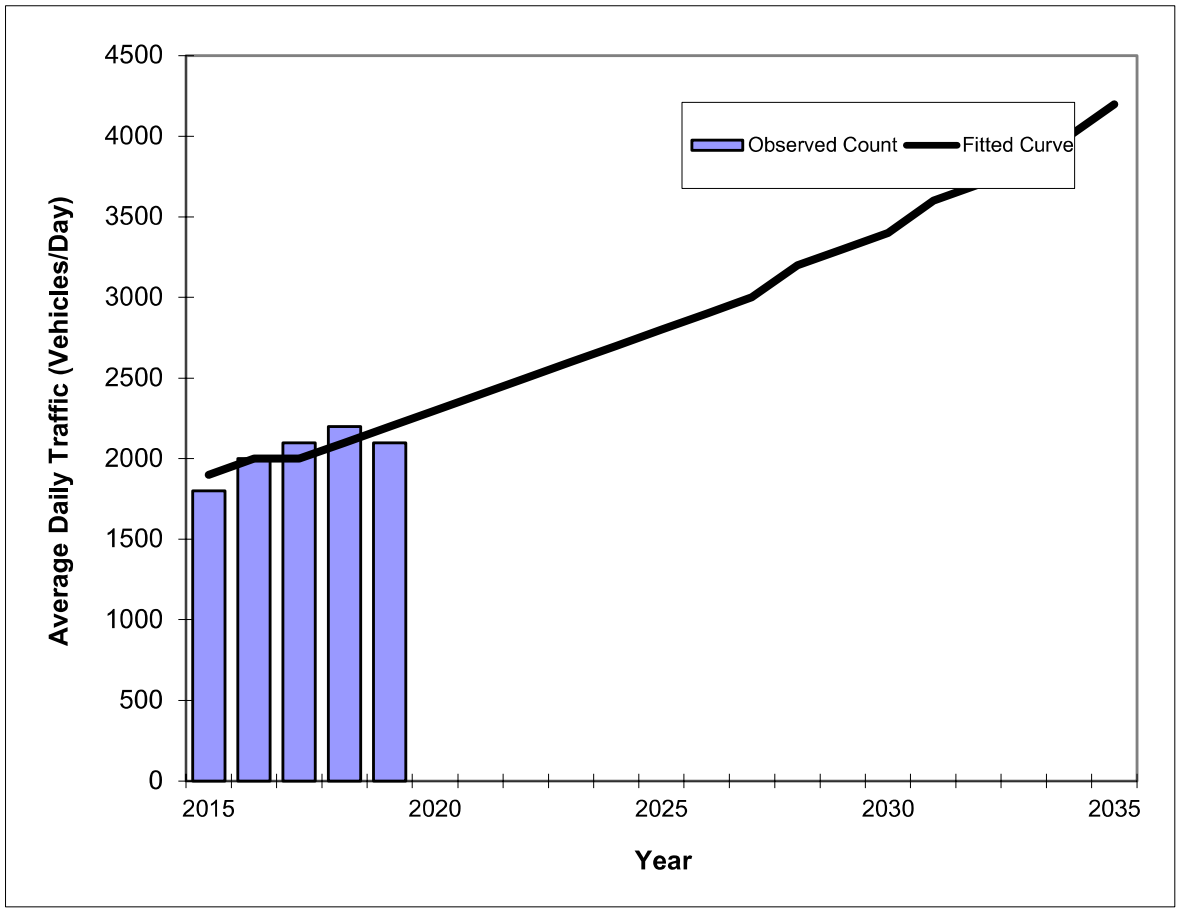
***Axle-Adjusted**

Traffic Trends - V03.a

KICKLIGHTER RD -- Macy Ave to Lake Helen-Osteen/Prevatt

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KICKLIGHTER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1800	1900
2016	2000	2000
2017	2100	2000
2018	2200	2100
2019	2100	2200
2027 Opening Year Trend		
2027	N/A	3000
2033 Mid-Year Trend		
2033	N/A	3900
2034 Design Year Trend		
2034	N/A	4000
TRANPLAN Forecasts/Trends		

Trend R-squared:	69.58%
Compounded Annual Historic Growth Rate:	3.73%
Compounded Growth Rate (2019 to Design Year):	4.07%
Printed:	18-Jan-23

Exponential Growth Option

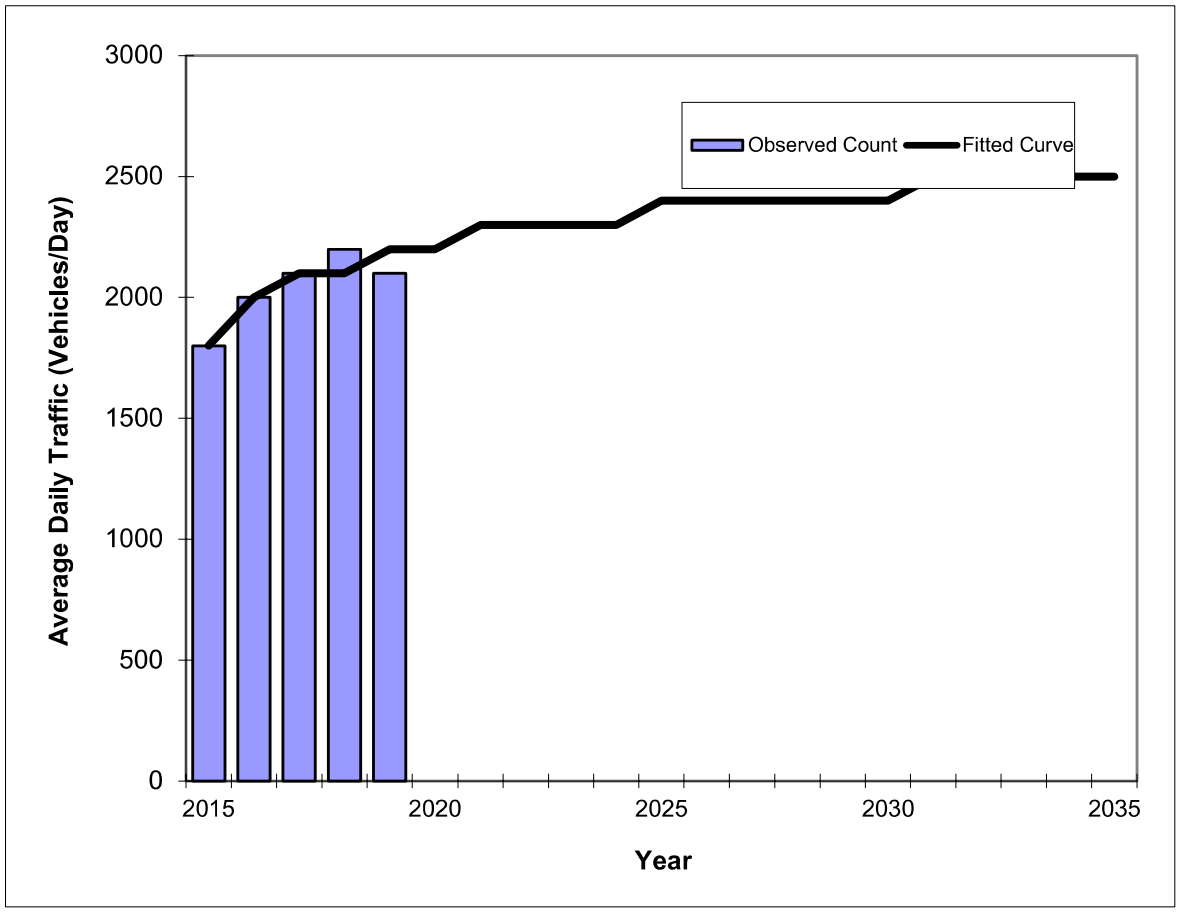
***Axle-Adjusted**

Traffic Trends - V03.a

KICKLIGHTER RD -- Macy Ave to Lake Helen-Osteen/Prevatt

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	KICKLIGHTER RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1800	1800
2016	2000	2000
2017	2100	2100
2018	2200	2100
2019	2100	2200
2027 Opening Year Trend		
2027	N/A	2400
2033 Mid-Year Trend		
2033	N/A	2500
2034 Design Year Trend		
2034	N/A	2500
TRANPLAN Forecasts/Trends		

Trend R-squared:	85.54%
Compounded Annual Historic Growth Rate:	5.14%
Compounded Growth Rate (2019 to Design Year):	0.86%
Printed:	18-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

I-4

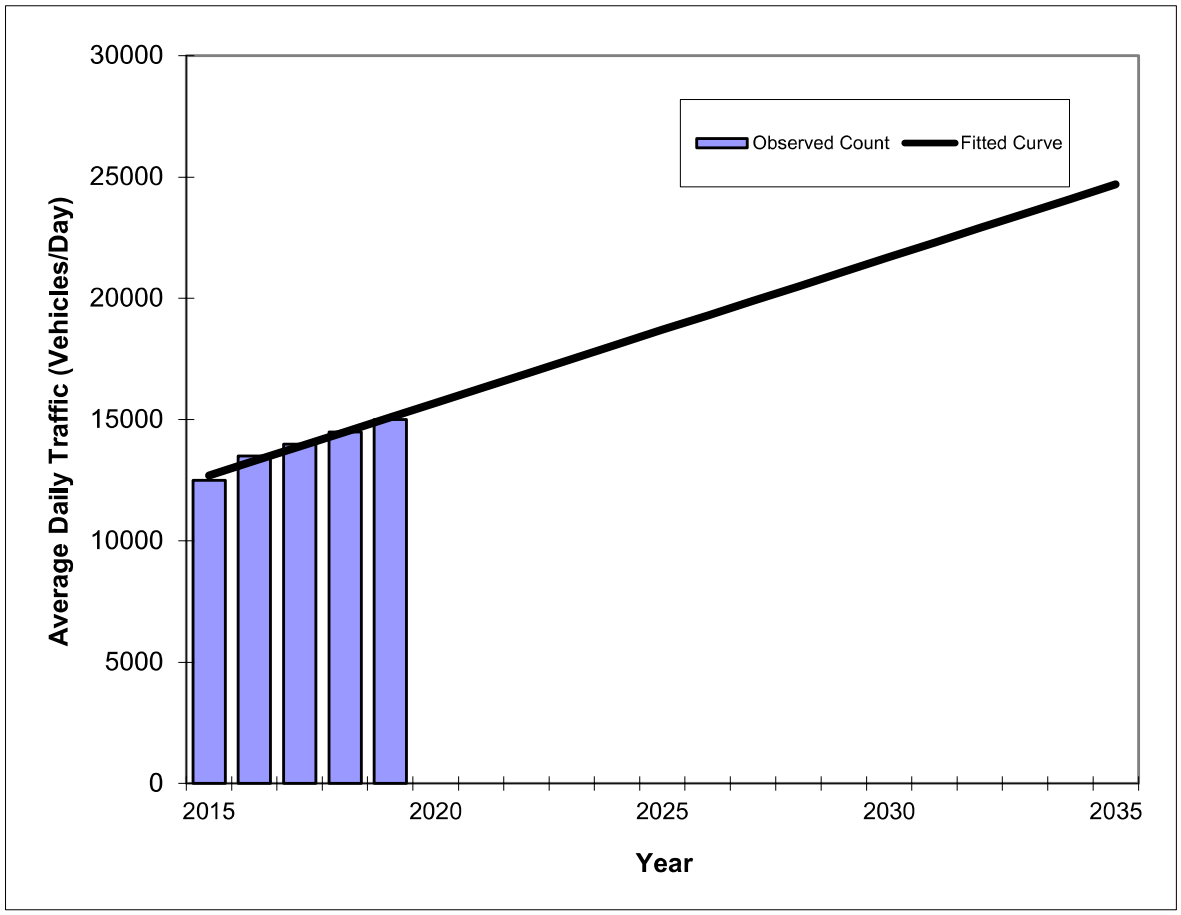
Five Year Trends

Traffic Trends - V03.a

I-4 -- SR 472 EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12500	12700
2016	13500	13300
2017	14000	13900
2018	14500	14500
2019	15000	15100
2022 Opening Year Trend		
2022	N/A	16900
2024 Mid-Year Trend		
2024	N/A	18100
2027 Design Year Trend		
2027	N/A	19900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	600
Trend R-squared:	97.30%
Trend Annual Historic Growth Rate:	4.72%
Trend Growth Rate (2019 to Design Year):	3.97%
Printed:	30-Jan-23

Straight Line Growth Option

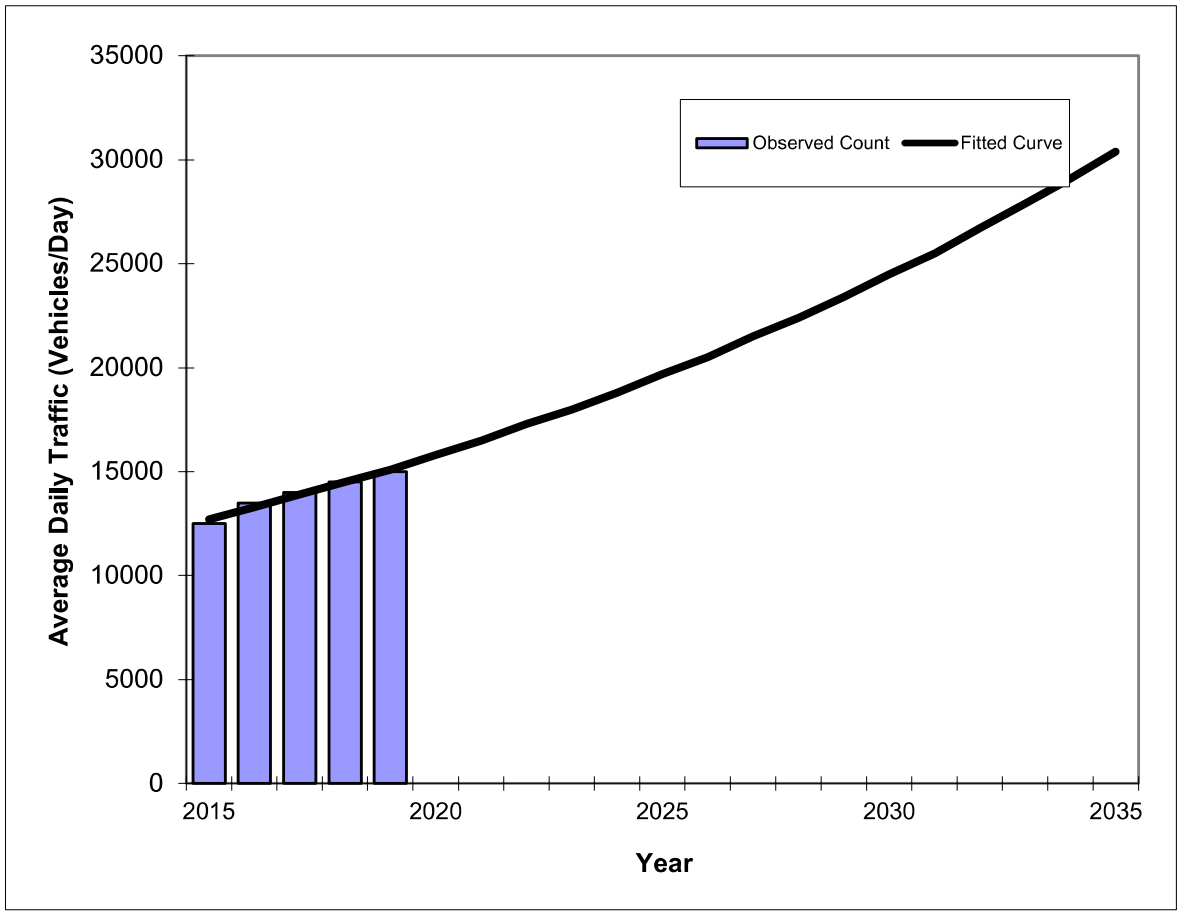
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12500	12700
2016	13500	13300
2017	14000	13900
2018	14500	14500
2019	15000	15100
2022 Opening Year Trend		
2022	N/A	17300
2024 Mid-Year Trend		
2024	N/A	18800
2027 Design Year Trend		
2027	N/A	21500
TRANPLAN Forecasts/Trends		

Trend R-squared:	96.34%
Compounded Annual Historic Growth Rate:	4.42%
Compounded Growth Rate (2019 to Design Year):	4.52%
Printed:	30-Jan-23

Exponential Growth Option

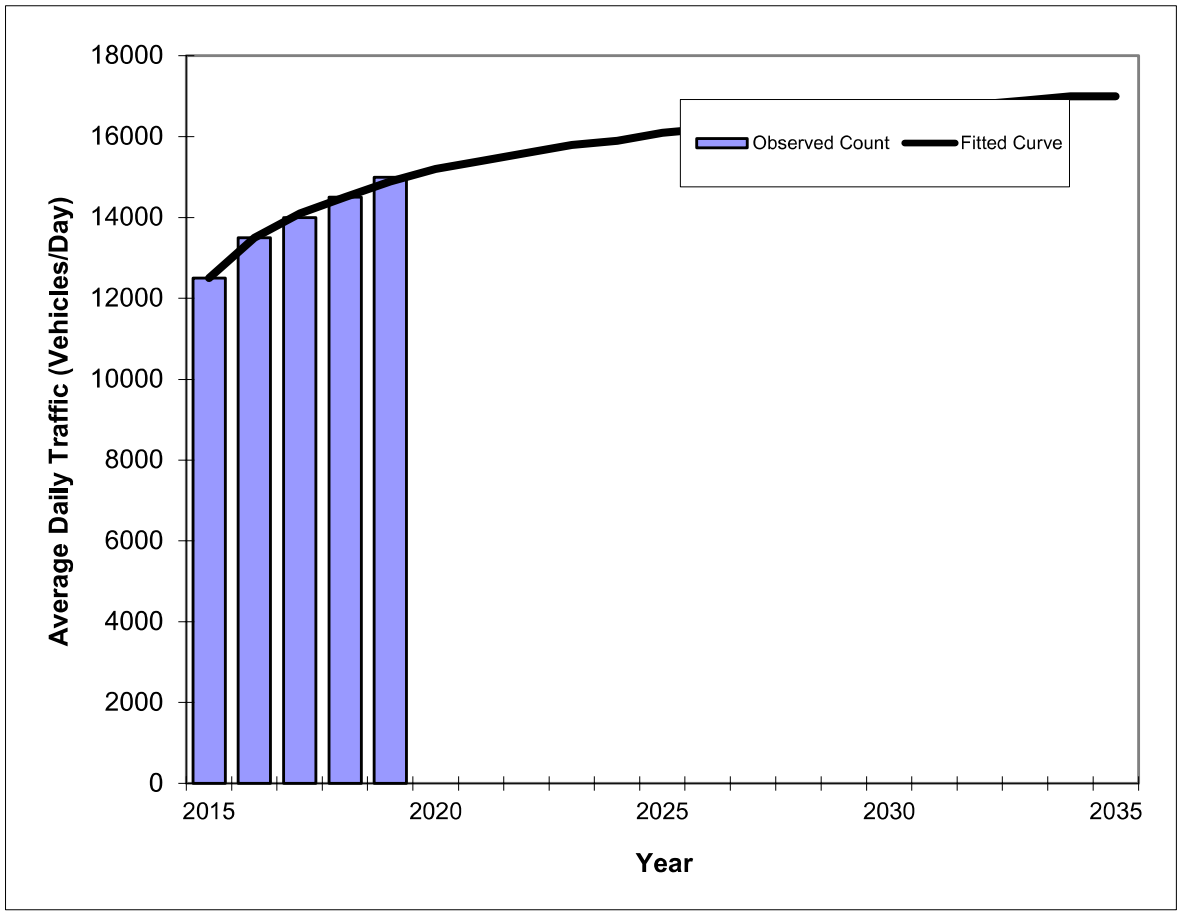
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	12500	12500
2016	13500	13500
2017	14000	14100
2018	14500	14500
2019	15000	14900
2022 Opening Year Trend		
2022	N/A	15600
2024 Mid-Year Trend		
2024	N/A	15900
2027 Design Year Trend		
2027	N/A	16300
TRANPLAN Forecasts/Trends		

Trend R-squared:	99.18%
Compounded Annual Historic Growth Rate:	4.49%
Compounded Growth Rate (2019 to Design Year):	1.13%
Printed:	30-Jan-23

Decaying Exponential Growth Option

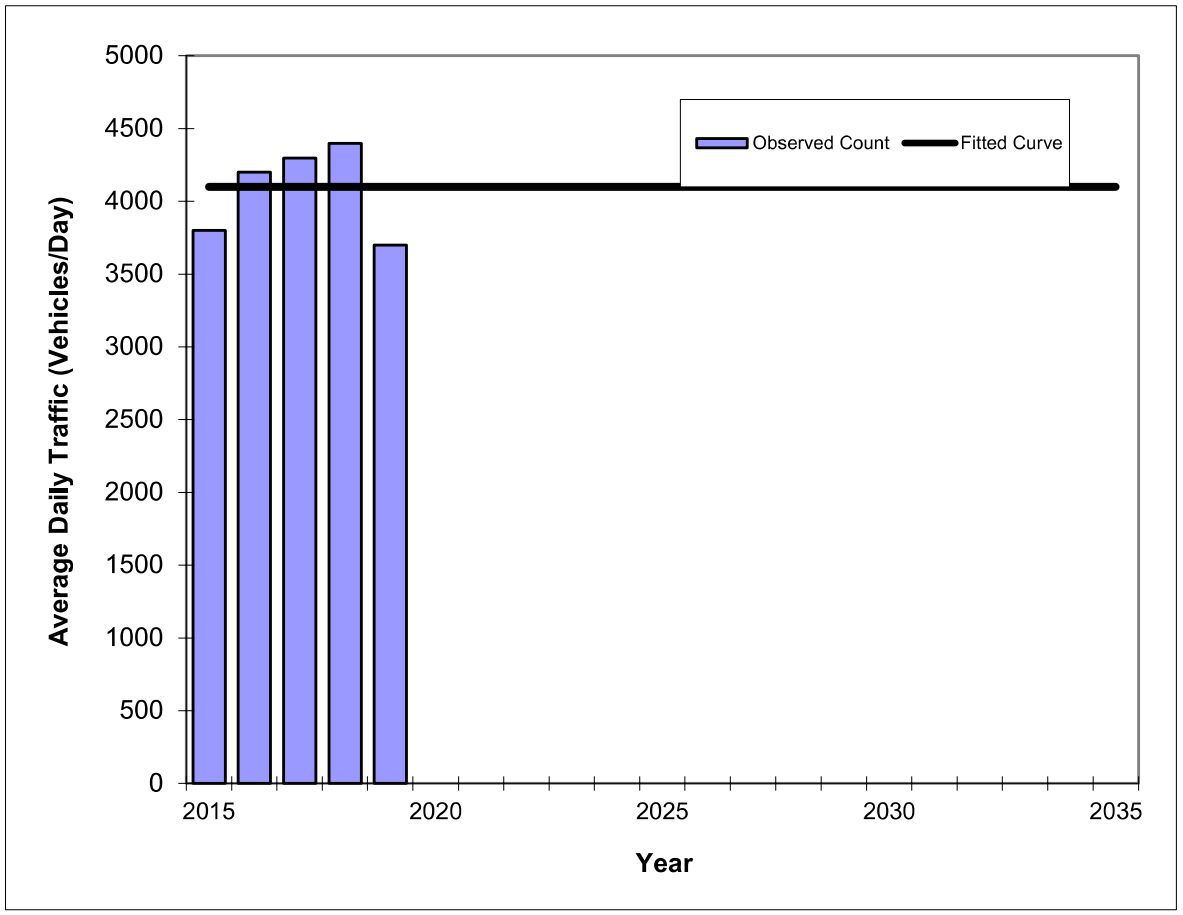
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3800	4100
2016	4200	4100
2017	4300	4100
2018	4400	4100
2019	3700	4100
2022 Opening Year Trend		
2022	N/A	4100
2024 Mid-Year Trend		
2024	N/A	4100
2027 Design Year Trend		
2027	N/A	4100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	0
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2019 to Design Year):	0.00%
Printed:	30-Jan-23

Straight Line Growth Option

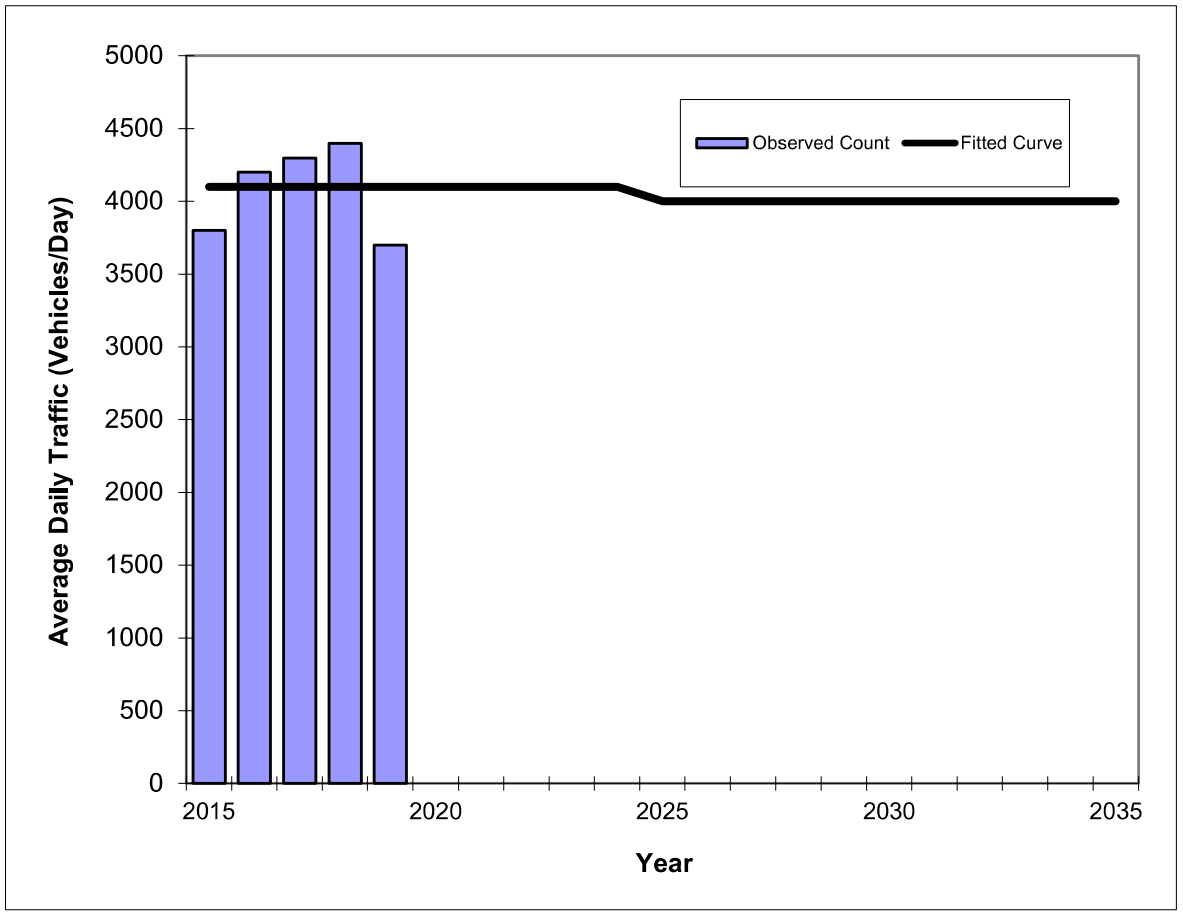
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3800	4100
2016	4200	4100
2017	4300	4100
2018	4400	4100
2019	3700	4100
2022 Opening Year Trend		
2022	N/A	4100
2024 Mid-Year Trend		
2024	N/A	4100
2027 Design Year Trend		
2027	N/A	4000
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.02%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2019 to Design Year):	-0.31%
Printed:	30-Jan-23

Exponential Growth Option

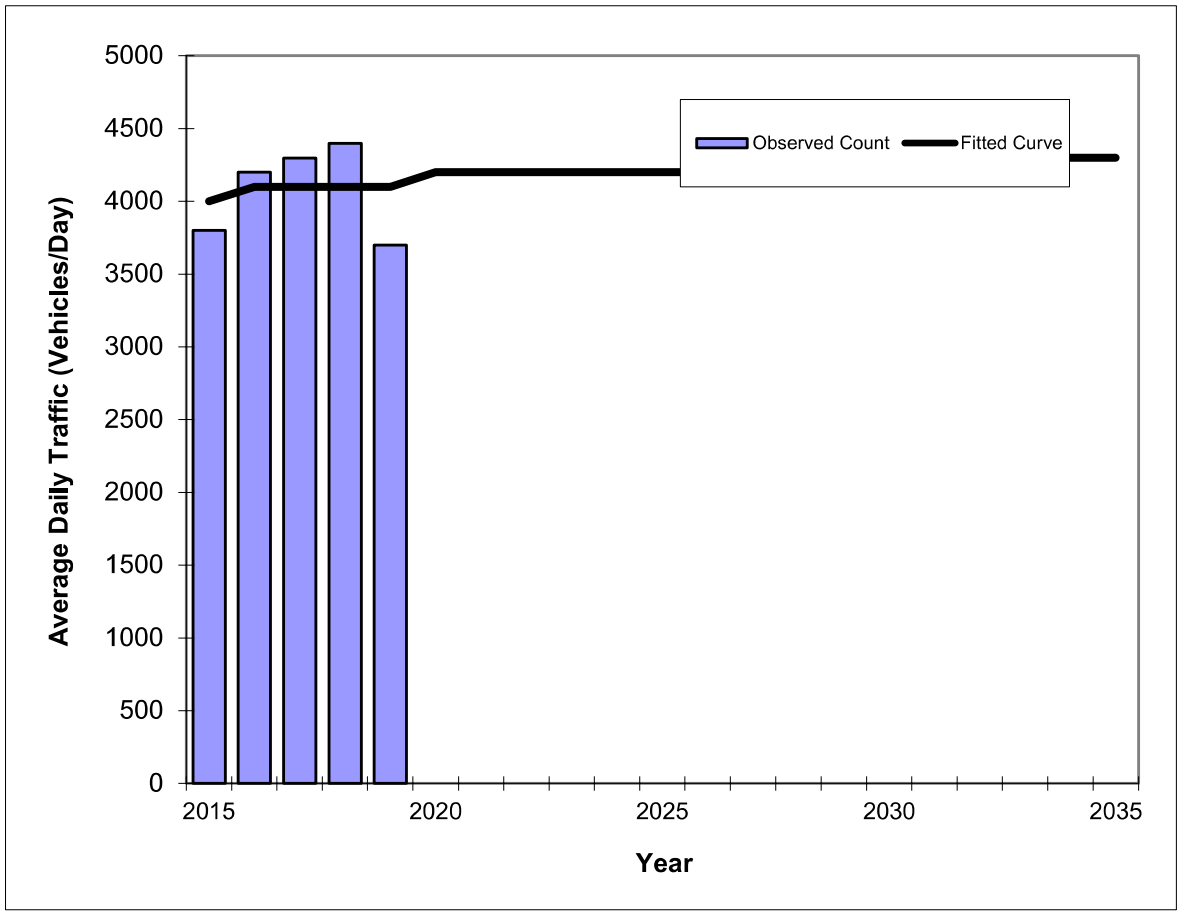
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3800	4000
2016	4200	4100
2017	4300	4100
2018	4400	4100
2019	3700	4100
2022 Opening Year Trend		
2022	N/A	4200
2024 Mid-Year Trend		
2024	N/A	4200
2027 Design Year Trend		
2027	N/A	4200
TRANPLAN Forecasts/Trends		

Trend R-squared:	3.93%
Compounded Annual Historic Growth Rate:	0.62%
Compounded Growth Rate (2019 to Design Year):	0.30%
Printed:	30-Jan-23

Decaying Exponential Growth Option

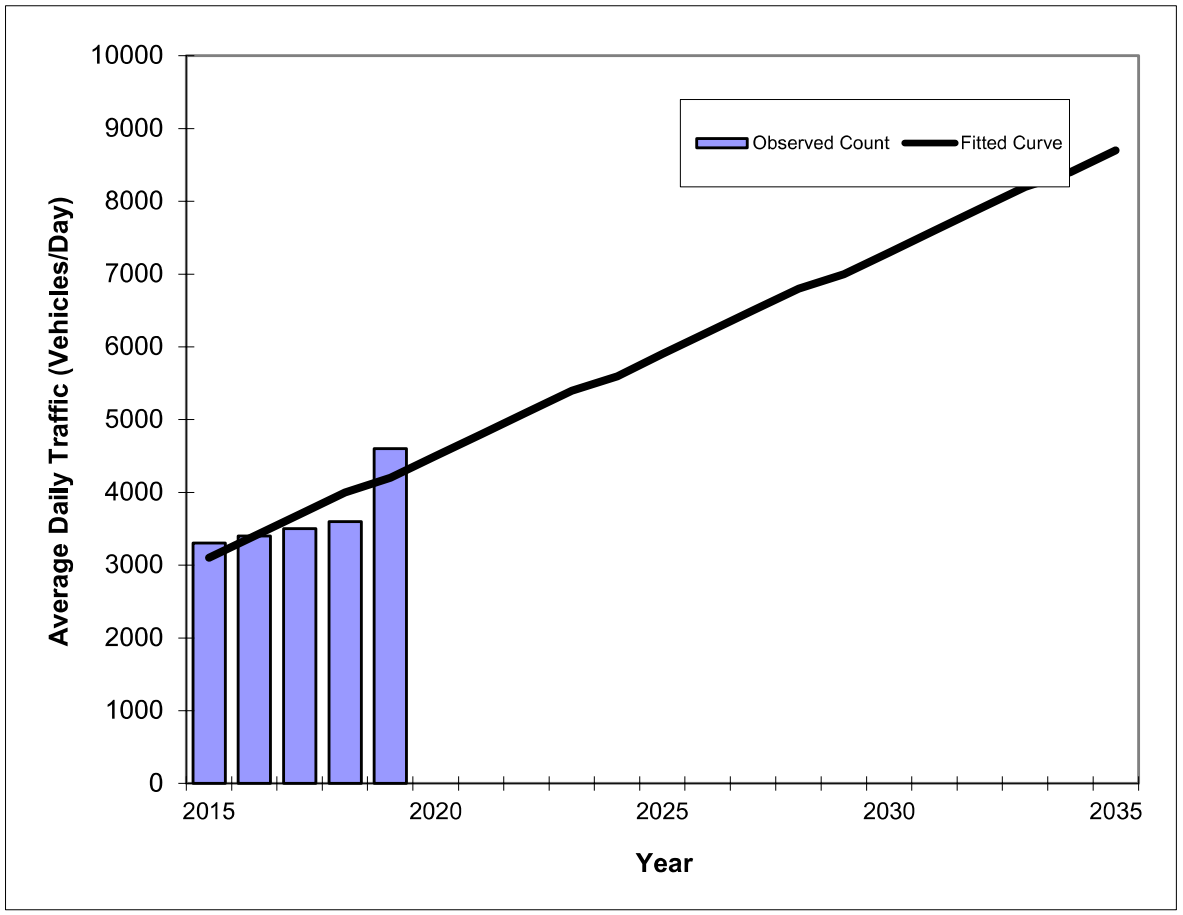
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3300	3100
2016	3400	3400
2017	3500	3700
2018	3600	4000
2019	4600	4200
2022 Opening Year Trend		
2022	N/A	5100
2024 Mid-Year Trend		
2024	N/A	5600
2027 Design Year Trend		
2027	N/A	6500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	280
Trend R-squared:	70.76%
Trend Annual Historic Growth Rate:	8.87%
Trend Growth Rate (2019 to Design Year):	6.85%
Printed:	31-Jan-23
Straight Line Growth Option	

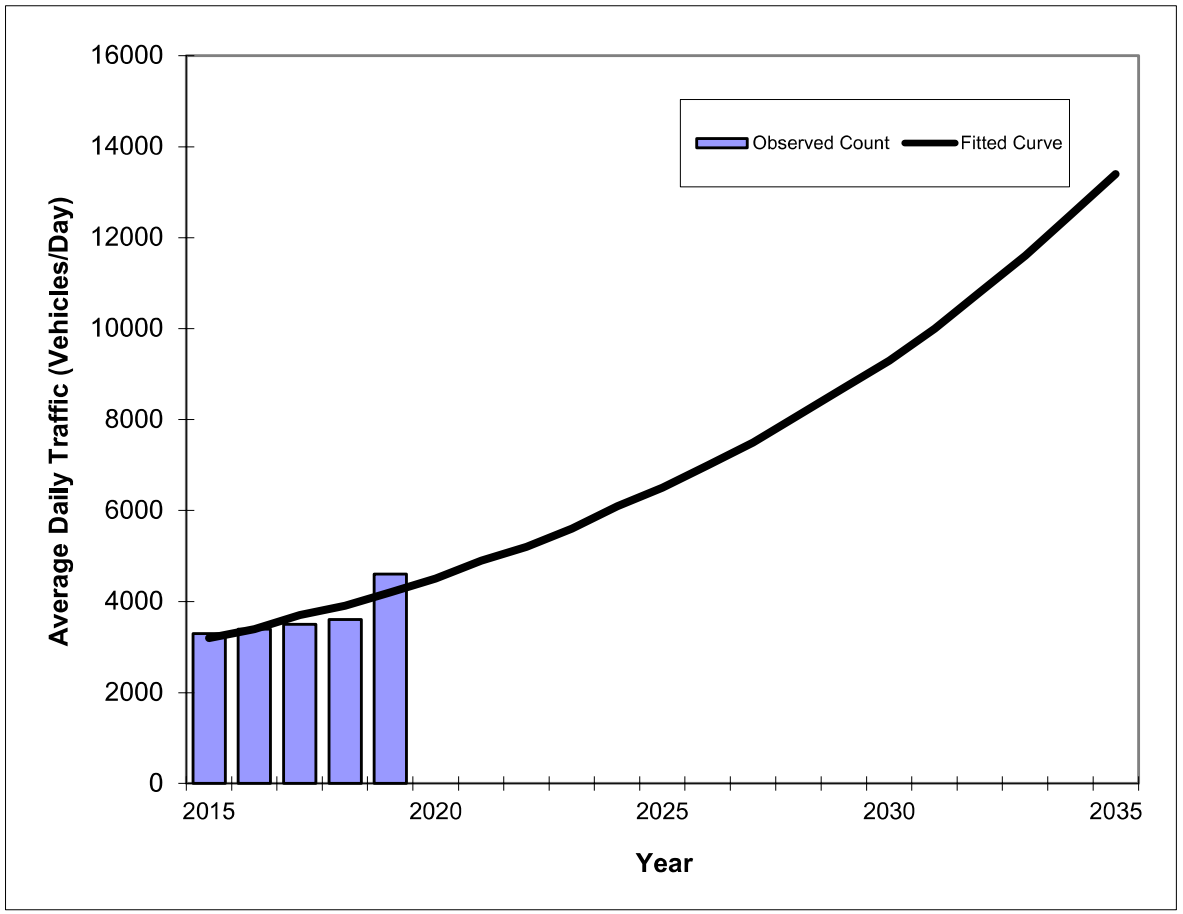
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3300	3200
2016	3400	3400
2017	3500	3700
2018	3600	3900
2019	4600	4200
2022 Opening Year Trend		
2022	N/A	5200
2024 Mid-Year Trend		
2024	N/A	6100
2027 Design Year Trend		
2027	N/A	7500
TRANPLAN Forecasts/Trends		

Trend R-squared:	73.66%
Compounded Annual Historic Growth Rate:	7.03%
Compounded Growth Rate (2019 to Design Year):	7.52%
Printed:	31-Jan-23

Exponential Growth Option

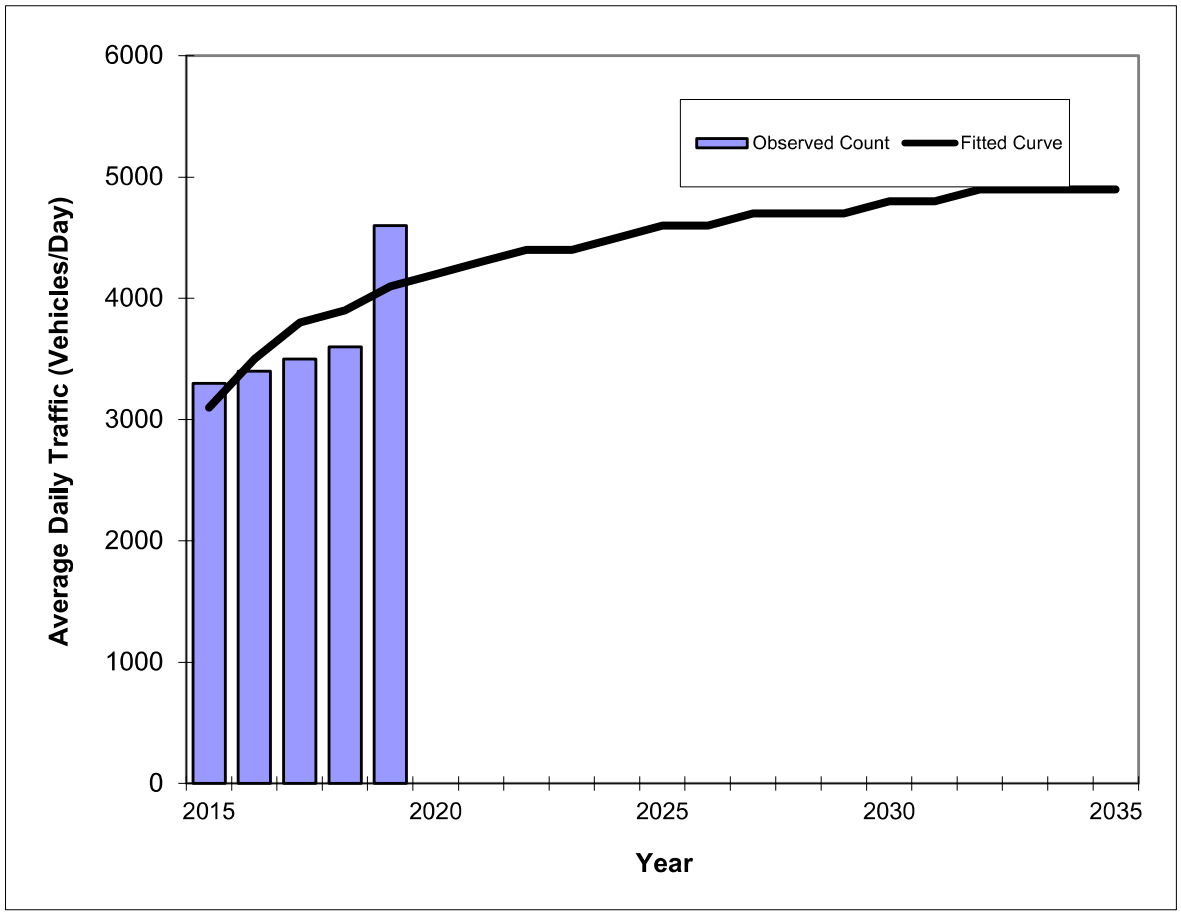
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp EB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	3300	3100
2016	3400	3500
2017	3500	3800
2018	3600	3900
2019	4600	4100
2022 Opening Year Trend		
2022	N/A	4400
2024 Mid-Year Trend		
2024	N/A	4500
2027 Design Year Trend		
2027	N/A	4700
TRANPLAN Forecasts/Trends		

Trend R-squared:	53.43%
Compounded Annual Historic Growth Rate:	7.24%
Compounded Growth Rate (2019 to Design Year):	1.72%
Printed:	31-Jan-23

Decaying Exponential Growth Option

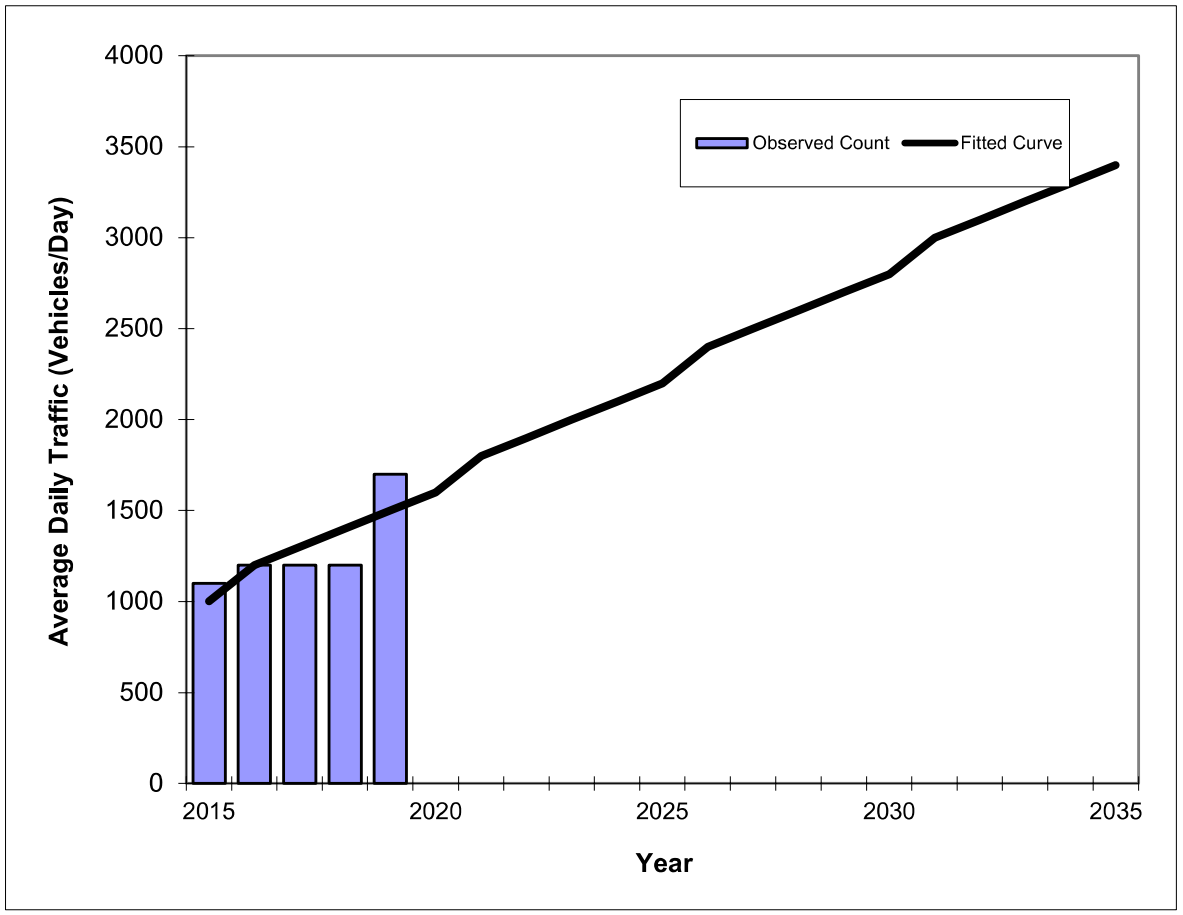
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1100	1000
2016	1200	1200
2017	1200	1300
2018	1200	1400
2019	1700	1500
2022 Opening Year Trend		
2022	N/A	1900
2024 Mid-Year Trend		
2024	N/A	2100
2027 Design Year Trend		
2027	N/A	2500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	120
Trend R-squared:	63.16%
Trend Annual Historic Growth Rate:	12.50%
Trend Growth Rate (2019 to Design Year):	8.33%
Printed:	31-Jan-23

Straight Line Growth Option

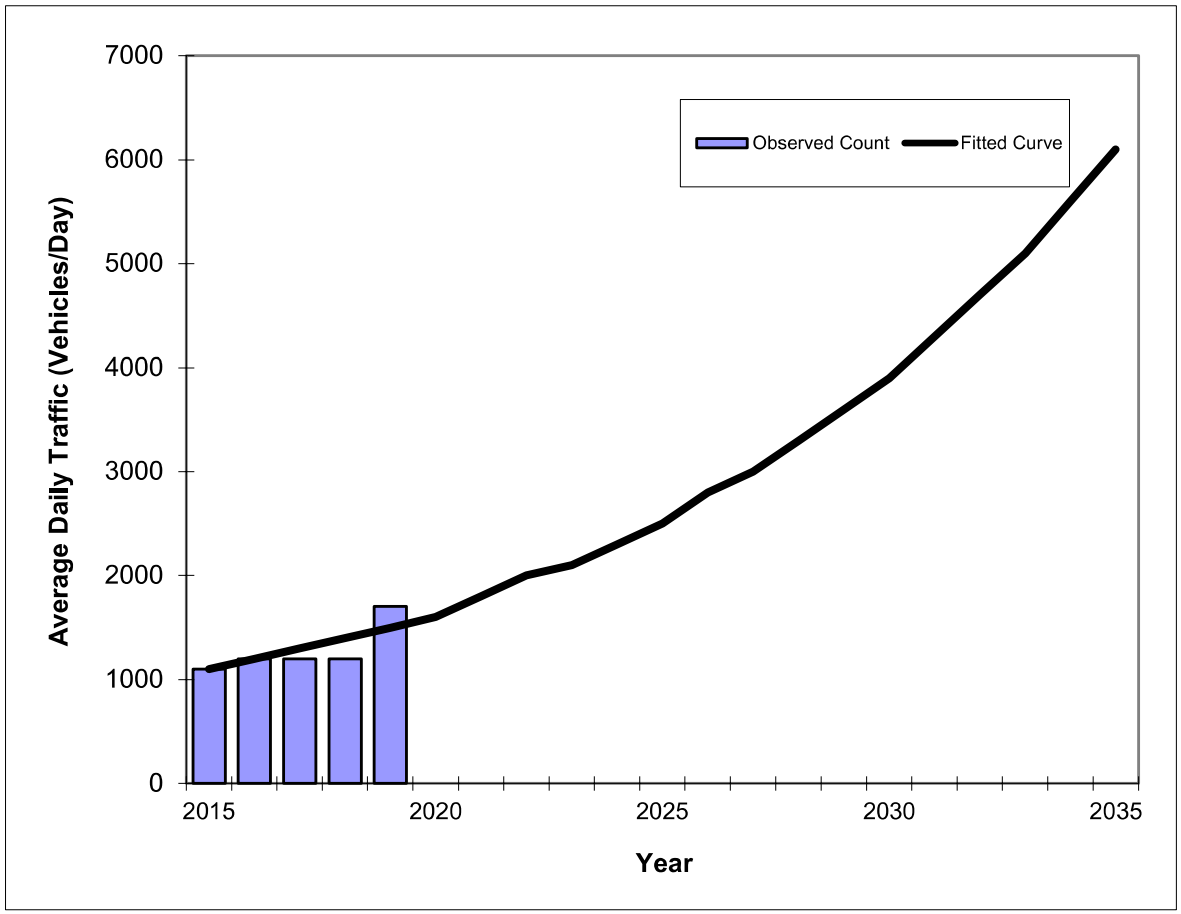
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1100	1100
2016	1200	1200
2017	1200	1300
2018	1200	1400
2019	1700	1500
2022 Opening Year Trend		
2022	N/A	2000
2024 Mid-Year Trend		
2024	N/A	2300
2027 Design Year Trend		
2027	N/A	3000
TRANPLAN Forecasts/Trends		

Trend R-squared:	65.78%
Compounded Annual Historic Growth Rate:	8.06%
Compounded Growth Rate (2019 to Design Year):	9.05%
Printed:	31-Jan-23

