City of Deltona

2345 Providence Blvd.
Deltona, FL 32725

Agenda

Planning and Zoning Board

Chair Tom Burbank
Vice Chair Adam Walosik
Member Victor M. Ramos
Member Noble Olasimbo
Member Stony Sixma

Wednesday, January 20, 2016 | **7:00 PM** | **Council Chambers**

1. CALL TO ORDER:

A. Election of Officers

2. ROLL CALL:

3. APPROVAL OF MINUTES & AGENDA:

A. Minutes for December 16, 2015

4. PRESENTATIONS/AWARDS/REPORTS:

5. PUBLIC FORUM:

6. OLD BUSINESS:

7. NEW BUSINESS:

B. Ordinance No. 02-2016, Business Planned Unit Development Rezoning Request for Lots 2 and 3 Deltona Welcome Center

8. STAFF COMMENTS:

9. BOARD/COMMITTEE MEMBERS COMMENTS:

10. ADJOURNMENT:

NOTE: If any person decides to appeal any decision made by the City Commission with respect to any matter considered at this meeting or hearing, he/she will need a record of the proceedings, and for such purpose he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based (F.S. 286.0105).

Individuals with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk, Joyce Raftery 48 hours in advance of the meeting date and time at (386) 878-8500.

City of Deltona

2345 Providence Blvd.
Deltona, FL 32725

Minutes

Planning and Zoning Board

Wednesday, December 16, 2015 **7:00 PM** **Deltona Commission Chambers**

1. CALL TO ORDER:

The meeting was called to order at 7:00 pm by Chairman Burbank.

2. ROLL CALL:

Present: 4 - Chair Tom Burbank
Member Victor M. Ramos
Member Noble Olasimbo
Member Stony Sixma

Excused: 1 - Vice Chair Adam Walosik

Absent: 1 - Member Herb Zischkau

3. APPROVAL OF MINUTES & AGENDA:

A **Approval of Minutes for October 21, 2015**

Motion to . The motion carried by the following vote:

For: 4 - Chair Burbank, Member Ramos, Member Olasimbo and Member Sixma

B **Approval of Minutes for November 18, 2015**

Motion by Member Olasimbo, seconded by Member Sixma, to approve the minutes for November 18, 2015. The motion carried by the following vote:

For: 4 - Chair Burbank, Member Ramos, Member Olasimbo and Member Sixma

4. PRESENTATIONS/AWARDS/REPORTS:

5. PUBLIC FORUM:

6. OLD BUSINESS:

7. NEW BUSINESS:

A Election of Secretary

Motion by Member Olasimbo, seconded by Member Sixma, to nominate Victor Ramos as Board Secretary. The motion carried by the following vote:

For: 4 - Chair Burbank, Member Ramos, Member Olasimbo and Member Sixma

B Ordinance No. 29-2015 amending the Comprehensive Plan of the City of Deltona, by amending the Capital Improvements Element providing for the replacement of the Capital Improvement Project sheets.

Mr. Paradise provided a brief explanation surrounding the Capitol Improvement Element update to the City's Comprehensive Plan, that needs to be submitted to the State.

Chairman Burbank asked if the bricks and mortar are capital improvements. Mr. Paradise explained that this is typically for the horizontal construction.

Motion by Member Olasimbo, seconded by Member Sixma, to recommend that the City Commission adopt Ordinance No. 29-2015 amending the Comprehensive Plan of the City of Deltona, by amending the Capital Improvements Element providing for the replacement of the Capital Improvement Project sheets. The motion carried by the following vote:

For: 4 - Chair Burbank, Member Ramos, Member Olasimbo and Member Sixma

8. STAFF COMMENTS:

Mr. Paradise thanked the Planning & Zoning Board members on behalf of Planning and Development Services staff and wished them a Happy Holidays.

9. BOARD/COMMITTEE MEMBERS COMMENTS:

The board wished everyone, as well as the City Manager, a Happy Holidays.

10. ADJOURNMENT:

The meeting adjourned at 7:13 pm.