Exponential Growth Option

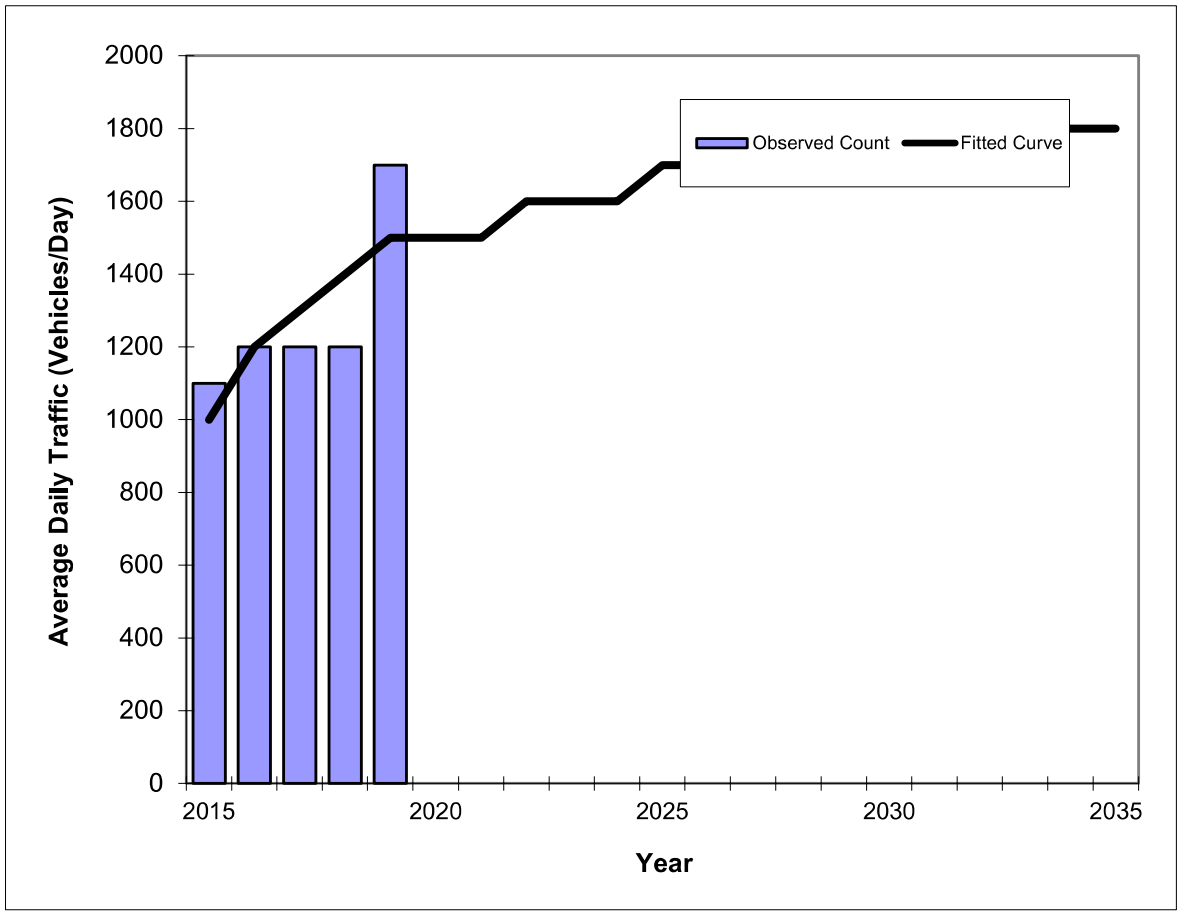
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2015	1100	1000
2016	1200	1200
2017	1200	1300
2018	1200	1400
2019	1700	1500
2022 Opening Year Trend		
2022	N/A	1600
2024 Mid-Year Trend		
2024	N/A	1600
2027 Design Year Trend		
2027	N/A	1700
TRANPLAN Forecasts/Trends		

Trend R-squared:	48.28%
Compounded Annual Historic Growth Rate:	10.67%
Compounded Growth Rate (2019 to Design Year):	1.58%
Printed:	31-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

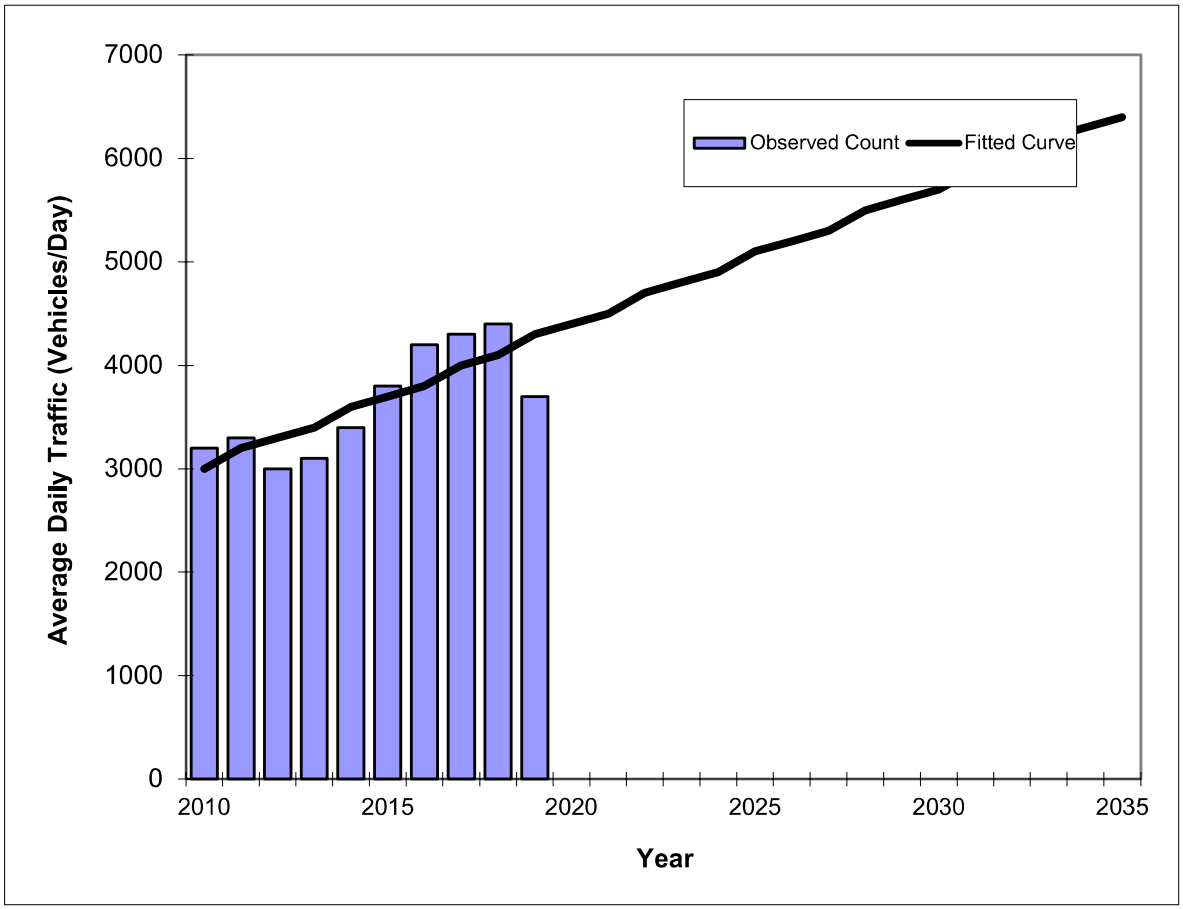
Ten Year Trends

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	3200	3000
2011	3300	3200
2012	3000	3300
2013	3100	3400
2014	3400	3600
2015	3800	3700
2016	4200	3800
2017	4300	4000
2018	4400	4100
2019	3700	4300
2027 Opening Year Trend		
2027	N/A	5300
2033 Mid-Year Trend		
2033	N/A	6200
2034 Design Year Trend		
2034	N/A	6300
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	136
Trend R-squared:	62.73%
Trend Annual Historic Growth Rate:	4.81%
Trend Growth Rate (2019 to Design Year):	3.10%
Printed:	31-Jan-23
Straight Line Growth Option	

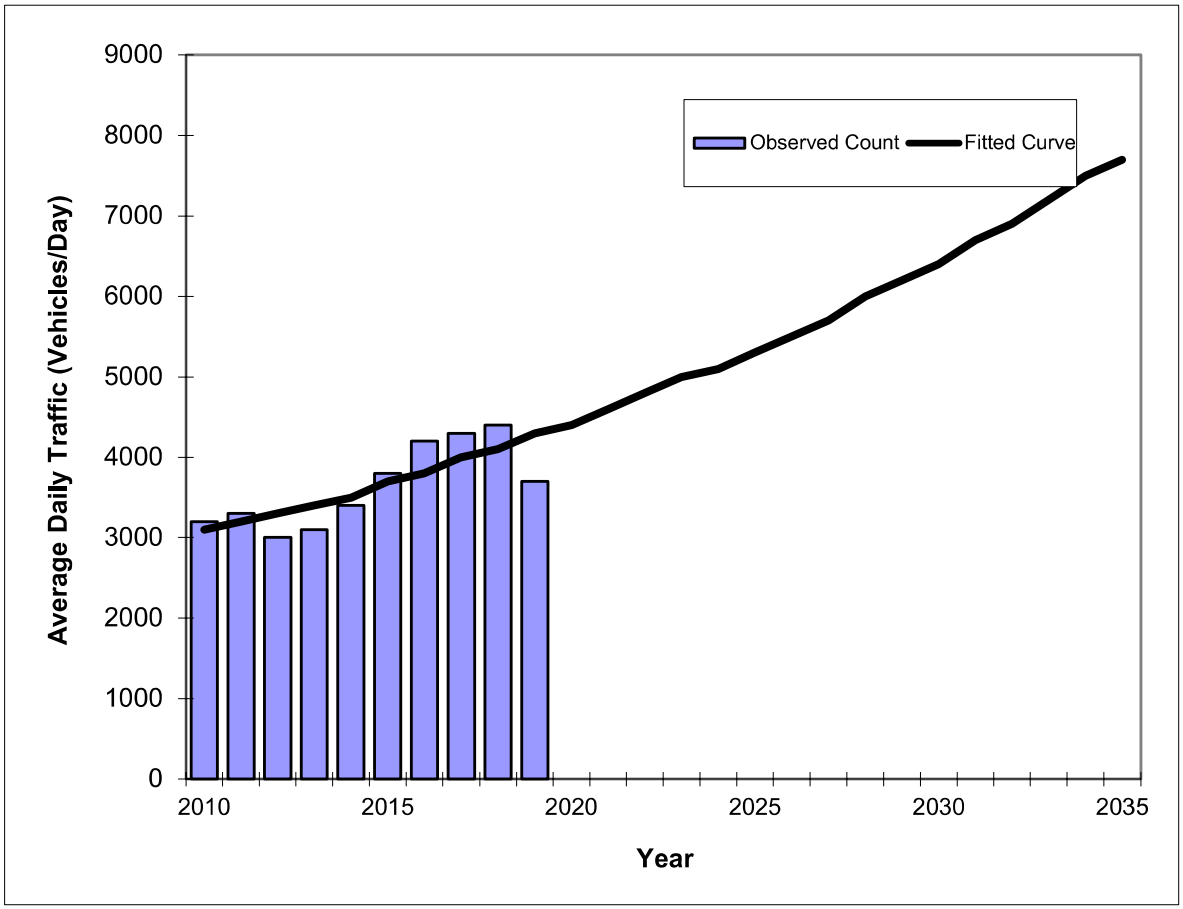
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	3200	3100
2011	3300	3200
2012	3000	3300
2013	3100	3400
2014	3400	3500
2015	3800	3700
2016	4200	3800
2017	4300	4000
2018	4400	4100
2019	3700	4300
2027 Opening Year Trend		
2027	N/A	5700
2033 Mid-Year Trend		
2033	N/A	7200
2034 Design Year Trend		
2034	N/A	7500
TRANPLAN Forecasts/Trends		

Trend R-squared:	63.68%
Compounded Annual Historic Growth Rate:	3.70%
Compounded Growth Rate (2019 to Design Year):	3.78%
Printed:	31-Jan-23

Exponential Growth Option

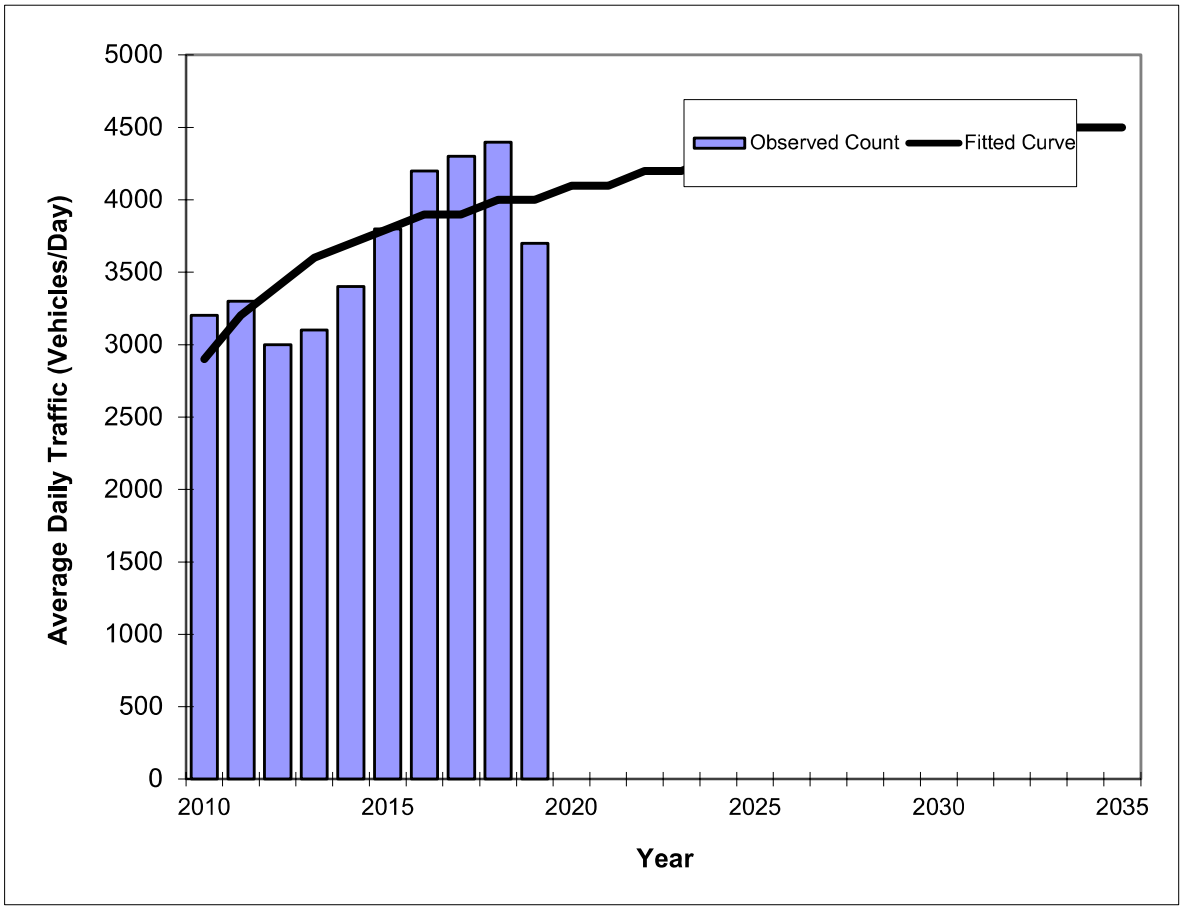
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- SR 472 WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	3200	2900
2011	3300	3200
2012	3000	3400
2013	3100	3600
2014	3400	3700
2015	3800	3800
2016	4200	3900
2017	4300	3900
2018	4400	4000
2019	3700	4000
2027 Opening Year Trend		
2027	N/A	4300
2033 Mid-Year Trend		
2033	N/A	4500
2034 Design Year Trend		
2034	N/A	4500
TRANPLAN Forecasts/Trends		

Trend R-squared:	52.60%
Compounded Annual Historic Growth Rate:	3.64%
Compounded Growth Rate (2019 to Design Year):	0.79%
Printed:	31-Jan-23

Decaying Exponential Growth Option

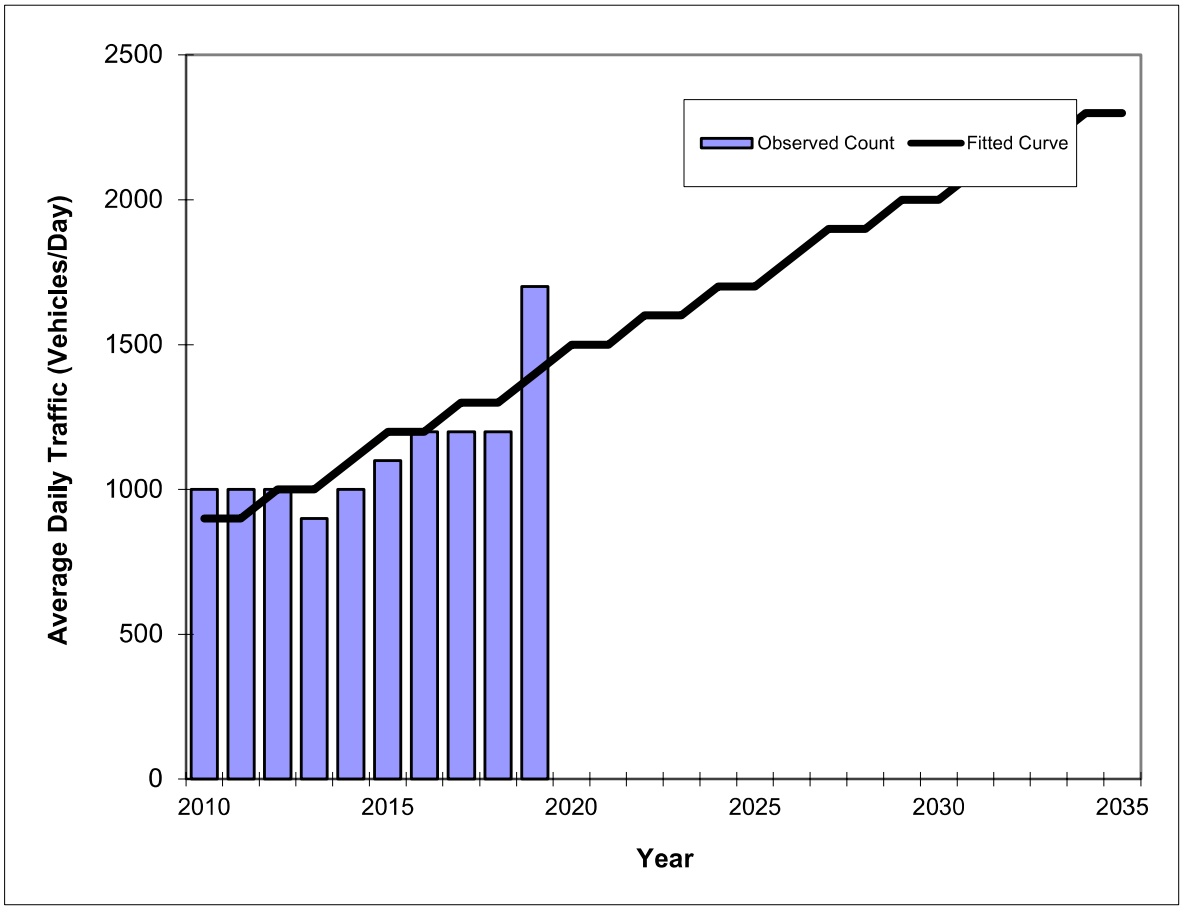
***Axle-Adjusted**

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1000	900
2011	1000	900
2012	1000	1000
2013	900	1000
2014	1000	1100
2015	1100	1200
2016	1200	1200
2017	1200	1300
2018	1200	1300
2019	1700	1400
2027 Opening Year Trend		
2027	N/A	1900
2033 Mid-Year Trend		
2033	N/A	2200
2034 Design Year Trend		
2034	N/A	2300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	59
Trend R-squared:	61.85%
Trend Annual Historic Growth Rate:	6.17%
Trend Growth Rate (2019 to Design Year):	4.29%
Printed:	31-Jan-23

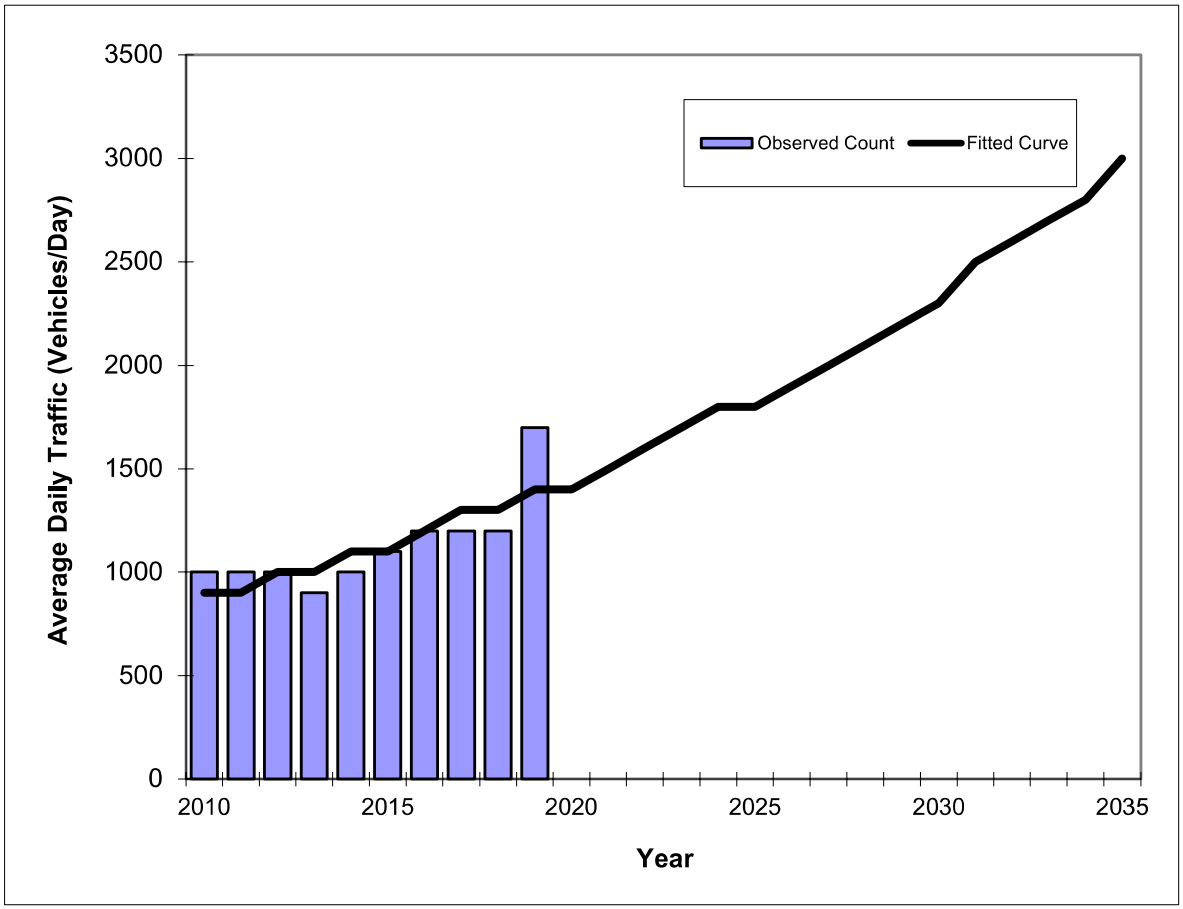
Straight Line Growth Option

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1000	900
2011	1000	900
2012	1000	1000
2013	900	1000
2014	1000	1100
2015	1100	1100
2016	1200	1200
2017	1200	1300
2018	1200	1300
2019	1700	1400
2027 Opening Year Trend		
2027	N/A	2000
2033 Mid-Year Trend		
2033	N/A	2700
2034 Design Year Trend		
2034	N/A	2800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	66.14%
Compounded Annual Historic Growth Rate:	5.03%
Compounded Growth Rate (2019 to Design Year):	4.73%
Printed:	31-Jan-23

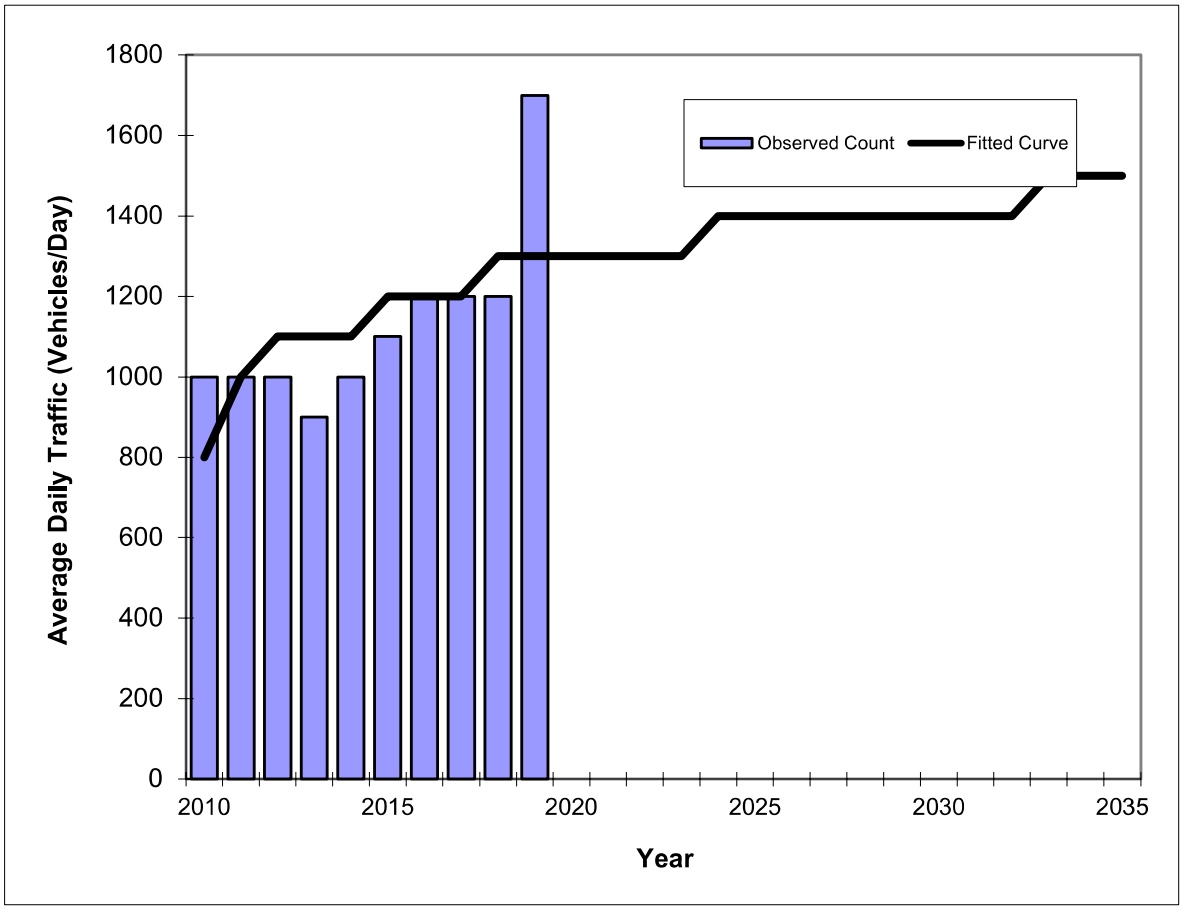
Exponential Growth Option

Traffic Trends - V03.a

I-4 -- Orange Camp WB Off Ramp

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	I-4



Year	Traffic (ADT/AADT) Count*	Trend**
2010	1000	800
2011	1000	1000
2012	1000	1100
2013	900	1100
2014	1000	1100
2015	1100	1200
2016	1200	1200
2017	1200	1200
2018	1200	1300
2019	1700	1300
2027 Opening Year Trend		
2027	N/A	1400
2033 Mid-Year Trend		
2033	N/A	1500
2034 Design Year Trend		
2034	N/A	1500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	39.07%
Compounded Annual Historic Growth Rate:	5.54%
Compounded Growth Rate (2019 to Design Year):	0.96%
Printed:	31-Jan-23

Decaying Exponential Growth Option

Taylor Road

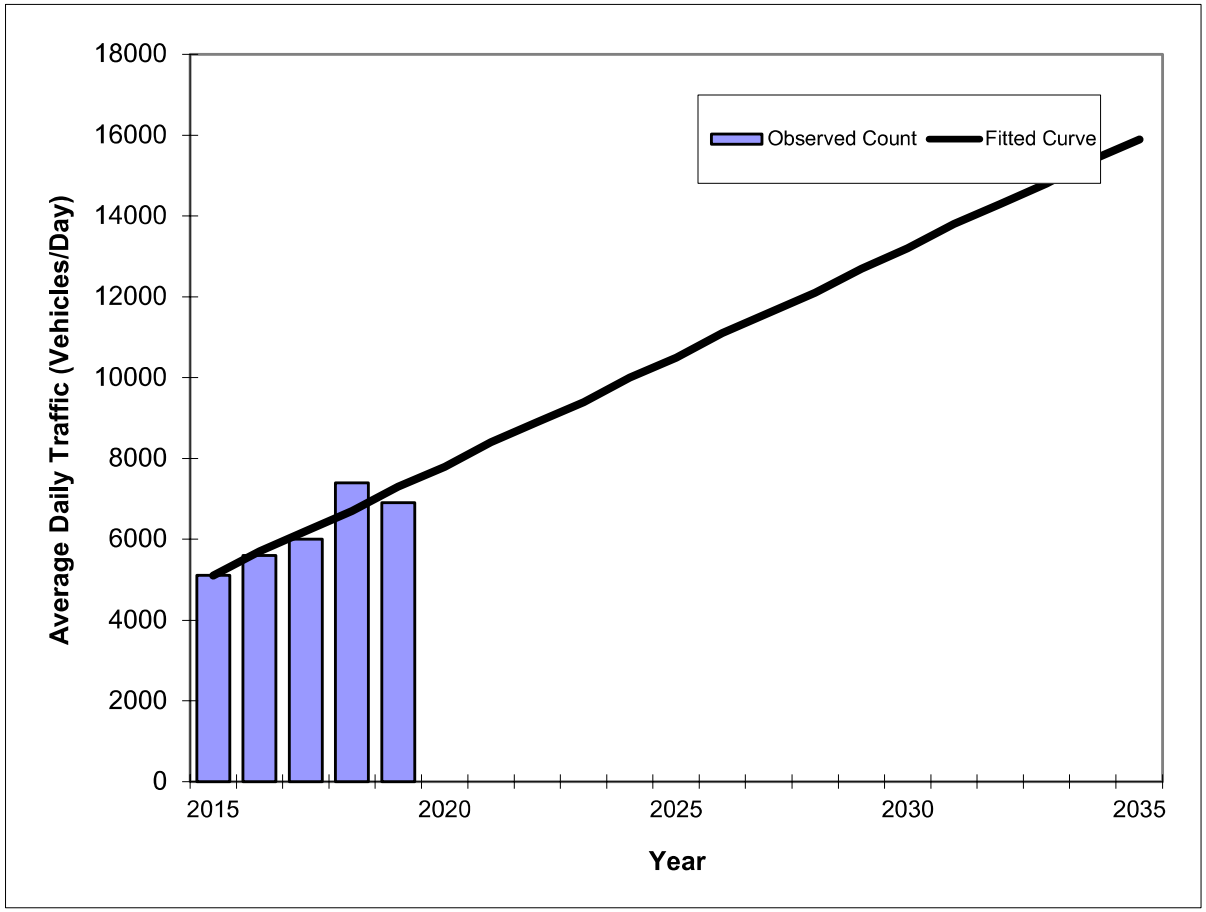
Five Year Trends

Traffic Trends - V03.a

TAYLOR RD -- Blue Lake Ave to MLK Blty

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	TAYLOR RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5100	5100
2016	5600	5700
2017	6000	6200
2018	7400	6700
2019	6900	7300
2027 Opening Year Trend		
2027	N/A	11600
2033 Mid-Year Trend		
2033	N/A	14800
2034 Design Year Trend		
2034	N/A	15400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	540
Trend R-squared:	82.37%
Trend Annual Historic Growth Rate:	10.78%
Trend Growth Rate (2019 to Design Year):	7.40%
Printed:	25-Jan-23

Straight Line Growth Option

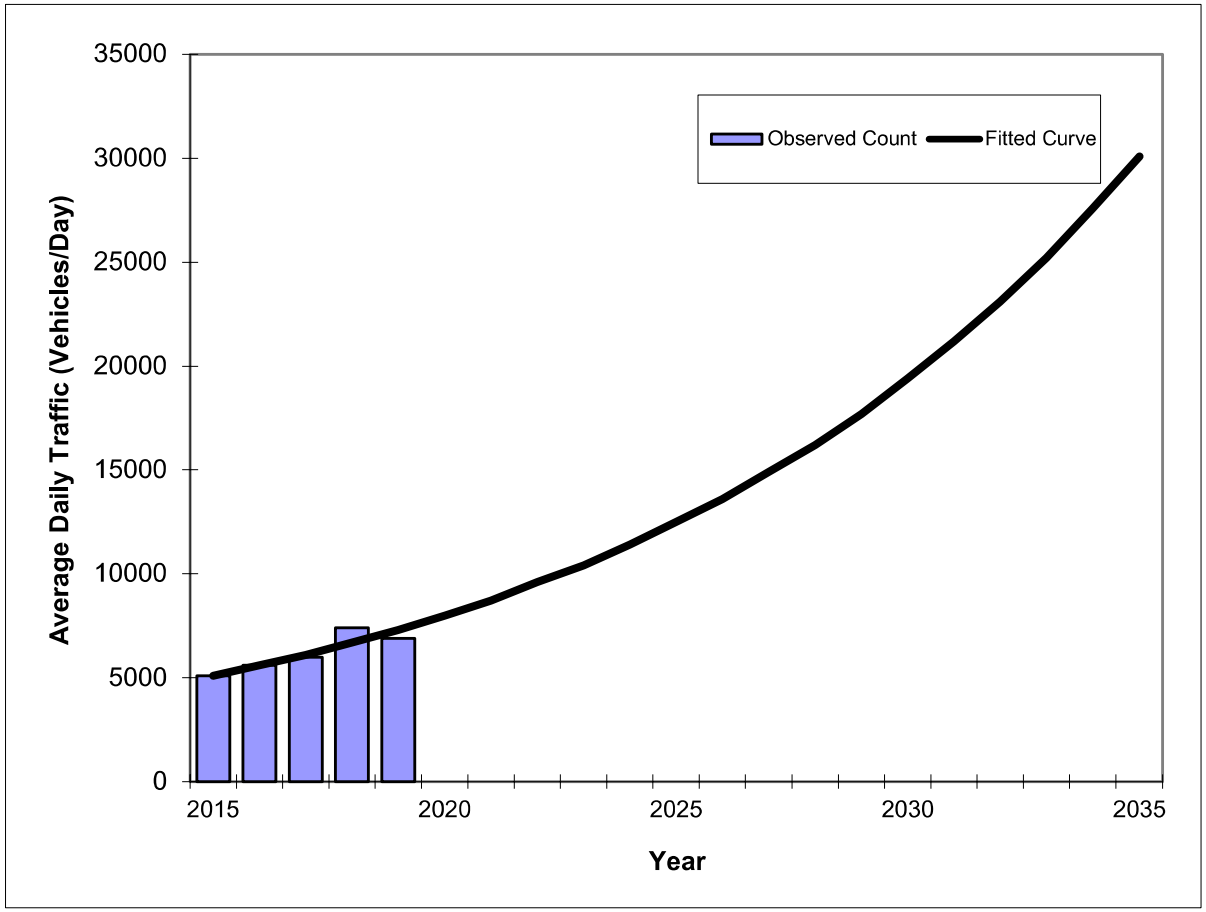
***Axle-Adjusted**

Traffic Trends - V03.a

TAYLOR RD -- Blue Lake Ave to MLK Blty

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	TAYLOR RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5100	5100
2016	5600	5600
2017	6000	6100
2018	7400	6700
2019	6900	7300
2027 Opening Year Trend		
2027	N/A	14900
2033 Mid-Year Trend		
2033	N/A	25200
2034 Design Year Trend		
2034	N/A	27600
TRANPLAN Forecasts/Trends		

Trend R-squared:	84.89%
Compounded Annual Historic Growth Rate:	9.38%
Compounded Growth Rate (2019 to Design Year):	9.27%
Printed:	25-Jan-23

Exponential Growth Option

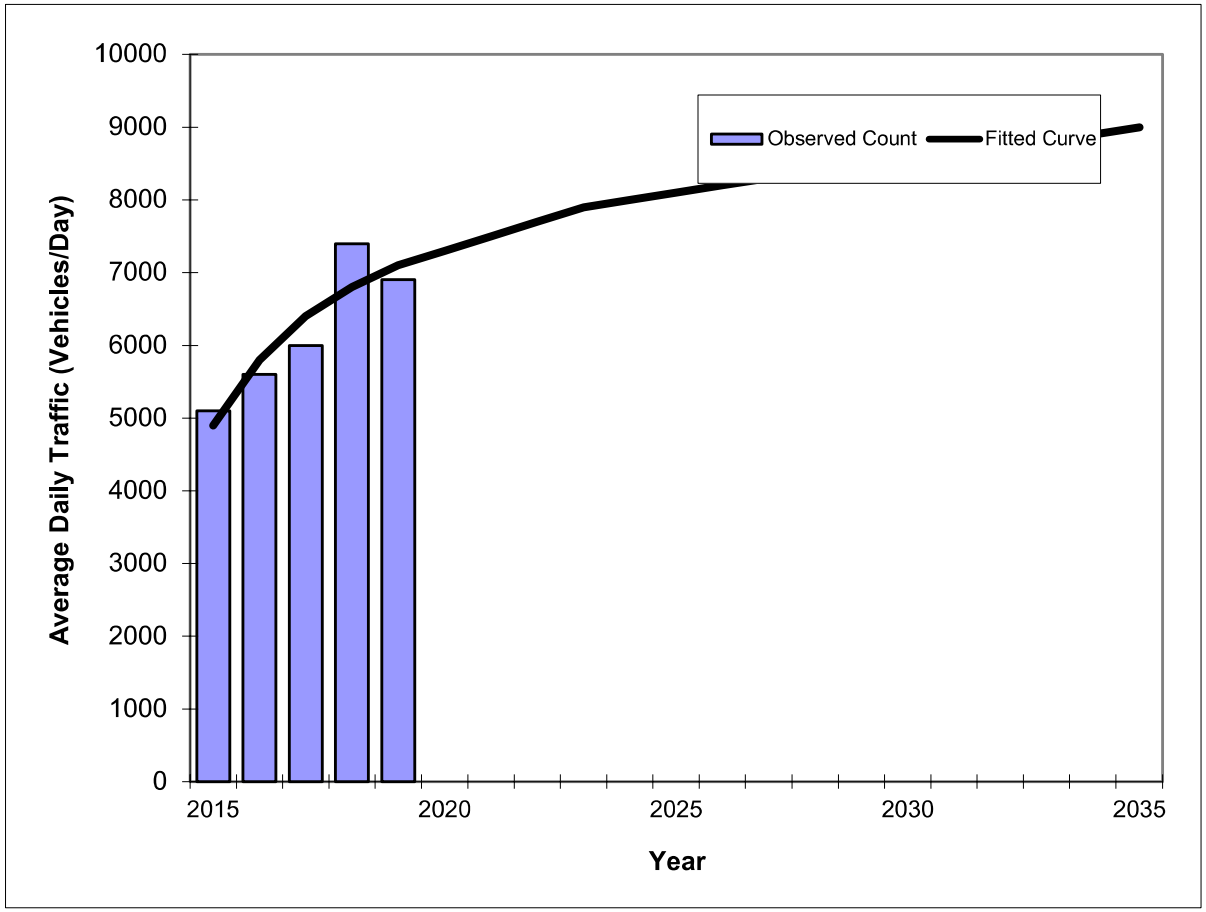
***Axle-Adjusted**

Traffic Trends - V03.a

TAYLOR RD -- Blue Lake Ave to MLK Blty

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	TAYLOR RD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5100	4900
2016	5600	5800
2017	6000	6400
2018	7400	6800
2019	6900	7100
2027 Opening Year Trend		
2027	N/A	8300
2033 Mid-Year Trend		
2033	N/A	8800
2034 Design Year Trend		
2034	N/A	8900
TRANPLAN Forecasts/Trends		

Trend R-squared:	81.17%
Compounded Annual Historic Growth Rate:	9.71%
Compounded Growth Rate (2019 to Design Year):	1.52%
Printed:	25-Jan-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Rhode Island Avenue

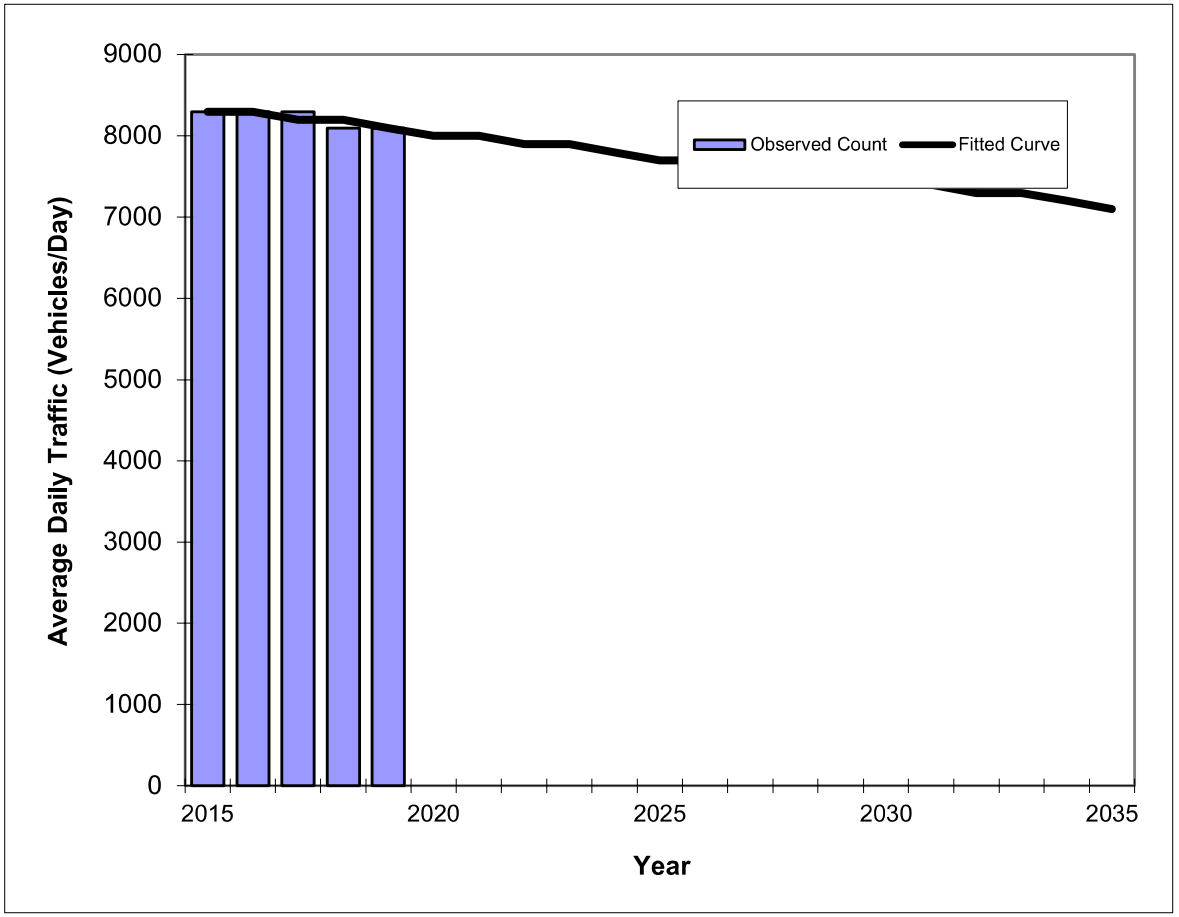
Five Year Trends

Traffic Trends - V03.a

RHODE ISLAND AVE -- US 17/92 to Veterans Pkwy.

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	RHODE ISLAND AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	8300	8300
2016	8300	8300
2017	8300	8200
2018	8100	8200
2019	8100	8100
2022 Opening Year Trend		
2022	N/A	7900
2024 Mid-Year Trend		
2024	N/A	7800
2027 Design Year Trend		
2027	N/A	7600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-60
Trend R-squared:	75.00%
Trend Annual Historic Growth Rate:	-0.60%
Trend Growth Rate (2019 to Design Year):	-0.77%
Printed:	7-Feb-23
Straight Line Growth Option	

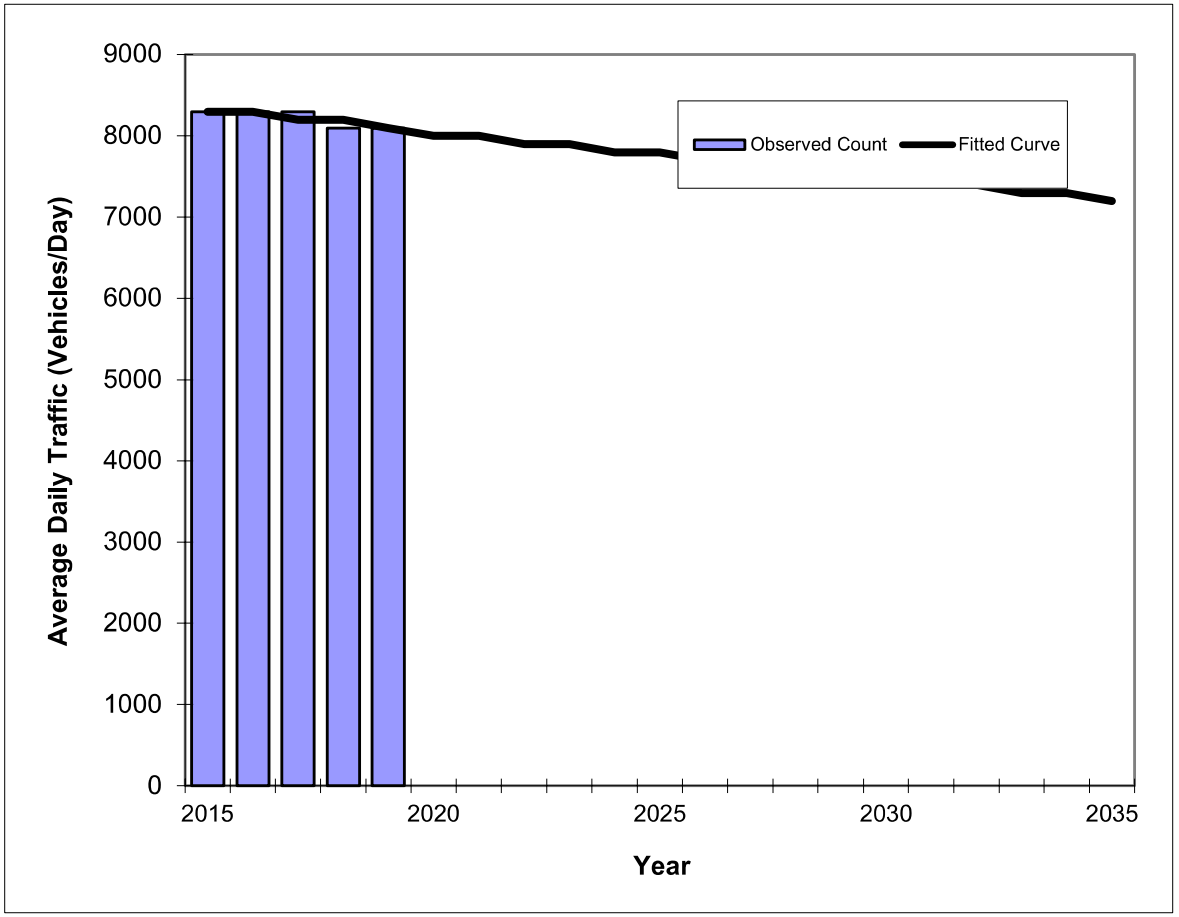
***Axle-Adjusted**

Traffic Trends - V03.a

RHODE ISLAND AVE -- US 17/92 to Veterans Pkwy.

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	RHODE ISLAND AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	8300	8300
2016	8300	8300
2017	8300	8200
2018	8100	8200
2019	8100	8100
2022 Opening Year Trend		
2022	N/A	7900
2024 Mid-Year Trend		
2024	N/A	7800
2027 Design Year Trend		
2027	N/A	7600
TRANPLAN Forecasts/Trends		

Trend R-squared:	75.00%
Compounded Annual Historic Growth Rate:	-0.61%
Compounded Growth Rate (2019 to Design Year):	-0.79%
Printed:	7-Feb-23

Exponential Growth Option

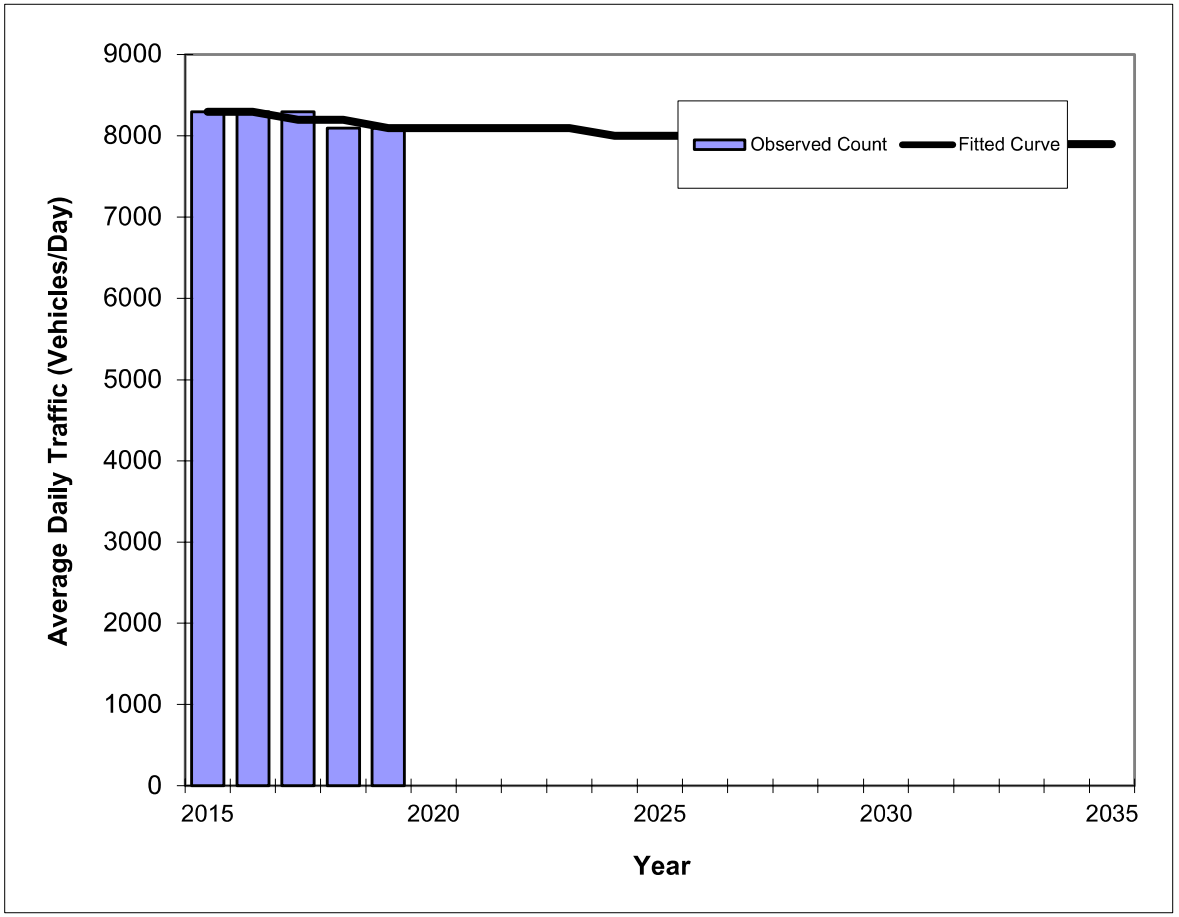
***Axle-Adjusted**

Traffic Trends - V03.a

RHODE ISLAND AVE -- US 17/92 to Veterans Pkwy.