_____
Tom Burbank, Chairperson

ATTEST:

_____
Kathrine Kyp, Board Secretary

Staff Report

To: **Planning and Zoning Board**

From: **Ron A. Paradise, Assistant Director, Planning and Development**

Date: **January 4, 2016**

Re: **Project No. RZ15-007, Ordinance No. 02-2016, Business Planned Unit Development Rezoning Request for Lots 2 and 3 Deltona Welcome Center**

A. Summary of Application:

Applicant: Mikal R Hale, P.E.
Traffic Engineering Solutions, Inc.

Request: Rezone Lots 2 and 3 of the Deltona Welcome Center project from Business Planned Unit Development (BPUD) Development Agreement to Business Planned Unit Development (BPUD).

Tax Parcel No.: 01-19-30-08-00-0020 & 01-19-30-10-00-0030

Property Acreage: ±1.98 Acres

Property Location: Northeast corner of the intersection of Deltona Boulevard and Dirksen/Debary Avenue.

Legal Description: Lot 2 Deltona Welcome Center, per Map Book 45, page 17 and Lot 3 Deltona Welcome Center Replat, per Map Book 50, Page 37, of the public records, Volusia County, Florida

Existing Zoning: BPUD

B. Background: The City has received an application to rezone a portion of the Deltona Welcome Center Business Planned Unit Development (BPUD) project to an independent Business Planned Unit Development. The purpose of the rezoning is to

reconfigure site access and to facilitate the construction of an approximately 6,000 square foot convenience store with 20 fueling pumps. Recently the property was the subject of an amendment to the 2003 Deltona Welcome Center Business Planned Unit Development. The amendment involved very limited subject matters and addressed only access and a change of use (allowance of a convenience store with fueling pumps). The amendment to the 2003 Deltona Welcome Center BPUD was approved by the City on September 21, 2015. After approval, the applicant approached the County to gain access to Debary Av. However, after extensive negotiations, the County did not approve the access request. The lack of access onto Debary Av. caused the applicant to review other access options for the site.

With regard to access, the applicant, through this rezoning application, is requesting a full movement onto Deltona Blvd. The September 2015 amendment granted a limited right in and right out access to Deltona Blvd. Deltona Blvd. is a City road and the City has the ability to grant a full access movement to this roadway.

Other elements of the rezoning request include landscaping, transportation improvements and building design and orientation (as depicted on the Master Development Plan and building elevations).

Since the current request addresses more than a limited subject (access/use), a rezoning for Lots 2 and 3 was determined to be a more comprehensive approach to managing development on the property. The rezoning request covered under Ordinance No. 02-2016 will only be applicable for lots 2 and 3. Ordinance 14 – 2015 which was an amendment to the 2003 Deltona Welcome Center Business Planned Unit Development will be superseded by this rezoning request. In addition, the 2003 Deltona Welcome Center BPUD will remain in effect for the remainder of the Welcome Center lots and common areas (stormwater, etc.). Finally, any requirements or obligations associated with the 2003 BPUD agreement not covered in this request will remain in effect and be applicable to lots 2 and 3.

C. Support Information

Public Facilities:

a. Potable Water: to be supplied by Deltona Water
b. Sanitary Sewer: to be supplied by Deltona Water
c. Fire Protection: Deltona Fire Station 62

d. Law Enforcement: Volusia County Sheriff's Office (VCSO)
e. Electricity: Duke Energy

D. Matters for Consideration:

Section 110-1101, Code of City Ordinances, states that the City shall consider the following matters when reviewing applications for amendments to the Official Zoning Map:

1. **Whether it is consistent with all adopted elements of the Comprehensive Plan.**

   The rezoning request is consistent with the following goals and objectives of the City's Comprehensive plan.

   Policy FLU1-7.26

   The City shall seek to expand commercial, industrial and mixed-use development at appropriate locations, including the three target areas identified in accordance with economic development strategies and initiatives.

   The subject property is located in one of three major gateways into the City, and is an ideal location for commercial development. Located within 600 feet of I-4, this property is appropriate for the use proposed.

   Policy FLU1-5.13

   In implementing the Future Land Use Element, the City shall develop and adopt regulations to ensure to the maximum extent feasible, compatibility of use of areas and properties, including but not limited to such factors as traffic circulation, air quality and odor control, noise control, lighting and aesthetics. 9J-5.006(3)(c)(2)

   There are suggested changes to the BPUD Development Agreement that seek to improve traffic circulation and promote aesthetically appropriate development. Therefore, the attached Development Agreement with staff suggested changes would be consistent with this policy.