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	RHODE ISLAND AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2015	8300	8300
2016	8300	8300
2017	8300	8200
2018	8100	8200
2019	8100	8100
2022 Opening Year Trend		
2022	N/A	8100
2024 Mid-Year Trend		
2024	N/A	8000
2027 Design Year Trend		
2027	N/A	8000
TRANPLAN Forecasts/Trends		

Trend R-squared:	60.25%
Compounded Annual Historic Growth Rate:	-0.61%
Compounded Growth Rate (2019 to Design Year):	-0.16%
Printed:	7-Feb-23

Decaying Exponential Growth Option

***Axle-Adjusted**

Normandy Boulevard

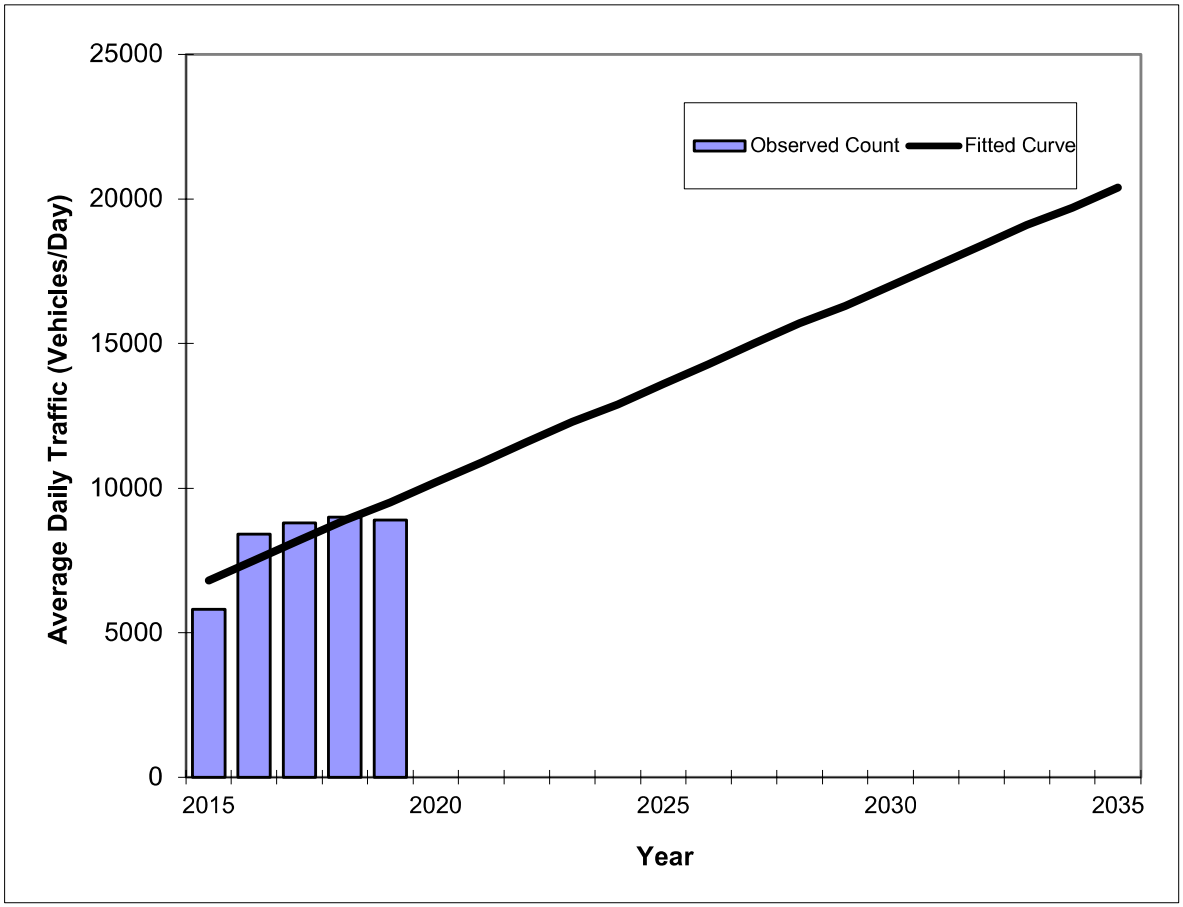
Five Year Trends

Traffic Trends - V03.a

NORMANDY BOULEVARD -- Graves Ave to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	NORMANDY BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5800	6800
2016	8400	7500
2017	8800	8200
2018	9000	8900
2019	8900	9500
2027 Opening Year Trend		
2027	N/A	15000
2033 Mid-Year Trend		
2033	N/A	19100
2034 Design Year Trend		
2034	N/A	19700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	680
Trend R-squared:	63.45%
Trend Annual Historic Growth Rate:	9.93%
Trend Growth Rate (2019 to Design Year):	7.16%
Printed:	18-Jan-23

Straight Line Growth Option

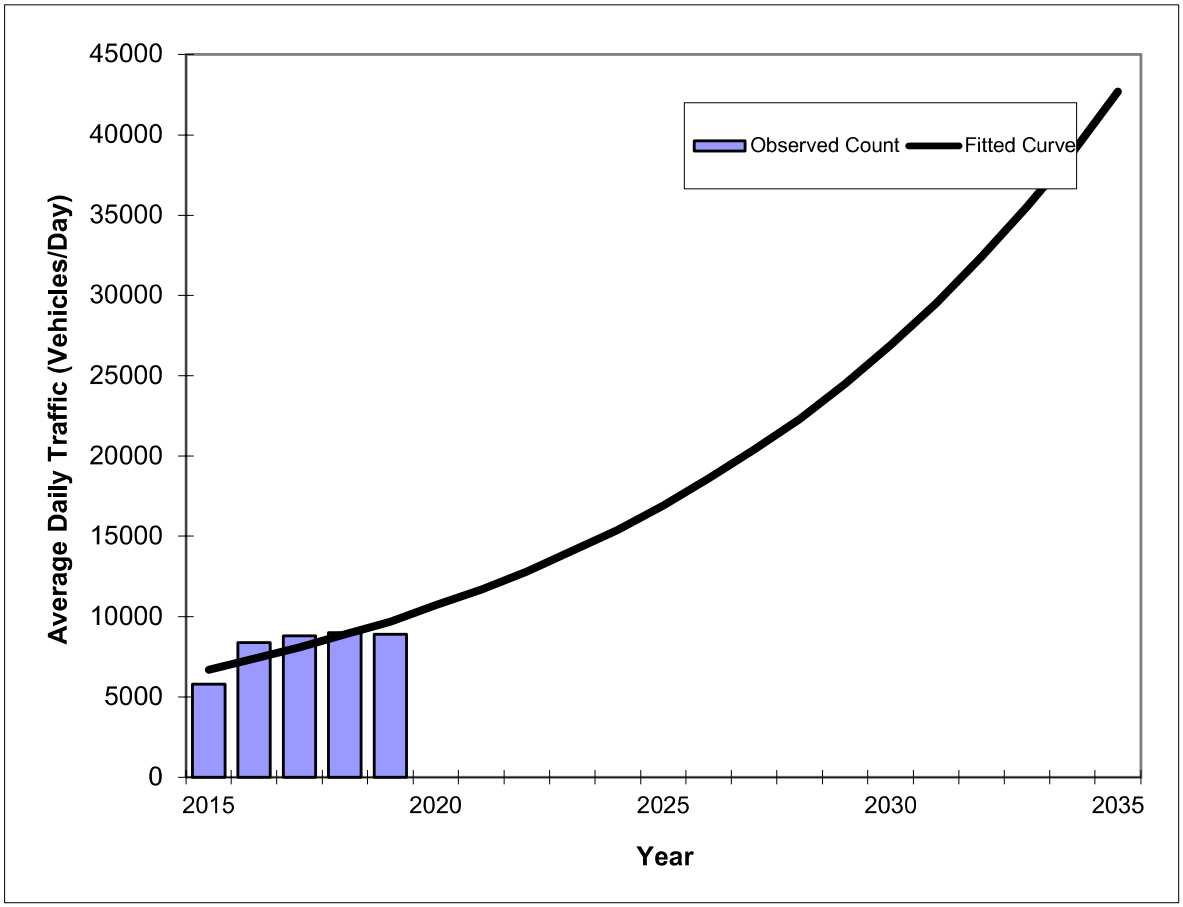
***Axle-Adjusted**

Traffic Trends - V03.a

NORMANDY BOULEVARD -- Graves Ave to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	NORMANDY BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5800	6700
2016	8400	7400
2017	8800	8100
2018	9000	8900
2019	8900	9700
2027 Opening Year Trend		
2027	N/A	20400
2033 Mid-Year Trend		
2033	N/A	35500
2034 Design Year Trend		
2034	N/A	38900
TRANPLAN Forecasts/Trends		

Trend R-squared:	61.31%
Compounded Annual Historic Growth Rate:	9.69%
Compounded Growth Rate (2019 to Design Year):	9.70%
Printed:	18-Jan-23

Exponential Growth Option

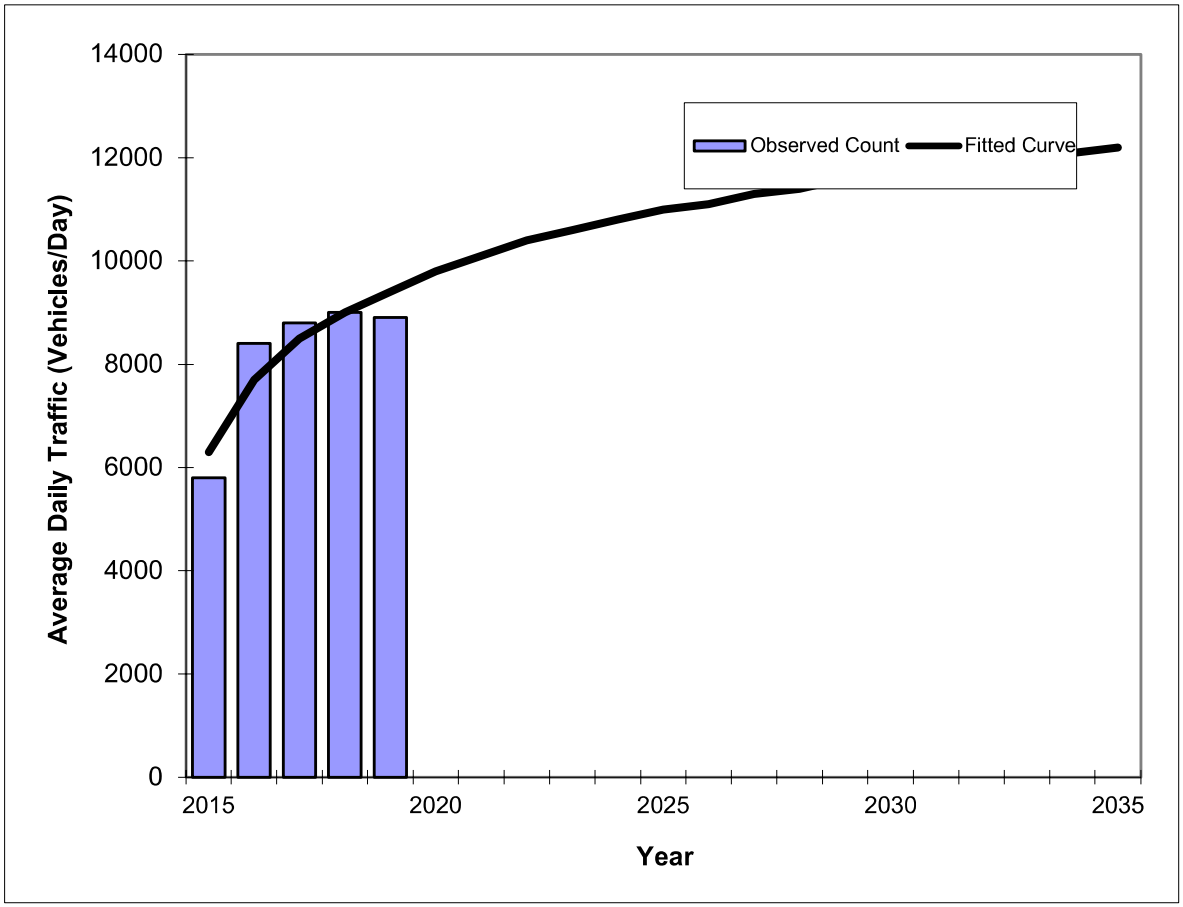
***Axle-Adjusted**

Traffic Trends - V03.a

NORMANDY BOULEVARD -- Graves Ave to Rhode Island Ave

FIN#	0
Location	1

County:	Volusia (79)
Station #:	0
Highway:	NORMANDY BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2015	5800	6300
2016	8400	7700
2017	8800	8500
2018	9000	9000
2019	8900	9400
2027 Opening Year Trend		
2027	N/A	11300
2033 Mid-Year Trend		
2033	N/A	12000
2034 Design Year Trend		
2034	N/A	12100
TRANPLAN Forecasts/Trends		

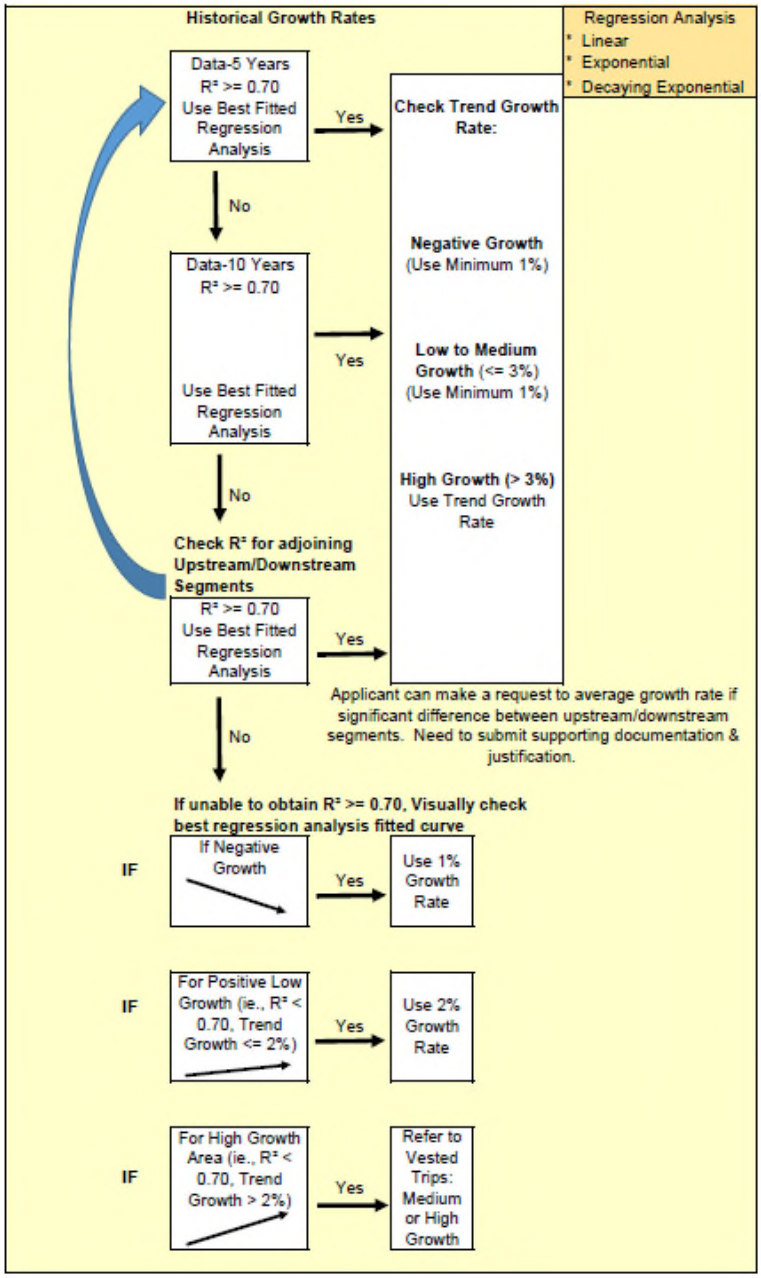
Trend R-squared:	83.17%
Compounded Annual Historic Growth Rate:	10.52%
Compounded Growth Rate (2019 to Design Year):	1.70%
Printed:	18-Jan-23

Decaying Exponential Growth Option

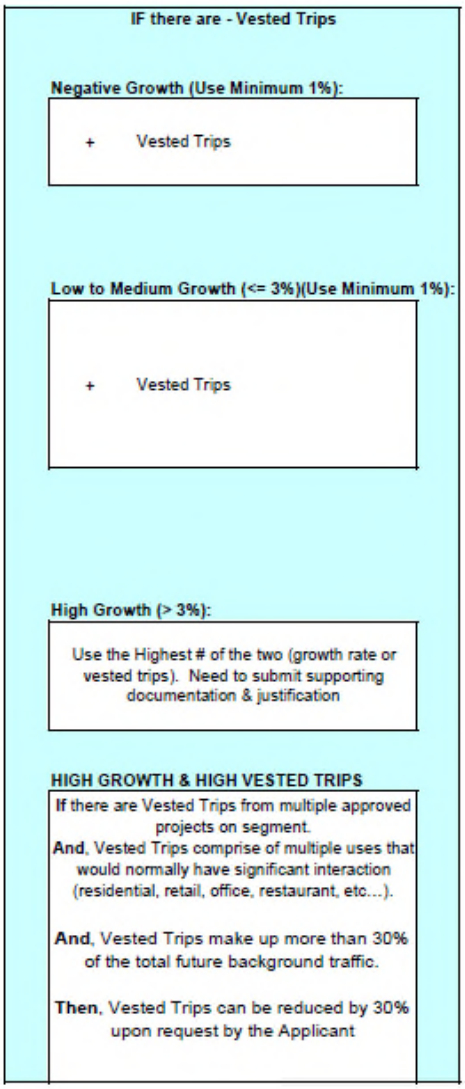
***Axle-Adjusted**

Volusia County Growth Rate Policy

Volusia County's Segment Growth Rates and Vested Trips Instructions Policy



AND



Signed: _____ Date: _____

Jon E. Cheney, P.E.

July 2022 Update: Volusia County is no longer accepting exponential regression due to concerns regarding high numbers of vested trips and exponential trends potentially over-estimate future traffic. Decaying exponential and linear are still permitted. The County may consider an exception to allow exponential regression depending on a unique situation presented by the developer.

Historical Growth Rate Selection Summary

		5 Year TRENDs (2015-19)						10 Year TRENDs (2010-19)									
Roadway	Segment	Lin R^2	Lin Hist GR	Exp R^2	Exp Hist GR	Dec Exp R^2	Dec Exp Hist GR	Lin R^2	Lin Hist GR	Exp R^2	Exp Hist GR	Dec Exp R^2	Dec Exp Hist GR	Growth Rate Selection	Growth Rate Type	Growth Rate Method	Reason
	SR 472 to Cassadaga Rd.	52.94%	1.38%	52.09%	1.35%	34.68%	1.16%	66.65%	2.80%	65.13%	2.53%	44.24%	2.31%	3.27%	Linear	Adjacent Segment Trend	Using the growth rate for adjacent segment on Kentucky Ave that has a R2 value>.70 for the linear 10 year growth rate.
Dr Martin Luther King Jr Beltway	Cassadaga Rd. to Orange Camp Rd.	15.81%	1.28%	14.73%	1.26%	8.70%	0.84%	65.09%	2.53%	64.55%	2.31%	45.56%	2.07%	2.53%	Linear	General Segment Trend - High	This segment and adjacent segments don't have a growth rate with a R2>.70. Using ten year linear trend for a visual trend.
	Orange Camp Rd. to Taylor Rd.	30.17%	-2.46%	31.46%	-2.56%	28.91%	-2.54%	36.55%	2.13%	37.74%	1.96%	34.87%	2.01%	2.00%	Exponential	General Segment Trend - Low	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 10 year exponential for a visual trend.
	Taylor Rd. to Beresford Ave.	66.12%	-3.63%	65.63%	-3.85%	61.07%	-3.58%	6.62%	0.54%	6.27%	0.53%	8.93%	0.64%	1.00%	Linear	General Trend - Negative	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 5 year linear trend as a visual trend.
Kentucky Avenue	Graves Ave. to SR 472	45.00%	0.96%	44.86%	0.95%	38.00%	0.71%	80.09%	3.27%	78.31%	3.01%	66.52%	3.03%	3.27%	Linear	10 Year Segment Trend	10 year linear growth rate meets criteria.
Veteran's Memorial Par	Rhode Island Ave. to Graves Ave.	32.96%	-4.19%	31.01%	-4.34%	50.42%	-5.29%	10.43%	1.23%	10.87%	1.11%	21.36%	1.74%	4.91%	Linear	Adjacent Segment Trend	Using the adjacent segment on Veteran's Memorial Pkwy that has a R2 value>.70 for the linear 10 year growth rate.
Cassadaga Road	Dr. Martin Luther King Jr Bltwy. to Macy Ave.	0.00%	0.00%	0.00%	0.00%	0.95%	0.00%	36.86%	1.67%	36.19%	1.57%	27.29%	1.57%	2.00%	Linear	General Segment Trend - Low	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 10 year linear as a visual trend.
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	96.17%	5.82%	96.53%	5.37%	87.61%	5.27%	-	-	-	-	-	-	5.37%	Exponential	5 Year Segment Trend	Five year exponential growth rate meets criteria.
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	71.51%	3.53%	72.73%	3.22%	54.69%	2.86%	-	-	-	-	-	-	3.22%	Exponential	5 Year Segment Trend	Five year exponential growth rate meets criteria.
	I-4/SR 472 to Wolf Pack Rn.	0.00%	0.00%	0.02%	0.07%	0.01%	0.00%	53.33%	3.05%	53.41%	2.69%	41.38%	2.62%	1.00%	Decaying Exponential	Adjacent Segment Trend	Using the adjacent segment on SR 472 that has a R2 value>.70 for the decaying exponential 5 year growth rate.
	Wolf Pack Rn. to Catalina Blvd.	3.28%	-0.24%	3.21%	-0.24%	9.47%	-0.49%	53.89%	1.87%	52.63%	1.74%	40.86%	1.62%	2.00%	Linear	General Segment Trend - Low	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 10 year linear as a visual trend.
Howland Boulevard	Catalina Blvd. to Providence Blvd.	2.50%	-0.41%	2.68%	-0.42%	0.13%	0.00%	49.22%	1.68%	48.82%	1.57%	43.08%	1.56%	2.00%	Linear	General Segment Trend - Low	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 10 year linear as a visual trend.
	US 17/92 to Martin Luther King Jr Bltwy.	83.05%	7.59%	83.79%	6.73%	71.98%	6.59%	-	-	-	-	-	-	6.73%	Exponential	5 Year Segment Trend	Five year exponential growth rate meets criteria.
SR 472	Martin Luther King Jr Bltwy. to I-4	54.87%	2.36%	54.93%	2.28%	76.03%	2.66%	-	-	-	-	-	-	1.00%	Decaying Exponential	5 Year Segment Trend	Five year decaying exponential growth rate meets criteria.
Macy Avenue	Ohio St. to Cassadaga Rd.	0.00%	0.00%	0.09%	0.00%	1.43%	1.74%	25.35%	1.85%	24.41%	1.73%	11.86%	1.73%	2.00%	Linear	General Segment Trend - Low	This segment and adjacent segments don't have a growth rate with a R2>.70. Using 10 year linear as a visual trend.
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	69.57%	3.95%	69.58%	3.73%	85.54%	5.14%	-	-	-	-	-	-	5.14%	Decaying Exponential	5 Year Segment Trend	Five year decaying exponential growth rate meets criteria.
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	63.45%	9.93%	61.31%	9.69%	83.17%	10.52%	53.25%	6.15%	49.03%	4.81%	29.30%	4.25%	10.52%	Decaying Exponential	5 Year Segment Trend	Five year decaying exponential growth rate meets criteria.

Appendix I:
Vested Trip Information

BTR DeLand

Traffic & Mobility Consultants

MEMORANDUM

September 7, 2022

Re: TM BTR Deland
Traffic Impact Analysis Methodology
City of Deland, Volusia County, Florida
Project № 22012

This is an outline of the methodology for the Traffic Impact Analysis (TIA) for the above referenced project. In general, the TIA will conform to the methodology requirements and guidelines documented by the River to Sea Transportation Planning Organization (R2CTPO).

Project Description

The proposed development consists of 233 single-family attached units (horizontal apartments) with anticipated buildout year 2025. The site consists of parcel 810600000124, located on the southeast corner of the intersection of Cassadega Road and Dr. Martin Luther King Jr Beltway, in the City of Deland, Florida, as shown in **Figure 1.** The proposed development will be accessed via two (2) access driveways; one (1) on Cassadega Road and one (1) connecting to Dr. Martin Luther King Jr Beltway. A copy of the development plan is provided in the **Attachments.**

Trip Generation

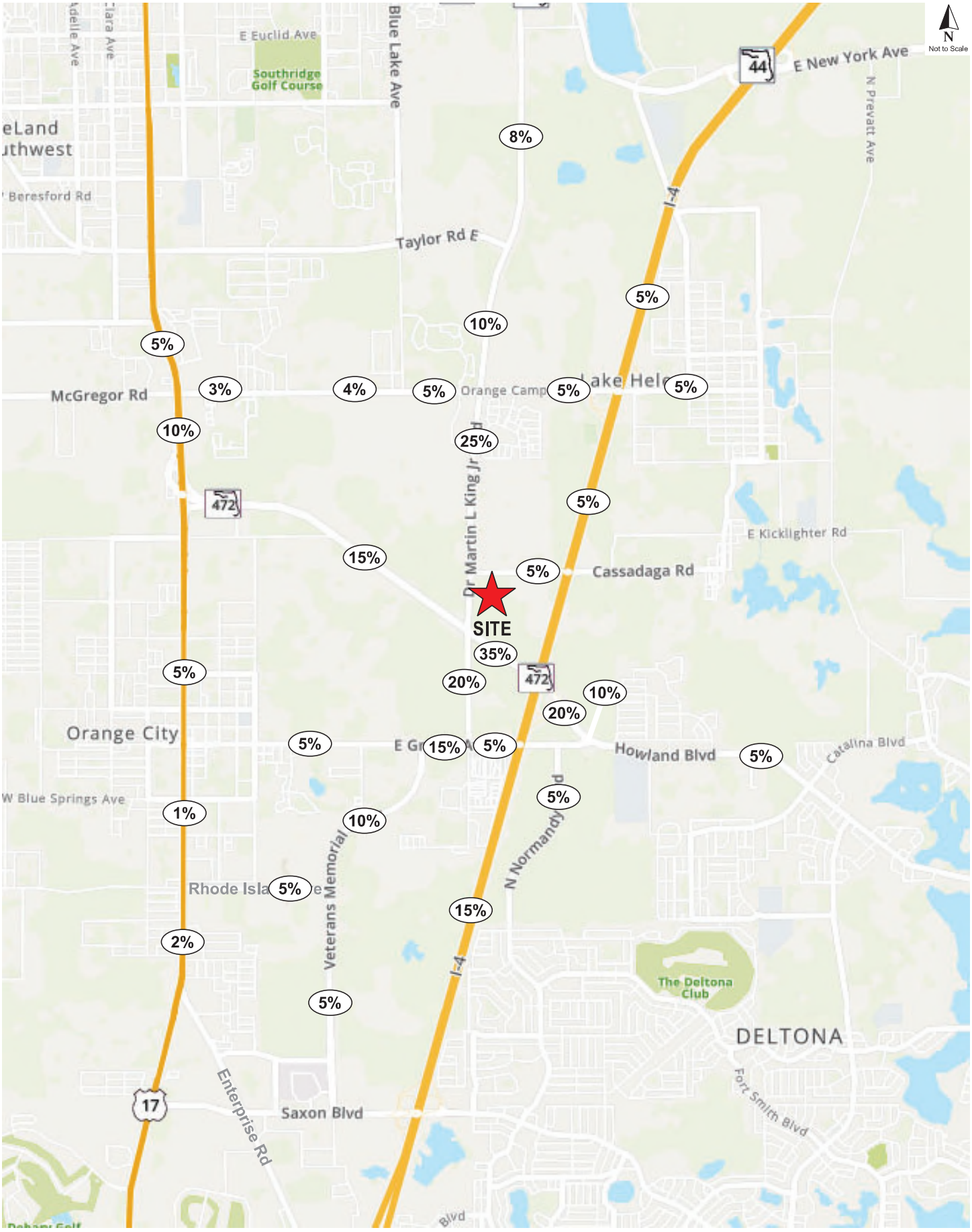
The trip generation analysis for the proposed development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*. The trip generation calculation for the project is summarized in **Table 1.** Detailed trip generation sheets are provided in the **Attachments.**

Table 1
Trip Generation Calculation

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
220	Multifamily Residential	233 DU	6.73	1,569	0.41	95	23	72	0.52	121	76	45

Trip Generation analysis based on ITE Trip Generation Manual, 11th Edition.

The proposed development is projected to generate 1,569 new daily trips of which 95 trips occur during the AM peak hour and 121 trips occur during the PM peak hour. Per the R2CTPO traffic study guidelines, the proposed development is anticipated to generate more than 1,000 daily new trips; therefore, requires a TIA.



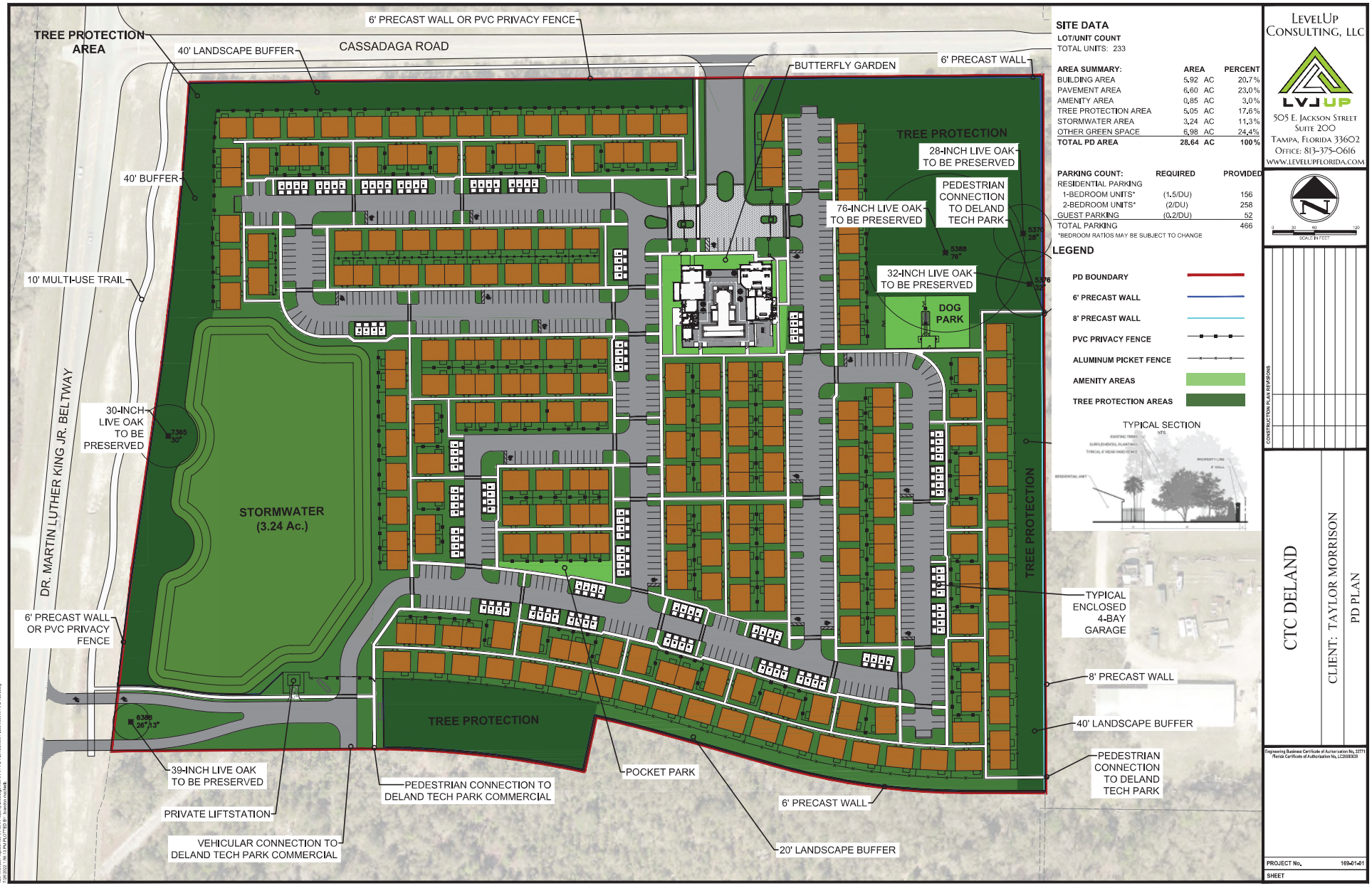
Project Trip Distribution
TM BTR Deland
22012

Figure **2**

Table 2
Study Area Significance Review

Roadway Segment	Count Stn #	A T	Function Class	# Lns	PK 2W Cap	Project Trips Dist	Trips	% Cap	Signif-icant?	C/NC VC/VNC?	In Study?
I-4											
Saxon Blvd to SR 472	1003	U	Prin-Art	6	10,060	15%	18	0.2%	NO	–	NO
SR 472 to Orange Camp Rd	485	U	Prin-Art	6	10,060	5%	6	0.1%	NO	–	NO
Orange Camp Rd to SR 44	497	U	Prin-Art	6	10,060	5%	6	0.1%	NO	–	NO
SR 472											
US 17 / 92 to CR 410 / MLK Blvd	472	U	Prin-Art	4	5,900	15%	18	0.3%	NO	–	NO
CR 410 / MLK Blvd to I-4 (end of state rd)	535	U	Prin-Art	4	3,580	35%	42	1.2%	NO	–	NO
US 17 / 92											
Enterprise Rd to Rhode Island Ave	444	U	Prin-Art	4	3,580	2%	2	0.1%	NO	–	NO
Rhode Island Ave to Graves Ave	5165	U	Prin-Art	4	3,580	1%	1	0.0%	NO	–	NO
Graves Ave to New York Ave	5166	U	Prin-Art	4	3,580	5%	6	0.2%	NO	–	NO
New York Ave to SR 472	445	U	Prin-Art	4	3,580	5%	6	0.2%	NO	–	NO
SR 472 to SR 15A / Taylor Rd	1004	U	Prin-Art	6	5,390	10%	12	0.2%	NO	NC	**YES**
Blue Lake Ave											
Orange Camp Rd to Taylor Rd	231	U	Maj-Coll	2	1,540	0%	0	0.0%	NO	–	NO
Taylor Rd to Beresford Ave	232	U	Maj-Coll	2	1,230	0%	0	0.0%	NO	–	NO
Cassadaga Rd											
W. Volusia Bltwy to Macy Ave	280	U	Maj-Coll	2	1,230	5%	6	0.5%	NO	–	NO
Graves Ave / CR 4145											
US 17 / 92 to Leavitt Ave	770	U	Maj-Coll	2	1,330	5%	6	0.5%	NO	–	NO
Leavitt Ave to Veteran's Memorial Pkwy	772	U	Maj-Coll	2	1,020	5%	6	0.6%	NO	–	NO
Veteran's Memorial Pkwy to Kentucky Ave	775	U	Min-Art	2	1,620	15%	18	1.1%	NO	C	**YES**
Kentucky Ave to Howland Blvd	900	U	Min-Art	2	1,620	5%	6	0.4%	NO	C	**YES**
Orange Camp Rd											
US 17 / 92 to Princeton	1380	U	Min-Art	2	1,270	3%	4	0.3%	NO	VC	**YES**
Princeton to Blue Lake Ave	1382	U	Min-Art	2	1,540	4%	5	0.3%	NO	VNC	**YES**
Blue Lake Ave to W Volusia Bltwy (Dr. MLK Jr)	1384	U	Min-Art	2	1,540	5%	6	0.4%	NO	VNC	**YES**
W Volusia Bltwy (Dr. MLK Jr) to I-4	1385	U	Min-Art	2	1,540	5%	6	0.4%	NO	VC	**YES**
Taylor Rd											
US 17 / 92 to Stratford Dr	1816	U	Min-Art	2	1,020	0%	0	0.0%	NO	–	NO
Stratford Dr to Blue Lake Ave	1818	U	Min-Art	2	1,540	0%	0	0.0%	NO	–	NO
Blue Lake Ave to Martin Luther King Bltwy	1819	U	Min-Art	2	1,230	0%	0	0.0%	NO	–	NO
W. Volusia Bltwy											
Saxon Blvd to Harley Strickland Blvd	1900	U	Min-Art	4	3,410	5%	6	0.2%	NO	C	**YES**
Harley Strickland Blvd to Rhode Island Ave	1901	U	Min-Art	2	1,540	5%	6	0.4%	NO	C	**YES**
Rhode Island Ave to Graves Ave	1902	U	Min-Art	2	1,620	10%	12	0.7%	NO	VC	**YES**
Graves Ave to SR 472	1030	U	Maj-Coll	2	1,540	20%	24	1.6%	NO	–	NO
SR 472 to Cassadaga Rd	1940	U	Min-Art	2	1,540	70%	85	5.5%	YES	–	**YES**
Cassadaga Rd to Orange Camp Rd	1942	U	Min-Art	2	1,540	25%	30	2.0%	NO	–	NO
Orange Camp Rd to Taylor Rd	1943	U	Min-Art	2	1,540	10%	12	0.8%	NO	–	NO
Taylor Rd to Beresford Ave Ext	1945	U	Min-Art	2	1,540	8%	10	0.6%	NO	–	NO

Source: Volusia County 2019 Average Annual Daily Traffic & Historical Counts
C/NC/VC/VNC=Critical/Near Critical and Vested Critical/Vested Near Critical from Volusia County Map



SITE DATA

LOT/UNIT COUNT

TOTAL UNITS: 233

AREA SUMMARY:	AREA		PERCENT
BUILDING AREA	5.92	AC	20.7%
PAVEMENT AREA	6.60	AC	23.0%
AMENITY AREA	0.85	AC	3.0%
TREE PROTECTION AREA	5.05	AC	17.6%
STORMWATER AREA	3.24	AC	11.3%
OTHER GREEN SPACE	6.98	AC	24.4%
TOTAL PD AREA	**28.64**	**AC**	**100%**

PARKING COUNT:	REQUIRED	PROVIDED
RESIDENTIAL PARKING		
1-BEDROOM UNITS*	(1.5/DU)	156
2-BEDROOM UNITS*	(2/DU)	258
GUEST PARKING	(0.2/DU)	52
TOTAL PARKING		466

*BEDROOM RATIOS MAY BE SUBJECT TO CHANGE

LEGEND

- PD BOUNDARY
- 6' PRECAST WALL
- 8' PRECAST WALL
- PVC PRIVACY FENCE
- ALUMINUM PICKET FENCE
- AMENITY AREAS
- TREE PROTECTION AREAS

TYPICAL SECTION

LEVELUP CONSULTING, LLC
505 E. JACKSON STREET
SUITE 200
TAMPA, FLORIDA 33602
OFFICE: 813-375-0616
WWW.LEVELUPFLORIDA.COM

SCALE IN FEET

CONSTRUCTION PLAN REVISIONS

CTC DELAND
CLIENT: TAYLOR MORRISON
PD PLAN

Engineering Business Certificate of Authorization No. 32711
Florida Certificate of Authorization No. LC0000209

PROJECT No. 169-01-01

SHEET

Kirk Subdivision/Canopy Terrace

KIRK SUBDIVISION
Project № 20147.2
April 2021

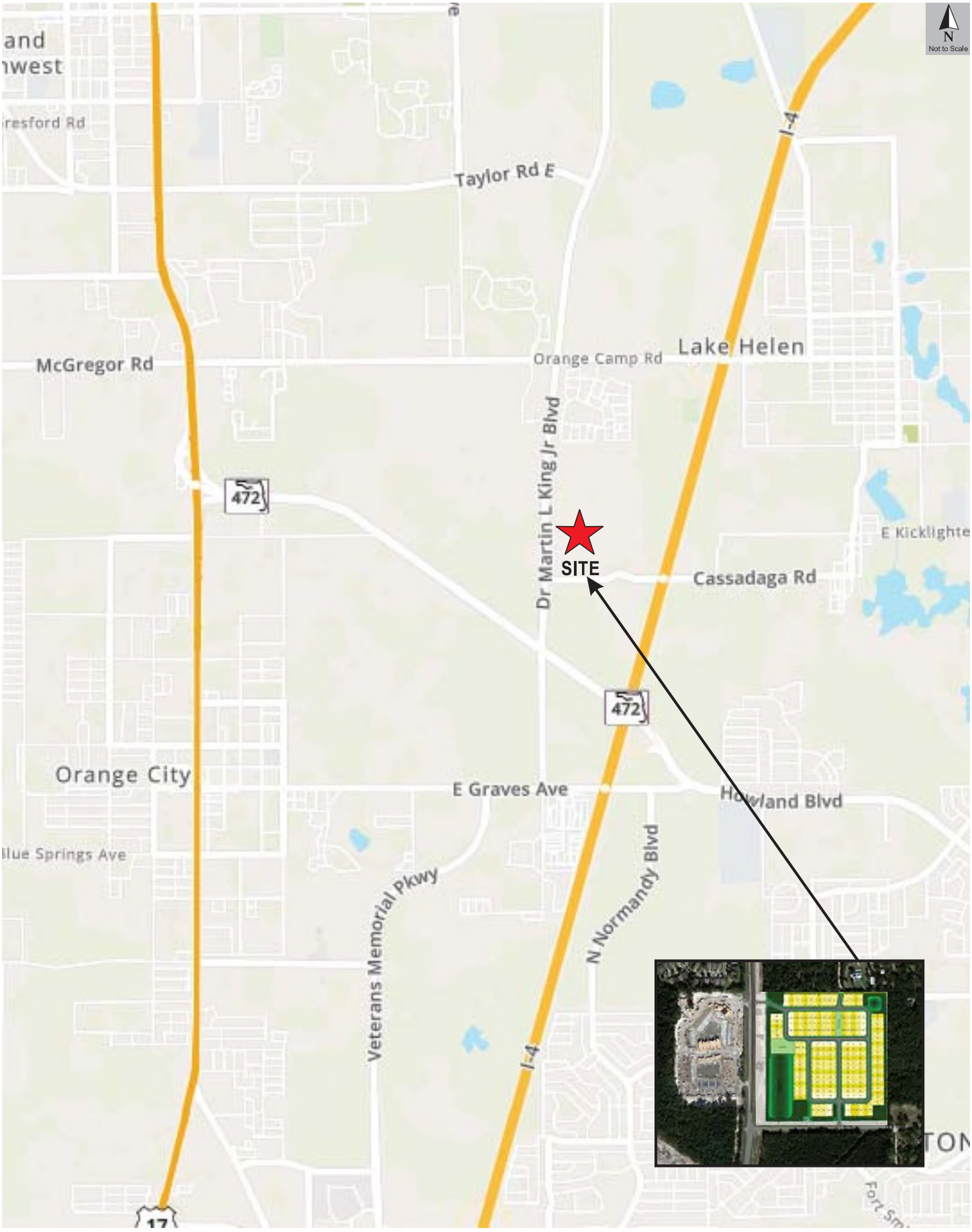
TRAFFIC IMPACT ANALYSIS
CITY OF DELAND
FLORIDA

Prepared by:

Traffic & Mobility Consultants
3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

Prepared for:

Pulte Group
4901 Vineland Road, Suite 460
Orlando, 32811



Site Location Map
Kirk Subdivision
20147.2

Figure 1

I-9

2.0 PROJECT TRAFFIC

2.1 Trip Generation

The trip generation of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. The trip generation for the project is summarized in **Table 1** and the ITE charts are provided in **Appendix C.**

Table 1
Trip Generation Analysis

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential	140 DU	10.12	1,417	0.74	104	26	78	1.00	140	88	52

ITE Trip Generation Manual, 10th Edition
Regression Equation used to calculate rates when R^2 is greater than 0.75 and has more than 20 studies

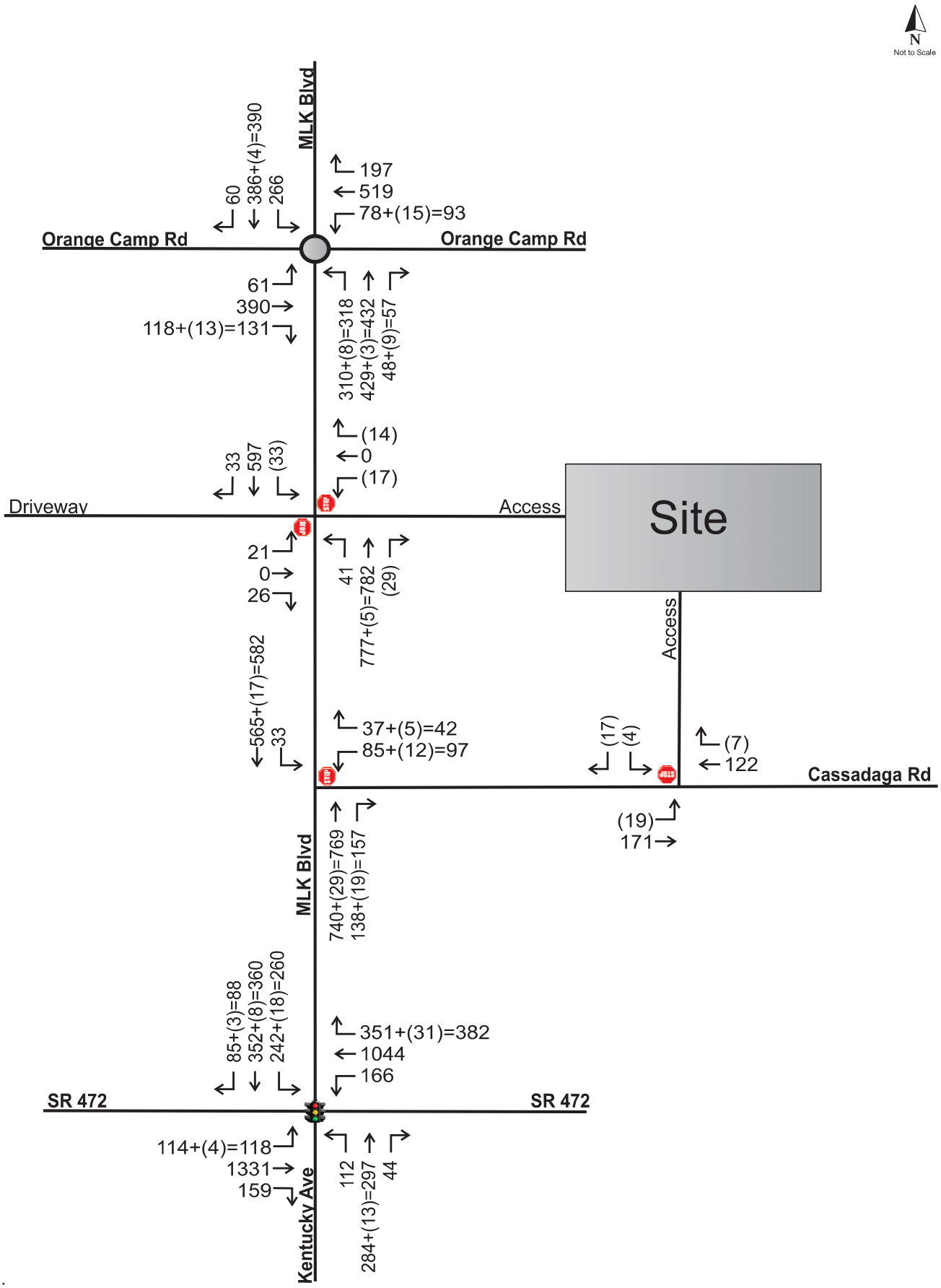
The proposed development is projected to generate 1,417 new daily trips, of which 104 trips will occur during the AM peak hour and 140 trips will occur during the PM peak hour.

2.2 Trip Distribution

A preliminary trip distribution pattern was developed using the Central Florida Regional Planning Model (CFRPM). The adopted model was modified to include a project specific Traffic Analysis Zone (TAZ) with the corresponding socio-economic data to reflect the proposed development. A Select Zone Analysis was executed for the project TAZ to determine the resultant trip distribution pattern on the surrounding transportation network. Manual adjustments of the model generated distribution pattern were applied to better reflect the local transportation network and prevailing travel patterns. The resulting trip distribution pattern is illustrated in **Figure 2** and the model output plots are included **Appendix D.**

Table 2
Study Area Determination

Road	Segment	Lns	LOS Std	PK 2W Cap	C/ NC?	Project Trips				
						Dist	Volume	Signif	y/n?	Study
US 17/92	Rhode Island Ave. to Graves Ave.	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	Graves Ave. to New York Ave.	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	New York Ave to SR 472	4	D	3,580		5%	7	0.20%	NO	NO
US 17/92	SR 472 to SR 15A/Taylor Rd.	6	D	5,390	NC	3%	4	0.07%	NO	**YES**
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	4	E	3,790		2%	3	0.08%	NO	NO
I-4	Saxon Blvd. to SR 472	6	D	10,060		25%	35	0.35%	NO	NO
I-4	SR 472 to Orange Camp Rd.	6	D	10,060		17%	24	0.24%	NO	NO
I-4	Orange Camp Rd. to SR 44	6	D	10,060		17%	24	0.24%	NO	NO
SR 472	US 17/92 to CR 4101/MLK Blvd	4	D	5,900		5%	7	0.12%	NO	NO
SR 472	CR 4101/MLK Blvd to I-4 (end of state road)	4	D	3,580		35%	49	1.37%	NO	NO
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	2	E	1,540		5%	7	0.45%	NO	NO
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	2	E	1,230		8%	11	0.89%	NO	**YES**
Graves Av/CR 4145	US 17/92 to Leavitt Ave.	2	E	1,330		5%	7	0.53%	NO	NO
Graves Av/CR 4145	Leavitt Ave. to Veteran's Memorial Pkwy	2	E	1,020		5%	7	0.69%	NO	NO
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentucky Ave.	2	E	1,620	C	5%	7	0.43%	NO	**YES**
Graves Av/CR 4145	Kentucky Ave. to Howland Blvd.	2	E	1,620	NC	5%	7	0.43%	NO	**YES**
Hill Ave.	Taylor Rd. to Beresford Ave.	2	E	1,020		5%	7	0.69%	NO	NO
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	4	E	3,410	VC	5%	7	0.21%	NO	**YES**
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	4	E	3,410	NC	4%	6	0.18%	NO	**YES**
Howland Blvd.	Catalina Blvd. to Providence Blvd.	4	E	3,410	VNC	3%	4	0.12%	NO	**YES**
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	4	E	3,410		2%	3	0.09%	NO	NO
Macy Ave.	Ohio St. to Cassadaga Rd.	2	C	470		2%	3	0.64%	NO	NO
McGregor Rd.	Spring Garden Ave. to US17/92	2	E	1,230		3%	4	0.33%	NO	NO
Orange Camp Rd.	US 17/92 to Princeton	2	E	1,270	VC	5%	7	0.55%	NO	**YES**
Orange Camp Rd.	Princeton. to Blue Lake Ave.	2	E	1,540	VNC	10%	14	0.91%	NO	**YES**
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (Dr MLK Jr)	2	E	1,540	VNC	10%	14	0.91%	NO	**YES**
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	4	E	3,410		17%	24	0.70%	NO	NO
Summit Ave.	SR 44 to Main St.	2	E	1,230		1%	1	0.08%	NO	NO
Taylor Rd. (DL)	Stratford Dr. to Blue Lake Ave.	2	E	1,540		3%	4	0.26%	NO	NO
Taylor Rd. (DL)	Blue Lake Ave. to Martin Luther King Bltwy.	2	E	1,230		5%	7	0.57%	NO	NO
W. Volusia Bltwy (Veteran's Memorial Pkwy)	Harley Strickland Blvd. to Rhode Island Ave.	2	E	1,540	C	3%	4	0.26%	NO	**YES**
W. Volusia Bltwy (Veteran's Memorial Pkwy)	Rhode Island Ave. to Graves Ave.	2	E	1,620	VC	5%	7	0.43%	NO	**YES**
W. Volusia Bltwy (Kentucky Ave)	Graves Ave to SR 472	2	E	1,540	VNC	5%	7	0.45%	NO	**YES**
W. Volusia Bltwy (Dr MLK Jr)	SR 472 to Cassadaga Rd.	2	E	1,540	VNC	55%	77	5.00%	**YES**	**YES**
W. Volusia Bltwy (Dr MLK Jr)	Cassadaga Rd. to Orange Camp Rd.	2	E	1,540	VNC	37%	52	3.38%	**YES**	**YES**
W. Volusia Bltwy (Dr MLK Jr)	Orange Camp Rd. to Taylor Rd.	2	E	1,540	VNC	5%	7	0.45%	NO	**YES**
W. Volusia Bltwy (Dr MLK Jr)	Taylor Rd. to Beresford Ave. Ext.	2	E	1,540		4%	6	0.39%	NO	NO



Legend:
Background+(Project)=Total

Projected PM Peak Hour Intersection Volumes
Kirk Subdivision
20147.2

Figure 7

I-12



SITE DATA

LOT / UNIT COUNT:

40' LOTS:	48
50' LOTS:	76
60' LOTS:	16
TOTAL:	140 LOTS

AREA SUMMARY:	AREA	PERCENT
SINGLE FAMILY LOT AREA:	19.25 AC	53%
INTERNAL RIGHT OF WAY:	5.85 AC	16%
FUTURE RIGHT OF WAY:	0.61 AC	1.69%
LIFT STATION TRACT:	0.04 AC	0.11%
OPEN SPACE:	10.41 AC	29%
10% USEABLE OPEN SPACE PROVIDED 3.62 AC (MIN)		
15% TREE PROTECTION AREA PROVIDED: 5.42 AC (MIN)		
TOTAL PD AREA	36.16 AC	100%

LOT SUMMARY

40' LOTS:	48
50' LOTS:	76
60' LOTS:	16
TOTAL:	140 LOTS

GRAPHIC SCALE
75 0 32.5 75 150 300
(IN FEET)
1 INCH = 150 FEET

KELLY, COLLINS & GENTRY, INC.
KCG
1700 SOUTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32806
(407) 896-1494 FAX (407) 896-1495

NO.	DATE	REVISION
1		
2		
3		
4		
5		
6		

PREPARED FOR: PULTE GROUP

PROJECT: KIRK SUBDIVISION

PD SKETCH PLAN

DRAWN: GPH
DESIGN: SCC
CHECKED: SRAG
JOB NO.: 1401.000
DATE: 11/30/20

SHEET 1 OF 1

I-13

The Crossings

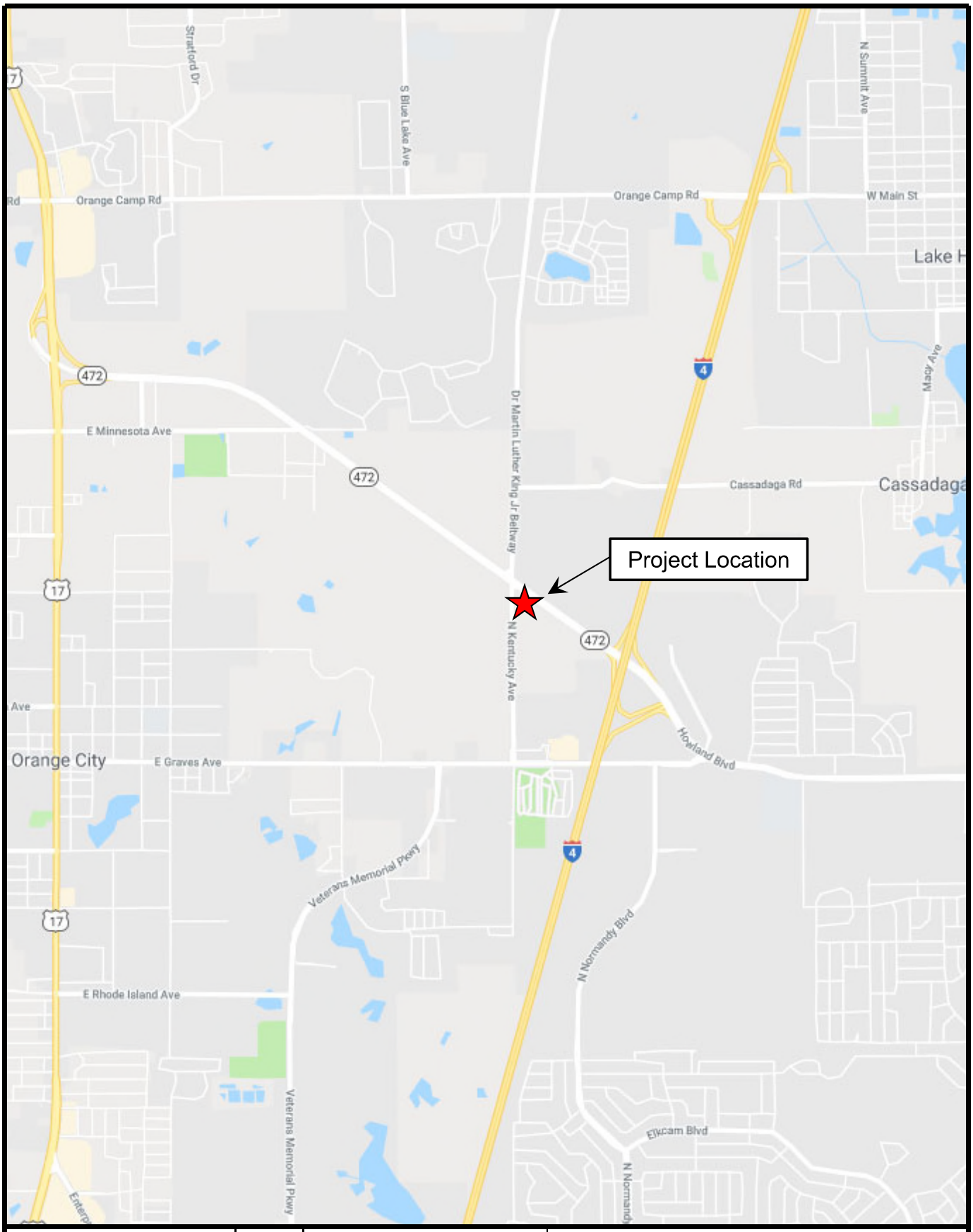
The Crossings
Orange City, Florida

Traffic Impact Analysis

Prepared for: Trycon Management Leasing, Inc.
By: LTG, Inc.

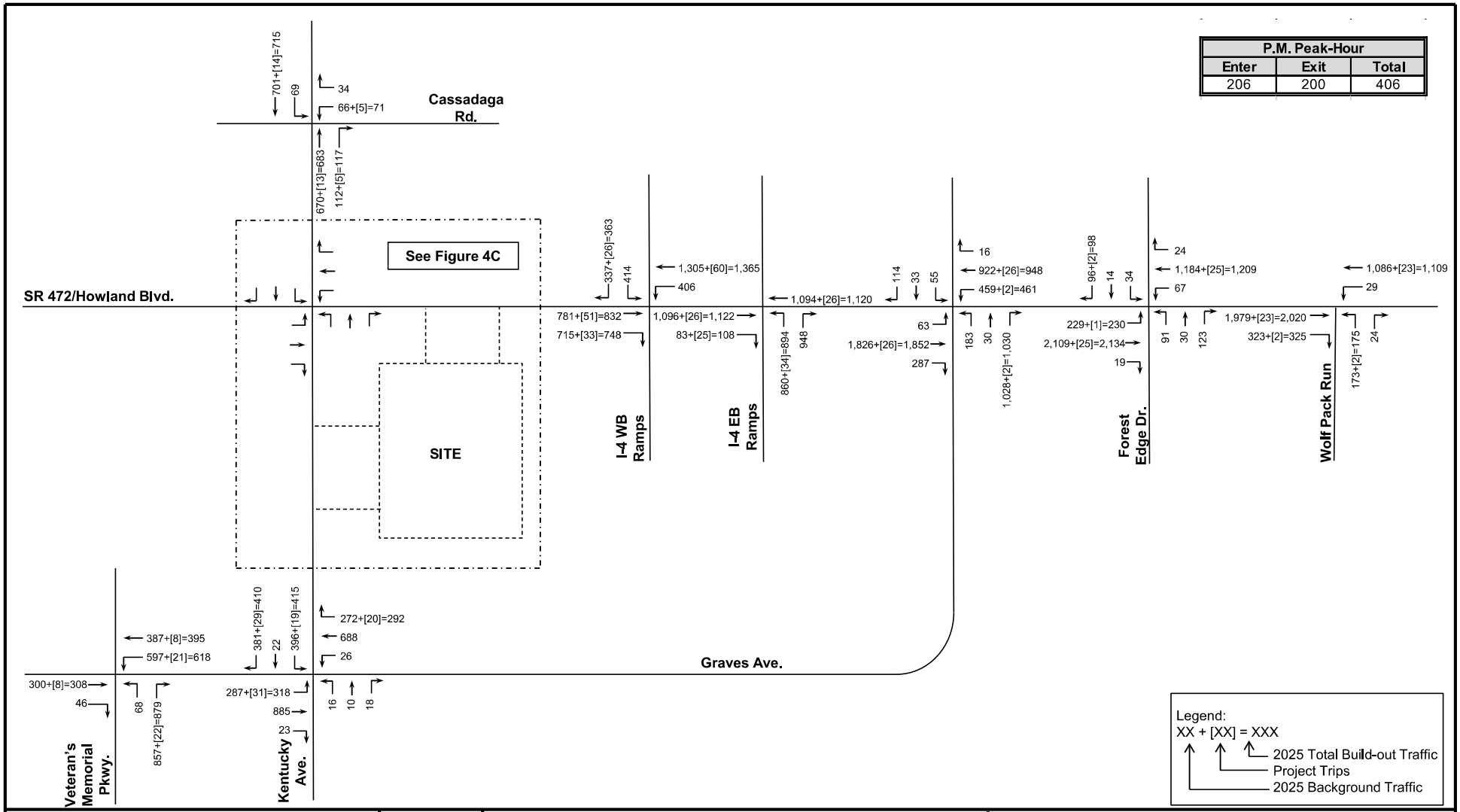
November 2020

LTG Engineering & Planning



West Volusia Crossings	N NTS	**Project Location Map**		LTG Engineering & Planning
		Project No.: 4888.05	Figure: 1	1450 W. Granada Blvd., Suite 2, Ormond Beach, Florida 32174 Telephone: 386.257.2571 Fax: 386.257.6996 EB# 0009227

I-16



West Volusia Crossings

N

NTS

2025 Build-Out
P.M. Peak-Hour Volumes

Project Number: 4888.05

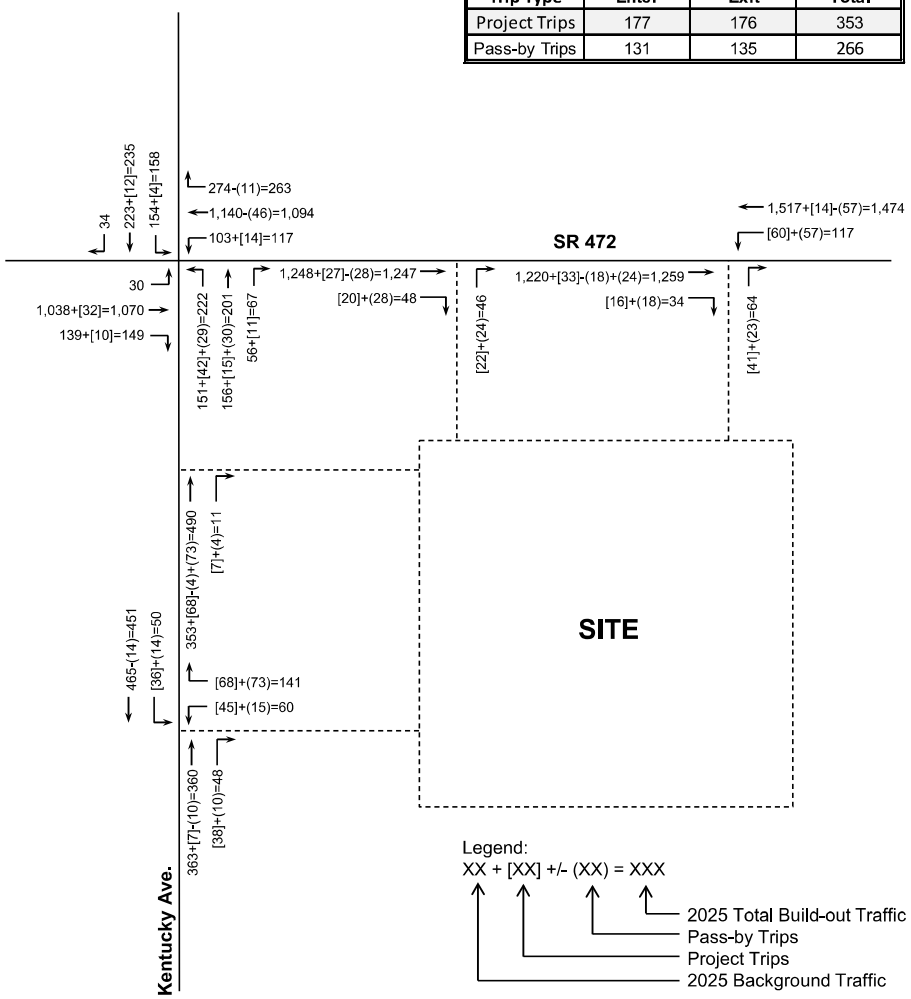
Figure 4B

LTG Engineering & Planning

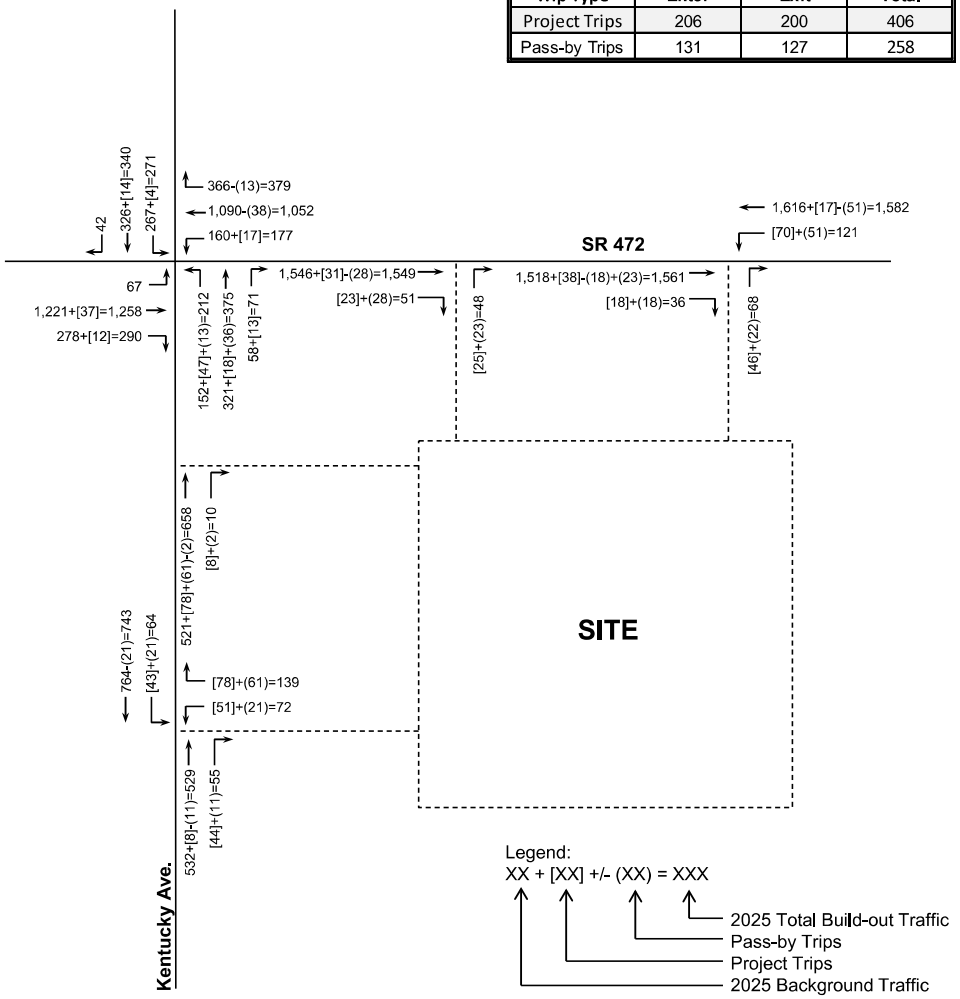
1450 W. Granada Blvd, Suite 2 – Ormond Beach, Florida 32174
Telephone: 386.257.2571 Fax: 386.257.6996 EB# 0009227

I-17

2025 AM Peak-Hour External Trips			
Trip Type	Enter	Exit	Total
Project Trips	177	176	353
Pass-by Trips	131	135	266



2025 PM Peak-Hour External Trips			
Trip Type	Enter	Exit	Total
Project Trips	206	200	406
Pass-by Trips	131	127	258



West Volusia Crossings

N

NTS

2025 Build-Out
A.M. and P.M. Peak-Hour Volumes

Project Number: 4888.05

Figure 4C

LTG Engineering & Planning
1450 W. Granada Blvd, Suite 2 – Ormond Beach, Florida 32174
Telephone: 386.257.2571 Fax: 386.257.6996 EB# 0009227

I-18

Table 14
2025 Build-Out P.M. Roadway Segment Analysis[1]
The Crossings

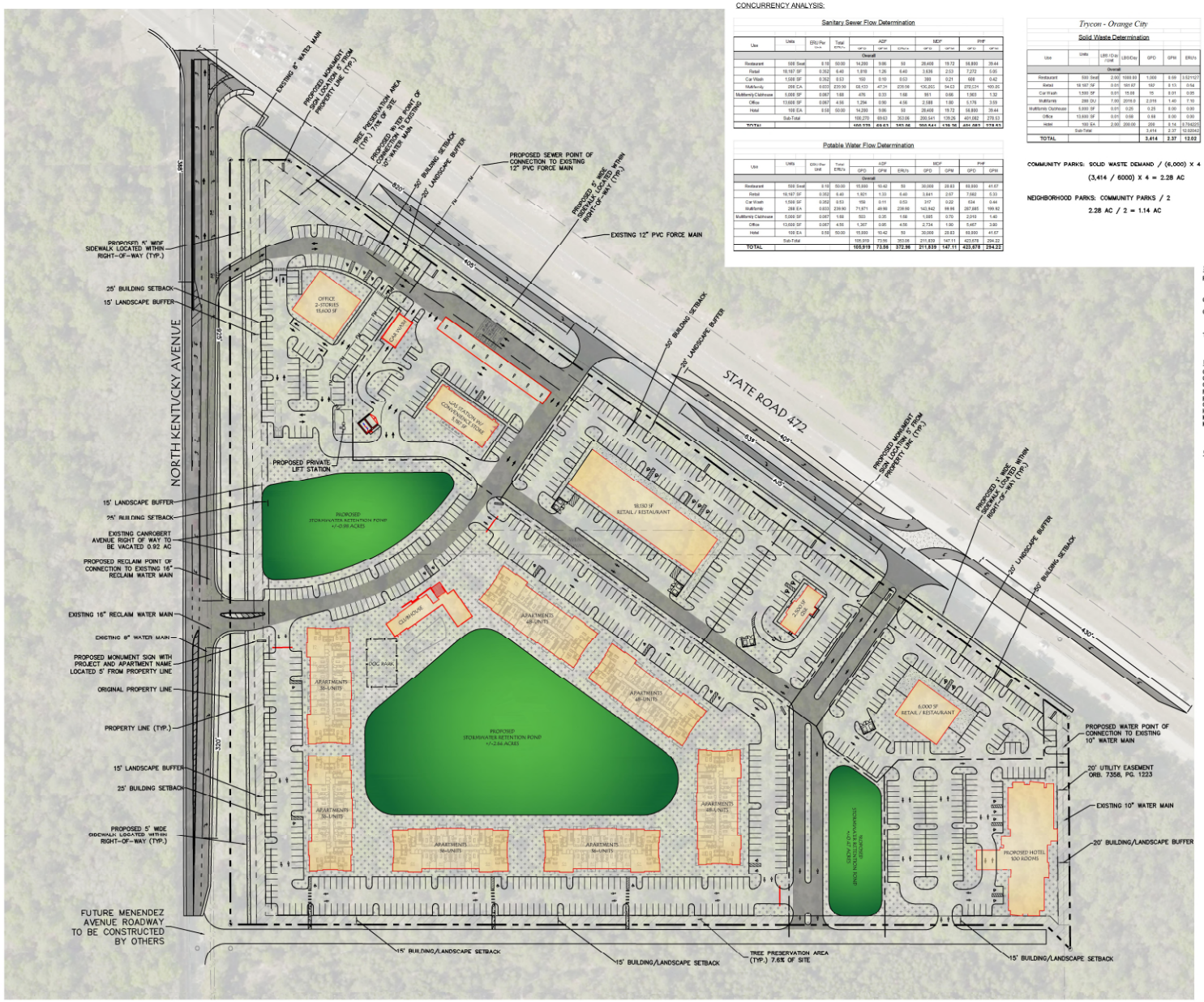
Roadway	Segment		No. of Lanes	Adopted LOS	Generalized Peak-Hour Two-Way Capacity	Existing Peak-Hour Two-Way Volume	2025 Growth Factor	Vested Trips	2025 Background Traffic	2025 Background PM Volume Exceed Adopted LOS?	Project Distribution	Project Trips	2025 Build-out Traffic	V/C Ratio	2025 Build-out Traffic Exceed Adopted LOS?
Catalina Blvd.	Howland Blvd.	Sixma Rd.	4	D	2,630	1,002	1.15	-	1,151	No	2.3%	9	1,160	0.44	No
	Sixma Rd.	Lake Helen-Osteen Rd.	2	D	960	856	1.15	-	983	Yes	1.7%	7	990	1.03	Yes
Graves Ave.	Veteran's Memorial Pkwy	Kentucky Ave.	3	E	2,000	1,600	-	424	2,024	Yes	14.6%	59	2,083	1.04	Yes
	Kentucky Ave.	Normandy Blvd.	2	E	1,620	1,400	-	771	2,171	Yes	9.6%	39	2,210	1.36	Yes
	Normandy Blvd.	Howland Blvd.	4	E	3,410	1,400	-	771	2,171	No	9.6%	39	2,210	0.65	No
Howland Blvd.	I-4/SR 472	Wolf Pack Run.	4	E	3,580	3,150	-	637	3,787	Yes	28.0%	114	3,901	1.09	Yes
	Wolf Pack Run	Catalina Blvd.	4	E	3,410	2,530	-	576	3,106	No	12.6%	51	3,157	0.93	No
	Providence Blvd.	Elkcam Blvd.	4	E	3,410	1,420	1.21	-	1,718	No	5.7%	23	1,741	0.51	No
Orange Camp Rd.	US 17-92	Princeton Ave.	2	E	1,270	1,160	1.32	-	1,532	Yes	1.0%	4	1,536	1.21	Yes
	Princeton Rd.	Blue Lake Ave.	2	E	1,540	1,060	1.31	-	1,386	No	0.7%	3	1,389	0.90	No
	Blue Lake Ave.	W Volusia Beltway.	2	E	1,540	1,270	1.34	-	1,700	Yes	2.6%	11	1,711	1.11	Yes
	W Volusia Beltway	I-4	4	E	3,410	1,390	1.24	-	1,718	No	2.3%	9	1,727	0.51	No
SR 472	W. Volusia Bltwy/CR 4101	I-4	4	D	3,580	2,655	1.20	-	3,191	No	42.0%	171	3,362	0.94	No
US 17/92	SR 15A/Taylor Rd.	SR 472	6	D	5,390	4,995	1.15	-	5,738	Yes	15.1%	61	5,799	1.08	Yes
W. Volusia Bltwy. (Dr. MLK Bltwy.)	Orange Camp Rd.	Cassadaga Rd.	2	E	1,540	1,010	-	378	1,388	No	6.7%	27	1,415	0.92	No
	Cassadaga Rd.	SR 472	2	E	1,540	1,080	-	246	1,326	No	8.8%	36	1,362	0.88	No
Kentucky Ave.	SR 472	Graves Ave.	2	E	1,540	950	-	254	1,204	No	25.5%	104	1,308	0.85	No
Veteran's Memorial Pkwy.	Rhode Island Ave.	Harley Strickland Blvd.	4	E	3,410	1,570	-	641	2,211	No	6.1%	25	2,236	0.66	No

[1]Includes improvements recommended in existing conditions, which are not currently funded for construction, with the exception of Howland Boulevard from Providence Boulevard to Elkcam Boulevard.

Table 15
2025 Build-Out P.M. Roadway Segment Analysis - Improved
The Crossings[1]

Roadway	Segment		No. of Lanes	Adopted LOS	Peak-Hour Two-Way Capacity	Existing Peak-Hour Two-Way Volume	Growth Factor	Vested Trips	Background Traffic	2025 Background Volume Exceed Adopted LOS?	Project Distribution	Project Trips	2025 Build-out Traffic	V/C Ratio	2025 Build-out Traffic Exceed Adopted LOS?
Catalina Blvd.	Sixma Rd.	Lake Helen-Osteen Rd.	4	D	2,630	856	1.15	-	983	No	1.7%	7	990	0.38	No
Graves Ave.	Veteran's Memorial Pkwy	Kentucky Ave.	4	E	3,410	1,600	-	424	2,024	No	14.6%	59	2,083	0.61	No
	Kentucky Ave.	Normandy Blvd.	4	E	3,410	1,400	-	771	2,171	No	9.6%	39	2,210	0.65	No
Howland Blvd.	I-4/SR 472	Wolf Pack Run.	6	E	5,390	3,150	-	637	3,787	No	28.0%	114	3,901	0.72	No
Orange Camp Rd.	US 17-92	Princeton Ave.	4	E	3,410	1,160	1.32	-	1,532	No	1.0%	4	1,536	0.45	No
	Blue Lake Ave.	W Volusia Beltway.	4	E	3,410	1,270	1.34	-	1,700	No	2.6%	11	1,711	0.50	No
US 17/92	SR 15A/Taylor Rd.	SR 472	8	D	7,210	4,995	1.15	-	5,738	No	15.1%	61	5,799	0.80	No

[1]Improved capacities were determined using the FDOT Generalized Service Tables and comparable capacities from Volusia County's AADT Table; Improvements not currently funded for construction.



CONCURRENCY ANALYSIS:

Sanitary Sewer Flow Determination

Use	Units	ERU Per Unit	Total ERUs	ADF GPD	ADF GPM	ADF ERUs	MDF GPD	MDF GPM	PHF GPD	PHF GPM
Overall										
Restaurant	500 Seat	0.10	50.00	14,280	9.96	50	28,408	19.72	56,800	39.44
Retail	18,187 SF	0.352	6.40	1,818	1.26	6.40	3,636	2.53	7,272	5.05
Car Wash	1,500 SF	0.352	0.53	150	0.10	0.53	300	0.21	600	0.42
Multifamily	288 EA	0.833	239.90	68,133	47.31	239.98	136,265	94.63	272,531	189.26
Multifamily Clubhouse	5,000 SF	0.067	1.68	475	0.33	1.68	951	0.66	1,903	1.32
Office	13,600 SF	0.067	4.56	1,294	0.90	4.56	2,588	1.80	5,176	3.59
Hotel	100 EA	0.50	50.00	14,280	9.96	50	28,408	19.72	56,800	39.44
	Sub-Total			100,270	69.63	353.06	200,541	139.26	401,082	278.53
TOTAL				100,270	69.63	353.06	200,541	139.26	401,082	278.53

Potable Water Flow Determination

Use	Units	GPD / Per Unit	Total ERUs	ADF GPD	ADF GPM	ADF ERUs	MDF GPD	MDF GPM	PHF GPD	PHF GPM
Overall										
Restaurant	500 Seat	0.10	50.00	15,000	10.42	50	30,000	20.83	60,000	41.67
Retail	18,187 SF	0.352	6.40	1,821	1.33	6.40	3,641	2.67	7,282	5.33
Car Wash	1,500 SF	0.352	0.53	158	0.11	0.53	317	0.22	634	0.44
Multifamily	288 EA	0.833	239.90	71,871	49.98	239.98	143,842	99.96	287,685	199.92
Multifamily Clubhouse	5,000 SF	0.067	1.68	503	0.35	1.68	1,005	0.70	2,010	1.40
Office	13,600 SF	0.067	4.56	1,367	0.95	4.56	2,734	1.90	5,467	3.80
Hotel	100 EA	0.50	50.00	15,000	10.42	50	30,000	20.83	60,000	41.67
	Sub-Total			105,919	73.56	353.06	211,839	147.11	423,078	294.22
TOTAL				105,919	73.56	372.96	211,839	147.11	423,078	294.22

Tycon - Orange City

Solid Waste Determination

Use	Units	LBS / Day / Unit	LBS/Day	GPD	GPM	ERUs
Overall						
Restaurant	500 Seat	2.00	1000.00	1,000	0.69	3.521127
Retail	18,187 SF	0.01	181.87	182	0.13	0.64
Car Wash	1,500 SF	0.01	15.00	15	0.01	0.05
Multifamily	288 DU	7.00	2016.0	2,016	1.40	7.10
Multifamily Clubhouse	5,000 SF	0.01	0.25	0.25	0.00	0.00
Office	13,600 SF	0.01	0.68	0.68	0.00	0.00
Hotel	100 EA	2.00	200.00	200	0.14	0.704225
	Sub-Total			3,414	2.37	12.02042
TOTAL				3,414	2.37	12.02

COMMUNITY PARKS: SOLID WASTE DEMAND / (6,000) X 4

(3,414 / 6000) X 4 = 2.28 AC

NEIGHBORHOOD PARKS: COMMUNITY PARKS / 2

2.28 AC / 2 = 1.14 AC

SITE DATA:

PROJECT AREA:
(COMBINED PARCELS 1 & 2) ±27.48 AC

COMMON OPEN SPACE REQUIRED: 8.24 AC (30.0%)

COMMON OPEN SPACE PROVIDED: ±9.90 AC (36.0%)
COMMON OPEN SPACE IS TO BE MAINTAINED BY PLANNED DEVELOPMENT

TREE PRESERVATION AREA: ±2.10 AC (7.6%)

DEVELOPMENT DENSITY:

CONVENIENCE STORE:	5,187 SF
CAR WASH:	1,500 SF
QUICK SERVICE RESTAURANT:	2,500 SF
RETAIL/RESTAURANT:	18,130 SF
RETAIL/RESTAURANT:	6,000 SF
OFFICE:	13,600 SF
HOTEL:	100 ROOMS
MULTIFAMILY APARTMENTS:	288 UNITS
MULTIFAMILY CLUBHOUSE:	5,000 SF

GENERAL NOTES:

1. POTABLE WATER IS SUPPLIED BY THE CITY OF ORANGE CITY.
2. RECLAIMED WATER IS SUPPLIED BY VOLUSIA COUNTY.
3. SANITARY SEWER TREATMENT/WASTEWATER DISPOSAL SHALL BE PROVIDED BY VOLUSIA COUNTY.
4. THE CURBS, CURB AND GUTTERS, CURBS AND GUTTER ENDINGS, CONCRETE SIDEWALKS, SIDEWALK CURB RAMPS, DETECTABLE WARNING, DRIVEWAYS, CROSSWALKS, STOP MARKINGS, SIGNS, STRIPING AND PAVEMENTS MARKINGS MUST COMPLY WITH THE FDOT STANDARDS.
5. THE CONTRACTOR MUST SUBMIT ONE SET OF AS-BUILT PLANS, SIGNED AND SEALED BY THE SURVEYOR OF RECORD, INCLUDING A CD IN AUTOCAD FORMAT, PDF AND CSV FILE TO THE PUBLIC WORKS DEPARTMENT AT THE CITY OF ORANGE CITY.
6. THE CONTRACTOR MUST REPAIR THE EXISTING ROAD, SIDEWALKS, CURBS, LANDSCAPING AND UTILITIES, IF IT IS DISTURBED BY THE CONSTRUCTION PROCESS.
7. CONSTRUCTION OF THE PROJECT MUST BE IN ACCORDANCE WITH THE CITY OF ORANGE CITY DESIGN STANDARDS AND SPECIFICATION MANUAL.

LEGEND

- PROPERTY LINE (TYP.)
- COMMON AREA ASPHALT PAVEMENT
- COMMON AREA OPEN SPACE
- TREE PRESERVATION AREA

Kimley»Horn
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PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM CA 00000696

No.	REVISIONS	DATE	BY

LICENSED PROFESSIONAL
BRINT A. LENZEN, P.E.
FLORIDA LICENSE NUMBER 78537
DATE: 10/9/2020

KHA PROJECT 149734003
DATE 10/9/2020
SCALE AS SHOWN
DESIGNED BY JCS
DRAWN BY JCS
CHECKED BY BAL

THE CROSSINGS
ORANGE CITY FLORIDA

SITE PLAN

SHEET NUMBER
PD-3

Drawing name: K:\ORL_Civil\149734003 --Orange City SR472\CAD\PD\PD-3.dwg Layout1 Oct 09, 2020 9:55am by Jarod.Stubbs
Information shown hereon is preliminary in nature and is subject to change. It is not to be used for construction, bidding or permitting purposes. Kimley-Horn and Associates, Inc. makes no warranties, expressed or implied, as to the accuracy or completeness of this information.

North Kentucky Distribution Center

North Kentucky Distribution Center

Traffic Impact Analysis

City of Orange City, FL

October 2022

Kimley»Horn

PROJECT TRIP GENERATION

Trip generation for the proposed development was calculated per procedures published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 11th Edition*. Land Use Code (LUC) 150 (Warehousing) was used to represent the proposed development. As the development's primary use will be the storage of materials, LUC 150 (Warehousing) is more appropriate to use than LUC 110 (General Light Industrial) which is defined by ITE as "a facility dedicated to light industrial activities such as printing, material testing, or assembly of data processing equipment". Truck trips were estimated using the appropriate fitted curve equation or average rate for LUC 150 that were published in the ITE *Trip Generation Manual.* The total car trips were calculated by subtracting the total truck trips from the total vehicle trips.

Table 1 summarizes the Daily, AM peak, and PM peak trip generation calculations for both truck and car trips. The resulting trip calculations indicate that the proposed development is anticipated to generate 1,037 total daily trips, 107 total AM peak hour trips (82 inbound and 25 outbound), and 114 total PM peak hour trips (32 inbound and 82 outbound) upon buildout. The trip generation potential of the proposed development was utilized to assess project impacts on the surrounding transportation network.

Table 1: Trip Generation Calculations

	Land Use	ITE LUC	Size	Units	Trip Rate[1]	Daily Trip Generation				
						Total	In[1]		Out[1]	
Daily	Warehousing	150	**632.240**	KSF	1.64	1,037	50%	519	50%	518
	Total Vehicle Trips Generated					**1,037**	**519**		**518**	
	Total Truck Trips[2]	*150*	*632*	*KSF*	*0.60*	*379*	*50%*	*190*	*50%*	*189*
	Total Car Trips[3]	*150*	*632*	*KSF*	*1.04*	*658*	*50%*	*329*	*50%*	*329*
	Land Use	**ITE LUC**	**Size**	**Units**	**Trip Rate[1]**	**AM Peak Hour Trip Generation**				
						Total	**In[1]**		**Out[1]**	
AM Peak Hour	Warehousing	150	**632.240**	KSF	0.17	107	77%	82	23%	25
	Total Vehicle Trips Generated					**107**	**82**		**25**	
	Total Truck Trips[2]	*150*	*632*	*KSF*	*0.02*	*13*	*52%*	*7*	*48%*	*6*
	Total Car Trips[3]	*150*	*632*	*KSF*	*0.15*	*94*	*80%*	*75*	*20%*	*19*
	Land Use	**ITE LUC**	**Size**	**Units**	**Trip Rate[1]**	**PM Peak Hour Trip Generation**				
						Total	**In[1]**		**Out[1]**	
PM Peak Hour	Warehousing	150	**632.240**	KSF	0.18	114	28%	32	72%	82
	Total Vehicle Trips Generated					**114**	**32**		**82**	
	Total Truck Trips[2]	*150*	*632*	*KSF*	*0.03*	*19*	*52%*	*10*	*48%*	*9*
	Total Car Trips[3]	*150*	*632*	*KSF*	*0.15*	*95*	*23%*	*22*	*77%*	*73*

Notes: [1] Vehicle trip rates and directional splits per data and procedures outlined in ITE Trip Generation Manual,11th Ed

[2] Truck trip rates and directional splits per data and procedures outlined in ITE Trip Generation Manual,11th Ed

[3] Car trip volumes found by using the following formula: Total Vehicles Generated - Total Truck Trips

Table 4: Future Background (2024) and Buildout (2024) PM Peak Hour Roadway Segment Summary

Roadway		Adopted LOS [1]	Peak Hour Two-Way Maximum Service Volume [1]	Existing (2022) Peak Season Two-Way Peak Hour Volume	Applied Growth Rate [2]	Vested Trips	Future Background (2024) PM Peak Hour Conditions [3]			Improved Future Background (2024) PM Peak Hour Conditions				PM Peak Hour Project Traffic				Future Buildout (2024) PM Peak Hour Conditions [5]		
From	To						Two-Way Peak Hour Volume	v/c Ratio	LOS	Improved No. of Lanes	Improved MSV	v/c Ratio	LOS	% Project Distribution (Cars) [4]	Project Trips (Cars)	% Project Distribution (Trucks) [4]	Project Trips (Trucks)	Two-Way Peak Hour Volume	v/c Ratio	LOS
I-4																				
Dirksen Dr	Saxon Blvd	D	10,510	10,292	1%	480	10,978	1.04	F	8	13,390	0.82	D	8%	8	50%	10	10,996	0.82	D
US 17/92																				
SR 472	SR 15A / Taylor Rd	D	5,390	5,716	5.32%	85	6,409	1.19	F	8	7,210	0.89	C	14%	13	0%	0	6,422	0.89	C
Graves Avenue / CR 4145																				
Veteran's Memorial Pkwy	Kentucky Ave	E	1,620	1,656	1%	524	2,213	1.37	F	4	3,410	0.65	C	17%	16	0%	0	2,229	0.65	C
Kentucky Ave	Normandy Blvd	E	1,620	1,434	1%	1,175	2,638	1.63	F	4	3,410	0.77	C	21%	20	0%	0	2,658	0.78	C
Normandy Blvd	Howland Blvd	E	2,740	1,650	0%	1,175	2,825	1.03	F	6	5,120	0.55	C	15%	14	0%	0	2,839	0.55	C
Howland Blvd																				
I-4 / SR 472	Wolf Pack Run	E	3,410	2,555	1%	1,003	3,609	1.06	F	6	5,120	0.70	C	20%	19	0%	0	3,628	0.71	C
Wolf Pack Run	Catalina Blvd	E	3,410	2,333	1%	911	3,291	0.97	E					14%	13	0%	0	3,304	0.97	E
Providence Blvd	Elkcam Blvd [6]	E	3,410	1,121	1%	328	1,471	0.43	C					10%	10	0%	0	1,481	0.43	C
Lake Helen-Osteen Rd																				
Haulover Blvd	Catalina Blvd	E	1,230	1,101	1%	47	1,170	0.95	E					2%	2	0%	0	1,172	0.95	E
Orange Camp Rd																				
Princeton Rd	Blue Lake Ave	E	1,540	1,160	0%	188	1,348	0.88	C					1%	1	0%	0	1,349	0.88	C
Blue Lake Ave	W Volusia Bltwy (Dr MLK Jr)	E	1,540	1,210	0%	212	1,422	0.92	D					3%	3	0%	0	1,425	0.93	D
W Volusia Bltwy (Dr MLK Jr)	I-4 [7]	E	3,410	1,182	1%	357	1,563	0.46	C					7%	7	0%	0	1,570	0.46	C
Saxon Blvd																				
Veteran's Memorial Pkwy	FDOT Park & Ride	E	5,140	3,386	2%	344	3,865	0.75	C					5%	5	0%	0	3,870	0.75	C
FDOT Park & Ride	I-4	E	5,140	2,707	1%	346	3,107	0.60	C					5%	5	0%	0	3,112	0.61	C
W. Volusia Bltwy (Veteran's Memorial Pkwy)																				
Saxon Blvd	Harley Strickland Blvd	E	3,410	1,283	1%	0	1,309	0.38	C					10%	10	0%	0	1,319	0.39	C
Harley Strickland Blvd	Rhode Island Ave	E	1,540	1,535	1%	409	1,975	1.28	F	4	3,410	0.58	C	11%	10	0%	0	1,985	0.58	C
Rhode Island Ave	Graves Ave	E	1,620	1,212	1%	342	1,578	0.97	E					14%	13	0%	0	1,591	0.98	E
W. Volusia Bltwy (Veteran's Memorial Pkwy Extension / Kentucky Ave)																				
Graves Ave	SR 472	E	1,540	928	2%	370	1,335	0.87	C					54%	51	100%	19	1,405	0.91	D
W. Volusia Bltwy (Dr MLK Jr)																				
SR 472	Cassadaga Rd	E	1,540	1,061	2%	386	1,489	0.97	E					19%	18	0%	0	1,507	0.98	E
Cassadaga Rd	Orange Camp Rd	E	1,540	1,010	2%	466	1,516	0.98	E					16%	15	0%	0	1,531	0.99	E
Orange Camp Rd	Taylor Rd	E	1,540	1,051	2%	353	1,446	0.94	E					6%	6	0%	0	1,452	0.94	E

Notes:
1. Peak hour two-way service capacities and adopted level of service are based on the 2021 Volusia County Average Annual Daily Traffic & Historical Counts Report.
2. Applied growth rates were calculated based on historical annual average daily traffic volumes, in accordance with the approved methodology.
3. Future background (non-project) traffic volumes are the summation of the existing peak season volumes, background growth, and committed/vested trips.
4. The percent project traffic is the maximum across the segment.
5. Buildout project traffic volumes are the summation of future non-project traffic and project traffic.
6. Howland Boulevard from Providence Boulevard to Elkcam Boulevard is funded to be widened to four-lane section.
7. Orange Camp Road from west of W Volusia Beltway (Dr MLK Jr) to I-4 is funded to be widened to a four-lane section.

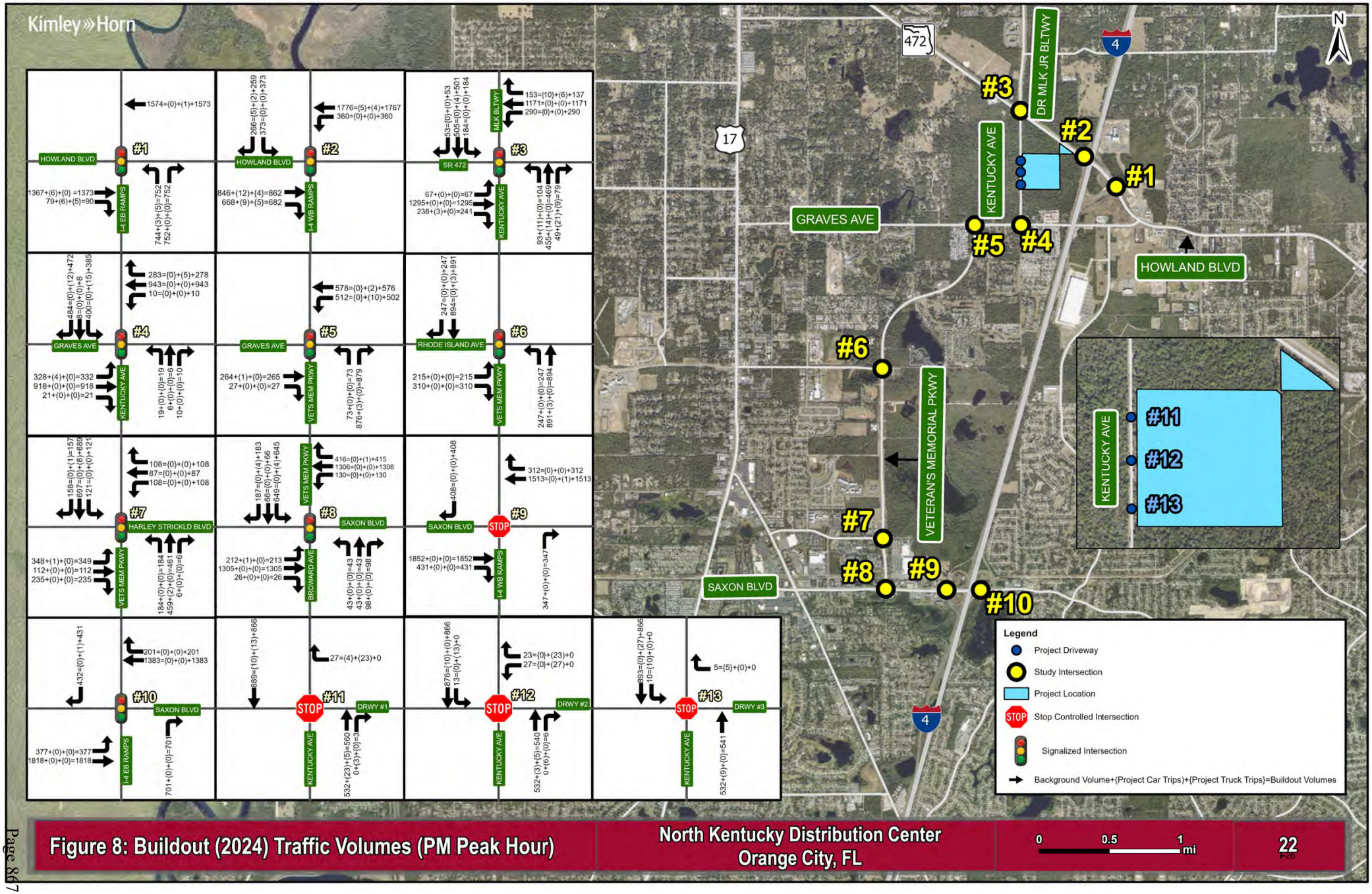


Figure 8: Buildout (2024) Traffic Volumes (PM Peak Hour)

North Kentucky Distribution Center
Orange City, FL

22
I-26

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Drawing name: K:\ORL_Civil\249071000-Orange City DD\CADD\PD\PlanSheets\PD-3.dwg PD-3 Aug 18, 2022 5:54pm by Joe.Pellerin

Parc Hill

Parc Hill Mixed Use PUD
Orange City, Florida

Traffic Impact Analysis

Prepared for: G.L. Summitt Engineering, Inc.
By: Lassiter Transportation Group, Inc.
***Revised* October 2016**

Lassiter Transportation Group, Inc.
Engineering and Planning



No.	Intersection
1	Saxon Boulevard at Enterprise Road
2	Saxon Boulevard at Threadgill Place
3	Veterans Memorial Parkway at Saxon Blvd
4	Saxon Boulevard at I-4 Park and Ride
5	Saxon Boulevard at I-4 EB on Ramp
6	Saxon Boulevard at Finland Blvd
7	Saxon Boulevard at Normandy Boulevard
8	Harley Strickland Boulevard at Enterprise Road
9	Harley Strickland Boulevard at JR Street
10	Harley Strickland Boulevard at Threadgill Place
11	Harley Strickland Boulevard at Florida Hospital
12	Veterans Memorial Parkway at Harley Strickland Blvd
13	Enterprise Road at Grand Plaza Drive
14	US 17/92 at E. Roberts Street
15	US 17/92 at E. Iris Drive
16	Veterans Memorial Parkway at Rhode Island Avenue
17	Veterans Memorial Parkway at Graves Avenue
18	Graves Avenue at Kentucky Avenue

Parc Hill

N

NTS

Lassiter Transportation Group, Inc.
Engineering and Planning
1450 W. Granada Blvd, Suite 2 – Ormond Beach, Florida 32174
Telephone: 386.257.2571 Fax: 386.257.6996 EB#0009227

Location and Study Intersection Map

Project Number: 4136.02 I-30 1

Vested Traffic

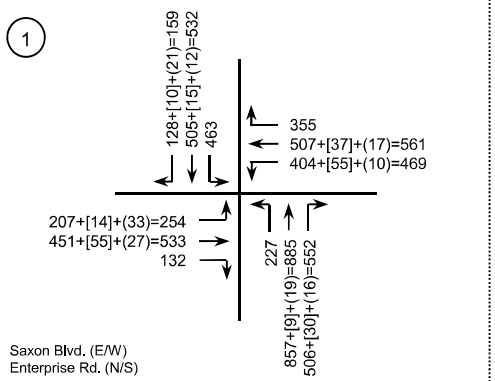
Due to approvals previously issued for developments within the immediate study area, the City of Orange City has requested that we also use vested traffic to determine the background traffic used in the analysis. The developments included in the vested traffic total include Sam's Club located on Veterans Memorial Parkway, Shadow Crossings Phase 2, and Delaware North Card Room. The total vested traffic used in the future background and build-out conditions is graphically depicted in Figure 5.

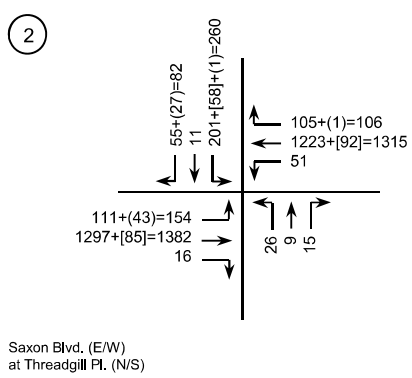
Trip Generation

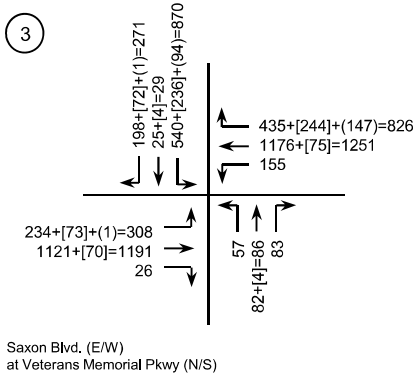
The total trip generation for the development was determined using the trip generation rates contained in the *Institute of Transportation Engineers (ITE) 9th edition* of the Trip Generation Manual. Table 7 shows the total daily, a.m. and p.m. peak-hour trip generation for the proposed project.

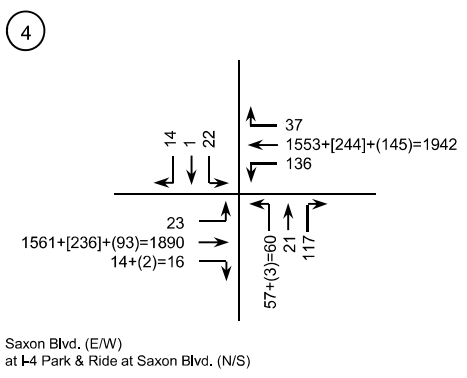
Table 7
Daily, A.M. & P.M. Peak-Hour Total Trip Generation
Parc Hill Mixed Use PUD

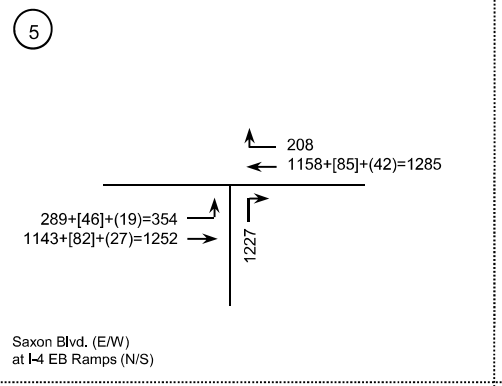
Time Period	ITE Land Use	ITE LU Code	Trip Rate Equation	Units (X)		Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Single-Family Residential	210	Ln(T) = 0.92 Ln(X) + 2.72	370	DUs	3,500	50%	50%	1,750	1,750
	Apartments	220	T = 6.06 (X) + 123.56	400	DUs	2,548	50%	50%	1,274	1,274
	Specialty Retail	826	T = 44.32 (X)	25	ksf	1,108	50%	50%	554	554
	Assisted Living Facility	254	T= 1.61 (X) + 132.16	130	Beds	342	50%	50%	171	171
					Totals:	**7,498**			**3,749**	**3,749**
A.M. Peak-Hour	Single-Family Residential	210	T = 0.70 (X) + 9.74	370	DUs	269	25%	75%	67	202
	Apartments	220	T = 0.49 (X) + 3.73	400	DUs	200	20%	80%	40	160
	Specialty Retail	*826*	*T = 0.8 (p.m. peak-hour trips)*	25	ksf	65	50%	50%	33	33
	Assisted Living Facility	254	T= 0.18 (X)	130	Beds	24	68%	32%	16	8
					Totals:	**558**			**156**	**402**
P.M. Peak-Hour	Single-Family Residential	210	Ln(T) = 0.90 Ln(X) + 0.51	370	DUs	341	63%	37%	215	126
	Apartments	220	T = 0.55 (X) + 17.65	400	DUs	238	65%	35%	155	83
	Specialty Retail	826	T = 2.40 (X) + 21.48	25	ksf	81	44%	56%	36	45
	Assisted Living Facility	254	T= 0.29 (X)	130	Beds	38	50%	50%	19	19
					Totals:	**698**			**425**	**273**

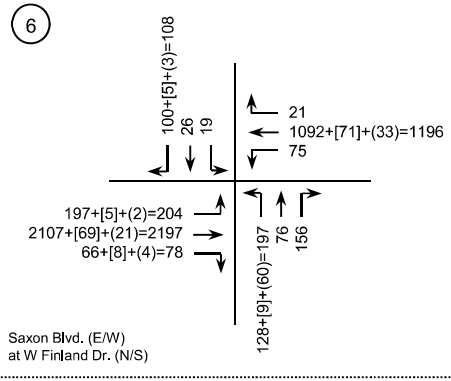


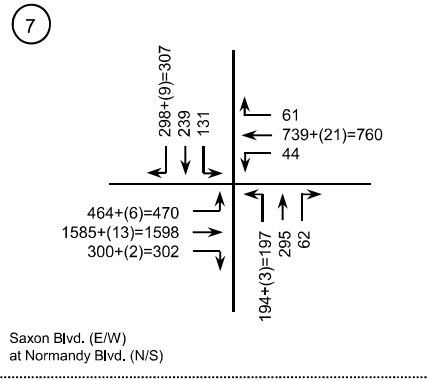


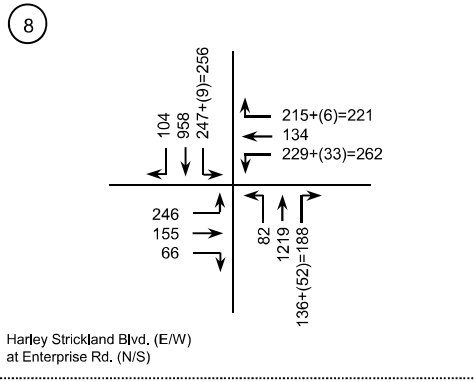


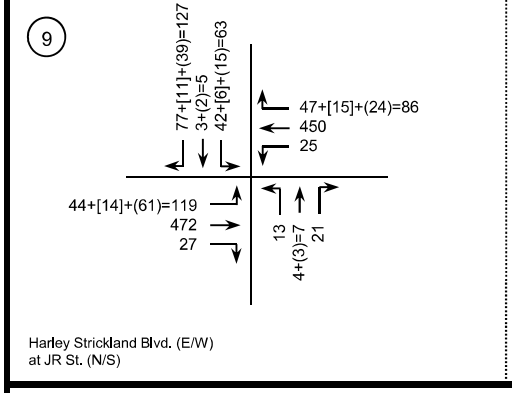


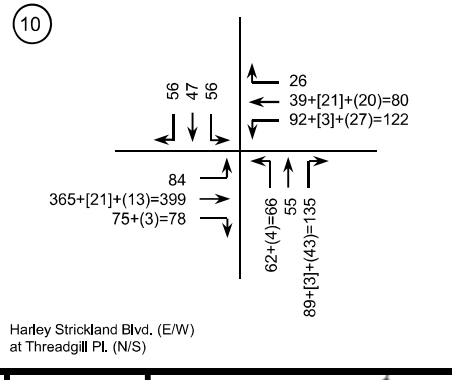


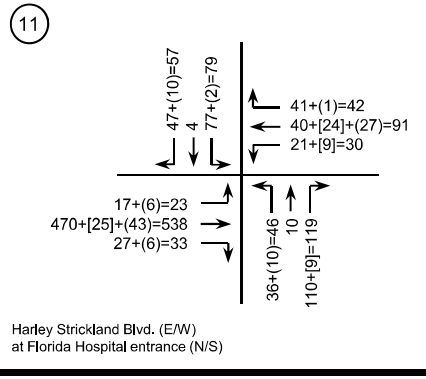












P.M. Peak-Hour	Enter	Exit	Total
Project Trips	425	273	698

LEGEND:

XXX+[XX]+(XX)=XXX

- Build-Out Traffic
- Background Traffic
- Vested Traffic
- Historical Growth

Parc Hill

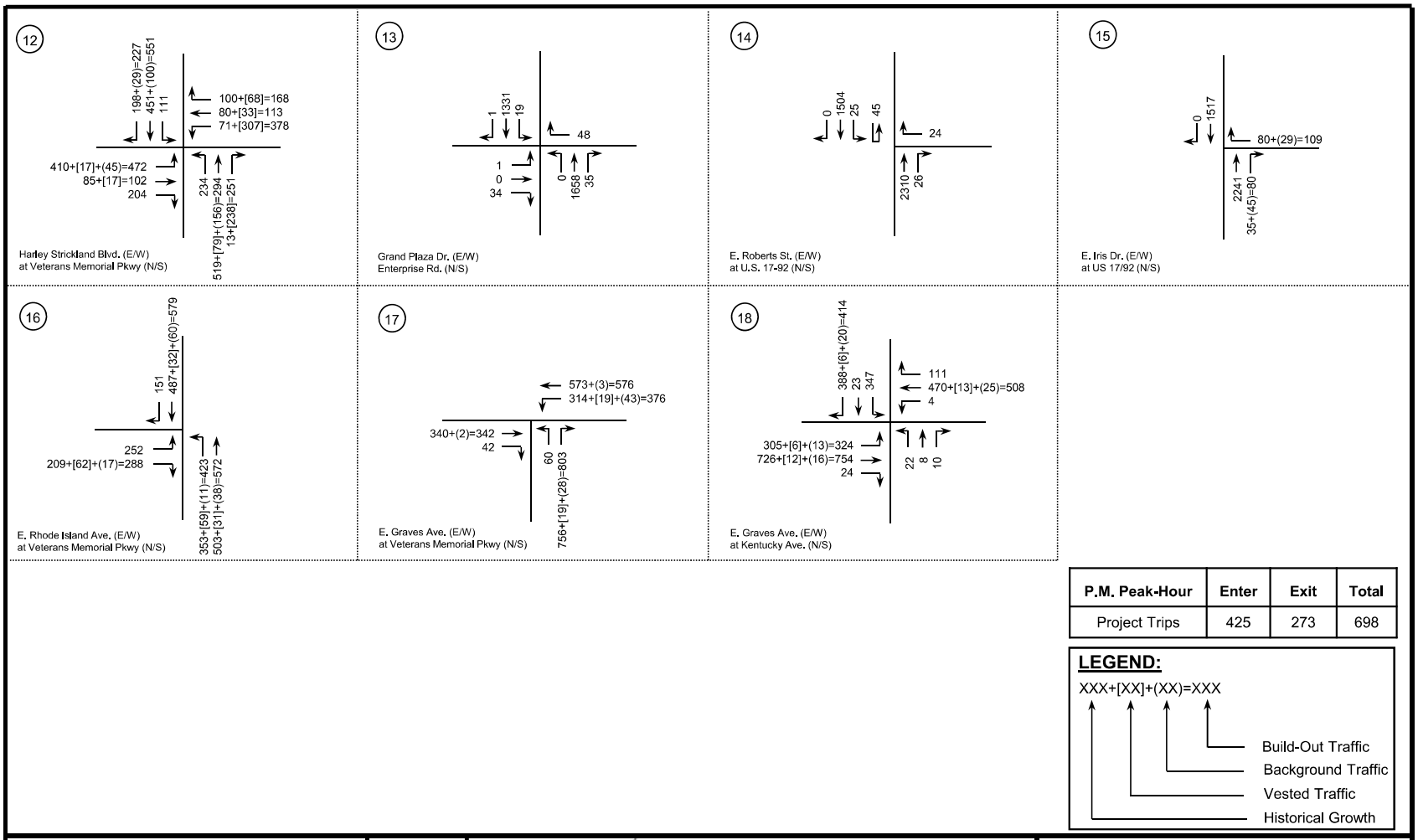
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2025 Build-Out Volumes
P.M. Peak-Hour
(including vested trips)

Project Number: 4136.02 I-32 4B



P.M. Peak-Hour	Enter	Exit	Total
Project Trips	425	273	698

LEGEND:

XXX+[XX]+(XX)=XXX

- Build-Out Traffic
- Background Traffic
- Vested Traffic
- Historical Growth

Parc Hill

N

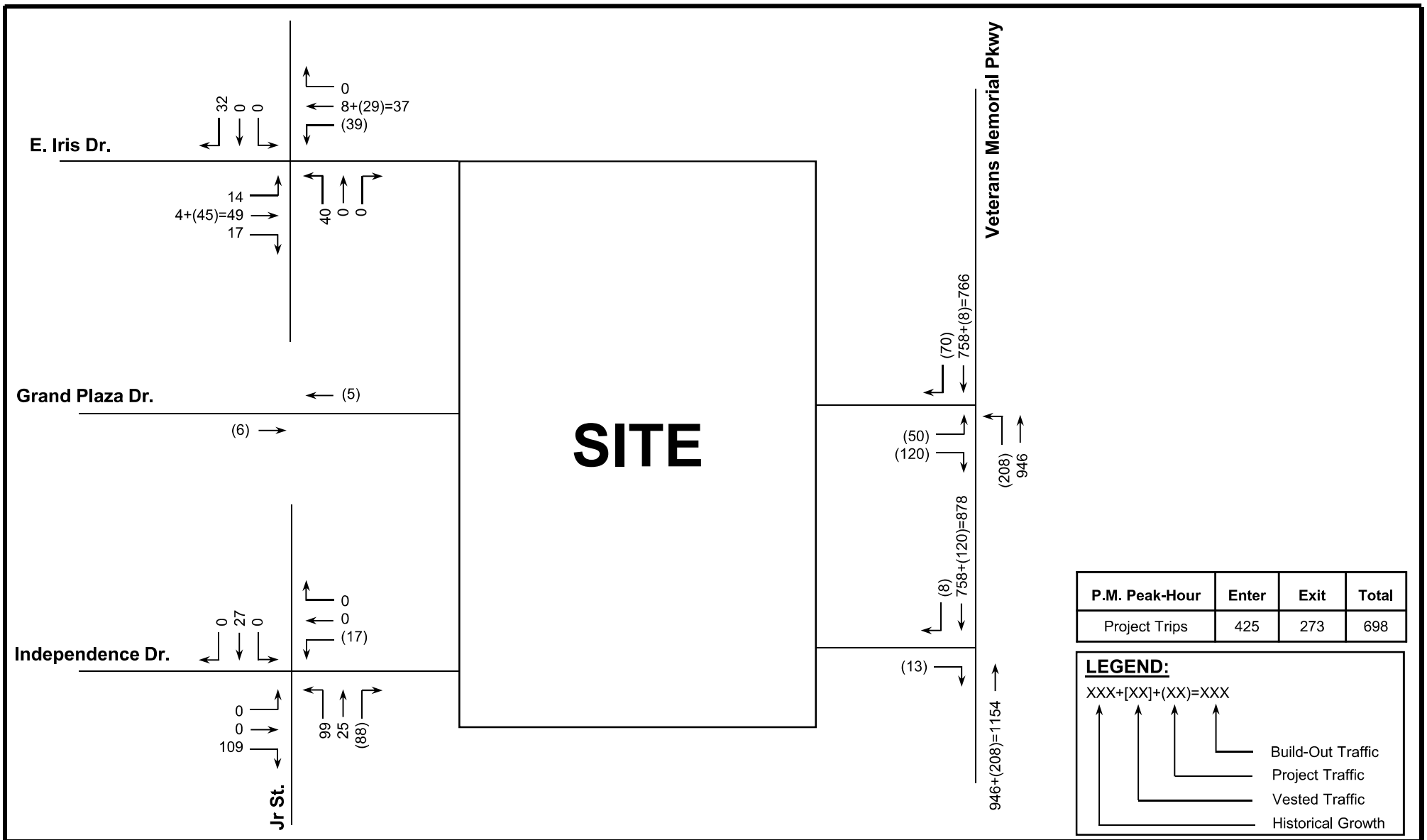
NTS

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Telephone: 386.257.2571 Fax: 386.257.6996 EB#0009227

2025 Build-Out Volumes
P.M. Peak-Hour
(including vested trips)

Project Number: 4136.02

4B



Parc Hill

N

NTS

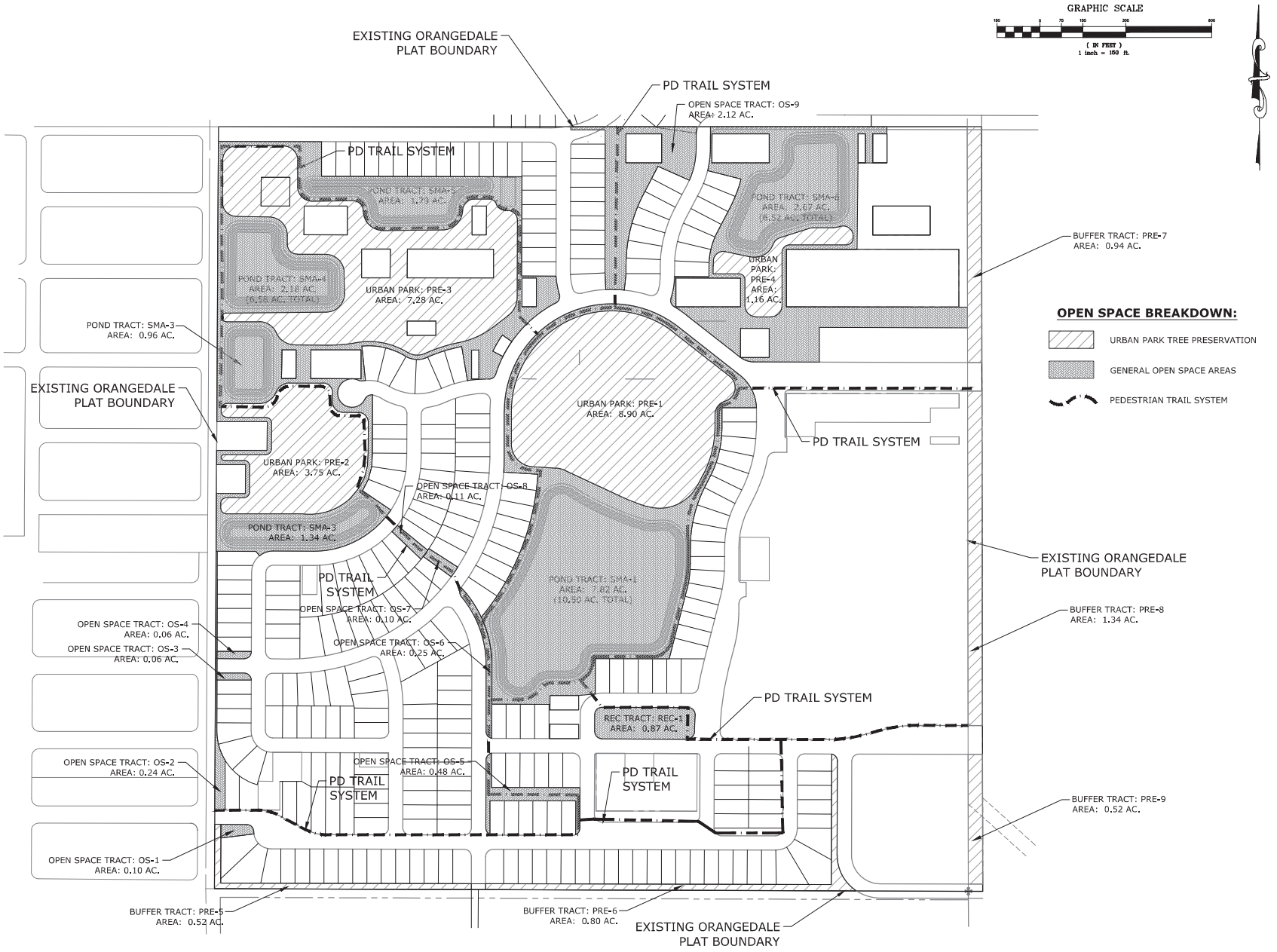
Lassiter Transportation Group, Inc.
Engineering and Planning
1450 W. Granada Blvd, Suite 2 – Ormond Beach, Florida 32174
Telephone: 386.257.2571 Fax: 386.257.6996 EB#0009227

2025 Near-Site Build-Out Volumes
P.M. Peak-Hour

Project Number: 4136.02 I-34 4B

Table 17
2025 Build-Out P.M. Peak-Hour LOS – Roadway Segments – with Project Traffic
Parc Hill Mixed Use PUD

Roadway	Segment		Adopted LOS	Lanes	2015 AADT	Peak-Hour Two-Way Capacity	K-Factor	Existing Peak-Hour Two-Way Volume	Applied Growth Rate	Growth Factor	Background Peak-Hour Two-Way Volume	Vested Traffic	Future Peak-Hour Two-Way Volume	Project Distribution	Projects Trips	Build-Out Peak-Hour Two-Way Volume	V/C Ratio	Existing LOS
	From	To																
I-4	Dirksen Dr	Saxon Blvd	D	6	106,510	11,860	0.0997	10,619	1.00%	1.09	11,575	357	11,932	17.20%	120	12052	1.02	F
	Saxon Blvd	SR 472	D	6	92,500	11,860	0.0997	9,222	1.00%	1.09	10,052	189	10,241	7.10%	50	10291	0.87	D
	SR 472	Orange Camp Rd	D	6	80,500	11,860	0.0997	8,026	3.19%	1.29	10,353	189	10,542	7.10%	50	10592	0.89	D
Catalina Blvd	Howland Blvd	Sixma Rd	D	4	12,590	1,970	0.0997	1,255	1.00%	1.09	1,368	0	1,368	0.00%	0	1368	0.69	B
	Sixma Rd	Lake Helen-Osteen Rd	D	4	10,630	1,970	0.0997	1,060	1.00%	1.09	1,155	0	1,155	0.00%	0	1155	0.59	B
Dirksen Dr/Debary Ave	I-4	Deltona Blvd	E	6	31,470	4,130	0.0997	3,138	1.00%	1.09	3,420	0	3,420	0.2%	1	3421	0.83	D
	Providence Blvd	Garfield Rd	E	4	13,120	2,050	0.0997	1,308	1.00%	1.09	1,426	0	1,426	0.9%	6	1432	0.70	C
Elkcam Blvd	Providence Blvd	Montecito Ave	D	2	10,170	1,270	0.0997	1,014	1.00%	1.09	1,105	0	1,105	0.00%	0	1105	0.87	D
	Montecito Ave	Howland Blvd	D	2	10,230	1,270	0.0997	1,020	1.00%	1.09	1,112	0	1,112	0.00%	0	1112	0.88	D
Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	E	4	18,780	3,222	0.0997	1,872	1.00%	1.09	2,041	38	2,079	10.70%	75	2154	0.67	B
Harley Strickland Blvd	Enterprise Rd	Veterans Memorial Pkwy	E	4	11,760	2,630	0.0997	1,172	1.00%	1.09	1,278	78	1,356	28.90%	202	1558	0.59	B
Howland Blvd	I-4/SR 472	Wolf Pack Run	E	6	36,570	4,850	0.0997	3646	1.00%	1.09	3,974	0	3,974			3974	0.82	D
	Providence Blvd	Elkcam Blvd	E	2	16,780	2,416	0.0997	1,673	1.00%	1.09	1,824	16	1,840	0.00%	0	1840	0.76	C
Kentucky Ave	Graves Ave	SR 472	E	2	9,320	1,540	0.0997	929	1.00%	1.09	1,013	12	1,025	4.80%	34	1058	0.69	B
Normandy Blvd	Saxon Blvd	Deltona Blvd	D	2	10,630	1,330	0.0997	1,060	1.00%	1.09	1,155	4	1,159	0.70%	5	1164	0.88	D
	Deltona Blvd	Tivoli Dr	D	3	10,100	1,330	0.0997	1,007	1.00%	1.09	1,098	6	1,104	0.70%	5	1108	0.83	D
Providence Blvd	Anderson Dr	Normandy Blvd	E	2	11,650	1,330	0.0997	1,162	1.00%	1.09	1,266	0	1,266	0.00%	0	1266	0.95	E
Saxon Blvd*	Veterans Memorial Pkwy	FDOT Park & Ride	E	6	34,640	4,280	0.0997	3,454	1.00%	1.09	3,764	625	4,389	34.60%	242	4631	1.08	**F**
	FDOT Park & Ride	I-4	E	6	40,100	3,410	0.0997	3,998	1.00%	1.09	4,358	501	4,859	34.00%	237	5096	1.49	**F**
	I-4	Finland Dr	E	6	40,540	4,851	0.0997	4,042	1.00%	1.09	4,406	167	4,573	9.80%	68	4641	0.96	**E**
	Finland Dr	Normandy Blvd	E	6	39,620	4,851	0.0997	3950	1.00%	1.09	4,306	0	4,306	9.80%	68	4374	0.90	**D**
Tivoli Dr	Saxon Blvd	Providence Blvd	D	4	12,360	1,970	0.0997	1,232	1.00%	1.09	1,343	0	1,343	0.00%	0	1343	0.68	B
Veterans Memorial Parkway	Graves Ave	Rhode Island Ave	E	4	15,510	3,222	0.0997	1,546	1.50%	1.135	1,755	184	1,939	14.00%	98	2037	0.63	B
	Rhode Island Ave	Harley Strickland Blvd	E	4	17,750	3,410	0.0997	1,770	1.00%	1.09	1,929	771	2,700	67.20%	469	3169	0.93	E
	Harley Strickland Blvd	Saxon Blvd	E	4	18,050	3,410	0.0997	1,800	1.00%	1.09	1,962	718	2,680	36.80%	257	2936	0.86	D



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3911 Orange Lake Dr.
Orlando, FL 32817
321-303-8093

Parc Hill
Planned Development
Orange City, Florida

PD Land Use
Plans

PD Open Space & Mobility Plan

Plans not valid unless Signed, Dated and Sealed below:

GEOFFREY L. SUMMITT, P.E.
Date: June 27, 2016
FL Registration #58775
Certificate of Authorization #29665

Revisions

NO.	DATE	DESCRIPTION
1	11-16-15	Agency Revisions
2	11-30-15	Revised Per Orlando Springs DRC Comments
3	"	"
4	"	"
5	"	"
6	"	"
7	"	"
8	"	"
9	"	"
10	"	"

SHEET NUMBER
5 OF 6
I-36

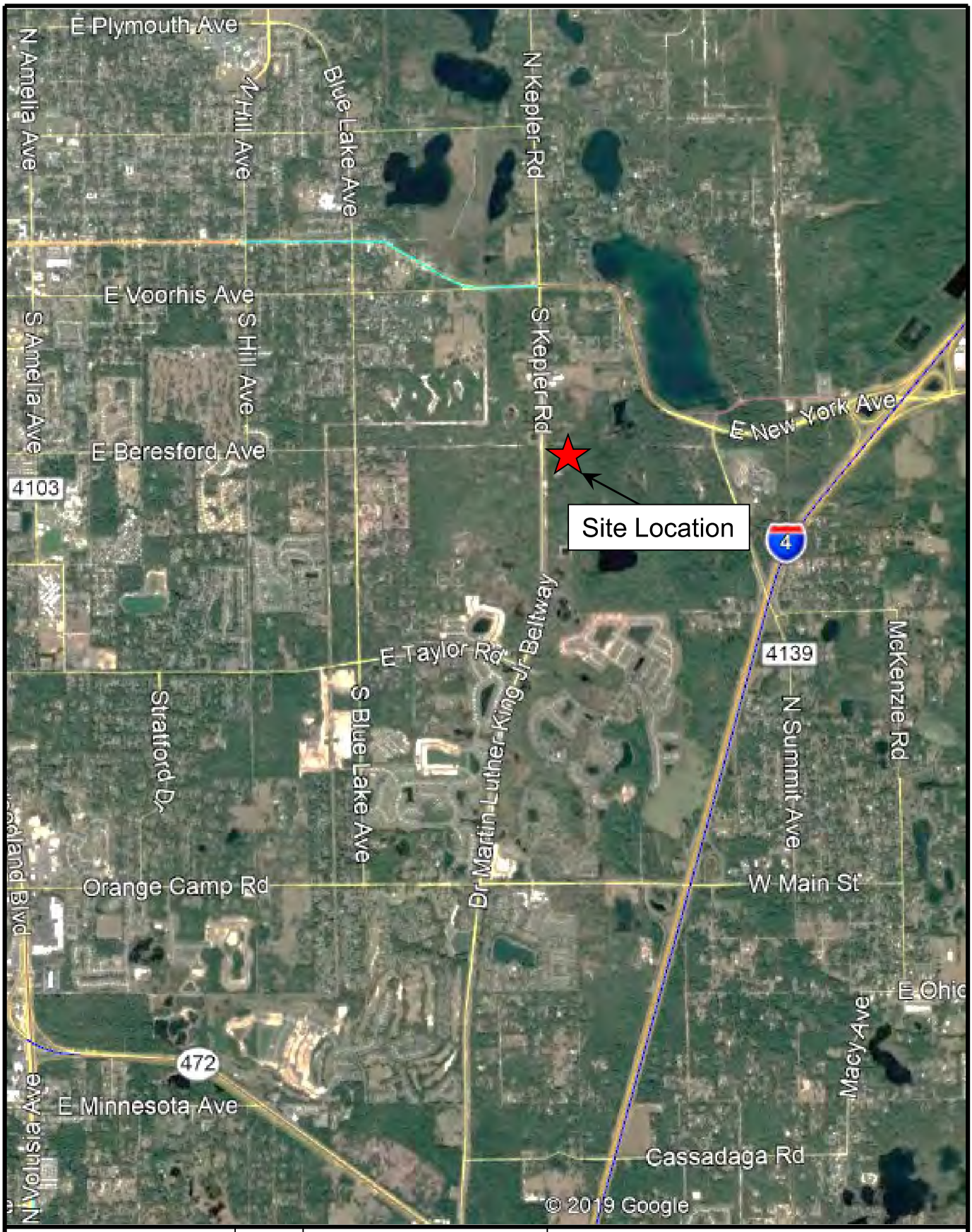
Park Lake Estates

Park Lake Estates
DeLand, Florida

Traffic Impact Analysis

Prepared for: DDC Management, LLC
By: LTG, Inc.
***Revised* September 2020**

LTG Engineering & Planning



Park Lakes Estates	N NTS	**Site Location**		LTG Engineering & Planning
		Project No.: 4817.32	Figure: 1	1450 W. Granada Blvd, Suite 2 – Ormond Beach, Florida 32174 Telephone: 386.257.2571 Fax: 386.257.6996 EB# 0009227

5

BUILD-OUT - FUTURE ROADWAY ANALYSIS

The study area intersections and roadway segments were analyzed based on the roadway conditions at the time of project build-out to determine potential impacts of project-generated trips and investigate mitigation requirements. The improvements recommended in background conditions have been included in the 2025 build-out analysis for those applicable intersections and roadway segments.

Build-Out Project Trip Generation

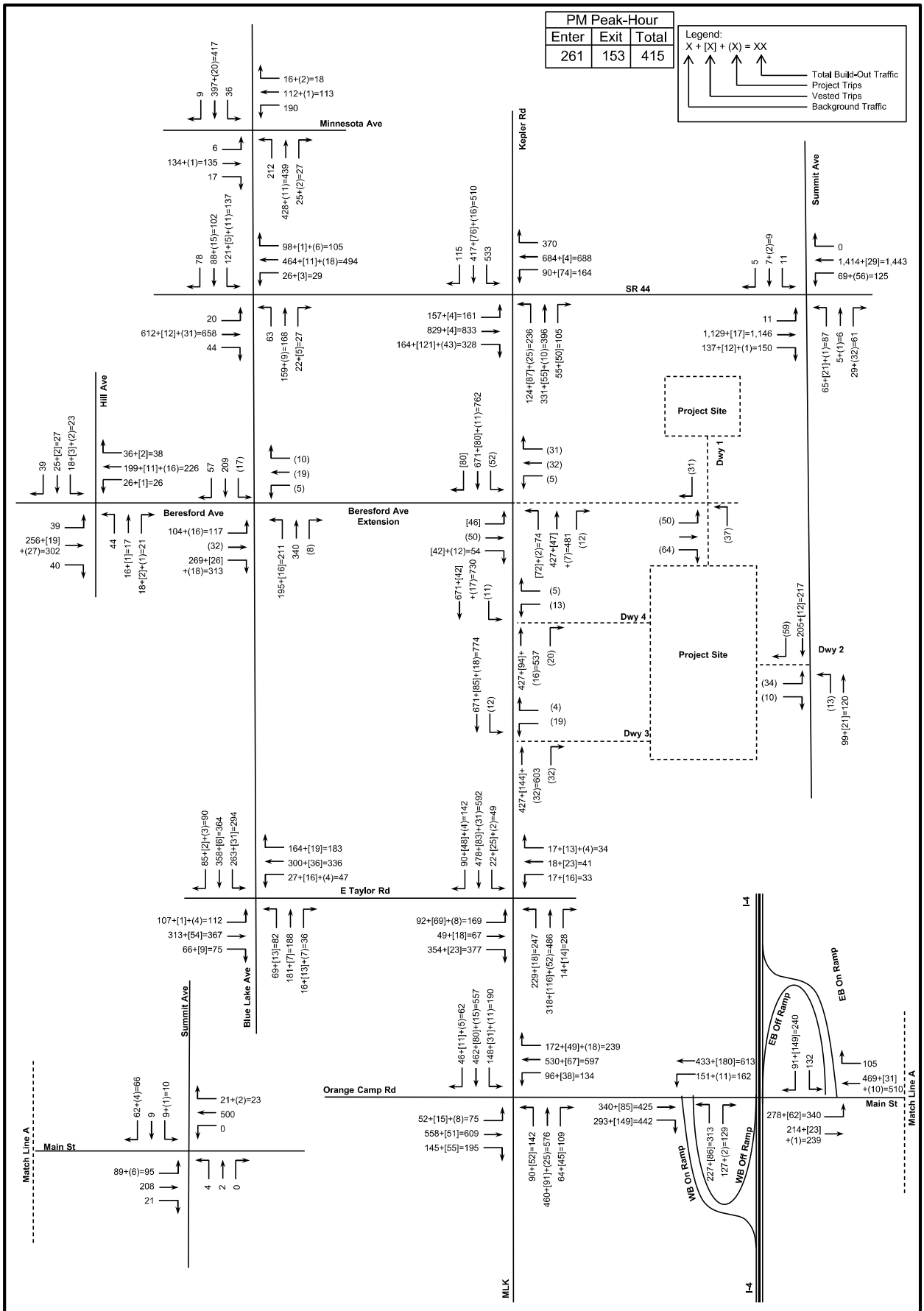
The trip generation for the development was determined using the Institute of Transportation Engineers (ITE) 10th Edition of the *Trip Generation Manual* and is presented in Table 11.

Table 11
Project Trip Generation
Park Lake Estates

Time Period	Land Use	ITE LUC	Trip Rate Equation	Quantity (X)		Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips (T)
Daily	Single Family Residential	210	Ln(T)=0.92Ln(X)+2.71	433	DU	50%	50%	2,002	2,002	4,004
AM Peak-Hour			T=0.71(X)+4.80			25%	75%	78	234	312
PM Peak-Hour			Ln(T)=0.96Ln(X)+0.20			63%	37%	261	153	415

2025 Project Trip Distribution

The process of determining the directional flow of traffic associated with a new development is called trip distribution. The Central Florida Regional Planning Model (CFRPM), version 6.1 was used to determine the primary project trip distribution and is presented in Figure 3. Using the trip distribution, the PM peak-hour project trips were assigned to the study area roadway network. Figures 4A and 4B graphically depict the 2025 total background traffic and 2025 build-out a.m. and p.m. peak-hour project trips at the study area intersections.



Park Lake Estates	N NTS	**2025 PM Build-out Volumes**	Project No.: 4817.32	Figure: 6

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Table 15
Build-Out PM Peak-Hour LOS - Roadway Segments*
Park Lake Estates

Roadway	Segment		No. of Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing PM Peak-Hour Two-Way Volume	2025 Growth Factor	Vested Trips	2025 Background Traffic	Project Distribution	Project Trips	2025 Build-Out Traffic	2025 Build-Out Traffic Exceed Adopted LOS?
US 17/92	SR 472	SR 15A/Taylor Road	6	D	5,390	4,470	1.32	61	5,955	3.4%	14	5969	Yes
	Beresford Ave	Euclid Ave	2	D	1,480	1,406	1.12	75	1,650	0.0%	0	1650	Yes
	SR 44/New York Ave	Plymouth Ave	2	D	1,410	1,340	1.12	56	1,556	0.0%	0	1556	Yes
SR 44	Blue Lake Ave	Kepler Road	2	D	1,712	1,270	1.12	246	1,668	16.6%	69	1737	Yes
	Kepler Road	Summit Ave	2	D	1,712	1,510	1.12	130	1,821	0.4%	2	1823	Yes
Amelia Ave	Minnesota Ave	Plymouth Ave	2	E	1,270	900	1.06	0	954	0.9%	4	958	No
Beresford Ave	Hilll Ave	Blue Lake Ave	2	E	1,230	400	1.41	0	563	12.2%	51	614	No
Beresford Ave Ext	Blue Lake Ave	Volusia Bltwy/ Dr. MLK Bltway	2	E	1,230	0	1.06	240	240	21.9%	91	331	No
Blue Lake Ave	SR 15A/Taylor Road	Beresford Ave	2	E	1,230	830	1.66	167	1,547	3.1%	13	1560	Yes
	SR 44	Minnesota Ave	2	E	1,020	620	1.12	0	694	9.3%	39	733	No
	Minnesota Ave	Plymouth Ave	2	E	1,230	700	1.49	0	1,046	10.1%	42	1088	No
Orange Camp Road	US 17/92	Princeton Rd	2	E	1,270	1,240	1.29	229	1,832	3.4%	14	1846	Yes
	Princeton Rd	Blue Lake Ave	2	E	1,540	1,030	1.12	209	1,363	4.0%	17	1380	No
	Blue Lake Ave	W.Volusia Bltwy	2	E	1,540	1,210	1.29	238	1,795	3.0%	12	1807	Yes
	W. Volusia Bltwy	I-4	4	E	3,410	1,200	1.31	330	1,901	7.0%	29	1930	No
Summit Ave	SR 44/New York Ave	Main Street	2	E	1,230	290	1.06	0	307	22.5%	93	400	No
Taylor Rd.	Blue Lake Ave	W.Volusia Bltwy/ Dr. MLK Bltway	2	E	1,230	610	1.44	301	1,179	2.9%	12	1191	No
W. Volusia Bltwy/ Dr. MLK Bltwy	Cassadaga Road	Orange Camp Road	2	E	1,540	1,120	1.12	453	1,707	9.7%	40	1747	Yes
	Orange Camp Road	SR 15A/Taylor Road	2	E	1,540	960	1.12	217	1,292	19.8%	82	1374	No
	SR 15A/Taylor Road	Beresford Ave Ext.	2	E	1,540	780	1.12	257	1,131	24.7%	102	1233	No
W. Volusia Bltwy/ Kepler Road	Beresford Ave Ext.	SR 44/New York Ave	2	E	1,540	870	1.12	273	1,247	24.3%	101	1348	No
	SR 44/New York Ave	Minnesota Ave	2	E	1,540	1,440	1.18	70	1,770	6.3%	26	1796	Yes

Build-out Improved*

Roadway	Segment		No. of Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing PM Peak-Hour Two-Way Volume	2025 Growth Factor	Vested Trips	Background Traffic	Project Distribution	Project Trips	Build-Out Traffic	Build-Out Traffic Exceed Adopted LOS?
US 17/92	SR 472	SR 15A/Taylor Road	8	D	7,210	4,470	1.32	61	5,955	3.4%	14	5,969	No
	Beresford Ave	Euclid Ave	4	D	3,580	1,406	1.12	75	1,650	0.0%	0	1,650	No
	SR 44/New York Ave	Plymouth Ave	4	D	3,580	1,340	1.12	56	1,556	0.0%	0	1,556	No
SR 44	Blue Lake Ave	Kepler Road	4	D	3,580	1,270	1.12	246	1,668	16.6%	69	1,737	No
	Kepler Road	Summit Ave	4	D	3,580	1,510	1.12	130	1,821	0.4%	2	1,823	No
Blue Lake Ave	SR 15A/Taylor Road	Beresford Ave	4	E	3,222	830	1.66	167	1,547	3.1%	13	1,560	No
Orange Camp Road	US 17/92	Princeton Rd	4	E	3,410	1,240	1.29	229	1,832	3.4%	14	1,846	No
	Blue Lake Ave	W.Volusia Bltwy	4	E	3,410	1,210	1.29	238	1,795	3.0%	12	1,807	No
W. Volusia Bltwy/ Dr. MLK Bltwy	Cassadaga Road	Orange Camp Road	4	E	3,410	1,120	1.12	453	1,707	9.7%	40	1,747	No
W. Volusia Bltwy/ Kepler Road	SR 44/New York Ave	Minnesota Ave	4	E	3,580	1,440	1.18	70	1,770	6.3%	26	1,796	No

**Improved capacities were determined using the FDOT Generalized Service Tables and comparable capacities from Volusia County's AADT Table; Improvements not currently funded for construction.*

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PHASING PLAN
CITY/COUNTY
FLORIDA
CAP 5 DEVELOPMENT, LLC
1323 BROOKHAVEN DR
ORLANDO, FL 32803
(407) 924-2646
DATE
REVISIONS
JOB #
DATE:
SCALE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
19030
01-27-2020
1" = 2000'
PH- 1
PHASE 1
40x120 = 71 LOTS
50x120 = 113 LOTS
PHASE 2
40x120 = 35 LOTS
50x120 = 92 LOTS
PHASE 3
40x120 = 57 LOTS
50x120 = 52 LOTS
65x120 = 13 LOTS
PHASE 1 TOTAL = 184 LOTS
PHASE 2 TOTAL = 127 LOTS
PHASE 3 TOTAL = 122 LOTS
40x120 TOTAL = 163 LOTS
50x120 TOTAL = 257 LOTS
65x120 TOTAL = 13 LOTS
TOTAL LOT COUNT = 433 LOTS
CR 4139
TATUM LAKE
MOORE LAKE
PHASE 3
PHASE 2
PHASE 1
WEST VOLUSIA BELTWAY
DR MARTIN LUTHER KING BELTWAY

Volusia County Vested Trip Database

Roadway	Segment	2021PM Pk Hr (VCTE) (VCTE Staff note: R/D Set = HOT pk volumes based on daily V C proportion.)	Capacity	2020 Pure Infill (50% Removed)	SWAC Phase IA Trips 11,444 (removed 13% Integra Dunes)	Victoria Park Ph 2 Remaining Trips per city (reduced by 75%)	Victoria Park Ph 3 trips per city (0% removed)	Halifax Crossing-s BPUD (37% Removed)	Hawthorne Landing	Rivera Bella East Unit 8&9 REMOVED 50%	Ft Florida Commons	Riverbend 2868	Springview Unit 8 REMOVED 90%	Canterwood ALF	Vineland Reserve	Fernanda Place (85% removed)	Enterprise Osteen (Reflects only 189 units as vested)	Enterprise Osteen East	Lincoln Oaks 2019	133 S. Courtland Blvd	Doyle Road Tract	Reserve at Victoria 2019	Park Lake Estates 2020	Crosswinds 2020	Beresford Woods 2019	DeBary Town Center	I-4 / Kepler at SR 44 2019	Azalea Walk 2019 (20% removed)	Estates at Pelham Square 2019	Animal ER Critical Care 2019	Liberty Station, Orange City 2019	The Crossings, Orange City 2020	Eleah Estates 2022	Dehtom Village PUD 2030 (see PUD trip tracker) 375 remaining not reflected on network	Deltona Village 2020/Mango Street	Portland Industrial 2020	Orange City Oncology 2025	Canopy Terrace/Kirk Subdivision	Grandview Gardens	Three Island Lake South	Villages at Pelham Square	Oak Hammock Reserve	Deen River Estates	Circle K at SR 40/US 17	Total Vested Trips
L-4 Segments based on LADOT V/C																																											
I-4	Saxon to SR 472	7505	10510	25	50	13	80	76																						115															*159*
I-4	SR 472 to Orange Camp	6640	10510	25	40	13	90	58																						115															*341*
I-4	Orange Camp to SR 44	7216	10510	0		8	45																							65															*118*
Graves Ave	Kirkman Rd to Kentucky	1420	1620	10	40		8	115																						33	93		44		53											*343*
Graves Ave	Kentucky to Normandy	1470	1620		80	1	9	352																							311		44	19	109											*923*
Graves Ave	Normandy Blvd to Howland Blvd	1390	2740		80	1	9	352																							311		44	19	175											*901*
Howland Blvd	I-4 to Wolf Pack Run	2320	3410		130	13		294							9														10	187		82	57	116								8				*908*
Howland Blvd	Wolf Pack Run to Catalina Blvd	2310	3410		119			238							10															152		133	25	98								8				*785*
Howland Blvd	Catalina Blvd to Providence Blvd	1670	3410		119			142							11															71		43		80												*466*
Howland Blvd	Providence Blvd to Elkcam	1,140	1270				6		85						10															63		82		19								6				*209*
Orange Camp Rd-Blvd	17-92 to Princeton	1,150	1270	0	20	9	57														19	16		11						3	20				14											*164*
Orange Camp Rd	Princeton to Blue Lake Ave	1,160	1560	0	20	8	57														29	16	3	11						3	20				14								2				*173*
Orange Camp Rd	Blue Lake Ave to MLK	1,210	1560	0	20	11	80														20	16	4							3	20	2			21											*197*
Orange Camp Rd	MLK to I-4	1,170	1560		40	17	111														59	69	9							3	10	3			54											*355*
MLK	SR 44 to Beresford Rd ext	800	1560			2	12														254		4																							*272*
MLK	Beresford to Taylor Rd	760	1560			3	18														228	188	4												54											*495*
MLK	Taylor to Orange Camp	1020	1560			8	59														123	101	0												54											*345*
MLK	Orange Camp to Cassadaga Rd	990	1560	0	90	12	83														54	44	3							14	51	10			21											*382*
MLK	Cassadaga to SR 472	1040	1560	0	110	7	44																							16	61	13		20											*271*
Kentucky	SR 472 to Graves	910	1560																											67	162	10		31											*270*
VMP	Graves Ave to Rhode Island	1200	1620	69	90	1	10																							08	91	8		35											*332*
VMP	Rhode Island to Hartley Strickler	1490	1620	255	90	1	3																							35	20			23											*307*
SR 472	MLK to I-4	2710	3590																															46											*46*
US 17/92	Euclid Ave to SR 44	1157	1410			1	8																			1		2																	*12*
US 17/92	SR 44 to Plymouth Ave	1406	1410			1	13																	3				5							62											*82*
US 17/92	Taylor Rd to SR 473	4731	5390																															53	46							33			*134*
Blue Lake Ave	Orange Camp to Taylor	530	1560			9	59																																						*68*
Blue Lake Ave	Taylor to Beresford	730	1230			9	79														42	33													31											*216*
Blue Lake Ave	Beresford to Veterns	530	1020			6	42																																						*48*
Blue Lake Ave	Veterns to SR 44	400	1020			5	40																																						*45*
Taylor Rd	Stratford to Blue Lake	700	1560			7	49																																						*56*
Taylor Rd	Blue Lake to MLK	610	1230			10	69														47	35	3			145																				*309*
Lake Helen Osteen	Catalina Blvd to Hanlover Blvd	1095	1230																																											*81*
Lake Helen Osteen	Hanlover Blvd to Elkcam Blvd	820	1230																											0																*47*
Normandy Blvd	Graves Ave to Rhode Island	787	1150																											570			13	181												*764*
Normandy Blvd	Rhode Island to Elkcam Blvd	636	2650																											647				60												*707*
Normandy Blvd	Elkcam Blvd to Saxon Blvd	599	2650																											305				33												*338*
Normandy Blvd	Saxon Blvd to Deltona Blvd	936	2650																											61																*61*

Orange City Vested Trip Database

Orange City Concurrency Management System (updated Jan.21, 2020)

2018 Roadway Trips and Capacity						Vested Project Peak Trips									
Roadway	Segment	PM Peak 2way Hour	PM Peak LOS Capacity	AADT	AADT Capacity	2020 Parc Hill	Sparkman 153 SFR (74 phase 1)	SWAC Phase IA Trips	WVRC-106 MF units	FL Hospital Bed Tower		Deltona Whouse	Crossings PUD 288 MF/100 Hotel/62K	Liberty St. PUD 175SFR	Total Vested Peak Trips
STATE ROADS															
I-4	Seminole to Dirksen	n/a	10060	114,000	111,800							36			
I-4	Dirksen to Saxon	n/a	10060	112,700	111,800	120	31	69	3			48			
I-4	Saxon to SR 472	n/a	10060	94,000	111,800	50	0	57	3			54		10	
I-4	SR 472 to Orange Cam	n/a	10060	74,000	111,800	50		46				37		12	
I-4	Orange Camp to SR 44	n/a	10060	79,000	111,800							21			
US 17-92	SR 472 to New York	2,423	3580	30,000	39800			34							34
US 17-92	New York to Graves	n/a	3580	29500	39800			23							23
US 17-92	Graves to Rhode island	2,592	3580	32,000	39800			23							23
US 17-92	Rhode Island to Enterp	2,633	3580	31,000	39800			11							11
US 17-92	Enterprise to Saxon	n/a	3580	22,000	39800										0
US 17-92	Saxon to DeBary Planta	2,791	3580	29,500	39,800										
SR 472	17/92- VMP	2,373	5900	29,000	65600			80						24	
SR 472	VMP to I-4	2,473	3580	29,500	39800			103				36	171	16	
COUNTY ROADS															
Graves Ave	VMP to Kentucky Ave	1600	1620	19,590	17900	75	9	46	3	15		72	59	33	
Graves Ave	Kentucky to Howland	1400	1620	15,520	17900			92				116	39	40	
Enterprise	17/92 to Harley	1,870	2740	23,760	30420			11							11
Enterprise	Harley to Saxon	1,510	3410	19,220	37970			23							23
Enterprise	Saxon to Highbanks	1,530	3410	19,820	37970			34							34
W. French	State park to Sparkmar	460	1,020	5,180	13,640										
Rhode Islar	Westside Pkwy to Spar	540	1330	8,030	14740		57								57
Rhode Islar	Sparkman to Carpente	720	1330	9,800	14740		112								112
Rhode Islar	Carpenter to 17/92	750	1330	9,390	14740		112								112
Rhode Islar	VMP to Normandy	0	0	0	13640										
Saxon	17/92 to Enterprise	1170	2,740	15,890	30,420			23							23
Saxon	Enterprise to VMP	1950	4,280	25,720	47,560			34						17	34
Saxon	VMP to FDOT Park n Ri	2660	4,280	34,090	47,560	242		57	14			33		19	
Saxon	Park n Ride to I-4	3260	3,410	44,320	37,970	237	37	57	14			33			
Westside P	Hamilton to French	240	1,020	2,690	13,640										
Westside P	French to DeBary Plant	0	0	0	13,640										
Kentucky	SR 472 to Graves	950	1,540	10,570	17050			92				96	104	67	
VMP	Graves Ave to Rhode Is	1120	1620	13,400	17900	98	3	103	4	24		54		48	
VMP	Rhode Island to Harley	1570	1540	19,420	17,900	469	22	92	4	30		12	25	35	
VMP	Harley to Saxon	1200	3410	14,650	37970				15	25				29	

CITY ROADS														
Roadway	Segment	PM Peak 2way Hour	PM Peak LOS Capacity	AADT	AADT Capacity	2020 Parc Hill	Sparkman 153 SFR (74 phase 1)	SWAC Phase IA Trips	WVRC-106 MF units	FL Hospital tower expansion		Deltona Whouse	Crossings	Liberty Station	Total Vested Trips
Harley Stri	Enterprise to VMP	n/a	1,270	12,400	14,040				24	29					53
Rhode Islar	17/92 to VMP	661	1,230	8,100	13,640			69				30			69
Leavitt	French to Graves														
Leavitt	Graves to Ohio														
Leavitt	Ohio to Rhode Island														
Wisconsin	17/92 to leavitt														
Graves	17/92 to leavitt	640	1,330	7,360	14,740			11				6		10	
Graves	leavitt to VMP	650	1,020	7,560	13,640			23				18		17	
W. French	Sparkman to 17-92	460	1,020	5,180	13,640										
W. Blue Sp	Sparkman to 17/92														

Total Vested Trips Summary

Vested Trip Summary

Roadway	Segment	CTC Development	Kirk Subdivision	The Crossings	North Kentucky Distribution Center	Parc Hill	Park Lake Estates	Database Source	Database Vested Trips	Total Vested Trips
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	85	77	36	18	0	0	Volusia County	258	474
	Cassadaga Rd. to Orange Camp Rd.	30	52	27	15	0	40	Volusia County	369	533
	Orange Camp Rd. to Taylor Rd.	12	7	0	6	0	82	Volusia County	345	452
	Taylor Rd. to Beresford Ave.	10	6	0	0	0	102	Volusia County	491	609
Kentucky Avenue	Graves Ave. to SR 472	24	7	104	51	34	0	Orange City	359	579
Veteran's Memorial Par	Rhode Island Ave. to Graves Ave.	12	7	0	13	98	0	Orange City	236	366
Cassadaga Road	Dr. Martin Luther King Jr Bltwy. to Macy Ave.	6	11	0	0	0	0	Volusia County	0	17
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	6	14	11	3	0	12	Volusia County	191	237
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	18	7	59	16	75	0	Volusia County	388	563
	I-4/SR 472 to Wolf Pack Rn.	0	7	114	19	0	0	Volusia County	786	926
	Wolf Pack Rn. to Catalina Blvd.	0	6	51	13	0	0	Volusia County	650	720
Howland Boulevard	Catalina Blvd. to Providence Blvd.	0	4	0	0	0	0	Volusia County	423	466
	US 17/92 to Martin Luther King Jr Bltwy.	18	7	0	0	0	0	Orange City	104	129
SR 472	Martin Luther King Jr Bltwy. to I-4	43	49	171	0	0	0	Orange City	326	589
Macy Avenue	Ohio St. to Cassadaga Rd.	0	3	0	0	0	0	Volusia County	0	3
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	0	0	0	0	0	0	Volusia County	0	0
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	0	0	0	0	0	0	Volusia County	764	764

Appendix J:
Volume Derivation Sheets

Future Turning Movement Volume Development

PM	Intersection		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway	Raw Vol	115	184	78	207	257	82	64	989	218	137	938	214
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	121	193	82	217	270	86	67	1038	229	144	985	225
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	6.7%	6.7%	1.0%	1.0%	1.0%
		Growth Volume	0	0	0	0	0	0	26	400	88	7	50	11
		Vested Trips	126	184	80	87	96	29	0	0	0	34	81	88
		Future Background	247	377	162	304	366	115	93	1438	317	185	1116	324
		Industrial Park/Warehouse PV Trips			in	out				in		out	out	
					9.10%	51.30%				17.30%		9.10%	17.30%	
			0	0	7	121	0	0	0	13	0	22	41	0
		Industrial Park/Warehouse Truck Trips			in	out				in		out	out	
					9.10%	51.30%				17.30%		9.10%	17.30%	
			0	0	2	30	0	0	0	3	0	5	10	0
		Commercial + Gas/Conv Pass By		15.0%	-15.0%	30.0%			15.0%	-15.0%				
			0	39	-39	79	0	0	39	-39	0	0	0	0
		Commercial + Gas/Conv New Inbound Trips		5.5%	3.6%				6.9%	10.4%				
			0	22	14	0	0	0	27	41	0	0	0	0
		Commercial + Gas/Conv New Outbound Trips				51.3%	5.5%	6.90%				3.60%	10.40%	
			0	0	0	224	24	30	0	0	0	16	45	0
		Future Total	247	438	146	758	390	145	159	1456	317	228	1212	324
2	Dr Martin Luther King Jr Beltway at Cassadaga Road	Raw Vol	0	386	74	43	468	0	0	0	0	62	0	26
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	405	78	45	491	0	0	0	0	65	0	27
		Growth Rate	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%
		Growth Volume	0	0	0	6	62	0	0	0	0	7	0	3
		Vested Trips	0	152	98	25	204	0	0	0	0	49	0	14
		Future Background	0	557	176	76	757	0	0	0	0	121	0	44
		Industrial Park/Warehouse PV Trips				in						out		out
						15.10%						51.30%		15.10%
			0	0	0	11	0	0	0	0	0	121	0	36
		Industrial Park/Warehouse Truck Trips				in						out		out
						22.30%						51.30%		22.30%
			0	0	0	4	0	0	0	0	0	30	0	13
		Commercial + Gas/Conv New Inbound Trips				6.2%	8.9%							
			0	0	0	24	35	0	0	0	0	0	0	0
		Commercial + Gas/Conv New Outbound Trips		8.90%										6.20%
			0	39	0	0	0	0	0	0	0	0	0	27
		Future Total	0	596	176	115	792	0	0	0	0	272	0	120
3	Dr Martin Luther King Jr Beltway at Orange Camp Road	Raw Vol	102	321	88	137	307	114	43	487	135	100	405	128
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	107	337	92	144	322	120	45	511	142	105	425	134
		Growth Rate	2.5%	2.5%	2.5%	2.0%	2.0%	2.0%	5.4%	5.4%	5.4%	6.0%	6.0%	6.0%
		Growth Volume	14	43	12	15	34	12	13	153	42	36	144	45
		Vested Trips	47	149	43	41	136	40	0	0	0	0	0	0
		Future Background	168	529	147	200	492	172	58	664	184	141	569	179
		Project Trips	37	59	11		39				24	7		
		Future Total	205	588	158	200	531	172	58	664	208	148	569	179

Future Turning Movement Volume Development

4	Dr Martin Luther King Jr Beltway at Taylor Road	Raw Vol	146	382	25	21	451	67	48	58	103	18	47	57
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	153	401	26	22	474	70	50	61	108	19	49	60
		Growth Rate	2.0%	2.0%	2.0%	1.0%	1.0%	1.0%	9.4%	9.4%	9.4%	9.4%	9.4%	9.4%
		Growth Volume	16	42	3	1	24	4	28	35	61	11	28	34
		Vested Trips	48	176	8	12	243	34	0	0	0	0	0	0
		Future Background	217	619	37	35	741	108	78	96	169	30	77	94
		Project Trips	0	48	7		32				0	5		
		Future Total	217	667	44	35	773	108	78	96	169	35	77	94
5	Kentucky Ave at Graves Avenue	Raw Vol	27	7	25	292	13	273	225	454	30	13	327	180
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	28	7	26	307	14	287	236	477	32	14	343	189
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Growth Volume	0	0	0	0	0	0	0	0	0	0	0	0
		Vested Trips	0	0	0	127	4	153	120	140	8	11	302	182
		Future Background	28	7	26	434	18	440	356	617	40	25	645	371
		Project Trips				15		51	34					10
		Future Total	28	7	26	449	18	491	390	617	40	25	645	381
6	Veterans Memorial Parkway at Graves Avenue	Raw Vol	119	0	429	0	0	0	0	301	341	317	295	0
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	125	0	450	0	0	0	0	316	358	333	310	0
		Truck %	2.5%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	1.7%	0.7%	0.9%	1.0%	0.0%
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	3.2%	3.2%	0.0%	0.0%	0.0%
		Growth Volume	0	0	0	0	0	0	0	54	61	0	0	0
		Vested Trips	26	0	153	0	0	0	0	0	0	179	109	0
		Future Background	151	0	603	0	0	0	0	370	419	512	419	0
		Project Trips			23					11		35	17	
		Future Total	151	0	626	0	0	0	0	381	419	547	436	0
7	Veterans Memorial Parkway at Rhode Island Avenue	Raw Vol	261	383	0	0	561	123	204	0	254	0	0	0
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	274	402	0	0	589	129	214	0	267	0	0	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%
		Growth Volume	0	0	0	0	0	0	11	0	13	0	0	0
		Vested Trips	56	110	0	0	168	24	4	0	17	0	0	0
		Future Background	330	512	0	0	757	153	229	0	297	0	0	0
		Project Trips		15			22	10	7					
		Future Total	330	527	0	0	779	163	236	0	297	0	0	0
8	SR 472 at I-4 WB Ramps	Raw Vol	0	0	0	350	0	263	0	666	608	273	1010	0
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	0	0	368	0	276	0	699	638	287	1061	0
		Growth Rate	0.0%	0.0%	0.0%	3.7%	3.7%	3.7%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	0	0	0	73	0	55	0	36	33	15	54	0
		Vested Trips	0	0	0	90	0	105	0	161	132	35	220	0
		Future Background	0	0	0	531	0	436	0	896	803	337	1335	0
		Project Trips						33		301	75		168	
		Future Total	0	0	0	531	0	469	0	1197	878	337	1503	0

Future Turning Movement Volume Development

9	SR 472 at I-4 EB Ramps	Raw Vol	661	0	674	0	0	0	0	861	83	0	901	0
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	694	0	708	0	0	0	0	904	87	0	946	0
		Growth Rate	4.5%	4.5%	4.5%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	170	0	174	0	0	0	0	46	4	0	48	0
		Vested Trips	136	0	84	0	0	0	0	399	78	0	435	0
		Future Background	1000	0	966	0	0	0	0	1349	169	0	1429	0
		Project Trips	44							252	48		92	
		Future Total	1044	0	966	0	0	0	0	1601	217	0	1521	0
12	Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard	Raw Vol	133	35	345	22	21	65	44	1468	140	341	809	41
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	140	37	362	23	22	68	46	1541	147	358	849	43
		Growth Rate	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	20	5	52	3	3	10	2	63	6	15	34	2
		Vested Trips	0	0	0	0	0	0	15	377	35	115	297	14
		Future Background	160	42	414	26	25	78	63	1981	188	488	1180	59
		Project Trips	23							104	34		69	
		Future Total	183	42	414	26	25	78	63	2085	222	488	1249	59
13	Normandy Boulevard at Graves Avenue	Raw Vol	150	0	149	0	0	0	0	344	387	162	413	0
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	158	0	156	0	0	0	0	361	406	170	434	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	3.6%	3.6%
		Growth Volume	0	0	0	0	0	0	0	0	0	25	63	0
		Vested Trips	196	0	190	0	0	0	0	227	235	0	0	0
		Future Background	354	0	346	0	0	0	0	588	641	195	497	0
		Project Trips	8		23						12	34		
		Future Total	362	0	369	0	0	0	0	588	653	229	497	0
14	SR 472 at Project Driveway (eastern driveway)	Raw Vol								1274			1273	
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	0	0	0	0	0	0	1338	0	0	1337	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	0	0	0	0	0	0	0	68	0	0	68	0
		Vested Trips	0	0	68	0	0	0	0	279	36	121	181	0
		Future Background	0	0	68	0	0	0	0	1685	36	121	1586	0
		Industrial Park/Warehouse PV Trips						out	in	out				in
								26.40%	26.40%	51.30%				51.30%
			0	0	0	0	0	63	20	121	0	0	0	39
		Industrial Park/Warehouse Truck Trips						out	in	out				in
								26.40%	26.40%	51.30%				51.30%
			0	0	0	0	0	16	5	30	0	0	0	10
		Commercial + Gas/Conv Pass By						10.00%					-10.00%	10.00%
			0	0	0	0	0	26	0	0	0	0	-26	26
		Commercial + Gas/Conv New Inbound Trips							14.0%				25.6%	25.7%
			0	0	0	0	0	0	56	0	0	0	101	102
		Commercial + Gas/Conv New Outbound Trips						7.00%		51.30%				
			0	0	0	0	0	31	0	224	0	0	0	0
		Future Total	0	0	68	0	0	136	81	2060	36	121	1661	177

Future Turning Movement Volume Development

15	SR 472 at Project Driveway (middle driveway)	Raw Vol								1274			1273	
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	0	0	0	0	0	0	1338	0	0	1337	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	0	0	0	0	0	0	0	67	0	0	67	0
		Vested Trips	0	0	0	0	0	0	0	290	0	0	181	0
		Future Background	0	0	0	0	0	0	0	1695	0	0	1584	0
		Industrial Park/Warehouse PV Trips								in			out	
										26.40%			26.40%	
			0	0	0	0	0	0	0	141	0	0	63	0
		Industrial Park/Warehouse Truck Trips								in			out	
										26.40%			26.40%	
			0	0	0	0	0	0	0	35	0	0	16	0
		Commercial + Gas/Conv Pass By						10.00%					-10.00%	10.00%
			0	0	0	0	0	26	0	0	0	0	-26	26
		Commercial + Gas/Conv New Inbound Trips								14.00%			12.80%	12.80%
			0	0	0	0	0	0	0	55	0	0	50	50
		Commercial + Gas/Conv New Outbound Trips						3.50%		51.30%			7.00%	
			0	0	0	0	0	16	0	224	0	0	31	0
		Future Total	0	0	0	0	0	42	0	2150	0	0	1718	76
16	SR 472 at Project Driveway (Westernmost Driveway)	Raw Vol								1274			1273	
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	0	0	0	0	0	0	1338	0	0	1337	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Growth Volume	0	0	0	0	0	0	0	67	0	0	67	0
		Vested Trips	0	0	0	0	0	0	0	290	0	0	181	0
		Future Background	0	0	0	0	0	0	0	1695	0	0	1584	0
		Industrial Park/Warehouse PV Trips								in			out	
										26.40%			26.40%	
			0	0	0	0	0	0	0	141	0	0	63	0
		Industrial Park/Warehouse Truck Trips								in			out	
										26.40%			26.40%	
			0	0	0	0	0	0	0	35	0	0	16	0
		Commercial + Gas/Conv Pass By						10.00%					-10.00%	10.00%
			0	0	0	0	0	26	0	0	0	0	-26	26
		Commercial + Gas/Conv New Inbound Trips								14.00%				12.80%
			0	0	0	0	0	0	0	55	0	0	0	50
		Commercial + Gas/Conv New Outbound Trips						3.50%		51.30%			10.50%	
			0	0	0	0	0	15	0	224	0	0	46	0
		Future Total	0	0	0	0	0	41	0	2150	0	0	1683	76

Future Turning Movement Volume Development

17	Dr Martin Luther King Jr Beltway at Project Driveway (Southern Driveway)	Raw Vol		462			546								
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
		Adjusted Volume	0	485	0	0	573	0	0	0	0	0	0	0	
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
		Growth Volume	0	0	0	0	0	0	0	0	0	0	0	0	
		Vested Trips	0	251	0	0	226	0	0	0	0	0	0	0	
		Future Background	0	736	0	0	799	0	0	0	0	0	0	0	
		Industrial Park/Warehouse PV Trips					out								
							51.30%								
			0	0	0	0	121	0	0	0	0	0	0	0	
		Industrial Park/Warehouse Truck Trips					out								
							51.30%								
			0	0	0	0	30	0	0	0	0	0	0	0	
		Commercial + Gas/Conv Pass By		-10%	40%		30.00%							10%	
			0	-26	106	0	79	0	0	0	0	0	0	26	
		Commercial + Gas/Conv New Inbound Trips		6.20%	6.20%										
			0	24	24	0	0	0	0	0	0	0	0	0	
		Commercial + Gas/Conv New Outbound Trips					63.70%							4.50%	
			0	0	0	0	278	0	0	0	0	0	0	20	
		Future Total	0	734	130	0	1307	0	0	0	0	0	0	46	
18	Dr Martin Luther King Jr Beltway at Project Driveway (Northern Driveway)	Raw Vol		462			546								
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
		Adjusted Volume	0	485	0	0	573	0	0	0	0	0	0	0	
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%							
		Growth Volume	0	0	0	0	0	0	0	0	0	0	0	0	
		Vested Trips	0	251	0	0	226	0	0	0	0	0	0	0	
		Future Background	0	736	0	0	799	0	0	0	0	0	0	0	
		Industrial Park/Warehouse PV Trips					out								
							51.30%								
			0	0	0	0	121	0	0	0	0	0	0	0	
		Industrial Park/Warehouse Truck Trips					out								
							51.30%								
			0	0	0	0	30	0	0	0	0	0	0	0	
		Commercial + Gas/Conv Pass By		-10.00%	10.00%	20.00%	-20.00%					50.00%		10.00%	
			0	-26	26	53	-53	0	0	0	0	132	0	26	
		Commercial + Gas/Conv New Inbound Trips			6.20%	8.90%									
			0	0	24	35	0	0	0	0	0	0	0	0	
		Commercial + Gas/Conv New Outbound Trips		4.50%								63.70%		4.40%	
			0	20	0	0	0	0	0	0	0	278	0	19	
		Future Total	0	730	50	88	897	0	0	0	0	410	0	45	

Future Turning Movement Volume Development

19	Cassadaga Road at Project Driveway	Raw Vol								117			88	
		Seasonal Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		Adjusted Volume	0	0	0	0	0	0	0	123	0	0	92	0
		Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
		Growth Volume	0	0	0	0	0	0	0	12	0	0	9	0
		Vested Trips	0	0	0	0	0	0	0	13	0	0	11	0
		Future Background	0	0	0	0	0	0	0	148	0	0	113	0
		Industrial Park/Warehouse PV Trips	out		out						in	in		
			66.40%		7.20%						15.10%	7.20%		
			157	0	17	0	0	0	0	0	11	5	0	0
		Industrial Park/Warehouse Truck Trips	out								in			
			73.60%								22.30%			
			44	0	0	0	0	0	0	0	4	0	0	0
		Commercial + Gas/Conv Pass By												
			0	0	0	0	0	0	0	0	0	0	0	0
		Commercial + Gas/Conv New Inbound									6.20%	7.20%		
		Trips	0	0	0	0	0	0	0	0	24	28	0	0
		Commercial + Gas/Conv New Outbound	6.20%		7.20%									
		Trips	27	0	31	0	0	0	0	0	0	0	0	0
		Future Total	228	0	48	0	0	0	0	148	39	33	113	0

Appendix K:
Planned and Programmed Improvements

COUNTY OF VOLUSIA

Graves Ave - Veteran's Memorial Pkwy to Kentucky Ave

Department: Public Works

Location: Orange City

CIP Category: Road Program

Account Number: 745-710-8132

Description / Justification

Volusia County received $168,145 in federal funding under the Local Agency Program (LAP) from the Florida Department of Transportation (FDOT) for the design of road safety improvements on Graves Avenue from Veterans Memorial Parkway to Kentucky Avenue. Per the recommendations of the Graves Avenue Safety Study prepared on behalf of the FDOT, the project will involve adding a dedicated left turn lane on Graves Avenue from the Veterans Memorial Parkway intersection to Kentucky Avenue intersection, adding a second left turn lane for westbound traffic on Graves turning south onto Veterans Memorial Parkway and extending the Kentucky Avenue southbound right turn lane on Graves Avenue.

This project is funded through FDOT's safety office as a safety improvement therefore, there is no local match required. However, due to additional improvements identified by county engineering staff, the design costs exceed the FDOT's budgeted amount and therefore the county will be responsible for up to $80,797. Anticipate construction bid process to start second quarter of fiscal year 2021-2022.

Project Reference

Council approved LAP grant for design 2/18/20
Council Approved Supplemental LAP Agreement for design 5/19/20
G1K75
FPN# 443545-1-38-01
Council awarded design contract to Dewberry 4/7/20

REVENUE SOURCE:

Budget Object Name	Prior Years	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Years 1-5	Total Amount
FL DOT	168,145	0	0	0	0	0	0	168,145
Gas Tax-Local Option	80,797	0	0	0	0	0	0	80,797
Grant Pending	0	951,000	0	0	0	0	951,000	951,000
Total Revenues:	**248,942**	**951,000**	**0**	**0**	**0**	**0**	**951,000**	**1,199,942**

CAPITAL IMPROVEMENT EXPENDITURE:

Budget Object Name	Prior Years	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Years 1-5	Total Amount
Construction Projects	0	951,000	0	0	0	0	951,000	951,000
Design	248,942	0	0	0	0	0	0	248,942
Total Expenditures:	**248,942**	**951,000**	**0**	**0**	**0**	**0**	**951,000**	**1,199,942**

COUNTY OF VOLUSIA

Orange Camp Rd - MLK Blvd to I-4

Department: Public Works

Location: DeLand

CIP Category: Road Program

Account Number: 103-790-8906

Description / Justification

Widen Orange Camp Road from two to four lanes from I-4 to west of Martin Luther King Jr. Parkway and widen Martin Luther King Jr. Parkway from two to four lanes for approximately 1,500 feet north and south of the intersection with Orange Camp Road. The signalized intersection of Orange Camp Road and Martin Luther King Jr. Parkway will be replaced with a roundabout to reduce traffic delays at the intersection. The widening is required due to the increase in traffic by nearby developments. Construction anticipated to be complete by third quarter fiscal year 2021-22.

Project Reference

Capital Project Sheet PW-ENG-5395

REVENUE SOURCE:

Budget Object Name	Prior Years	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Years 1-5	Total Amount
Bond Funded Road Program	5,703,646	0	0	0	0	0	0	5,703,646
City of DeLand	1,187,857	0	0	0	0	0	0	1,187,857
Gas Tax-Local Option	1,417,124	0	0	0	0	0	0	1,417,124
Proportionate Share	234,001	0	0	0	0	0	0	234,001
Road Impact Fees Z4/NW	4,217,747	0	0	0	0	0	0	4,217,747
Total Revenues:	**12,760,375**	**0**	**0**	**0**	**0**	**0**	**0**	**12,760,375**

CAPITAL IMPROVEMENT EXPENDITURE:

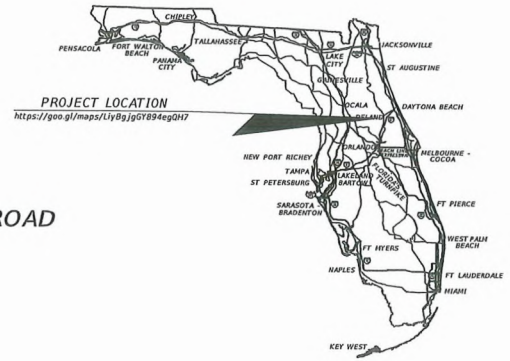
Budget Object Name	Prior Years	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Years 1-5	Total Amount
Construction Projects	5,629,778	5,300,000	0	0	0	0	5,300,000	10,929,778
Design	977,850	0	0	0	0	0	0	977,850
Right of Way	5,732	847,015	0	0	0	0	847,015	852,747
Total Expenditures:	**6,613,360**	**6,147,015**	**0**	**0**	**0**	**0**	**6,147,015**	**12,760,375**

Received 11/11/2021

Volusia County
FLORIDA

VOLUSIA COUNTY, FLORIDA
PUBLIC WORKS DEPARTMENT

CONSTRUCTION PLANS



DR. MARTIN LUTHER KING JR. BELTWAY AND CASSADAGA ROAD

SIGNALIZATION PLANS

SIGNAL NO. 471

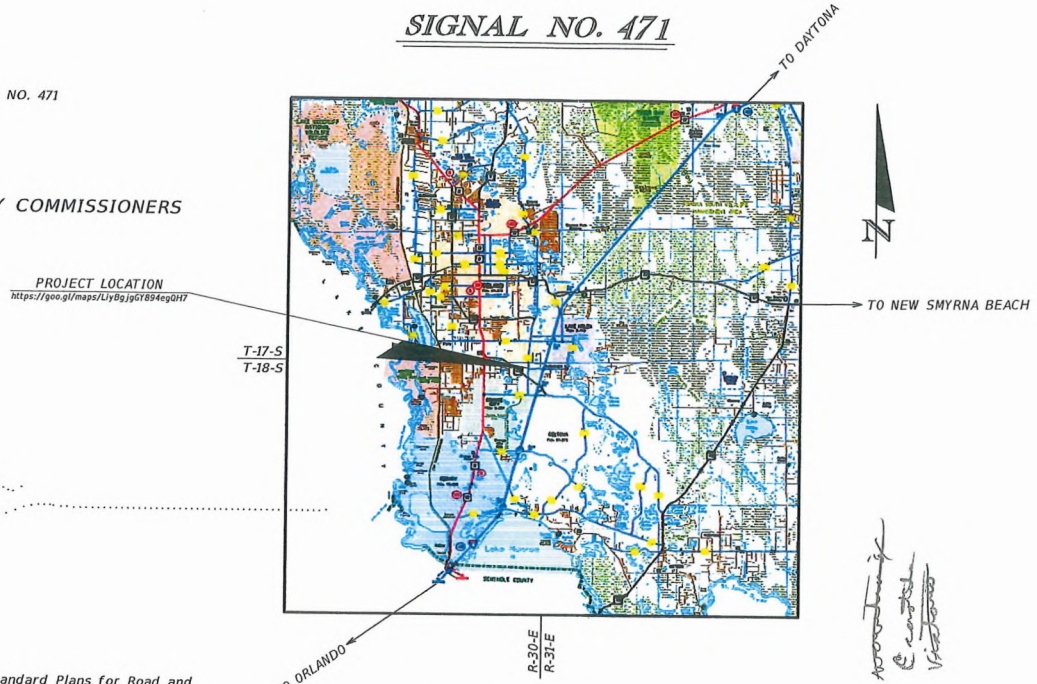
INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4 - T-5	GENERAL NOTES
T-6	SIGNALIZATION PLAN - SIGNAL NO. 471
T-7	CORNER CLIPS
T-8	STRAIN POLE SCHEDULE
T-9	GUIDESIGN WORKSHEET
B-1	SPT BORING SHEET

VOLUSIA COUNTY BOARD OF COUNTY COMMISSIONERS

COUNTY CHAIR - JEFF BROWER
AT-LARGE REPRESENTATIVE - BEN JOHNSON
COUNTY MANAGER - GEORGE RECKTENWALD

DISTRICT 1	BARBARA GIRTMAN
DISTRICT 2	BILLIE WHEELER
DISTRICT 3	DANNY ROBINS
DISTRICT 4	HEATHER POST
DISTRICT 5	DR. FRED LOWRY



SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:
JEREMY M. CROWE, PE 77064
TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD
SUITE 265
ORLANDO, FL 32803

PLANS PREPARED BY:

TMC
Traffic & Mobility Consultants

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD
SUITE 265
ORLANDO, FL 32803
(407) 531-5332
CERTIFICATE OF AUTHORIZATION NO.: 30024

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2021/22 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: N/A

Standard Plans for Bridge Construction are included in the Structures Plans Component

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2021 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/Implemented/SpecBooks

FINAL SUBMITTAL
11/08/2021

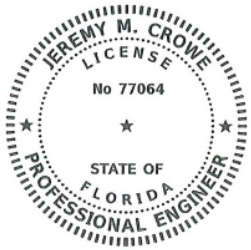
2021-P-USE-0554

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGES DUE TO REPRODUCTION

ENGINEER OF RECORD: JEREMY M CROWE, PE
P.E. NO.: 77064

TMC PROJECT NO.	FISCAL YEAR	SHEET NO.
20147.3	22	K-4 T-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED IN THE ELECTRONIC DOCUMENTS.

JEREMY M. CROWE, P.E.
P.E. LICENSE NUMBER 77064
TRAFFIC & MOBILITY CONSULTANTS LLC.
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL. 32803
CERTIFICATE OF AUTHORIZATION 30024

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

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T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4 THRU T-5	GENERAL NOTES
T-6	SIGNALIZATION PLAN - SIGNAL NO. 471
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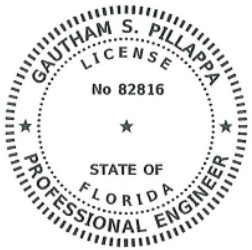
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MICHAEL L. HEBERT, P.E.
P.E. LICENSE NUMBER 50596
FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC.
633 DARTMOUTH STREET
ORLANDO, FL. 32804
CERTIFICATE OF AUTHORIZATION 26379

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-8	STRAIN POLE SCHEDULE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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GAUTHAM S. PILLAPPA, P.E.
P.E. LICENSE NUMBER 82816
GEO-TECHNOLOGY ASSOCIATES, INC.
4617 PARKBREEZE COURT
ORLANDO, FL. 32808
CERTIFICATE OF AUTHORIZATION 35088

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
B-1	SPT BORING SHEET

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

Volusia County

SIGNATURE SHEET

SHEET NO. T-2

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-6 PLAN	T-6 FINAL													TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	511														511		511	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1														1		1	
634-4-153	SPAN WIRE ASSEMBLY, FURNISH & INSTALL, TWO POINT, BOX OR DROP BOX	PI	1														1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	29														29		29	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS	1														1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	151														151		151	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE	EA	2														2		2	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	2														2		2	
641-2-18	PRESTRESSED CONCRETE POLE, F&I, TYPE P-VIII	EA	4														4		4	
646-1-11	ALUMINIUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL	EA	8														8		8	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	6														6		6	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS	1														1		1	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN 1 WAY	AS	8														8		8	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT, WAVETRONIX	EA	1														1		1	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	6														6		6	
663-1-121	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH & INSTALL, GPS, CABINET ELECTRONICS	EA	1														1		1	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	3														3		3	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL STANDARD	EA	8														8		8	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, FURNISH & INSTALL NEMA 2 PREEMPTION (ECONOLITE WITH UPS & 4G WIRELESS)	AS	1														1		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, LAYER 2, FURNISH & INSTALL	EA	1														1		1	
684-6-12	WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL ETHERNET SUBSCRIBER UNIT	EA	1														1		1	
685-1-11	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE	EA	1														1		1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	4														4		4	
715-5-31	LUMINAIRE & BRACKET ARM, FURNISH & INSTALL NEW LUMINAIRE & ARM ON NEW STRAIN POLE, ALUMINIUM	EA	4														4		4	

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

TABULATION OF QUANTITIES

SHEET NO. K-6 T-3

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTIFY VOLUSIA COUNTY TRAFFIC ENGINEERING AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING WORK. NOTIFY TIM KARR, ALLEN CATES AND BILLY WHITE (386) 736-5968.
2. THE CONTRACTOR SHALL COORDINATE WORK SCHEDULE, COORDINATE TIMING AND AUTHORIZATION OF POWER SERVICE WITH VOLUSIA COUNTY TRAFFIC ENGINEERING. NOTIFY BOBBY MADDOX, TIM KARR, AND BILLY WHITE (386) 736-5968.
3. ANY ITEM NOT SPECIFICALLY ADDRESSED IN THESE PLANS, USE F.D.O.T. FY 2021-22 STANDARD PLANS AND JULY 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL MATERIALS AND HARDWARE SHALL BE PRE-APPROVED BY VOLUSIA COUNTY TRAFFIC ENGINEERING.
4. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL NOTIFY SUNSHINE ONE-CALL 1-800-432-4770 AT LEAST TWO BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION WORK WHICH WOULD OTHERWISE INTERFERE WITH ANY ABOVE GROUND OR BELOW GROUND UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING CURRENT LOCATE TICKET THROUGHOUT THE DURATION OF THE WORK. THE COUNTY OF VOLUSIA IS NOT A MEMBER OF THE SUNSHINE ONE-CALL, FOR LOCATES CALL (386) 736-5968, VOLUSIA COUNTY TRAFFIC ENGINEERING TO REQUEST TO COMPLETE A LOCATE TICKET TO SCHEDULE THE LOCATE.
6. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH VOLUSIA COUNTY TRAFFIC ENGINEERING BEFORE ORDERING.
7. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING A BID PROPOSAL.
8. A SIGNAL INSPECTION IS TO BE SCHEDULED WITH ALLEN CATES AND BILLY WHITE (VOLUSIA COUNTY TRAFFIC ENGINEERING) (386) 736-5968 10 DAYS PRIOR TO THE SIGNAL BEING PLACED INTO OPERATION.
9. AT THE TIME OF FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE TWO SETS OF CONSTRUCTION "AS-BUILT" PLANS: ONE TO VOLUSIA COUNTY TRAFFIC ENGINEERING AND ONE FOR THE TRAFFIC SIGNAL CONTROLLER CABINET.
10. THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.
11. AT NO TIME IS THE CONTRACTOR TO CHANGE ANY SIGNAL TIMINGS. VOLUSIA COUNTY WILL MAINTAIN ALL SIGNAL TIMINGS BEFORE, DURING AND AFTER CONSTRUCTION. IF ANY TIMING CHANGES ARE MADE BY THE CONTRACTOR, A TIMING SHEET SHALL BE PLACED IN THE CONTROLLER CABINET WITH DATE AND TIME OF INSTALLING, ALONG WITH A CONTACT NUMBER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE EXISTING POWER UTILITY TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. IF REQUIRED, FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR THE ELECTRICAL POWER SERVICE ASSEMBLY.
13. THE CONTRACTOR SHALL HAVE AN I.M.S.A. LEVEL II SIGNAL TECHNICIAN ON SITE THROUGH ALL PHASES OF CONSTRUCTION AND ON CALL WITH A TWO-HOUR MAX. RESPONSE TIME.
14. UNLESS OTHERWISE STATED, ELEVATIONS LISTED IN THESE PLANS WERE DERIVED FROM ROD READINGS.

SIGNS:

1. LED INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE A SEPARATE POWER BREAKER, NOT LOCATED IN THE CONTROLLER CABINET.
2. LED INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON THE PROPOSED HANGING ARMS.

SIGNALS:

1. BLACK POLYCARBONATE HOUSINGS ARE REQUIRED FOR VEHICULAR AND PEDESTRIAN SIGNAL HEAD ASSEMBLIES IN VOLUSIA COUNTY. ALL VEHICLE SIGNAL DISPLAYS SHALL BE LED. ALL SIGNAL HEADS SHALL INCLUDE TUNNEL VISORS AND BACKPLATES WITH REFLECTIVE BORDERS.
2. ALL SIGNAL ASSEMBLES SHALL HAVE A VERTICAL CLEARANCE OF 17.5' MINIMUM AND 19.0' MAXIMUM FROM THE BOTTOM OF THE ASSEMBLY TO THE ROAD.

POLES / PEDS/ CONTROLLER:

1. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS PRIOR TO SETTING AND HAVE THE POLE LOCATIONS FIELD CHECKED BY VOLUSIA COUNTY TRAFFIC ENGINEERING. NOTIFY THOMAS EDWARDS (386) 736-5968 FOR FIELD CHECK AND POLE LOCATION APPROVAL.
2. ALL UNDERGROUND CONDUIT ENTRY HOLES ON SIGNAL POLES SHALL BE STUBBED OUT.
3. DUE TO THE CLOSE PROXIMITY OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL HAND DIG THE FIRST (4) FOUR FEET OF ANY POLE FOUNDATION.
4. NO POWER SERVICE EQUIPMENT WILL BE ALLOWED TO BE MOUNTED ON THE TRAFFIC SIGNAL CONTROLLER CABINET.
5. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL TRAFFIC SIGNAL CONTROLLER CABINETS.
6. TWO SPARE CABINET CONDUITS SHALL BE STUBBED OUT AND CAPPED IN EACH TRAFFIC SIGNAL CABINET ENTRY PULL BOX.
7. THE CONTROLLER BASE SHALL BE A MONOLITHIC POUR WITH A 4" MINIMUM/ 8" MAXIMUM ABOVE FINISHED GRADE. THE SERVICE PAD SHALL BE A SEPARATE CONCRETE PAD WITH A MINIMUM OF 4" THICKNESS. PROVIDE A SEALED 1/2" EXPANSION JOINT BETWEEN THE SERVICE PAD AND CONTROLLER BASE.
8. THE PROPOSED CONTROLLER ASSEMBLY SHALL BE NEMA TS2 TYPE V1 CABINET WITH A TS2 TYPE 2 ECONO LITE CONTROLLER (COLBALT) (2100) AND SHALL INCLUDE BACKUP INTERNAL TIME-BASED COORDINATION. THE CONTROLLER ASSEMBLY SHALL ALSO INCLUDE CONNECTION TO A UPS ECONOLITE (1000-WATT DOUBLE CONVERSION) BACKUP SYSTEM TO BE INTERNAL TO THE CONTROLLER CABINET, EXPRESS SUPPLY 8042 V3 PLUS NETWORK SWITCH, INTERFACE PANEL, FIBER OPTIC TRANSCEIVER MODULE AND ALL NECESSARY EQUIPMENT FOR A COMPLETE OPERATIONAL AND ACCEPTABLE INSTALLATION (670-5-110). ALSO, CONTROLLER CABINETS SHALL REQUIRE A GENERATOR HOOKUP BOX EXTERNAL TO THE CABINET, WIC, OR FIBER ENCLOSURE AND ECONOLITE 4G WIRELESS FOR COMMUNICATION.
9. CONTRACTOR TO ENSURE THAT A 4FT. X 4FT. FLAT LANDING AREA IS ADJACENT TO ALL PED BUTTONS FOR PEDESTRIANS.
10. PEDESTRIAN HEADS SHALL BE COUNTDOWN LED MODULAR WITH INTERNATIONAL SYMBOLS.

LOOPS/ CONDUIT/ PULL BOXES/ VIDEO DETECTION:

1. ALL CONDUIT SHALL BE 2" MINIMUM DIAMETER UNLESS OTHERWISE SPECIFIED IN THE PLANS. ABOVEGROUND CONDUIT SHALL BE 2" RIGID GALVANIZED STEEL, UNLESS OTHERWISE INDICATED. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 BURIED AT 36" MINIMUM DEPTH, UNLESS OTHERWISE INDICATED.
2. SIDE STREET AND LEFT TURN DETECTION ZONES SHALL BE CENTERED IN THE LANE AND SHALL BE EXTENDED 5' BEYOND THE STOP BAR.
3. WHEN MULTIPLE RUNS OF CONDUIT ARE PLACED UNDER PAVEMENT BY DIRECTIONAL BORE, JACKING OR TRENCHING, ONLY ONE RUN IS PAID FOR AS DIRECTIONAL BORE. ADDITIONAL RUNS ARE TO BE PAID FOR AS UNDERGROUND CONDUIT.
4. AS DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
5. PULL BOXES SHALL NOT BE LOCATED AT THE BOTTOM OF ANY DITCH OR RETENTION AREA/POND.
6. ALL ENDS OF CONDUITS IN PULL BOXES AND CABINETS SHALL BE SEALED WITH ELECTRICAL PUTTY AFTER WIRING IS COMPLETE.
7. TRAFFIC SIGNAL PULL BOXES SHALL BE COMPOSITE AND THE COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNALS" (QUAZITE 1324 BK., 1212BA OR EQUAL).
8. ALL PULL BOXES AND FIBER BOXES SHALL HAVE A CONCRETE APRON AROUND THE PULL BOX PER FDOT SPECIFICATIONS.

SIGNAL CABLE:

1. IF A CONTINUOUS RUN OF SIGNAL CABLE IS NOT POSSIBLE FROM THE CABINET TO THE SIGNAL HEAD, THEN A SPLICE WITH ORD WATERPROOF CONNECTORS SHALL BE USED AT THE HAND HOLE, NOT A TERMINAL STRIP - MARK PHASING ON WIRES.
2. THE PROPOSED SIGNAL CABLE SHALL INCLUDE SUFFICIENT CONDUCTORS FOR FUTURE LEFT TURN PHASES.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY N. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

Volusia County

GENERAL NOTES

SHEET NO. K-7 T-4

POWER SERVICE:

1. THE MAIN SERVICE DISCONNECT ENCLOSURE AND THE LOAD CENTER ENCLOSURE LOCATED ADJACENT TO THE CONTROLLER CABINET SHALL BE NEMA 3R OR BETTER RATED.
2. ABOVEGROUND CONDUIT USED FOR ELECTRIC SERVICE SHALL BE RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT 2" MIN. FOR POWER SERVICE WIRES AND A 3/4" MIN. FOR GROUNDING ELECTRODE CONDUCTORS.
3. ANTI-CORROSIVE PASTE SHALL BE USED ON ALL ELECTRIC SERVICE CONNECTIONS.
4. ELECTRICAL SERVICE INSTALLATIONS MUST CONFORM WITH THE MOST RECENT VERSION OF THE NATIONAL ELECTRIC CODE (NEC), FDOT SPECIFICATIONS, AND POWER UTILITY COMPANY REQUIREMENTS.

UTILITIES:

1. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE VV, VH, VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY; THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY UTILITY OWNER(S) THAT MAY OR MAY NOT BE A "SUNSHINE ONE-CALL" MEMBER IN ORDER TO COORDINATE UTILITY MARKING AND LOCATING AT A MINIMUM OF TWO DAYS PRIOR TO DIGGING. IT SHOULD BE NOTED THAT VOLUSIA COUNTY TRAFFIC ENGINEERING IS NOT A MEMBER OF "SUNSHINE ONE-CALL" AND THAT SEPARATE CONTACT WILL NEED TO BE MADE IN ORDER TO OBTAIN UTILITY LOCATE INFORMATION FOR VOLUSIA COUNTY TRAFFIC ENGINEERING FACILITIES.

BELOW IS A LIST OF UTILITY OWNERS NOTIFIED ON 06/08/2021:

COMPANY	CONTACT	TELEPHONE #
ATT	STEVE HAMER	813-888-8300
CENTURYLINK	BILL MCCLOUD	850-599-1444
CITY OF DELAND	RAYMOND BAHRAMI	386-626-7189
DUKE ENERGY	STEPHANIE OLMO	407-905-3376
FL PUBLIC UTILITIES	COLIN DUNN	386-785-4554
CENTURY LINK	NETWORK RELATIONS	877-366-8344
VOLUSIA COUNTY WATER & UTILITY SERVICE	EARL FARMER	251-753-8695
VOLUSIA COUNTY TRAFFIC ENGINEERING	ALLEN CATES	386-736-5968

VOLUSIA COUNTY USE PERMIT NOTES:

1. NOTIFY VOLUSIA COUNTY DEVELOPMENT ENGINEERING OFFICE AT (386) 736-5926 ONE BUSINESS DAY PRIOR TO BEGINNING ANY PERMITTED WORK BEFORE ANY CHANGES FROM APPROVED PLANS AND WHEN COMPLETED.
   A. ALL ROAD/LANE CLOSURES "ARE SEPARATE FROM THE PERMIT" AND REQUIRE PLAN REVIEW AND APPROVAL WITH 7 DAY ADVANCE NOTICE FROM VOLUSIA COUNTY TRAFFIC OPERATIONS AT (386) 239-6535 PRIOR TO ANY CLOSURES. MOT IS REQUIRED ON ALL PROJECTS.
   B. ALL TRAFFIC & PEDESTRIAN SIGNALS (& SURROUNDING AREAS), "ARE NOT" A MEMBER OF SUNSHINE ONE CALL. LOCATES MUST REQUESTED /LOCATED FROM VOLUSIA COUNTY TRAFFIC ENGINEERING AT (386) 736-5968.
   C. THE VOLUSIA COUNTY -STAMPED "APPROVED" PERMIT PLANS MUST BE ONSITE AT ALL TIMES.
   D. NO TRENCH/EXCAVATIONS SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT.
   E. SOD ALL DISTURBED AREAS.
   F. CONTRACTOR IS RESPONSIBLE FOR PRE/POST CONSTRUCTION VIDEO/PHOTOS OF EXISTING ROADWAYS, DRIVEWAYS, SIDEWAYS, DITCH SWALES, CULVERTS AND ABOVE GROUND UTILITIES.
2. OPERATIONS WITHIN THE COUNTY RIGHT-OF-WAY SHALL NORMALLY BE CONDUCTED FROM 7:00 AM TO 7:00 PM, MONDAY THROUGH FRIDAY. ANY DEVIATION FROM THESE HOURS REQUIRES PRIOR APPROVAL FROM THE COUNTY DEVELOPMENT ENGINEER. EMERGENCY REPAIRS ARE EXCLUDED FROM THIS TIME RESTRICTION.
3. ALL EXISTING SIDEWALKS WITHIN COUNTY RIGHT -OF-WAY SHALL EITHER REMAIN OPEN OR BE PROVIDED A TEMPORARY WALKWAY IN ACCORDANCE WITH THE CURRENT VERSION OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD INDEX NO. 102-660. ANY DAMAGE TO SIDEWALKS SHALL BE REPAIRED AND/OR REPLACED IN LIKE KIND BY THE CONTRACTOR. NEW SIDEWALKS AND SECTIONS THROUGH DRIVEWAYS MUST BE AT LEAST A 1.5% CROSS SLOPE AND 2% MAXIMUM CROSS SLOPE PER ADA STANDARDS.
4. DRIVING OR STAGING OF CONSTRUCTION VEHICLES OR MATERIALS IS NOT PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY OR ON PEDESTRIAN WALKWAYS AND PATHS. THERE SHALL BE NO OVERNIGHT CONSTRUCTION VEHICLE RELATED PARKING, CONSTRUCTION MATERIAL PLACEMENT, OR STORAGE OF ANY KIND PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY.

PAY ITEM NOTES:

660-3-XX: VENDOR AND DEVICE CONTRACTOR ARE TO USE RADAR DETECTION PROVIDED BY WAVETRONIX AS APPROVED BY VOLUSIA COUNTY. RADAR DETECTOR SHALL BE POLE MOUNTED AND NOT SPAN MOUNTED.

665-1-11: THE PEDESTRIAN DETECTOR MUST INCLUDE THE FURNISHING AND INSTALLING OF THE FTP-68B-06 SIGNS.

670-5-112: THIS PAY ITEM INCLUDES BOTH THE CONTROLLER ELECTRONICS AND THE CABINET. THE CONTRACTOR MUST INSTALL AN ECONOLITE CONTROLLER WITH UPS AND 4G WIRELESS CAPABILITY.

700-5-22: ALL INTERNALLY ILLUMINATED SIGNS INCLUDE STREET NAME SIGN PANELS. THE CANTILEVER ARM AND ALL MOUNTING HARDWARE IS INCLUDED IN THE PAY ITEM. THE SUPPORT STRUCTURE (CONCRETE POLE) IS PAID SEPERATELY.

715-5-32: THIS PAY ITEM INCLUDES THE BRACKET ARM, LUMINAIRE WITH LAMP AND ALL NECESSARY MOUNTING HARDWARE AS PER THE PLANS AND INDEXES. THE CONTRACTOR MUST FURNISH AND INSTALL GE EVOLVE LED STREET LIGHT OR AN EQUIVALENT VENDOR AS APPROVED BY VOLUSIA COUNTY TRAFFIC ENGINEERING.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

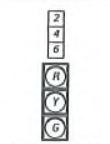
TRAFFIC & MOBILITY CONSULTANTS LLC
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JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30074

Volusia County

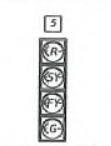
GENERAL NOTES

SHEET NO. K-8 1-5

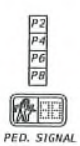
TRAFFIC SIGNAL HEAD DETAILS



3-SECT., 1-WAY
6 AS
650-1-14



4-SECT., 1-WAY
1 AS
650-1-16



PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
8 AS



FTP-68B-06
9"X18"
8 EA
(INCLUDED IN
665-1-11)

FUTURE TRAFFIC SIGNAL HEAD DETAILS

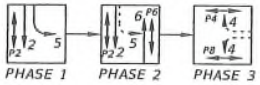


3-SECT., 1-WAY
2 AS



4-SECT., 1-WAY
3 AS

S.O.P. 2 (MOD)



PHASE 1 PHASE 2 PHASE 3



660-3-12 6 EA

INTERNALLY ILLUMINATED
OVERHEAD SIGNS (SINGLE-SIDED FACE MOUNTED)
N.T.S



700-5-22 2 EA



700-5-22 2 EA

RADAR DETECTION CONNECTION CHART

CAMERA DETECTION	DETECTION ZONE	DELAY TIME (SEC)	DETECTION ZONE DIMENSION
R1	DZ-2	-	6' X 330'
	DZ-5	-	6' X 40'
R2	DZ-6	-	6' X 40'
	DZ-6R	5	6' X 40'
R3	DZ-4R	5	6' X 330'
	DZ-4	-	6' X 40'
R4	DZ-6	-	6' X 330'
R5	DZ-5	-	6' X 40'
	DZ-2	-	6' X 40'
R6	DZ-4R	5	6' X 40'
	DZ-4	-	6' X 40'

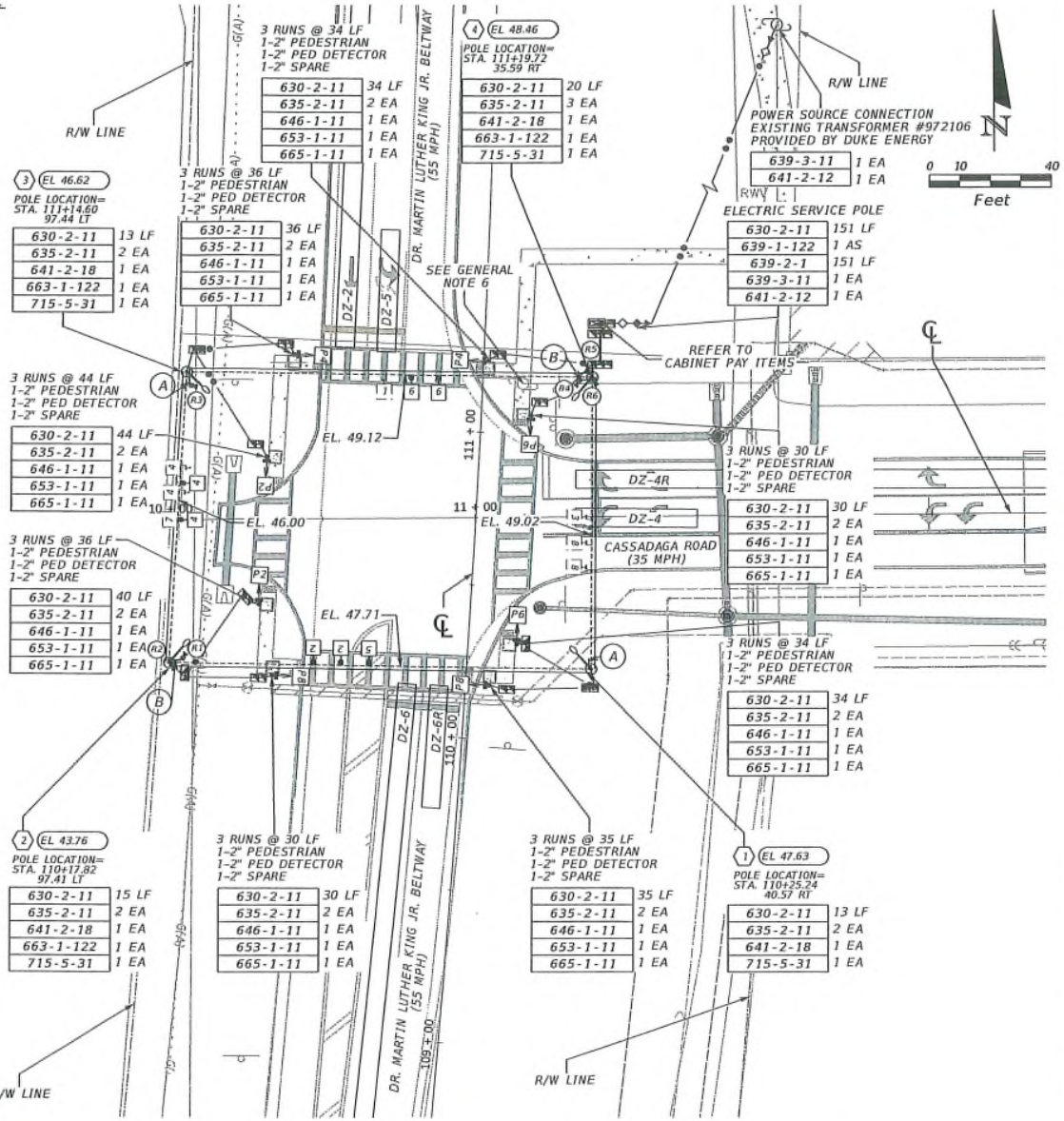
SIZE AND PLACEMENT OF RADAR DETECTION ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER

CONTROLLER TIMINGS

TIMING FUNCTION / DIRECTION		SBT	WBL/WBR	SBL	NBT	PED
	MOVEMENT NUMBER	2	4	5	6	P8
TIMING FUNCTION	MINIMUM GREEN	10	7	5	10	-
	EXTENSION	3.0	3.0	3.0	3.0	-
	MAXIMUM GREEN 1	70	50	30	70	-
	MAXIMUM GREEN 2	-	-	-	-	-
	YELLOW CLEARANCE	5.5	4.0	5.5	5.5	-
	ALL RED	2.0	2.8	2.0	2.0	-
	PEDESTRIAN WALK	7	7	-	7	7
	PED. CLEARANCE	9	15	-	17	17
	RECALL	MIN	-	-	MIN	-
	FLASH	Y	R	R	Y	-

CABINET PAY ITEMS
7 RUNS @ 16 LF
1-2" GROUND
1-2" LIGHTING
1-2" PEDESTRIAN
1-2" PED DETECTOR
1-2" RADAR
1-2" SIGNAL
1-2" SPARE

630-2-11	16 LF
632-7-1	1 PI
634-4-153	1 PI
635-2-11	4 EA
660-3-11	1 EA
663-1-121	1 EA
670-5-112	1 AS
684-1-1	1 EA
684-6-12	1 EA
685-1-11	1 EA



GENERAL NOTES

1. THE MAJOR STREET IS DR. MARTIN LUTHER KING JR. BELTWAY (SPEED LIMIT 55 MPH). THE MINOR STREET IS CASSADAGA ROAD (SPEED LIMIT 35 MPH). THE MAJOR STREET MOVEMENTS ARE 2,5 AND 6, AND THE MINOR STREET MOVEMENT IS 4.
2. DURING FLASH OPERATION, MOVEMENTS 4 AND 5 SHALL FLASH RED, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW.
3. CONTRACTOR TO COORDINATE WITH POWER COMPANY FOR CONNECTION TO POWER SERVICE.
4. THE FUTURE SIGNAL HEAD PLACEMENT FOR THE MAJOR STREET (MOVEMENT 1) AND MINOR STREET (MOVEMENTS 3,7 & 8) TO BE INSTALLED UPON CONSTRUCTION OF THE WEST LEG OF THE INTERSECTION.
5. THE FUTURE LANE CONFIGURATION FOR THE NEW WEST LEG (MOVEMENTS 3 & 8) WAS ASSUMED TO MIRROR CASSADAGA ROAD (EXCLUSIVE LEFT AND A SHARED THROUGH AND RIGHT LANE).
6. PEDESTRIAN SIGNALS OF THE NORTHWEST AND SOUTHWEST CORNERS TO BE ADJUSTED UPON CONSTRUCTION OF THE WEST LEG OF THE INTERSECTION.
7. EXISTING SOLAR STREET LIGHT REMOVAL BY DUKE ENERGY AT THE TIME OF CONSTRUCTION. EXISTING STREET LIGHT TO REMAIN ENERGIZED UNTIL THE NEW LIGHTS ARE OPERATIONAL.
8. MOVEMENT P8 IS TO OVERLAP WITH MOVEMENT P4.
9. MOVEMENT 5 SHALL OMIT THE FLASHING YELLOW PHASE WHILE MOVEMENT P6 IS ACTIVE.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
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FAX: (407) 531-5331
JEREMY N. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION: 30024

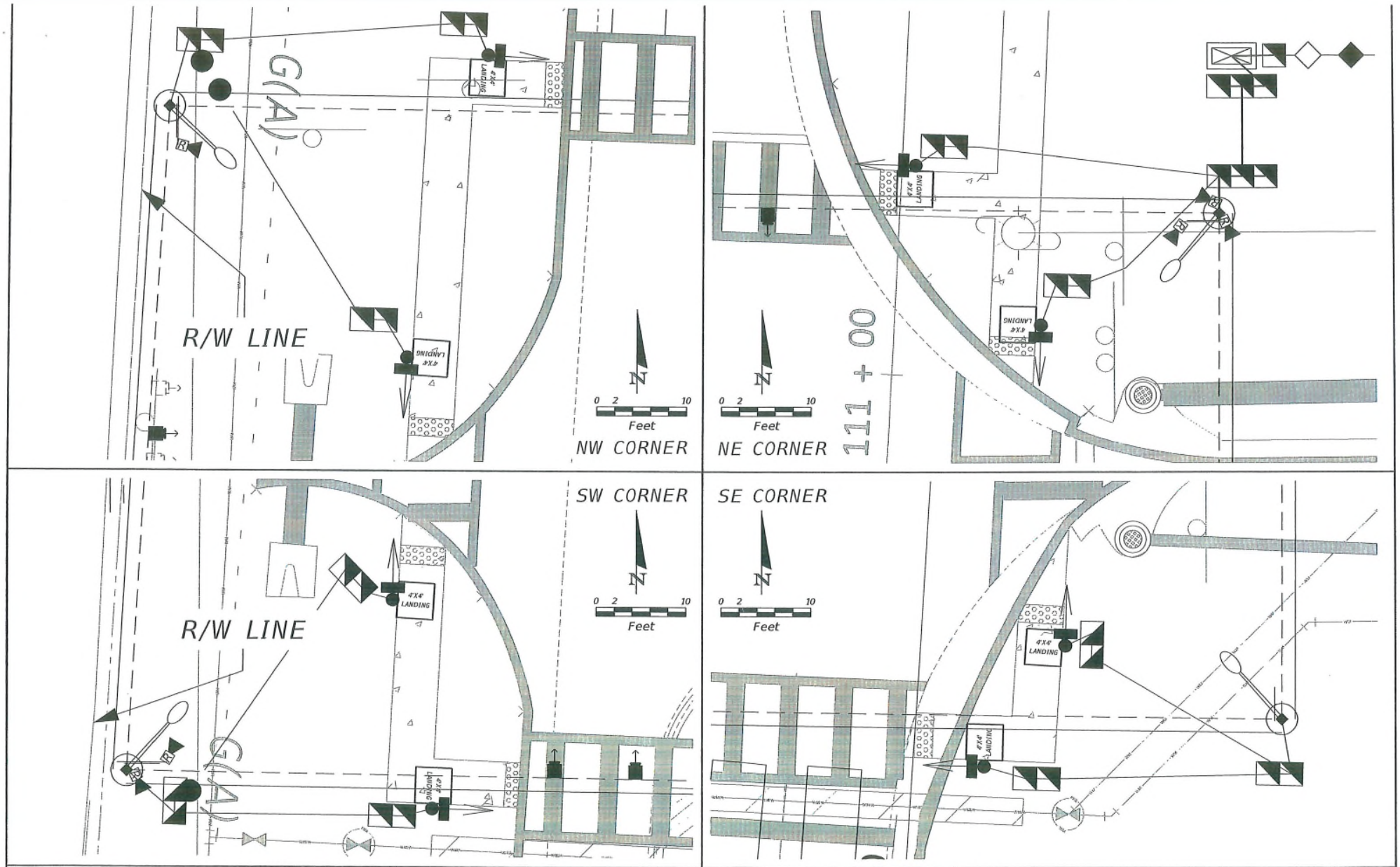
Volusia County

SIGNALIZATION PLAN

SIGNAL NO. 471

SHEET NO. K-9 / 1-6

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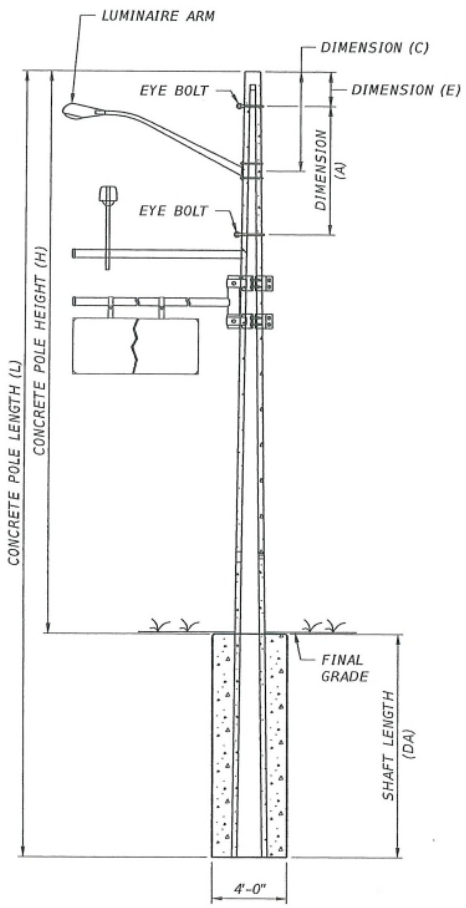
Traffic & Mobility Consultants

Volusia County

CORNER CLIPS

SHEET NO. K-10 1-7

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CONCRETE STRAIN POLE DIMENSIONS
TYPES P-III THROUGH P-VIII

STRAIN POLE SCHEDULE

ID NO.	SHEET NO.	POLE LOCATION		FINAL GRADE ELEVATION	CROWN ELEVATION	POLE TYPE	POLE LENGTH (L)	POLE HEIGHT (H)	DIMENSION (A)	DIMENSION (C)	DIMENSION (E)	SHAFT LENGTH (DA)
		STATION	OFFSET									
1	T-6	110+25.24	40.57' RT	47.63	47.71	P-VIII	50.00	33.07	6.53	4.27	1.00	16.93
2	T-6	110+17.82	97.41' LT	43.76	46.00	P-VIII	54.00	36.94	6.53	4.27	1.00	17.06
3	T-6	111+14.60	97.44' LT	46.62	49.12	P-VIII	52.00	35.03	6.53	4.27	1.00	16.97
4	T-6	111+19.72	35.59' RT	48.46	49.02	P-VIII	50.00	33.19	6.53	4.27	1.00	16.81

NOTES:

1. SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS FOR THE LUMINAIRE ARM ATTACHMENT TO THE POLE DETAILS MUST BE PROVIDED. THE DRAWINGS AND CALCULATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. LUMINAIRE ATTACHMENT MUST BE THROUGH BOLTED.
2. WORK THIS SHEET WITH INDEX 641-010.
3. MESSENGER AND CATENARY WIRE DIAMETER SHALL BE 1/2".
4. DESIGN OF THE STRAIN POLES, WIRES, AND FOUNDATIONS ARE BASED ON A DESIGN WIND SPEED OF 140 MPH, IN ACCORDANCE WITH THE JANUARY 2021 FDOT STRUCTURES MANUAL.
5. DESIGN OF THE FOUNDATIONS IS BASED ON BORINGS TAKEN 08/03/21, SEALED BY GEO-TECHOLOGY ASSOCIATES, INC. THE FOLLOWING ASSUMED SOIL PROPERTIES ARE USED IN DESIGN:
   SOIL TYPE = COHESIONLESS
   SOIL LAYER THICKNESS = 30 FT.
   SOIL FRICTION ANGLE = 30 DEG. (POLE 1), 29 DEG. (POLES 2-4).
   SOIL EFFECTIVE UNIT WEIGHT = 50 PCF (POLES 1-4).
   SOIL SPT N-VALUE = 13 BLOWS/FT (POLE 1), 5 BLOWS/FT (POLES 2-3), 6 BLOWS/FT (POLE 4).
   DESIGN WATER TABLE IS 0 FT. BELOW SURFACE

Designed By : ADB 09-21
Drawn By : BSW 08-21

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REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

MICHAEL L. HEBERT, P.E.
P.E. LICENSE NUMBER 50596
FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC.
633 DARTMOUTH STREET
ORLANDO, FL 32804
(407) 513-9709

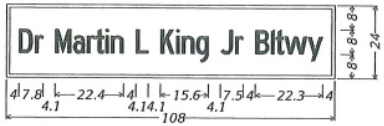
Volusia County
FLORIDA

STRAIN POLE SCHEDULE

SHEET NO.
K-11
T-8

SIGN NUMBER	A
QUANTITY	2
WIDTH	9'-0"
HEIGHT	2'-0"
BORDER WIDTH	1"
BORDER RADII	0"
BACKGROUND COLOR	3M EC GREEN
LEGEND & BORDER COLOR	3M 490T WHITE
STATION(S)	N/A

NOTES:
1. SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON CANTILEVER ARMS



0" Radius, 1.0" Border, White on Green;
"Dr Martin L King Jr Bltwy", C 2K specified length;
Table of distances between letter and object lefts

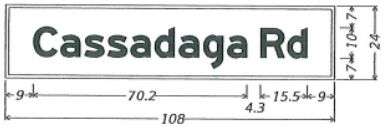
4.0	D 5.2	r 6.7	M 5.9	a 4.5	r 2.8	t 3.3	i 1.8	n 8.1	L 4.1

4.1	K 5.0	i 1.9	n 4.6	g 8.2	J 4.9	r 2.6

4.0	B 5.1	l 1.6	t 3.0	w 7.6	y 5.0	4.0

SIGN NUMBER	B
QUANTITY	2
WIDTH	9'-0"
HEIGHT	2'-0"
BORDER WIDTH	1"
BORDER RADII	0"
BACKGROUND COLOR	3M EC GREEN
LEGEND & BORDER COLOR	3M 490T WHITE
STATION(S)	N/A

NOTES:
1. SIGNS SHALL BE SINGLE SIDED AND FACE MOUNTED ON CANTILEVER ARMS



0" Radius, 1.0" Border, White on Green;
"Cassadaga Rd", E Mod 2K specified length;
Table of distances between letter and object lefts

9.0	C 8.9	a 7.9	s 7.4	s 7.6	a 7.9	d 8.0	a 7.9	g 8.0	a 10.9	R 8.9	d 6.6	9.0

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GUIDESIGN WORKSHEET

SHEET NO.
K-12
7-9

LOG OF BORING NO. MA-01

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	5	0	SP		Brown, dry, loose, fine Poorly Graded SAND, trace Organics.	
S-2	5				Same, Light Brown	
S-3	4				Same, Brown	
S-4	25	6			Same, medium dense	
S-5	19					
S-6	10	12			Same, loose	
S-7	16	18	SP-SM		Brown to Orange, moist, medium dense, fine Poorly Graded SAND with Silt.	
S-8	10	24			Same, Light Gray, loose	M/C = 15% F/C = 26%
S-9	15	30			Same, Brown to Light Brown, medium dense	

Boring terminated at 30 feet.

LOG OF BORING NO. MA-02

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	14	0	SP-SM		Brown, dry, medium dense, fine Poorly Graded SAND with Silt, trace Organics.	
S-2	17		SP		Brown, dry, medium dense, fine Poorly Graded SAND, trace Organics.	
S-3	6	6			Same, loose	
S-4	3				Same, very loose	
S-5	5				Same, loose	
S-6	8	12	SC		Brown, dry, loose, Clayey SAND.	M/C = 18% F/C = 34%
S-7	10	18	SP		Light Gray, dry, loose, fine Poorly Graded SAND.	
S-8	11	24	SP-SM		Gray to Orange, dry, medium dense, fine Poorly Graded SAND with Silt.	
S-9	26	30				

Boring terminated at 30 feet.

LOG OF BORING NO. MA-03

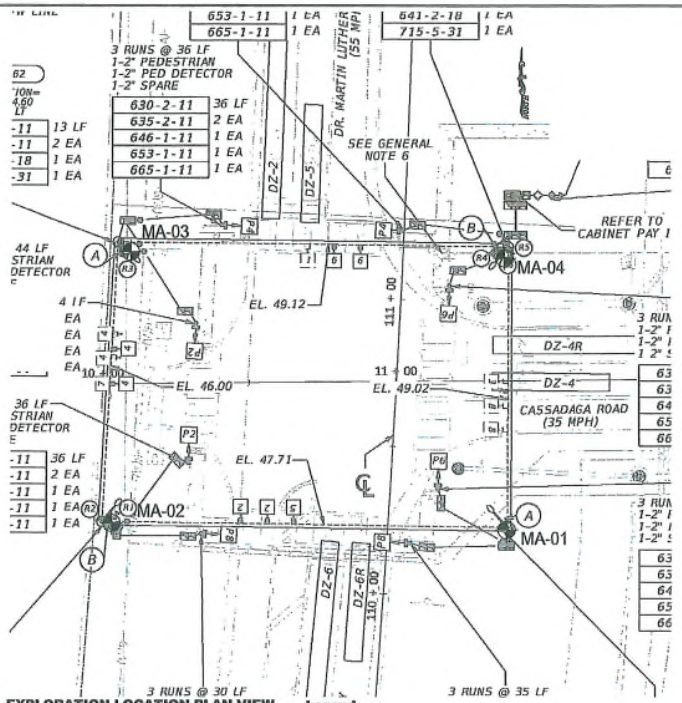
SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	10	0	SP-SM		Brown, dry, loose, fine Poorly Graded SAND with Silt, trace Asphalt Fragments and Organics.	
S-2	14		SP		Brown, dry, medium dense, fine Poorly Graded SAND, trace Organics.	
S-3	8				Same, Light Brown, loose	
S-4	4	6			Same, very loose	
S-5	4					M/C = 3% F/C = 1%
S-6	9	12	SP-SM		Brown to Orange, moist, loose, fine Poorly Graded SAND with Silt.	
S-7	9	18	SP		Light Gray, moist, loose, fine Poorly Graded SAND.	
S-8	10	24	SP-SM		Gray to Orange, moist, loose, fine Poorly Graded SAND with Silt.	
S-9	24	30			Same, medium dense	

Boring terminated at 30 feet.

LOG OF BORING NO. MA-04

SAMPLE NUMBER	N (blows/Ft.)	DEPTH (Ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
S-1	5	0	SP		Brown, dry, loose, fine Poorly Graded SAND, trace Organics.	
S-2	5				Same, Light Brown to Brown	
S-3	7					M/C = 9% F/C = 1%
S-4	22	6			Same, medium dense	
S-5	19					
S-6	10	12			Same, loose	
S-7	13	18	SP-SM		Brown to Orange, dry, medium dense, Poorly Graded SAND with Silt.	
S-8	11	24			Same, Light Gray	
S-9	14	30			Same, Brown to Light Gray	

Boring terminated at 30 feet.



EXPLORATION LOCATION PLAN VIEW

Scale: 1" = 20'

Base image was adapted from the Signalization Plan, Signal No. 471, undated, and prepared by Traffic & Mobility Consultants, LLC (Original scale 1" = 40').

Legend

MA-01 Identification and approximate location of Standard Penetration Test (SPT) boring performed by Geo-Technology Associates, Inc. (GTA) subcontractor in August of 2021.

Notes

1. Exploration locations were selected by GTA and staked in the field by AWK Consulting Engineers, Inc. using an instrumented survey. Exploration locations should be considered accurate only to the degree implied by the method used.

Key to Boring Logs

M/C NATURAL MOISTURE CONTENT (%)

F/C FINES CONTENT (%)

SP USCS GROUP SYMBOL BASED ON VISUAL OBSERVATION AND LABORATORY TEST

SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE)	CLEAN SANDS (LESS THAN 15% PASSING THE NO. 200 SIEVE)	SW	Well-Graded SAND
		SP	Poorly Graded SAND
	SANDS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)	SM	Silty SAND
		SC	Clayey SAND

COARSE-GRAINED SOILS (GRAVEL AND SAND)

DESIGNATION	BLOWS PER FOOT (BPF) N
VERY LOOSE	0-4
LOOSE	5-10
MEDIUM DENSE	11-30
DENSE	31-50
VERY DENSE	>50

NOTE: "N" VALUE DETERMINED AS PER ASTM D 1586

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SHEET NO. B-1

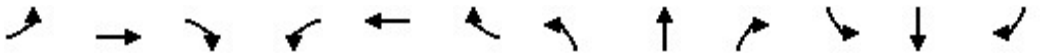
STRAIN POLES
MLK BELTWAY & CASSADAGA ROAD
VOLUSIA COUNTY, FLORIDA

SPT BORING SHEET

K-13

PROJECT: 31211343 | DATE: OCTOBER 2021 | SCALE: AS SHOWN | DRAWN BY: YMR | REVIEW BY: GSP | FIGURE: 2

Appendix L:
Background Conditions Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	1438	317	185	1116	324	247	377	162	304	366	115
Future Volume (vph)	93	1438	317	185	1116	324	247	377	162	304	366	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.3	8.3	8.3	8.3	8.3	8.3		8.8	8.8	9.4	9.4	9.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3539	1599	1719	3539	1583		1813	1583	1752	1863	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	3539	1599	1719	3539	1583		1813	1583	1752	1863	1509
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	1514	334	195	1175	341	260	397	171	320	385	121
RTOR Reduction (vph)	0	0	205	0	0	226	0	0	139	0	0	100
Lane Group Flow (vph)	98	1514	129	195	1175	115	0	657	32	320	385	21
Heavy Vehicles (%)	5%	2%	1%	5%	2%	2%	4%	2%	2%	3%	2%	7%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	10.7	49.7	49.7	11.7	50.7	50.7		28.2	28.2	25.6	25.6	25.6
Effective Green, g (s)	10.7	49.7	49.7	11.7	50.7	50.7		28.2	28.2	25.6	25.6	25.6
Actuated g/C Ratio	0.07	0.33	0.33	0.08	0.34	0.34		0.19	0.19	0.17	0.17	0.17
Clearance Time (s)	8.3	8.3	8.3	8.3	8.3	8.3		8.8	8.8	9.4	9.4	9.4
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	122	1172	529	134	1196	535		340	297	299	317	257
v/s Ratio Prot	0.06	c0.43		0.11	c0.33			c0.36		0.18	c0.21	
v/s Ratio Perm			0.08			0.07			0.02			0.01
v/c Ratio	0.80	1.29	0.24	1.46	0.98	0.22		1.93	0.11	1.07	1.21	0.08
Uniform Delay, d1	68.6	50.1	36.5	69.2	49.2	35.4		60.9	50.5	62.2	62.2	52.3
Progression Factor	1.00	1.00	1.00	0.77	0.88	1.60		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.5	137.8	1.1	232.4	18.4	0.7		430.3	0.2	71.9	122.0	0.2
Delay (s)	99.1	187.9	37.6	285.3	61.7	57.5		491.2	50.7	134.1	184.2	52.5
Level of Service	F	F	D	F	E	E		F	D	F	F	D
Approach Delay (s)		157.7			86.4			400.2			145.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	170.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	34.8
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	1514	334	195	1175	341	657	171	320	385	121
v/c Ratio	0.80	1.29	0.45	1.46	0.98	0.45	1.93	0.35	1.07	1.21	0.27
Control Delay	109.2	178.3	7.4	270.3	61.7	6.9	461.5	3.5	129.1	172.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.2	178.3	7.4	270.3	61.7	6.9	461.5	3.5	129.1	172.5	1.5
Queue Length 50th (ft)	96	~990	18	~261	629	84	~987	0	~346	~459	0
Queue Length 95th (ft)	#200	#1130	96	m#388	m#741	m101	#1233	16	#545	#669	0
Internal Link Dist (ft)		900			559		708			484	
Turn Bay Length (ft)	465		485	460		485		550	180		230
Base Capacity (vph)	122	1172	735	134	1196	760	340	482	299	317	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.29	0.45	1.46	0.98	0.45	1.93	0.35	1.07	1.21	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	121	44	557	176	76	757
Future Volume (vph)	121	44	557	176	76	757
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	1495	1845	1568	1770	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.21	1.00
Satd. Flow (perm)	1805	1495	1845	1568	396	1827
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	48	605	191	83	823
RTOR Reduction (vph)	0	40	0	42	0	0
Lane Group Flow (vph)	132	8	605	149	83	823
Heavy Vehicles (%)	0%	8%	3%	3%	2%	4%
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	13.1	13.1	34.1	34.1	48.8	48.8
Effective Green, g (s)	13.1	13.1	34.1	34.1	48.8	48.8
Actuated g/C Ratio	0.17	0.17	0.45	0.45	0.64	0.64
Clearance Time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	310	257	825	701	383	1170
v/s Ratio Prot	c0.07		0.33		0.02	c0.45
v/s Ratio Perm		0.01		0.10	0.12	
v/c Ratio	0.43	0.03	0.73	0.21	0.22	0.70
Uniform Delay, d1	28.2	26.3	17.3	12.9	8.5	9.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	3.4	0.2	0.3	1.9
Delay (s)	29.1	26.3	20.7	13.0	8.8	10.9
Level of Service	C	C	C	B	A	B
Approach Delay (s)	28.4		18.9			10.7
Approach LOS	C		B			B

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	76.2	Sum of lost time (s)	21.8
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	48	605	191	83	823
v/c Ratio	0.42	0.16	0.72	0.25	0.20	0.72
Control Delay	35.2	11.4	24.3	10.0	6.7	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	11.4	24.3	10.0	6.7	13.7
Queue Length 50th (ft)	54	0	233	32	13	218
Queue Length 95th (ft)	129	30	415	82	32	409
Internal Link Dist (ft)	1320		791			656
Turn Bay Length (ft)	180			145	125	
Base Capacity (vph)	1257	1055	1662	1420	822	1827
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.05	0.36	0.13	0.10	0.45

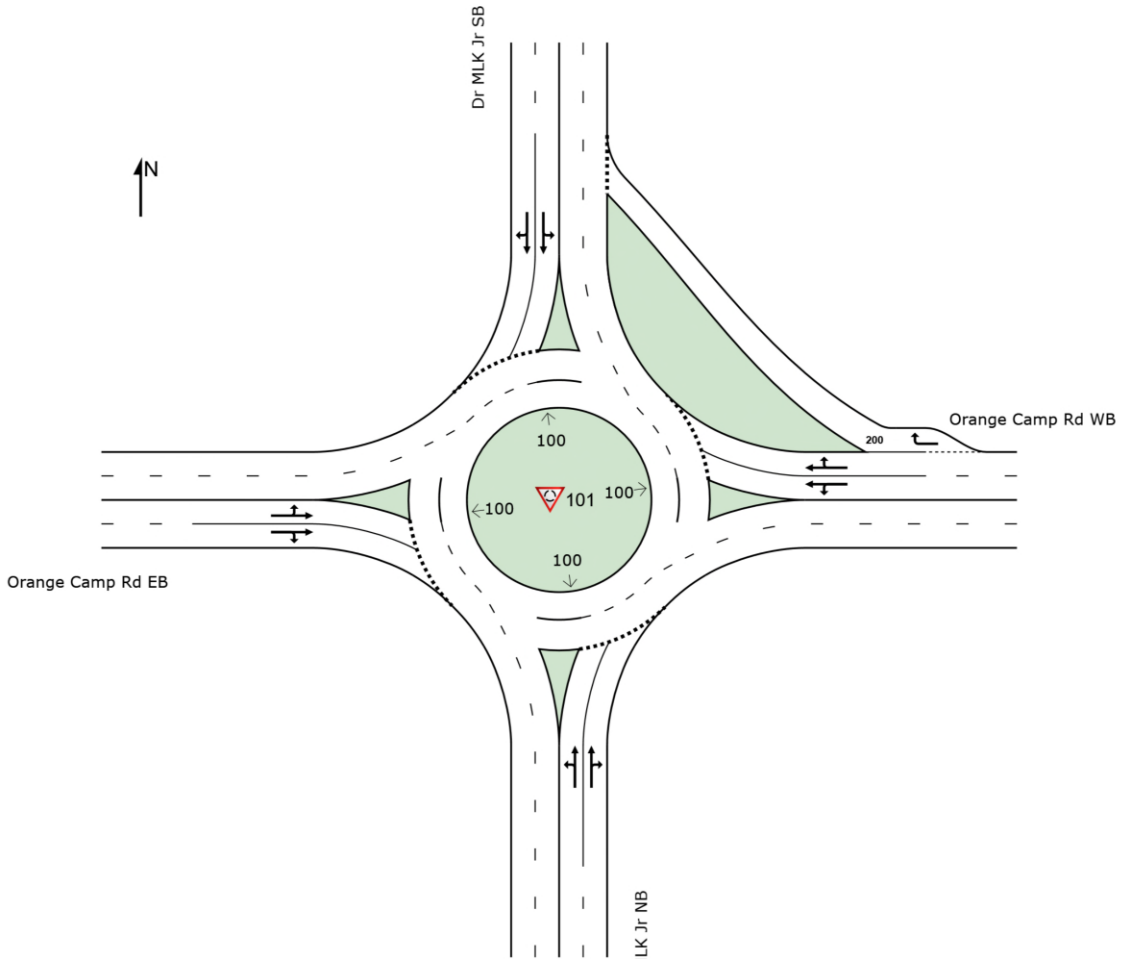
Intersection Summary

SITE LAYOUT

Site: 101 [2027 Future Buildout PM Peak Hour Conditions (Site Folder: General)]

Buildout Roundabout
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2027 Future Background PM Peak Hour Conditions (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Future Background Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Dr MLK Jr NB															
3	L2	All MCs	183	1.0	183	1.0	0.856	40.0	LOS D	7.8	195.8	0.92	1.29	2.20	21.7
8	T1	All MCs	575	1.0	575	1.0	0.856	38.1	LOS D	8.2	206.8	0.91	1.29	2.21	22.6
18	R2	All MCs	160	0.0	160	0.0	0.856	36.1	LOS D	8.2	206.8	0.91	1.29	2.21	22.9
Approach			917	0.8	917	0.8	0.856	38.1	LOS D	8.2	206.8	0.91	1.29	2.21	22.4
East: Orange Camp Rd WB															
1	L2	All MCs	153	5.0	153	5.0	0.605	18.4	LOS B	3.8	95.8	0.78	0.90	1.27	27.3
6	T1	All MCs	618	1.0	618	1.0	0.605	16.3	LOS B	4.0	99.7	0.78	0.88	1.25	28.7
16	R2	All MCs	195	2.0	195	2.0	0.248	7.3	LOS A	0.9	23.9	0.57	0.49	0.57	32.4
Approach			966	1.8	966	1.8	0.605	14.8	LOS B	4.0	99.7	0.74	0.80	1.12	29.1
North: Dr MLK Jr SB															
7	L2	All MCs	217	3.0	217	3.0	0.901	46.3	LOS D	9.7	251.6	0.94	1.45	2.67	20.3
4	T1	All MCs	535	6.0	535	6.0	0.901	46.0	LOS D	9.9	258.7	0.95	1.46	2.69	20.9
14	R2	All MCs	187	4.0	187	4.0	0.901	43.9	LOS D	9.9	258.7	0.95	1.47	2.71	21.2
Approach			939	4.9	939	4.9	0.901	45.6	LOS D	9.9	258.7	0.95	1.46	2.69	20.8
West: Orange Camp Rd EB															
5	L2	All MCs	63	7.0	63	7.0	0.919	50.5	LOS D	10.4	271.2	0.96	1.50	2.79	20.0
2	T1	All MCs	722	5.0	722	5.0	0.919	48.2	LOS D	11.2	289.9	0.96	1.50	2.81	20.6
12	R2	All MCs	200	2.0	200	2.0	0.919	45.0	LOS D	11.2	289.9	0.96	1.51	2.84	20.9
Approach			985	4.5	985	4.5	0.919	47.7	LOS D	11.2	289.9	0.96	1.50	2.82	20.6
All Vehicles			3808	3.0	3808	3.0	0.919	36.5	LOS D	11.2	289.9	0.89	1.26	2.21	22.8

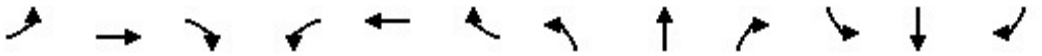
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	96	169	30	77	94	217	619	37	35	741	108
Future Volume (veh/h)	78	96	169	30	77	94	217	619	37	35	741	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1811	1811	1900	1900	1900	1856	1900	1752	1826	1856
Adj Flow Rate, veh/h	84	103	149	32	83	101	233	666	36	38	797	108
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	6	6	0	0	0	3	0	10	5	3
Cap, veh/h	104	128	191	45	118	140	263	930	807	298	806	694
Arrive On Green	0.12	0.12	0.12	0.09	0.09	0.09	0.10	0.50	0.50	0.04	0.44	0.44
Sat Flow, veh/h	835	1024	1535	521	1352	1610	1810	1856	1610	1668	1826	1572
Grp Volume(v), veh/h	187	0	149	115	0	101	233	666	36	38	797	108
Grp Sat Flow(s),veh/h/ln	1858	0	1535	1874	0	1610	1810	1856	1610	1668	1826	1572
Q Serve(g_s), s	10.3	0.0	9.9	6.3	0.0	6.4	9.0	29.4	1.2	1.3	45.5	4.3
Cycle Q Clear(g_c), s	10.3	0.0	9.9	6.3	0.0	6.4	9.0	29.4	1.2	1.3	45.5	4.3
Prop In Lane	0.45		1.00	0.28		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	0	191	163	0	140	263	930	807	298	806	694
V/C Ratio(X)	0.81	0.00	0.78	0.70	0.00	0.72	0.89	0.72	0.04	0.13	0.99	0.16
Avail Cap(c_a), veh/h	318	0	262	320	0	275	263	930	807	334	806	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	0.0	44.7	46.7	0.0	46.8	30.2	20.4	13.4	16.9	29.1	17.6
Incr Delay (d2), s/veh	11.3	0.0	10.8	6.5	0.0	8.1	28.2	2.6	0.0	0.2	28.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	0.0	7.5	5.8	0.0	5.0	7.8	17.3	0.7	0.8	31.8	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	55.4	53.3	0.0	54.9	58.4	23.1	13.4	17.1	57.8	17.7
LnGrp LOS	E	A	E	D	A	D	E	C	B	B	E	B
Approach Vol, veh/h		336			216			935			943	
Approach Delay, s/veh		55.8			54.0			31.5			51.6	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	60.3		15.7	16.0	54.0		19.6				
Change Period (Y+Rc), s	5.0	7.5		6.5	5.0	7.5		6.5				
Max Green Setting (Gmax), s	7.0	50.5		18.0	11.0	46.5		18.0				
Max Q Clear Time (g_c+I1), s	3.3	31.4		8.4	11.0	47.5		12.3				
Green Ext Time (p_c), s	0.0	3.8		0.8	0.0	0.0		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		44.7	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	356	617	40	25	645	371	28	7	26	434	18	440
Future Volume (vph)	356	617	40	25	645	371	28	7	26	434	18	440
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.0		7.0	7.0	7.0		7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1787	1848		1805	1863	1599		1647		1787	1900	1568
Flt Permitted	0.07	1.00		0.31	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (perm)	133	1848		589	1863	1599		1647		1787	1900	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	375	649	42	26	679	391	29	7	27	457	19	463
RTOR Reduction (vph)	0	1	0	0	0	162	0	17	0	0	0	320
Lane Group Flow (vph)	375	690	0	26	679	229	0	46	0	457	19	143
Heavy Vehicles (%)	1%	2%	0%	0%	2%	1%	7%	0%	7%	1%	0%	3%
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2			6		4	4		3	3	
Permitted Phases	2			6		6						3
Actuated Green, G (s)	77.0	77.0		50.7	50.7	50.7		8.2		42.9	42.9	42.9
Effective Green, g (s)	77.0	77.0		50.7	50.7	50.7		8.2		42.9	42.9	42.9
Actuated g/C Ratio	0.52	0.52		0.34	0.34	0.34		0.05		0.29	0.29	0.29
Clearance Time (s)	6.0	7.0		7.0	7.0	7.0		7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	4.0		4.0	4.0	4.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	293	954		200	633	543		90		514	546	451
v/s Ratio Prot	c0.17	0.37			0.36			c0.03		c0.26	0.01	
v/s Ratio Perm	c0.49			0.04		0.14						0.09
v/c Ratio	1.28	0.72		0.13	1.07	0.42		0.51		0.89	0.03	0.32
Uniform Delay, d1	49.9	27.8		34.0	49.2	37.9		68.5		50.8	38.2	41.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	149.6	2.9		0.4	56.8	0.7		4.8		16.9	0.0	0.4
Delay (s)	199.5	30.7		34.4	106.0	38.6		73.3		67.8	38.2	42.0
Level of Service	F	C		C	F	D		E		E	D	D
Approach Delay (s)		90.1			80.3			73.3			54.5	
Approach LOS		F			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	75.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	149.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	375	691	26	679	391	63	457	19	463
v/c Ratio	1.26	0.72	0.13	1.06	0.55	0.49	0.88	0.03	0.60
Control Delay	180.0	35.3	41.0	100.2	18.7	65.0	69.3	38.5	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	180.0	35.3	41.0	100.2	18.7	65.0	69.3	38.5	7.6
Queue Length 50th (ft)	~439	551	19	~787	118	45	430	13	10
Queue Length 95th (ft)	#693	785	48	#1103	245	99	#610	36	106
Internal Link Dist (ft)		965		1007		975		1049	
Turn Bay Length (ft)	165		165		320		260		115
Base Capacity (vph)	297	964	201	639	709	241	612	651	832
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.72	0.13	1.06	0.55	0.26	0.75	0.03	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	370	419	512	419	151	603
Future Volume (veh/h)	370	419	512	419	151	603
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1856	1870
Adj Flow Rate, veh/h	389	398	539	441	159	581
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	3	2
Cap, veh/h	561	479	634	885	658	590
Arrive On Green	0.30	0.30	0.09	0.47	0.37	0.37
Sat Flow, veh/h	1870	1598	3483	1885	1767	1585
Grp Volume(v), veh/h	389	398	539	441	159	581
Grp Sat Flow(s),veh/h/ln	1870	1598	1742	1885	1767	1585
Q Serve(g_s), s	16.3	20.6	8.0	14.4	5.5	32.2
Cycle Q Clear(g_c), s	16.3	20.6	8.0	14.4	5.5	32.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	561	479	634	885	658	590
V/C Ratio(X)	0.69	0.83	0.85	0.50	0.24	0.98
Avail Cap(c_a), veh/h	718	613	634	1043	658	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	28.9	23.8	16.3	19.2	27.5
Incr Delay (d2), s/veh	2.6	8.5	10.7	0.6	0.2	32.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	13.1	7.8	9.5	3.7	22.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.0	37.4	34.5	16.9	19.4	60.4
LnGrp LOS	C	D	C	B	B	E
Approach Vol, veh/h	787			980	740	
Approach Delay, s/veh	33.7			26.6	51.6	
Approach LOS	C			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.0	33.6				48.6	40.0
Change Period (Y+Rc), s	7.0	7.0				7.0	7.0
Max Green Setting (Gmax), s	8.0	34.0				49.0	33.0
Max Q Clear Time (g_c+I1), s	10.0	22.6				16.4	34.2
Green Ext Time (p_c), s	0.0	4.0				3.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

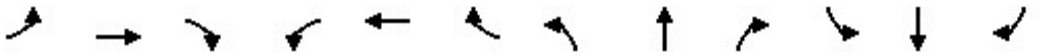
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	229	297	330	512	757	153
Future Volume (veh/h)	229	297	330	512	757	153
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1856	1870
Adj Flow Rate, veh/h	263	341	379	589	870	176
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	3	4	3	2
Cap, veh/h	422	375	267	1118	761	650
Arrive On Green	0.24	0.24	0.11	0.61	0.41	0.41
Sat Flow, veh/h	1781	1585	1767	1841	1856	1585
Grp Volume(v), veh/h	263	341	379	589	870	176
Grp Sat Flow(s),veh/h/ln	1781	1585	1767	1841	1856	1585
Q Serve(g_s), s	12.7	20.1	10.5	17.8	39.5	7.1
Cycle Q Clear(g_c), s	12.7	20.1	10.5	17.8	39.5	7.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	422	375	267	1118	761	650
V/C Ratio(X)	0.62	0.91	1.42	0.53	1.14	0.27
Avail Cap(c_a), veh/h	462	411	267	1118	761	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	35.7	29.0	10.9	28.4	18.8
Incr Delay (d2), s/veh	2.3	22.5	208.3	0.6	79.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.4	14.9	28.5	10.0	45.7	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.2	58.2	237.4	11.5	108.1	19.2
LnGrp LOS	D	E	F	B	F	B
Approach Vol, veh/h	604			968	1046	
Approach Delay, s/veh	48.2			100.0	93.1	
Approach LOS	D			F	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.0	48.0		29.3		67.0
Change Period (Y+Rc), s	8.5	8.5		6.5		8.5
Max Green Setting (Gmax), s	10.5	39.5		25.0		58.5
Max Q Clear Time (g_c+I1), s	12.5	41.5		22.1		19.8
Green Ext Time (p_c), s	0.0	0.0		0.7		5.7

Intersection Summary		
HCM 6th Ctrl Delay		85.3
HCM 6th LOS		F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	896	803	337	1335	0	0	0	0	531	0	436
Future Volume (veh/h)	0	896	803	337	1335	0	0	0	0	531	0	436
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1885	1870	1870	0				1885	0	1826
Adj Flow Rate, veh/h	0	953	0	359	1420	0				565	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	1	2	2	0				1	0	5
Cap, veh/h	0	1092		659	2559	0				625	0	
Arrive On Green	0.00	0.30	0.00	0.37	0.72	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	3705	1598	1781	3647	0				3483	0	1547
Grp Volume(v), veh/h	0	953	0	359	1420	0				565	0	0
Grp Sat Flow(s),veh/h/ln	0	1805	1598	1781	1777	0				1742	0	1547
Q Serve(g_s), s	0.0	37.5	0.0	23.9	28.0	0.0				23.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	37.5	0.0	23.9	28.0	0.0				23.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1092		659	2559	0				625	0	
V/C Ratio(X)	0.00	0.87		0.54	0.56	0.00				0.90	0.00	
Avail Cap(c_a), veh/h	0	1418		659	2559	0				720	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.67	0.67	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	49.6	0.0	37.3	9.8	0.0				60.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.6	0.0	0.6	0.6	0.0				13.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	24.8	0.0	14.5	13.7	0.0				17.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	59.2	0.0	37.9	10.4	0.0				74.0	0.0	0.0
LnGrp LOS	A	E		D	B	A				E	A	
Approach Vol, veh/h		953			1779						565	
Approach Delay, s/veh		59.2			15.9						74.0	
Approach LOS		E			B						E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		115.1			62.6	52.5		34.9				
Change Period (Y+Rc), s		7.1			7.1	7.1		8.0				
Max Green Setting (Gmax), s		103.9			37.9	58.9		31.0				
Max Q Clear Time (g_c+I1), s		30.0			25.9	39.5		25.8				
Green Ext Time (p_c), s		14.1			0.8	5.9		1.1				

Intersection Summary		
HCM 6th Ctrl Delay		38.4
HCM 6th LOS		D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1349	169	0	1429	1000	966
Future Volume (veh/h)	1349	169	0	1429	1000	966
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	0	1870	1870	1856
Adj Flow Rate, veh/h	1420	0	0	1504	1053	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	4	0	2	2	3
Cap, veh/h	2069		0	2950	1121	
Arrive On Green	1.00	0.00	0.00	0.58	0.32	0.00
Sat Flow, veh/h	3676	1560	0	5443	3456	1572
Grp Volume(v), veh/h	1420	0	0	1504	1053	0
Grp Sat Flow(s),veh/h/ln	1791	1560	0	1702	1728	1572
Q Serve(g_s), s	0.0	0.0	0.0	26.4	44.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	26.4	44.4	0.0
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2069		0	2950	1121	
V/C Ratio(X)	0.69		0.00	0.51	0.94	
Avail Cap(c_a), veh/h	2069		0	2950	1193	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	19.0	49.3	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.6	13.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	15.2	28.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.2	0.0	0.0	19.6	62.9	0.0
LnGrp LOS	A		A	B	E	
Approach Vol, veh/h	1420			1504	1053	
Approach Delay, s/veh	1.2			19.6	62.9	
Approach LOS	A			B	E	

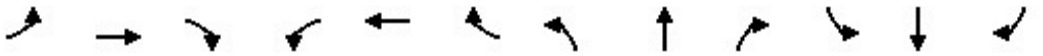
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		94.2		55.8		94.2
Change Period (Y+Rc), s		7.5		* 7.2		7.5
Max Green Setting (Gmax), s		83.5		* 52		83.5
Max Q Clear Time (g_c+I1), s		28.4		46.4		2.0
Green Ext Time (p_c), s		21.9		2.2		23.5

Intersection Summary		
HCM 6th Ctrl Delay	24.5	
HCM 6th LOS	C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1981	188	488	1180	59	160	42	414	26	25	78
Future Volume (veh/h)	63	1981	188	488	1180	59	160	42	414	26	25	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1826	1841	1870	1841	1811	1767	1885	1767	1900	1796
Adj Flow Rate, veh/h	66	2085	198	514	1242	62	106	131	0	27	26	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	1	5	4	2	4	6	9	1	9	0	7
Cap, veh/h	600	1878	811	563	2297	1008	109	112		79	89	71
Arrive On Green	0.04	0.52	0.52	0.17	0.65	0.65	0.06	0.06	0.00	0.05	0.05	0.05
Sat Flow, veh/h	3319	3582	1547	3401	3554	1560	1725	1767	1598	1682	1900	1522
Grp Volume(v), veh/h	66	2085	198	514	1242	62	106	131	0	27	26	82
Grp Sat Flow(s),veh/h/ln	1659	1791	1547	1700	1777	1560	1725	1767	1598	1682	1900	1522
Q Serve(g_s), s	1.3	78.7	10.5	22.3	28.5	2.2	9.2	9.5	0.0	2.3	2.0	7.0
Cycle Q Clear(g_c), s	1.3	78.7	10.5	22.3	28.5	2.2	9.2	9.5	0.0	2.3	2.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	600	1878	811	563	2297	1008	109	112		79	89	71
V/C Ratio(X)	0.11	1.11	0.24	0.91	0.54	0.06	0.97	1.17		0.34	0.29	1.15
Avail Cap(c_a), veh/h	610	1878	811	612	2297	1008	109	112		79	89	71
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	35.7	19.5	61.5	14.4	9.8	70.1	70.3	0.0	69.3	69.1	71.5
Incr Delay (d2), s/veh	0.1	57.8	0.7	17.3	0.9	0.1	76.4	138.2	0.0	2.6	1.8	154.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	63.0	6.8	16.2	16.4	1.4	10.5	14.1	0.0	1.9	1.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	93.5	20.2	78.8	15.3	9.9	146.5	208.5	0.0	71.8	70.9	226.1
LnGrp LOS	B	F	C	E	B	A	F	F		E	E	F
Approach Vol, veh/h		2349			1818			237			135	
Approach Delay, s/veh		85.1			33.1			180.8			165.4	
Approach LOS		F			C			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	104.4		17.5	31.8	86.2		14.5				
Change Period (Y+Rc), s	7.0	7.5		8.0	7.0	7.5		7.5				
Max Green Setting (Gmax), s	7.0	96.5		9.5	27.0	68.5		7.0				
Max Q Clear Time (g_c+I1), s	3.3	30.5		11.5	24.3	80.7		9.0				
Green Ext Time (p_c), s	0.0	19.1		0.0	0.6	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		71.7
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

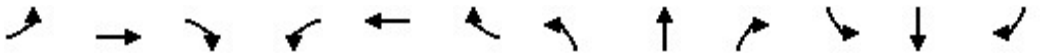


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	588	641	195	497	354	346
Future Volume (veh/h)	588	641	195	497	354	346
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1811	1870	1841	1796
Adj Flow Rate, veh/h	619	675	205	523	373	364
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	6	2	4	7
Cap, veh/h	1653	737	367	2207	419	640
Arrive On Green	0.46	0.46	0.08	0.62	0.24	0.24
Sat Flow, veh/h	3676	1598	1725	3647	1753	2679
Grp Volume(v), veh/h	619	675	205	523	373	364
Grp Sat Flow(s),veh/h/ln	1791	1598	1725	1777	1753	1340
Q Serve(g_s), s	10.5	36.6	5.4	6.1	19.1	11.1
Cycle Q Clear(g_c), s	10.5	36.6	5.4	6.1	19.1	11.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1653	737	367	2207	419	640
V/C Ratio(X)	0.37	0.92	0.56	0.24	0.89	0.57
Avail Cap(c_a), veh/h	1735	774	593	2207	472	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	23.3	11.5	7.8	34.2	31.1
Incr Delay (d2), s/veh	0.2	15.5	1.3	0.1	17.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	21.7	3.6	3.7	14.7	13.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.5	38.8	12.9	7.9	51.5	31.9
LnGrp LOS	B	D	B	A	D	C
Approach Vol, veh/h	1294			728	737	
Approach Delay, s/veh	28.1			9.3	41.8	
Approach LOS	C			A	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.7		28.2	14.8	49.9
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0
Max Green Setting (Gmax), s		45.0		25.0	20.0	45.0
Max Q Clear Time (g_c+I1), s		8.1		21.1	7.4	38.6
Green Ext Time (p_c), s		5.4		1.1	0.4	4.3

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Appendix M:
Background Improved Conditions Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1438	317	185	1116	324	247	377	162	304	366	115
Future Volume (veh/h)	93	1438	317	185	1116	324	247	377	162	304	366	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1885	1826	1870	1870	1841	1870	1870	1856	1870	1796
Adj Flow Rate, veh/h	98	1514	283	195	1175	308	260	397	0	320	385	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	1	5	2	2	4	2	2	3	2	7
Cap, veh/h	500	2331	729	205	1464	454	321	409		327	413	
Arrive On Green	0.29	0.46	0.46	0.12	0.29	0.29	0.16	0.22	0.00	0.16	0.22	0.00
Sat Flow, veh/h	1739	5106	1598	1739	5106	1585	1753	1870	1585	1767	1870	1522
Grp Volume(v), veh/h	98	1514	283	195	1175	308	260	397	0	320	385	0
Grp Sat Flow(s),veh/h/ln	1739	1702	1598	1739	1702	1585	1753	1870	1585	1767	1870	1522
Q Serve(g_s), s	6.4	34.4	17.6	16.7	32.0	25.8	21.6	31.6	0.0	23.0	30.3	0.0
Cycle Q Clear(g_c), s	6.4	34.4	17.6	16.7	32.0	25.8	21.6	31.6	0.0	23.0	30.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	500	2331	729	205	1464	454	321	409		327	413	
V/C Ratio(X)	0.20	0.65	0.39	0.95	0.80	0.68	0.81	0.97		0.98	0.93	
Avail Cap(c_a), veh/h	500	2331	729	205	1637	508	321	409		327	460	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.3	31.5	26.9	65.7	49.6	47.4	60.2	58.1	0.0	61.1	57.4	0.0
Incr Delay (d2), s/veh	0.2	1.4	1.6	48.7	4.7	7.9	14.8	36.9	0.0	43.7	24.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	19.7	11.0	15.1	19.8	16.2	16.1	25.9	0.0	22.2	23.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	32.9	28.5	114.4	54.3	55.3	75.1	95.0	0.0	104.8	82.1	0.0
LnGrp LOS	D	C	C	F	D	E	E	F		F	F	
Approach Vol, veh/h		1895			1678			657			705	
Approach Delay, s/veh		32.6			61.5			87.1			92.4	
Approach LOS		C			E			F			F	

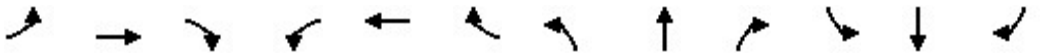
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.7	51.3	33.1	41.6	26.0	77.0	32.2	42.5
Change Period (Y+Rc), s	* 8.3	* 8.3	* 9.4	* 8.8	* 8.3	* 8.3	* 8.8	* 9.4
Max Green Setting (Gmax), s	* 12	* 48	* 23	* 33	* 18	* 42	* 23	* 37
Max Q Clear Time (g_c+I1), s	8.4	34.0	25.0	33.6	18.7	36.4	23.6	32.3
Green Ext Time (p_c), s	0.1	9.0	0.0	0.0	0.0	4.8	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	58.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	356	617	40	25	645	371	28	7	26	434	18	440
Future Volume (veh/h)	356	617	40	25	645	371	28	7	26	434	18	440
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1900	1900	1870	1885	1796	1900	1796	1885	1900	1856
Adj Flow Rate, veh/h	375	649	39	26	679	380	29	7	16	457	19	403
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	0	0	2	1	7	0	7	1	0	3
Cap, veh/h	402	2133	128	365	770	658	41	10	23	649	354	565
Arrive On Green	0.17	0.63	0.63	0.41	0.41	0.41	0.04	0.04	0.04	0.19	0.19	0.19
Sat Flow, veh/h	1795	3406	204	766	1870	1598	978	236	540	3483	1900	1572
Grp Volume(v), veh/h	375	338	350	26	679	380	52	0	0	457	19	403
Grp Sat Flow(s),veh/h/ln	1795	1777	1834	766	1870	1598	1754	0	0	1742	1900	1572
Q Serve(g_s), s	22.4	12.7	12.8	3.0	48.6	26.6	4.2	0.0	0.0	17.8	1.2	27.0
Cycle Q Clear(g_c), s	22.4	12.7	12.8	3.0	48.6	26.6	4.2	0.0	0.0	17.8	1.2	27.0
Prop In Lane	1.00		0.11	1.00		1.00	0.56		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	402	1113	1148	365	770	658	74	0	0	649	354	565
V/C Ratio(X)	0.93	0.30	0.30	0.07	0.88	0.58	0.70	0.00	0.00	0.70	0.05	0.71
Avail Cap(c_a), veh/h	487	1374	1418	441	956	816	85	0	0	649	354	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	12.5	12.5	26.0	39.4	32.9	68.4	0.0	0.0	55.2	48.4	39.9
Incr Delay (d2), s/veh	22.9	0.2	0.2	0.1	9.0	1.1	19.4	0.0	0.0	3.4	0.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.1	8.5	8.7	1.0	31.3	15.5	4.2	0.0	0.0	12.6	1.0	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	12.7	12.7	26.1	48.3	34.0	87.9	0.0	0.0	58.6	48.5	44.1
LnGrp LOS	E	B	B	C	D	C	F	A	A	E	D	D
Approach Vol, veh/h		1063			1085			52			879	
Approach Delay, s/veh		30.9			42.8			87.9			51.7	
Approach LOS		C			D			F			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		97.7		13.1	31.1	66.6		34.0				
Change Period (Y+Rc), s		7.0		7.0	6.0	7.0		7.0				
Max Green Setting (Gmax), s		112.0		7.0	32.0	74.0		27.0				
Max Q Clear Time (g_c+I1), s		14.8		6.2	24.4	50.6		29.0				
Green Ext Time (p_c), s		6.7		0.0	0.7	9.0		0.0				

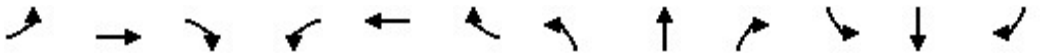
Intersection Summary												
HCM 6th Ctrl Delay			42.0									
HCM 6th LOS			D									



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	229	297	330	512	757	153
Future Volume (veh/h)	229	297	330	512	757	153
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1856	1870
Adj Flow Rate, veh/h	263	341	379	589	870	176
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	3	4	3	2
Cap, veh/h	426	379	414	1101	962	195
Arrive On Green	0.24	0.24	0.18	0.60	0.33	0.33
Sat Flow, veh/h	1781	1585	1767	1841	3014	591
Grp Volume(v), veh/h	263	341	379	589	525	521
Grp Sat Flow(s),veh/h/ln	1781	1585	1767	1841	1763	1749
Q Serve(g_s), s	12.1	19.2	14.0	17.4	26.2	26.2
Cycle Q Clear(g_c), s	12.1	19.2	14.0	17.4	26.2	26.2
Prop In Lane	1.00	1.00	1.00			0.34
Lane Grp Cap(c), veh/h	426	379	414	1101	580	576
V/C Ratio(X)	0.62	0.90	0.92	0.54	0.90	0.90
Avail Cap(c_a), veh/h	485	432	457	1166	600	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	34.0	23.3	11.0	29.5	29.5
Incr Delay (d2), s/veh	1.9	19.7	21.9	0.6	17.3	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	14.0	12.1	9.8	18.7	18.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.2	53.7	45.2	11.5	46.8	47.0
LnGrp LOS	C	D	D	B	D	D
Approach Vol, veh/h	604			968	1046	
Approach Delay, s/veh	44.8			24.7	46.9	
Approach LOS	D			C	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.8	38.9		28.6		63.6
Change Period (Y+Rc), s	8.5	8.5		6.5		8.5
Max Green Setting (Gmax), s	18.5	31.4		25.1		58.4
Max Q Clear Time (g_c+I1), s	16.0	28.2		21.2		19.4
Green Ext Time (p_c), s	0.3	2.1		0.8		5.7

Intersection Summary			
HCM 6th Ctrl Delay		38.2	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1981	188	488	1180	59	160	42	414	26	25	78
Future Volume (veh/h)	63	1981	188	488	1180	59	160	42	414	26	25	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1826	1841	1870	1841	1811	1767	1885	1767	1900	1796
Adj Flow Rate, veh/h	66	2085	198	514	1242	62	106	131	0	27	26	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	1	5	4	2	4	6	9	1	9	0	7
Cap, veh/h	612	2492	749	544	3066	937	154	158		112	126	101
Arrive On Green	0.04	0.48	0.48	0.16	0.60	0.60	0.09	0.09	0.00	0.07	0.07	0.07
Sat Flow, veh/h	3319	5147	1547	3401	5106	1560	1725	1767	1598	1682	1900	1522
Grp Volume(v), veh/h	66	2085	198	514	1242	62	106	131	0	27	26	82
Grp Sat Flow(s),veh/h/ln	1659	1716	1547	1700	1702	1560	1725	1767	1598	1682	1900	1522
Q Serve(g_s), s	1.4	52.7	11.4	22.4	19.3	2.5	8.9	10.9	0.0	2.3	1.9	8.0
Cycle Q Clear(g_c), s	1.4	52.7	11.4	22.4	19.3	2.5	8.9	10.9	0.0	2.3	1.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	612	2492	749	544	3066	937	154	158		112	126	101
V/C Ratio(X)	0.11	0.84	0.26	0.94	0.41	0.07	0.69	0.83		0.24	0.21	0.81
Avail Cap(c_a), veh/h	622	2492	749	544	3066	937	218	224		123	139	112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	33.6	22.9	62.3	15.8	12.5	66.3	67.2	0.0	66.4	66.3	69.1
Incr Delay (d2), s/veh	0.1	3.5	0.9	25.5	0.4	0.1	5.3	16.1	0.0	1.1	0.8	32.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	29.1	7.5	17.0	11.7	1.6	7.5	9.5	0.0	1.8	1.7	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	37.1	23.7	87.8	16.2	12.6	71.6	83.2	0.0	67.5	67.1	101.3
LnGrp LOS	B	D	C	F	B	B	E	F		E	E	F
Approach Vol, veh/h		2349			1818			237			135	
Approach Delay, s/veh		35.4			36.3			78.0			87.9	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	97.6		21.4	31.0	80.1		17.5				
Change Period (Y+Rc), s	7.0	7.5		8.0	7.0	7.5		7.5				
Max Green Setting (Gmax), s	7.0	83.0		19.0	24.0	66.0		11.0				
Max Q Clear Time (g_c+I1), s	3.4	21.3		12.9	24.4	54.7		10.0				
Green Ext Time (p_c), s	0.0	17.8		0.5	0.0	10.2		0.0				

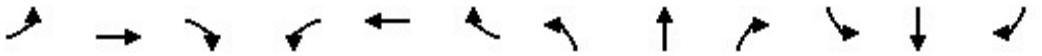
Intersection Summary			
HCM 6th Ctrl Delay		39.6	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Appendix N:
Buildout Conditions Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1456	317	228	1212	324	247	438	146	758	390	145
Future Volume (veh/h)	159	1456	317	228	1212	324	247	438	146	758	390	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1885	1826	1870	1870	1841	1870	1870	1856	1870	1796
Adj Flow Rate, veh/h	167	1533	283	240	1276	308	260	461	0	798	411	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	1	5	2	2	4	2	2	3	2	7
Cap, veh/h	124	1147	359	170	1283	398	328	339		515	534	
Arrive On Green	0.07	0.22	0.22	0.10	0.25	0.25	0.16	0.18	0.00	0.26	0.29	0.00
Sat Flow, veh/h	1739	5106	1598	1739	5106	1585	1753	1870	1585	1767	1870	1522
Grp Volume(v), veh/h	167	1533	283	240	1276	308	260	461	0	798	411	0
Grp Sat Flow(s),veh/h/ln	1739	1702	1598	1739	1702	1585	1753	1870	1585	1767	1870	1522
Q Serve(g_s), s	10.7	33.7	25.0	14.7	37.4	27.1	21.9	27.2	0.0	39.6	30.2	0.0
Cycle Q Clear(g_c), s	10.7	33.7	25.0	14.7	37.4	27.1	21.9	27.2	0.0	39.6	30.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1147	359	170	1283	398	328	339		515	534	
V/C Ratio(X)	1.35	1.34	0.79	1.41	0.99	0.77	0.79	1.36		1.55	0.77	
Avail Cap(c_a), veh/h	124	1147	359	170	1283	398	332	339		515	591	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.6	58.2	54.8	67.7	56.0	52.2	62.1	61.4	0.0	53.4	49.1	0.0
Incr Delay (d2), s/veh	199.8	157.3	16.0	214.9	23.8	13.6	12.9	179.7	0.0	257.4	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	46.0	16.8	26.1	25.3	17.6	16.1	44.3	0.0	83.6	20.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	269.5	215.5	70.8	282.5	79.8	65.8	74.9	241.1	0.0	310.7	54.7	0.0
LnGrp LOS	F	F	E	F	E	E	E	F		F	D	
Approach Vol, veh/h		1983			1824			721			1209	
Approach Delay, s/veh		199.4			104.1			181.2			223.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	46.0	49.0	36.0	23.0	42.0	32.8	52.2
Change Period (Y+Rc), s	* 8.3	* 8.3	* 9.4	* 8.8	* 8.3	* 8.3	* 8.8	* 9.4
Max Green Setting (Gmax), s	* 11	* 38	* 40	* 27	* 15	* 34	* 24	* 47
Max Q Clear Time (g_c+I1), s	12.7	39.4	41.6	29.2	16.7	35.7	23.9	32.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	171.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	272	120	596	176	115	792
Future Volume (vph)	272	120	596	176	115	792
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	1495	1845	1568	1770	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.16	1.00
Satd. Flow (perm)	1805	1495	1845	1568	292	1827
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	130	648	191	125	861
RTOR Reduction (vph)	0	98	0	40	0	0
Lane Group Flow (vph)	296	32	648	151	125	861
Heavy Vehicles (%)	0%	8%	3%	3%	2%	4%
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	25.2	25.2	45.0	45.0	63.9	63.9
Effective Green, g (s)	25.2	25.2	45.0	45.0	63.9	63.9
Actuated g/C Ratio	0.24	0.24	0.44	0.44	0.62	0.62
Clearance Time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	439	364	802	682	343	1129
v/s Ratio Prot	c0.16		c0.35		0.04	c0.47
v/s Ratio Perm		0.02		0.10	0.18	
v/c Ratio	0.67	0.09	0.81	0.22	0.36	0.76
Uniform Delay, d1	35.4	30.2	25.4	18.2	14.3	14.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.1	6.0	0.2	0.7	3.1
Delay (s)	39.4	30.3	31.4	18.4	15.0	17.4
Level of Service	D	C	C	B	B	B
Approach Delay (s)	36.7		28.5			17.1
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	103.4	Sum of lost time (s)	21.8
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	296	130	648	191	125	861
v/c Ratio	0.68	0.28	0.82	0.27	0.37	0.77
Control Delay	47.0	8.3	36.0	13.0	11.9	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	8.3	36.0	13.0	11.9	20.5
Queue Length 50th (ft)	175	0	363	47	31	378
Queue Length 95th (ft)	346	52	613	110	68	670
Internal Link Dist (ft)	1320		862			656
Turn Bay Length (ft)	180			145	125	
Base Capacity (vph)	912	820	1305	1130	627	1712
Starvation Cap Reductn	0	0	3	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.16	0.50	0.17	0.20	0.50

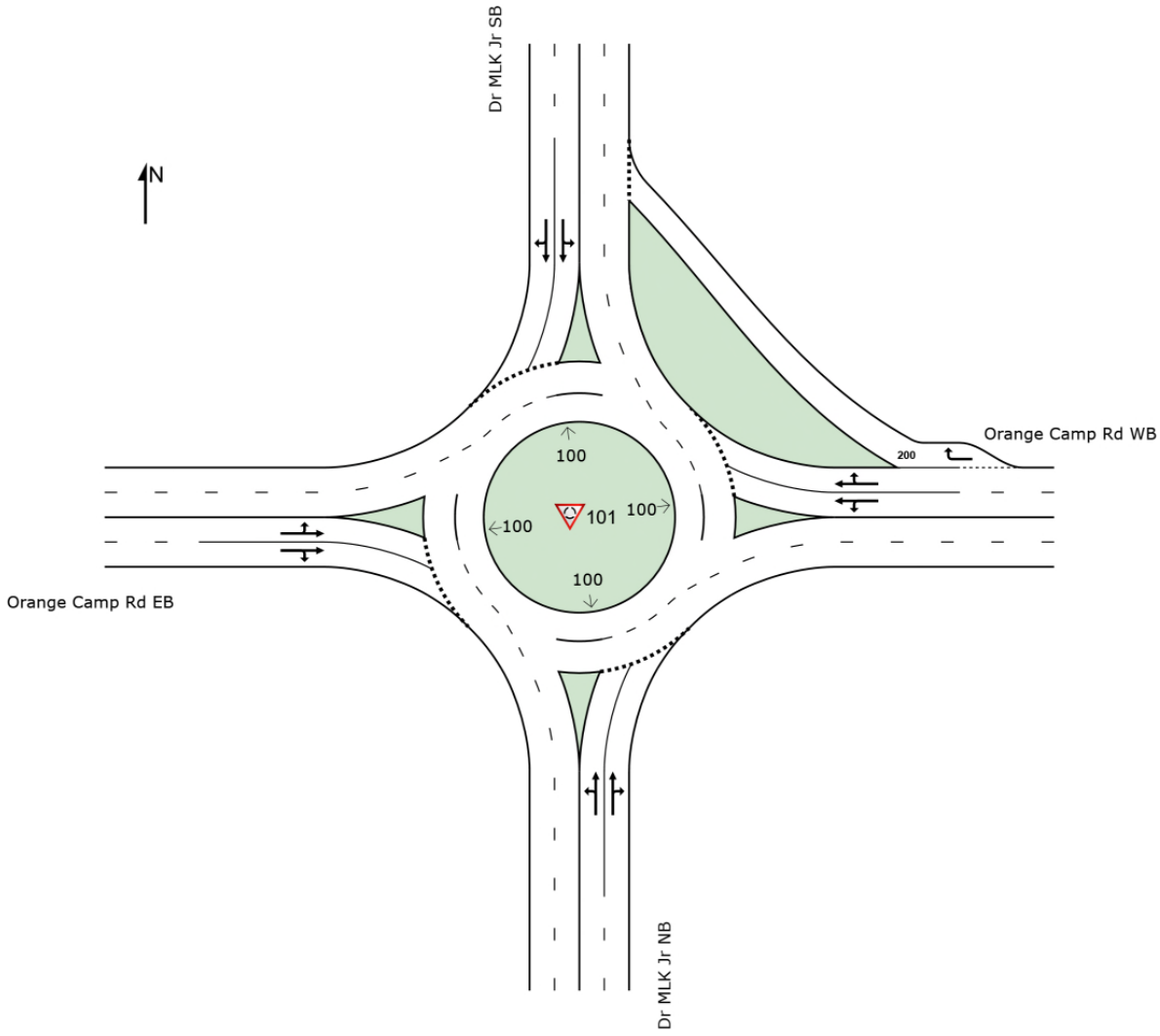
Intersection Summary

SITE LAYOUT

Site: 101 [2027 Future Buildout PM Peak Hour Conditions (Site Folder: General)]

Buildout Roundabout
Site Category: (None)
Roundabout

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MOVEMENT SUMMARY

Site: 101 [2027 Future Buildout PM Peak Hour Conditions (Site Folder: General)]

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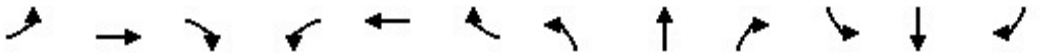
Buildout Roundabout
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Dr MLK Jr NB															
3	L2	All MCs	223	1.0	223	1.0	0.965	59.0	LOS E	13.2	331.5	0.98	1.64	3.28	18.4
8	T1	All MCs	639	1.0	639	1.0	0.965	56.6	LOS E	14.2	356.9	0.98	1.66	3.33	19.1
18	R2	All MCs	172	0.0	172	0.0	0.965	54.5	LOS D	14.2	356.9	0.98	1.67	3.36	19.3
Approach			1034	0.8	1034	0.8	0.965	56.8	LOS E	14.2	356.9	0.98	1.66	3.32	18.9
East: Orange Camp Rd WB															
1	L2	All MCs	161	5.0	161	5.0	0.673	23.4	LOS C	4.3	109.0	0.82	0.99	1.42	25.8
6	T1	All MCs	618	1.0	618	1.0	0.673	20.6	LOS C	4.6	114.9	0.82	0.98	1.41	27.3
16	R2	All MCs	195	2.0	195	2.0	0.262	7.9	LOS A	1.0	25.1	0.60	0.53	0.60	32.2
Approach			974	1.9	974	1.9	0.673	18.5	LOS B	4.6	114.9	0.77	0.89	1.25	27.8
North: Dr MLK Jr SB															
7	L2	All MCs	217	3.0	217	3.0	0.989	66.0	LOS E	14.6	378.1	0.99	1.81	3.76	17.3
4	T1	All MCs	577	6.0	577	6.0	0.989	65.6	LOS E	15.2	395.2	1.00	1.84	3.83	17.8
14	R2	All MCs	187	4.0	187	4.0	0.989	63.2	LOS E	15.2	395.2	1.00	1.86	3.88	17.9
Approach			982	5.0	982	5.0	0.989	65.2	LOS E	15.2	395.2	1.00	1.83	3.82	17.7
West: Orange Camp Rd EB															
5	L2	All MCs	63	7.0	63	7.0	0.991	68.0	LOS E	14.4	375.9	0.99	1.80	3.71	17.3
2	T1	All MCs	722	5.0	722	5.0	0.991	65.4	LOS E	15.9	409.1	1.00	1.82	3.76	17.8
12	R2	All MCs	226	2.0	226	2.0	0.991	61.7	LOS E	15.9	409.1	1.00	1.84	3.83	18.1
Approach			1011	4.5	1011	4.5	0.991	64.7	LOS E	15.9	409.1	1.00	1.82	3.77	17.9
All Vehicles			4000	3.0	4000	3.0	0.991	51.5	LOS D	15.9	409.1	0.94	1.56	3.06	19.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

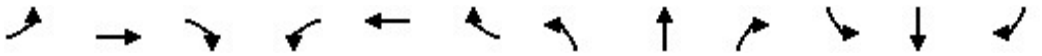
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Project: H:\28\28629 - DeLand Tech Park TIA\sidra\Dr MLK Jr at Orange Camp Roundabout_KAI.sip9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	96	169	35	77	94	217	667	44	35	773	108
Future Volume (veh/h)	78	96	169	35	77	94	217	667	44	35	773	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1811	1811	1900	1900	1900	1856	1900	1752	1826	1856
Adj Flow Rate, veh/h	84	103	149	38	83	101	233	717	43	38	831	108
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	6	6	0	0	0	3	0	10	5	3
Cap, veh/h	98	120	180	50	109	137	261	980	851	289	867	746
Arrive On Green	0.12	0.12	0.12	0.08	0.08	0.08	0.10	0.53	0.53	0.04	0.47	0.47
Sat Flow, veh/h	835	1024	1535	587	1283	1610	1810	1856	1610	1668	1826	1572
Grp Volume(v), veh/h	187	0	149	121	0	101	233	717	43	38	831	108
Grp Sat Flow(s),veh/h/ln	1858	0	1535	1871	0	1610	1810	1856	1610	1668	1826	1572
Q Serve(g_s), s	11.1	0.0	10.7	7.1	0.0	6.9	8.9	33.5	1.5	1.3	49.4	4.4
Cycle Q Clear(g_c), s	11.1	0.0	10.7	7.1	0.0	6.9	8.9	33.5	1.5	1.3	49.4	4.4
Prop In Lane	0.45		1.00	0.31		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	0	180	159	0	137	261	980	851	289	867	746
V/C Ratio(X)	0.86	0.00	0.83	0.76	0.00	0.74	0.89	0.73	0.05	0.13	0.96	0.14
Avail Cap(c_a), veh/h	223	0	184	224	0	193	262	980	851	321	900	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	48.6	50.4	0.0	50.3	31.1	20.4	12.9	16.9	28.5	16.7
Incr Delay (d2), s/veh	27.0	0.0	26.0	10.6	0.0	10.2	29.4	2.8	0.0	0.2	20.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	0.0	9.0	6.9	0.0	5.5	9.4	19.3	0.9	0.8	31.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	0.0	74.6	61.0	0.0	60.5	60.5	23.2	12.9	17.1	48.8	16.8
LnGrp LOS	E	A	E	E	A	E	E	C	B	B	D	B
Approach Vol, veh/h		336			222			993			977	
Approach Delay, s/veh		75.3			60.8			31.5			44.1	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	67.0		16.1	15.9	61.0		19.7				
Change Period (Y+Rc), s	5.0	7.5		6.5	5.0	7.5		6.5				
Max Green Setting (Gmax), s	7.0	59.5		13.5	11.0	55.5		13.5				
Max Q Clear Time (g_c+I1), s	3.3	35.5		9.1	10.9	51.4		13.1				
Green Ext Time (p_c), s	0.0	4.5		0.4	0.0	2.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		44.8	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	617	40	25	645	381	28	7	26	449	18	491
Future Volume (veh/h)	390	617	40	25	645	381	28	7	26	449	18	491
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1900	1900	1870	1885	1796	1900	1796	1885	1900	1856
Adj Flow Rate, veh/h	411	649	39	26	679	390	29	7	16	473	19	479
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	2	0	0	2	1	7	0	7	1	0	3
Cap, veh/h	435	2184	131	359	759	649	40	10	22	622	339	589
Arrive On Green	0.20	0.64	0.64	0.41	0.41	0.41	0.04	0.04	0.04	0.18	0.18	0.18
Sat Flow, veh/h	1795	3406	204	766	1870	1598	978	236	540	3483	1900	1572
Grp Volume(v), veh/h	411	338	350	26	679	390	52	0	0	473	19	479
Grp Sat Flow(s),veh/h/ln	1795	1777	1834	766	1870	1598	1754	0	0	1742	1900	1572
Q Serve(g_s), s	27.0	12.7	12.8	3.2	51.2	29.0	4.4	0.0	0.0	19.5	1.3	27.0
Cycle Q Clear(g_c), s	27.0	12.7	12.8	3.2	51.2	29.0	4.4	0.0	0.0	19.5	1.3	27.0
Prop In Lane	1.00		0.11	1.00		1.00	0.56		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	435	1140	1176	359	759	649	72	0	0	622	339	589
V/C Ratio(X)	0.95	0.30	0.30	0.07	0.89	0.60	0.72	0.00	0.00	0.76	0.06	0.81
Avail Cap(c_a), veh/h	487	1316	1359	413	891	761	81	0	0	622	339	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	12.0	12.0	27.6	41.9	35.3	71.6	0.0	0.0	59.0	51.5	42.5
Incr Delay (d2), s/veh	26.1	0.2	0.2	0.1	10.9	1.4	23.7	0.0	0.0	5.5	0.1	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	25.2	8.5	8.7	1.1	33.3	16.8	4.5	0.0	0.0	13.8	1.1	23.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	12.2	12.2	27.7	52.8	36.6	95.3	0.0	0.0	64.5	51.6	51.1
LnGrp LOS	E	B	B	C	D	D	F	A	A	E	D	D
Approach Vol, veh/h		1099			1095			52			971	
Approach Delay, s/veh		34.1			46.5			95.3			57.6	
Approach LOS		C			D			F			E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		104.0		13.2	35.6	68.4		34.0				
Change Period (Y+Rc), s		7.0		7.0	6.0	7.0		7.0				
Max Green Setting (Gmax), s		112.0		7.0	34.0	72.0		27.0				
Max Q Clear Time (g_c+I1), s		14.8		6.4	29.0	53.2		29.0				
Green Ext Time (p_c), s		6.7		0.0	0.6	8.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			46.4									
HCM 6th LOS			D									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	381	419	547	436	151	626
Future Volume (veh/h)	381	419	547	436	151	626
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1856	1870
Adj Flow Rate, veh/h	401	398	576	459	159	605
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	3	2
Cap, veh/h	550	470	601	867	682	612
Arrive On Green	0.29	0.29	0.09	0.46	0.39	0.39
Sat Flow, veh/h	1870	1598	3483	1885	1767	1585
Grp Volume(v), veh/h	401	398	576	459	159	605
Grp Sat Flow(s),veh/h/ln	1870	1598	1742	1885	1767	1585
Q Serve(g_s), s	17.5	21.2	8.0	15.8	5.5	34.4
Cycle Q Clear(g_c), s	17.5	21.2	8.0	15.8	5.5	34.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	550	470	601	867	682	612
V/C Ratio(X)	0.73	0.85	0.96	0.53	0.23	0.99
Avail Cap(c_a), veh/h	660	564	601	977	682	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	30.1	26.8	17.5	18.8	27.7
Incr Delay (d2), s/veh	3.9	10.8	26.5	0.7	0.2	33.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.4	13.8	8.1	10.4	3.7	23.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.6	40.9	53.3	18.2	19.0	61.2
LnGrp LOS	C	D	D	B	B	E
Approach Vol, veh/h	799			1035	764	
Approach Delay, s/veh	36.7			37.8	52.4	
Approach LOS	D			D	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.0	33.7				48.7	42.0
Change Period (Y+Rc), s	7.0	7.0				7.0	7.0
Max Green Setting (Gmax), s	8.0	32.0				47.0	35.0
Max Q Clear Time (g_c+I1), s	10.0	23.2				17.8	36.4
Green Ext Time (p_c), s	0.0	3.5				4.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

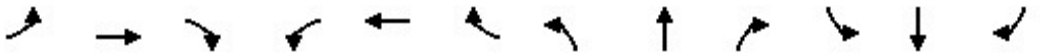
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	236	297	330	527	779	163
Future Volume (veh/h)	236	297	330	527	779	163
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1856	1870
Adj Flow Rate, veh/h	271	341	379	606	895	187
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	3	4	3	2
Cap, veh/h	424	378	411	1109	968	202
Arrive On Green	0.24	0.24	0.18	0.60	0.33	0.33
Sat Flow, veh/h	1781	1585	1767	1841	2996	606
Grp Volume(v), veh/h	271	341	379	606	543	539
Grp Sat Flow(s),veh/h/ln	1781	1585	1767	1841	1763	1746
Q Serve(g_s), s	12.9	19.7	14.7	18.4	28.0	28.0
Cycle Q Clear(g_c), s	12.9	19.7	14.7	18.4	28.0	28.0
Prop In Lane	1.00	1.00	1.00			0.35
Lane Grp Cap(c), veh/h	424	378	411	1109	588	583
V/C Ratio(X)	0.64	0.90	0.92	0.55	0.92	0.92
Avail Cap(c_a), veh/h	475	422	431	1141	599	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	34.8	24.8	11.1	30.2	30.2
Incr Delay (d2), s/veh	2.4	20.9	24.7	0.7	20.3	20.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	14.4	12.9	10.3	20.2	20.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.6	55.7	49.5	11.8	50.6	50.8
LnGrp LOS	C	E	D	B	D	D
Approach Vol, veh/h	612			985	1082	
Approach Delay, s/veh	46.4			26.3	50.7	
Approach LOS	D			C	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.3	39.9		28.9		65.2
Change Period (Y+Rc), s	8.5	8.5		6.5		8.5
Max Green Setting (Gmax), s	17.9	32.0		25.1		58.4
Max Q Clear Time (g_c+I1), s	16.7	30.0		21.7		20.4
Green Ext Time (p_c), s	0.2	1.4		0.8		6.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑					↰↰		↱
Traffic Volume (veh/h)	0	1197	878	337	1503	0	0	0	0	531	0	469
Future Volume (veh/h)	0	1197	878	337	1503	0	0	0	0	531	0	469
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1885	1870	1870	0				1885	0	1826
Adj Flow Rate, veh/h	0	1273	0	359	1599	0				565	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	1	2	2	0				1	0	5
Cap, veh/h	0	1363		526	2559	0				625	0	
Arrive On Green	0.00	0.38	0.00	0.30	0.72	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	3705	1598	1781	3647	0				3483	0	1547
Grp Volume(v), veh/h	0	1273	0	359	1599	0				565	0	0
Grp Sat Flow(s),veh/h/ln	0	1805	1598	1781	1777	0				1742	0	1547
Q Serve(g_s), s	0.0	50.9	0.0	26.7	34.4	0.0				23.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	50.9	0.0	26.7	34.4	0.0				23.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1363		526	2559	0				625	0	
V/C Ratio(X)	0.00	0.93		0.68	0.62	0.00				0.90	0.00	
Avail Cap(c_a), veh/h	0	1418		526	2559	0				720	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.63	0.63	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	44.9	0.0	46.7	10.7	0.0				60.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	13.0	0.0	2.3	0.7	0.0				13.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	32.3	0.0	16.3	16.2	0.0				17.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	57.9	0.0	49.0	11.4	0.0				74.0	0.0	0.0
LnGrp LOS	A	E		D	B	A				E	A	
Approach Vol, veh/h		1273			1958						565	
Approach Delay, s/veh		57.9			18.3						74.0	
Approach LOS		E			B						E	

Timer - Assigned Phs	2	5	6	8
Phs Duration (G+Y+Rc), s	115.1	51.4	63.7	34.9
Change Period (Y+Rc), s	7.1	7.1	7.1	8.0
Max Green Setting (Gmax), s	103.9	37.9	58.9	31.0
Max Q Clear Time (g_c+I1), s	36.4	28.7	52.9	25.8
Green Ext Time (p_c), s	17.7	0.7	3.8	1.1

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1601	217	0	1521	1044	966
Future Volume (veh/h)	1601	217	0	1521	1044	966
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	0	1870	1870	1856
Adj Flow Rate, veh/h	1685	0	0	1601	1099	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	4	0	2	2	3
Cap, veh/h	2034		0	2899	1155	
Arrive On Green	1.00	0.00	0.00	0.57	0.33	0.00
Sat Flow, veh/h	3676	1560	0	5443	3456	1572
Grp Volume(v), veh/h	1685	0	0	1601	1099	0
Grp Sat Flow(s),veh/h/ln	1791	1560	0	1702	1728	1572
Q Serve(g_s), s	0.0	0.0	0.0	29.6	46.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	29.6	46.6	0.0
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2034		0	2899	1155	
V/C Ratio(X)	0.83		0.00	0.55	0.95	
Avail Cap(c_a), veh/h	2034		0	2899	1193	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	20.4	48.8	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.8	15.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	16.8	30.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.8	0.0	0.0	21.2	64.4	0.0
LnGrp LOS	A		A	C	E	
Approach Vol, veh/h	1685			1601	1099	
Approach Delay, s/veh	1.8			21.2	64.4	
Approach LOS	A			C	E	

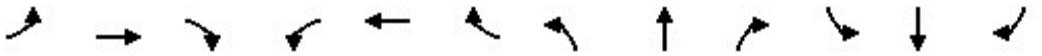
Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	92.7	57.3	92.7
Change Period (Y+Rc), s	7.5	* 7.2	7.5
Max Green Setting (Gmax), s	83.5	* 52	83.5
Max Q Clear Time (g_c+I1), s	31.6	48.6	2.0
Green Ext Time (p_c), s	23.6	1.6	33.3

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	2085	222	488	1249	59	183	42	414	26	25	78
Future Volume (veh/h)	63	2085	222	488	1249	59	183	42	414	26	25	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1826	1841	1870	1841	1811	1767	1885	1767	1900	1796
Adj Flow Rate, veh/h	66	2195	234	514	1315	62	224	0	0	27	26	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	1	5	4	2	4	6	9	1	9	0	7
Cap, veh/h	589	2540	764	544	3114	951	276	0		112	126	101
Arrive On Green	0.04	0.49	0.49	0.16	0.61	0.61	0.08	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	3319	5147	1547	3401	5106	1560	3450	0	1598	1682	1900	1522
Grp Volume(v), veh/h	66	2195	234	514	1315	62	224	0	0	27	26	82
Grp Sat Flow(s),veh/h/ln	1659	1716	1547	1700	1702	1560	1725	0	1598	1682	1900	1522
Q Serve(g_s), s	1.4	56.5	13.5	22.4	20.3	2.4	9.6	0.0	0.0	2.3	1.9	8.0
Cycle Q Clear(g_c), s	1.4	56.5	13.5	22.4	20.3	2.4	9.6	0.0	0.0	2.3	1.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	589	2540	764	544	3114	951	276	0		112	126	101
V/C Ratio(X)	0.11	0.86	0.31	0.94	0.42	0.07	0.81	0.00		0.24	0.21	0.81
Avail Cap(c_a), veh/h	599	2540	764	544	3114	951	437	0		123	139	112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	33.6	22.7	62.3	15.4	11.9	67.9	0.0	0.0	66.4	66.3	69.1
Incr Delay (d2), s/veh	0.1	4.2	1.0	25.5	0.4	0.1	6.2	0.0	0.0	1.1	0.8	32.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	31.0	8.7	17.0	12.1	1.5	7.9	0.0	0.0	1.8	1.7	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	37.8	23.7	87.8	15.8	12.0	74.1	0.0	0.0	67.5	67.1	101.3
LnGrp LOS	B	D	C	F	B	B	E	A		E	E	F
Approach Vol, veh/h		2495			1891			224			135	
Approach Delay, s/veh		35.9			35.3			74.1			87.9	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	99.0		20.0	31.0	81.5		17.5				
Change Period (Y+Rc), s	7.0	7.5		8.0	7.0	7.5		7.5				
Max Green Setting (Gmax), s	7.0	83.0		19.0	24.0	66.0		11.0				
Max Q Clear Time (g_c+I1), s	3.4	22.3		11.6	24.4	58.5		10.0				
Green Ext Time (p_c), s	0.0	19.4		0.4	0.0	7.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		38.9
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	588	653	229	497	362	369
Future Volume (veh/h)	588	653	229	497	362	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1811	1870	1841	1796
Adj Flow Rate, veh/h	619	687	241	523	381	388
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	6	2	4	7
Cap, veh/h	1651	736	380	2232	417	637
Arrive On Green	0.46	0.46	0.09	0.63	0.24	0.24
Sat Flow, veh/h	3676	1598	1725	3647	1753	2679
Grp Volume(v), veh/h	619	687	241	523	381	388
Grp Sat Flow(s),veh/h/ln	1791	1598	1725	1777	1753	1340
Q Serve(g_s), s	10.9	39.4	6.7	6.2	20.5	12.5
Cycle Q Clear(g_c), s	10.9	39.4	6.7	6.2	20.5	12.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1651	736	380	2232	417	637
V/C Ratio(X)	0.37	0.93	0.63	0.23	0.91	0.61
Avail Cap(c_a), veh/h	1702	759	573	2680	435	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	24.7	12.2	7.9	35.9	32.9
Incr Delay (d2), s/veh	0.2	18.3	1.8	0.1	23.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.4	23.7	4.5	3.8	16.3	14.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.2	43.0	14.0	7.9	59.1	34.4
LnGrp LOS	B	D	B	A	E	C
Approach Vol, veh/h	1306			764	769	
Approach Delay, s/veh	30.8			9.8	46.6	
Approach LOS	C			A	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.8		29.0	16.2	51.6
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0
Max Green Setting (Gmax), s		73.0		24.0	20.0	46.0
Max Q Clear Time (g_c+I1), s		8.2		22.5	8.7	41.4
Green Ext Time (p_c), s		5.7		0.5	0.5	3.3

Intersection Summary		
HCM 6th Ctrl Delay		29.4
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	81	2060	1661	177	0	136
Future Vol, veh/h	81	2060	1661	177	0	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	250	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	1	0	0	0	0
Mvmt Flow	85	2168	1748	186	0	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1934	0	-	0	-	874
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.24	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.27	-	-	-	-	3.3
Pot Cap-1 Maneuver	281	-	-	-	0	297
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	281	-	-	-	-	297
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	281	-	-	-	297
HCM Lane V/C Ratio	0.303	-	-	-	0.482
HCM Control Delay (s)	23.3	-	-	-	27.9
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	1.2	-	-	-	2.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	2150	1718	76	0	42
Future Vol, veh/h	0	2150	1718	76	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	250	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	2263	1808	80	0	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	904
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	284
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	284
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	284
HCM Lane V/C Ratio	-	-	-	0.156
HCM Control Delay (s)	-	-	-	20
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	2150	1683	76	0	41
Future Vol, veh/h	0	2150	1683	76	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	250	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2263	1772	80	0	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	886
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	292
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	292
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	292
HCM Lane V/C Ratio	-	-	-	0.148
HCM Control Delay (s)	-	-	-	19.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	734	130	0	1307
Future Vol, veh/h	0	46	734	130	0	1307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	0	0
Mvmt Flow	0	48	773	137	0	1376

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	773	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	402	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	402	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	402	-
HCM Lane V/C Ratio	-	-	0.12	-
HCM Control Delay (s)	-	-	15.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.4	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	410	45	730	50	88	897
Future Volume (veh/h)	410	45	730	50	88	897
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	432	47	768	53	93	944
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	3	0	0	0
Cap, veh/h	506	450	1088	944	307	1114
Arrive On Green	0.28	0.28	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1810	1610	1856	1610	677	1900
Grp Volume(v), veh/h	432	47	768	53	93	944
Grp Sat Flow(s),veh/h/ln	1810	1610	1856	1610	677	1900
Q Serve(g_s), s	15.2	1.5	19.6	0.9	7.6	27.4
Cycle Q Clear(g_c), s	15.2	1.5	19.6	0.9	27.2	27.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	506	450	1088	944	307	1114
V/C Ratio(X)	0.85	0.10	0.71	0.06	0.30	0.85
Avail Cap(c_a), veh/h	1305	1162	2553	2215	841	2614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	18.0	9.8	5.9	19.4	11.4
Incr Delay (d2), s/veh	4.2	0.1	0.9	0.0	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.0	1.0	9.6	0.4	1.9	13.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.1	18.1	10.7	6.0	19.9	13.3
LnGrp LOS	C	B	B	A	B	B
Approach Vol, veh/h	479		821			1037
Approach Delay, s/veh	26.2		10.4			13.9
Approach LOS	C		B			B

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		43.9			43.9	23.3
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		92.5			92.5	48.5
Max Q Clear Time (g_c+I1), s		21.6			29.4	17.2
Green Ext Time (p_c), s		6.1			10.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	6.4

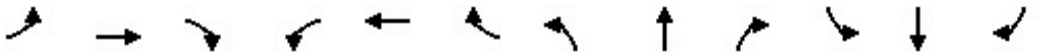
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	39	33	113	228	48
Future Vol, veh/h	148	39	33	113	228	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	200	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	156	41	35	119	240	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	197	0	345	156
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1388	-	656	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1388	-	640	895
Mov Cap-2 Maneuver	-	-	-	-	640	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	640	895	-	-	1388	-
HCM Lane V/C Ratio	0.375	0.056	-	-	0.025	-
HCM Control Delay (s)	14	9.3	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	1.7	0.2	-	-	0.1	-

Appendix O:
Buildout Improved Conditions Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1456	317	228	1212	324	247	438	146	758	390	145
Future Volume (veh/h)	159	1456	317	228	1212	324	247	438	146	758	390	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1885	1826	1870	1870	1841	1870	1870	1856	1870	1796
Adj Flow Rate, veh/h	167	1533	283	240	1276	308	260	461	0	798	411	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	1	5	2	2	4	2	2	3	2	7
Cap, veh/h	182	1590	760	265	1457	835	288	486		827	773	
Arrive On Green	0.10	0.31	0.31	0.03	0.09	0.09	0.16	0.14	0.00	0.24	0.22	0.00
Sat Flow, veh/h	1739	5106	1598	3374	5106	1585	1753	3554	1585	3428	3554	1522
Grp Volume(v), veh/h	167	1533	283	240	1276	308	260	461	0	798	411	0
Grp Sat Flow(s),veh/h/ln	1739	1702	1598	1687	1702	1585	1753	1777	1585	1714	1777	1522
Q Serve(g_s), s	14.3	44.3	16.9	10.6	37.0	18.7	21.8	19.3	0.0	34.5	15.3	0.0
Cycle Q Clear(g_c), s	14.3	44.3	16.9	10.6	37.0	18.7	21.8	19.3	0.0	34.5	15.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	1590	760	265	1457	835	288	486		827	773	
V/C Ratio(X)	0.92	0.96	0.37	0.90	0.88	0.37	0.90	0.95		0.96	0.53	
Avail Cap(c_a), veh/h	182	1590	760	265	1457	835	402	486		827	773	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.5	50.8	25.0	72.5	65.3	26.9	61.5	64.2	0.0	56.3	51.9	0.0
Incr Delay (d2), s/veh	43.9	15.6	1.4	31.5	7.7	1.3	20.1	28.6	0.0	23.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.1	27.7	10.6	9.8	24.8	12.7	16.6	15.8	0.0	23.8	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.4	66.4	26.4	104.0	73.0	28.2	81.6	92.8	0.0	79.3	52.6	0.0
LnGrp LOS	F	E	C	F	E	C	F	F		E	D	
Approach Vol, veh/h		1983			1824			721			1209	
Approach Delay, s/veh		64.4			69.5			88.8			70.2	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	51.1	45.6	29.3	20.1	55.0	33.5	41.4
Change Period (Y+Rc), s	* 8.3	* 8.3	* 9.4	* 8.8	* 8.3	* 8.3	* 8.8	* 8.8
Max Green Setting (Gmax), s	* 16	* 43	* 36	* 21	* 12	* 47	* 34	* 27
Max Q Clear Time (g_c+I1), s	16.3	39.0	36.5	21.3	12.6	46.3	23.8	17.3
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.3	0.8	1.6

Intersection Summary	
HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	46	734	130	0	1307
Future Vol, veh/h	0	46	734	130	0	1307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	250	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	0	0
Mvmt Flow	0	48	773	137	0	1376

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	387	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	617	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	617	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	617	-
HCM Lane V/C Ratio	-	-	0.078	-
HCM Control Delay (s)	-	-	11.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	410	45	730	50	88	897
Future Volume (veh/h)	410	45	730	50	88	897
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	432	47	768	53	93	944
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	3	0	0	0
Cap, veh/h	546	486	1734	792	402	1775
Arrive On Green	0.30	0.30	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1810	1610	3618	1610	677	3705
Grp Volume(v), veh/h	432	47	768	53	93	944
Grp Sat Flow(s),veh/h/ln	1810	1610	1763	1610	677	1805
Q Serve(g_s), s	9.5	0.9	6.2	0.8	4.5	7.8
Cycle Q Clear(g_c), s	9.5	0.9	6.2	0.8	10.7	7.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	546	486	1734	792	402	1775
V/C Ratio(X)	0.79	0.10	0.44	0.07	0.23	0.53
Avail Cap(c_a), veh/h	2764	2460	6034	2756	1228	6178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	10.9	7.2	5.8	10.7	7.6
Incr Delay (d2), s/veh	2.6	0.1	0.2	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.5	2.4	0.3	0.9	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.6	11.0	7.4	5.8	10.9	7.9
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	479		821			1037
Approach Delay, s/veh	16.0		7.3			8.1
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		25.9			25.9	17.6
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		74.5			74.5	66.5
Max Q Clear Time (g_c+I1), s		8.2			12.7	11.5
Green Ext Time (p_c), s		5.9			8.7	1.6

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	272	120	596	176	115	792
Future Volume (vph)	272	120	596	176	115	792
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	1495	1845	1568	1770	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.16	1.00
Satd. Flow (perm)	1805	1495	1845	1568	305	1827
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	130	648	191	125	861
RTOR Reduction (vph)	0	99	0	77	0	0
Lane Group Flow (vph)	296	31	648	114	125	861
Heavy Vehicles (%)	0%	8%	3%	3%	2%	4%
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	23.6	23.6	44.2	44.2	62.3	62.3
Effective Green, g (s)	23.6	23.6	44.2	44.2	62.3	62.3
Actuated g/C Ratio	0.24	0.24	0.44	0.44	0.62	0.62
Clearance Time (s)	6.8	6.8	7.5	7.5	7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	425	352	813	691	344	1135
v/s Ratio Prot	c0.16		0.35		0.04	c0.47
v/s Ratio Perm		0.02		0.07	0.19	
v/c Ratio	0.70	0.09	0.80	0.16	0.36	0.76
Uniform Delay, d1	35.0	29.9	24.1	16.9	13.6	13.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.1	5.5	0.1	0.7	3.0
Delay (s)	39.9	30.0	29.6	17.0	14.3	16.5
Level of Service	D	C	C	B	B	B
Approach Delay (s)	36.9		26.7			16.2
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	21.8
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

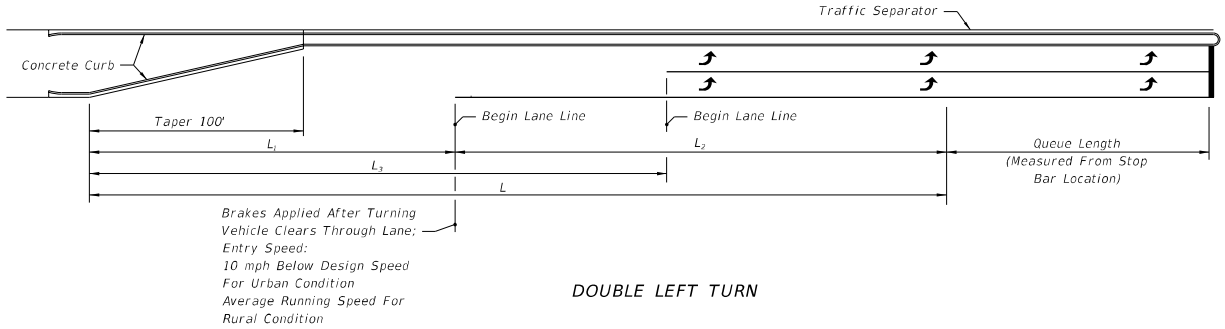


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	296	130	648	191	125	861
v/c Ratio	0.70	0.29	0.81	0.25	0.37	0.76
Control Delay	47.7	8.3	34.5	6.9	11.6	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	8.3	34.5	6.9	11.6	20.0
Queue Length 50th (ft)	170	0	341	19	29	352
Queue Length 95th (ft)	343	52	612	69	69	687
Internal Link Dist (ft)	1320		862			656
Turn Bay Length (ft)	180				125	
Base Capacity (vph)	837	763	1582	1364	472	1756
Starvation Cap Reductn	0	0	5	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.17	0.41	0.14	0.26	0.49

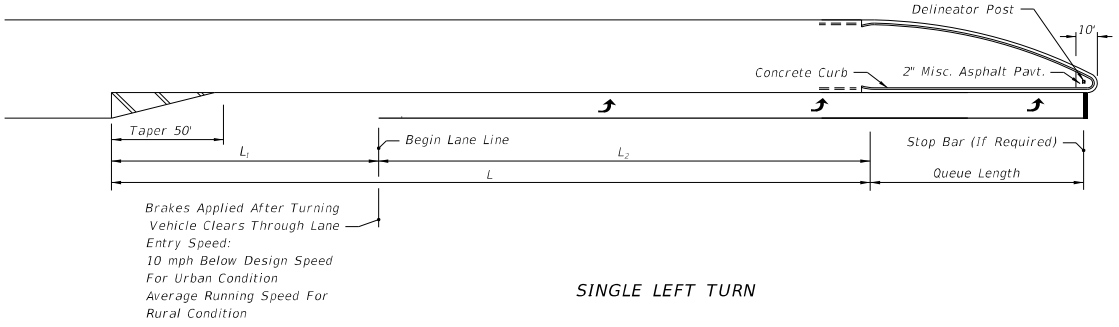
Intersection Summary

Appendix P:
Turn Lane Documentation

MEDIAN TURN LANES
MINIMUM DECELERATION LENGTHS



DOUBLE LEFT TURN



SINGLE LEFT TURN

MEDIAN TURN LANES								
			URBAN CONDITIONS			RURAL CONDITIONS		
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)
35	25	70	75	145	110	——	——	——
40	30	80	75	155	120	——	——	——
45	35	85	100	185	135	——	——	——
50	40/44	105	135	240	160	185	290	160
55	48	125	——	——	——	225	350	195
60	52	145	——	——	——	260	405	230
65	55	170	——	——	——	290	460	270

NOT TO SCALE

EXHIBIT 212-1
01/01/2018

Signalized, 4 lanes or more	370	380	385	1320*

DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

*Desirable spacing.

Driveway centerline spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway centerline spacing may be decreased if one-way driveways are utilized and accepted by the DRC.

(4) *Special driveway requirements.* In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.

(5) *Turn lanes requirements.*

a. *Turn lane requirements immediately adjacent to the development.*

1. A left-turn lane of 12 feet in width, conforming to Table VI, shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound left-turn volume is 25 vehicles or more. Increased queue lengths (waiting vehicle storage) may be required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 75 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 75 vehicles in the peak hour or less.
2. A right-turn lane of 12 feet in width, conforming to Table VI shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition queue lengths (waiting vehicle storage) may be

required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 150 vehicles in the peak hour or less.

b. *Additional improvements immediately adjacent to the development.* At intersections, with a thoroughfare which abut the development, the following improvements shall be provided:

1. A right-turn lane of 12 feet in width, conforming to subsection (e)(5) and Table VI, shall be provided if the development will generate 100 or more right turns during the peak hour.
2. A left-turn lane of 12 feet in width conforming to subsection (e)(5) and Table VI, shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.

c. *Through lane pavement transition tapers.* A through lane pavement transition taper shall be provided on all streets and roadways where the through lane is offset to provide for right turn lanes, left turn lanes, lane width changes and an increase or reduction in the number of through lanes. The through lane pavement transition taper length shall be based upon FDOT Standard Index #526 and 17346, and calculated using the following formulas:

For design speeds less than or equal to 40 m.p.h. use:

$$L = \frac{WS^2}{60}$$

For design speeds greater than or equal to 45 m.p.h. use:

L	=	WS
L	=	the pavement transition taper length in feet.

W	=	the width of the through lane lateral transition in feet (offset).
S	=	the design speed (must be at least five m.p.h. greater than the posted speed limit.)

TABLE VI. TURN LANE DIMENSIONAL REQUIREMENTS

Speed Limit (mph)	Urban Section Deceleration Length (feet)*	Rural Section Deceleration Length (feet)*
30	145	145

35	155	155
40	185	185
45	240	320
50	N/A**	385
55	N/A**	455

* Includes minimum 50 feet bay taper in accordance with FDOT Standard Index #301 and 526.

** Curbing is not permitted for these speed limits, use rural section.

d. *Modifications.* Required storage and transition lengths may be modified where conditions warrant and such modifications are acceptable to the DRC.

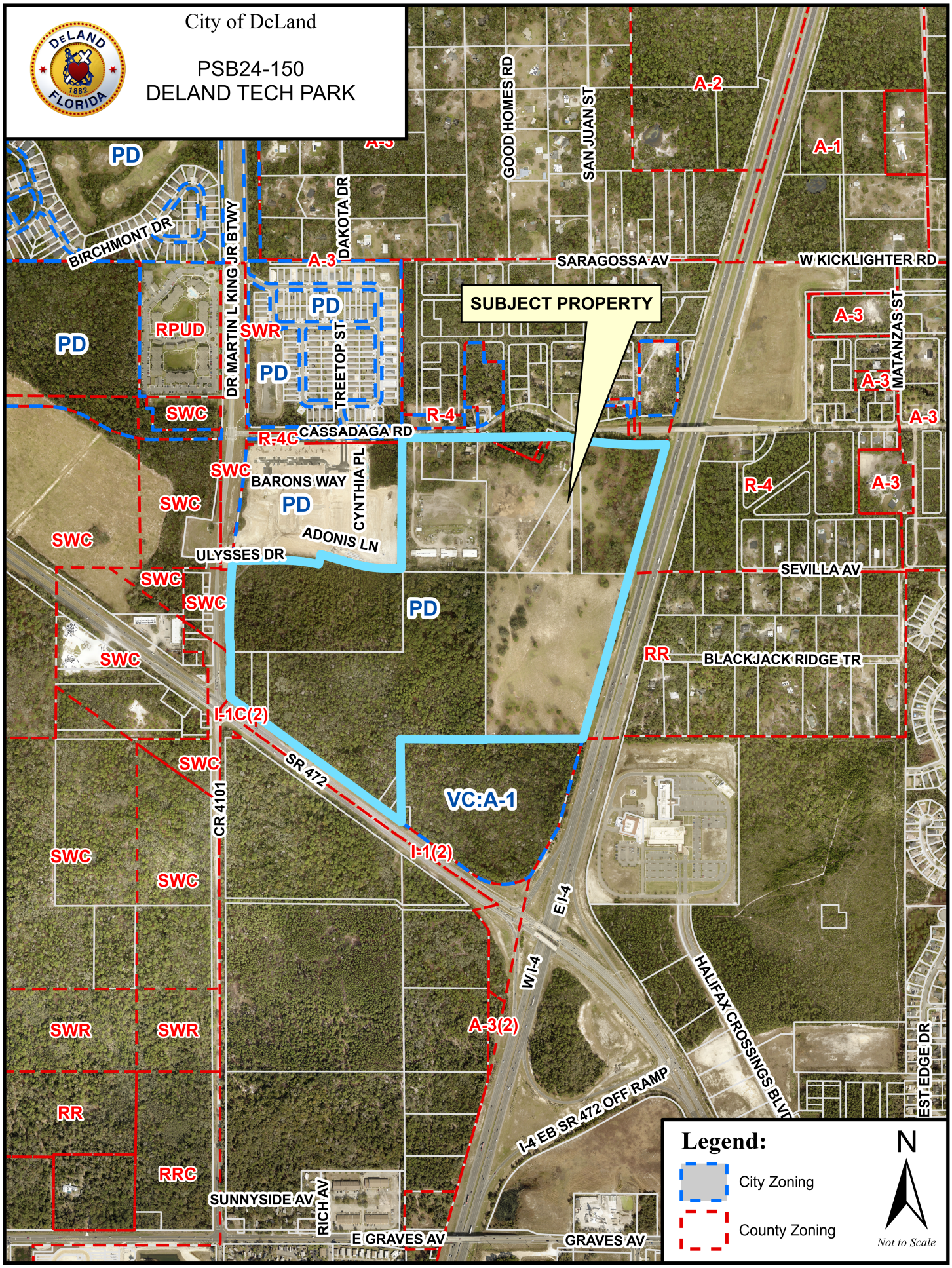
(Ord. No. 96-32, §§ XXVIII, LXXX, 12-19-96; Ord. No. 2008-25, § III, 12-4-08; Ord. No. 2012-05, § VII, 4-19-12)

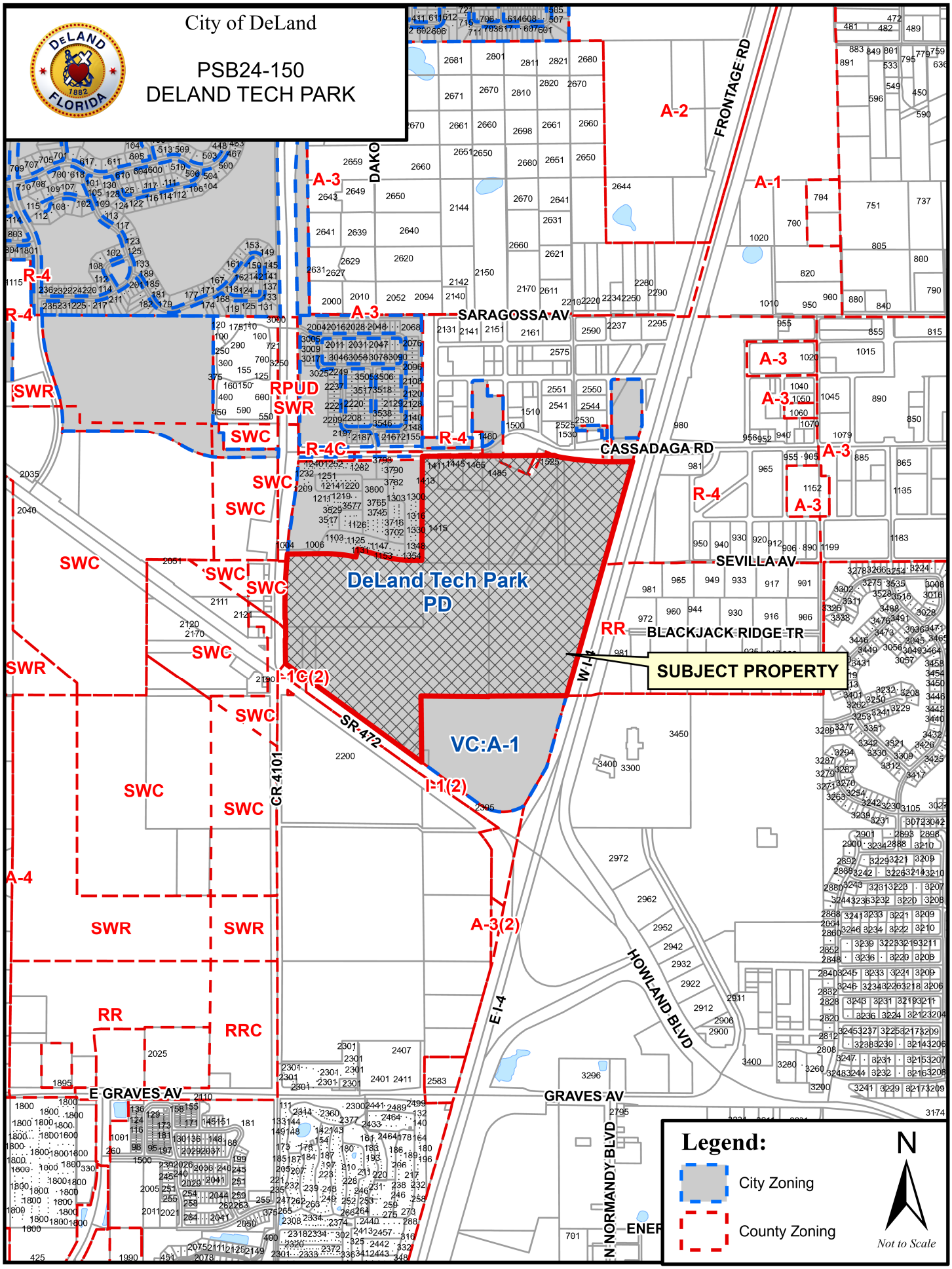
Appendix Q:
Proportionate Share Calculations

DeLand Tech Park - Proportionate Share Calculations

Roadways	Segment	Length	Improvement	Cost per Lane Mile	Additional Cost	Improvement Cost	Design + CEI (25%)	Total Improvement Cost	Existing Capacity	Improved Capacity	Capacity Increase	Project Trips	Project Percentage	Prop Share
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Road	0.40	Widen 2 to 4 lanes, rural	$3,259,629		$1,303,852		$1,303,851.78	1,540	3,410	1,870	198	10.59%	$138,054.89
Kentucky Avenue	Graves Ave. to SR 472	0.79	Widen 2 to 4 lanes, rural	$3,259,629		$2,575,107		$2,575,107.27	1,540	3,410	1,870	111	5.94%	$152,853.96
Howland Boulevard	Wolf Pack Rn. to Catalina Blvd.	1.19	Widen 4 to 6 lanes, rural	$3,710,209		$4,415,149		$4,415,149.06	3,410	5,390	1,980	142	7.17%	$316,642.00
SR 472	Martin Luther King Jr Bltwy. to I-4	0.60	Widen 4 to 6 lanes, urban	$6,551,619		$3,930,971		$3,930,971.28	3,580	5,390	1,810	322	17.79%	$699,321.96
Segment Total								$12,225,079.38						**$1,306,872.82**

Intersections		Length (ft)	Improvement	Cost per 300 feet/Total Cost	Additional Cost	Improvement Cost	Design + CEI (25%)	Total Improvement Cost	Prop Share
SR 472	at Kentucky Avenue/Dr Martin Luther King Jr Beltway	1,005	Add second southbound left turn lane	$210,603		$705,520		$705,520.49	$705,520.49
		805	Add second westbound left turn lane	$210,603		$565,118		$565,118.40	$565,118.40
		275	Extend eastbound left turn lane	$210,603		$193,053		$193,052.87	$193,052.87
		295	Extend eastbound right turn lane	$205,980		$202,547		$202,547.08	$202,547.08
		275	Extend westbound left turn lane	$210,603		$193,053		$193,052.87	$193,052.87
		320	Extend westbound right turn lane	$205,980		$219,712		$219,712.09	$219,712.09
		-	Optimize signal timings	$4,000		$4,000		$4,000.00	$4,000.00
Dr Martin Luther King Jr Beltway	at Cassadaga Road	25	Extend northbound right turn lane	$205,980		$17,165		$17,165.01	$17,165.01
		25	Extend southbound left turn lane	$210,603		$17,550		$17,550.26	$17,550.26
Dr Martin Luther King Jr Beltway	at Taylor Road	25	Extend eastbound right turn lane	$205,980		$17,165		$17,165.01	$17,165.01
		50	Extend northbound left turn lane	$210,603		$35,101		$35,100.52	$35,100.52
Kentucky Avenue	at Graves Avenue	175	Extend westbound right turn lane	$205,980		$120,155		$120,155.05	$120,155.05
		475	Extend southbound right turn lane	$205,980		$326,135		$326,135.13	$326,135.13
Veteran's Memorial Parkway	at Graves Avenue	25	Extend westbound left turn lane	$210,603		$17,550		$17,550.26	$17,550.26
Veteran's Memorial Parkway	at Rhode Island Avenue	120	Extend eastbound left turn lane	$210,603		$84,241		$84,241.25	$84,241.25
Howland Boulevard	at Graves Avenue/Halifax Crossing Boulevard	50	Extend eastbound right turn lane	$205,980		$34,330		$34,330.01	$34,330.01
Normandy Boulevard	at Graves Avenue	50	Extend eastbound right turn lane	$205,980		$34,330		$34,330.01	$34,330.01
		50	Extend northbound left turn lane	$210,603		$35,101		$35,100.52	$35,100.52
		25	Extend northbound right turn lane	$205,980		$17,165		$17,165.01	$17,165.01
Intersection Total									**$2,838,991.82**
								Total	**$4,145,864.64**


City of DeLand
PSB24-150
DELAND TECH PARK
SUBJECT PROPERTY
PD
RPUD
SWR
SWC
R-4C
R-4
A-1
A-2
A-3
RR
RRC
I-1C(2)
I-1(2)
VC:A-1
A-3(2)
GOOD HOMES RD
SAN JUAN ST
DAKOTA DR
BIRCHMONT DR
DR MARTIN L KING JR BTWY
TREETOP ST
CASSADAGA RD
BARONS WAY
CYNTHIA PL
ADONIS LN
ULYSSES DR
SARAGOSSA AV
W KICKLIGHTER RD
MATANZAS ST
SEVILLA AV
BLACKJACK RIDGE TR
SR 472
CR 4101
E I-4
W I-4
HALIFAX CROSSINGS BLVD
I-4 EB SR 472 OFF RAMP
EST EDGE DR
SUNNYSIDE AV
RICH AV
E GRAVES AV
GRAVES AV
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
PSB24-150
DELAND TECH PARK
DeLand Tech Park PD
VC:A-1
SUBJECT PROPERTY
A-2
A-1
A-3
A-3(2)
A-4
R-4
R-4C
RPUD
SWR
SWC
I-1C(2)
I-1(2)
RR
RRC
FRONTAGE RD
DAKO
SARAGOSSA AV
CASSADAGA RD
SEVILLA AV
BLACKJACK RIDGE TR
SR 472
CR 4101
E GRAVES AV
GRAVES AV
HOWLAND BLVD
N NORMANDY BLVD
W I-4
E I-4
Legend:
City Zoning
County Zoning
N
Not to Scale