   Policy T1-3.2

   The City of Deltona shall maintain land use regulations which provide for the continued safe and efficient movement of local traffic, and maintain a transportation system which accommodates demand at an acceptable level of service. 9J-5.019(4)(c)

   The Thoroughfares in the area operate within acceptable level of service thresholds. Transportation improvements and a signal warrant study required

as part of the revised Development Agreement will help ensure the movement of traffic.

Policy I1-PW3.5
The "infilling" of developed areas shall be directed to locations where an existing central system of potable water is available and where capacity is adequate to service the intended development or to those areas where funds have been committed for the provision of adequate capacity. 9J-5.011(2)(c)(1)

Development at this site would be an example of infill. Water and sewer utilities are already established in this area and capacity is available.

2. **Its impact upon the environment or natural resources.**
   The subject property has been planned for urban and highway interchange development for quite some time. The site is densely wooded with a mix of palms, hardwoods and a few pines. Gopher tortoises are known to inhabit the site and the applicant will need to follow state and federal procedures to remove those animals. No other listed species are known to inhabit the site.

3. **Its impact upon the economy of any affected area.**
   The development of a RaceTrac gas station will create short-term construction trickle down economic growth and later result in several full-time management positions as well as up to 20 part-time positions.

4. **Notwithstanding the provisions of Article XIV of the Land Development Code, Ordinance No. 92-25 [Chapter 86, Code of Ordinances] as it may be amended from time to time, its impact upon necessary governmental services, such as schools, sewage disposal, potable water, drainage, fire and police protection, solid waste or transportation systems.**

   a. **Schools:** This rezoning is non-residential and should have no negative impact on local schools

   b. **Sewage Disposal:** Wastewater will be treated by Deltona Water. The proposed use will generate approximately 1,300 Gallons Per Day (GPD) of wastewater; the Deltona Water sanitary sewer system currently has 250,000 GPD of remaining treatment capacity.

   c. **Potable Water:** Potable water will be supplied by Deltona Water. The proposed development will use approximately 1,300 GPD of potable

water, which is equivalent to four residential dwelling units. Deltona Water has ample potable water capacity to support the proposed use.

d. **Drainage:** The Deltona Welcome Center PUD project has a master stormwater system to manage stormwater associated with the development. The applicant will be required to certify the capacity of the master stormwater system to warrant that there is adequate volume and flow characteristics to manage run-off generated by the project. In addition, if there are stormwater deficiencies identified, the applicant will be responsible for addressing such deficiencies.

e. **Transportation Systems:** The surrounding thoroughfares have trip capacity and currently operate at a level of "D", with the exception of Dirksen/Debary Avenue from Deltona Blvd to I-4 which operates at a level of "E". The applicant has provided a Transportation Impact Analysis (TIA) that indicates the following:

- The proposed development will generate a total of 1,704 net new daily trips, of which 82 new trips will occur in the AM peak hour and 102 new trips will occur in the PM peak hour.
- A review of roadway capacity indicates that currently all roadway segments operate within capacities and are projected to continue to do so at project build-out.
- An analysis of intersection capacity and operations reveals that the study intersections currently operate adequately. The intersections are projected to continue to operate adequately after project build-out.

As has been mentioned, an element of this rezoning request is a full access movement onto Deltona Blvd. The proposed access point has been reviewed by three traffic/engineering professionals including a transportation engineer for the applicant, a transportation engineer hired by the City to review the applicant supplied traffic impact analysis and the City engineer. Find attached the applicant supplied traffic impact analysis prepared by the firm TMC and a peer review of the TMC work prepared by an engineer at the consulting company VHB. The results of the TMC and VHB findings are differing. VHB indicates that the full access movement would create traffic conflicts associated with left turns, especially during the a.m. peak. TMC indicates that the full access could be functional. However, the addition of a full access to Deltona Blvd., based on the juxtaposition of the requested access to the Welcome Center Dr./Deltona Blvd. and Deltona Blvd./Debary Av. intersections, would necessitate

transportation improvements to the Deltona Blvd. corridor. The need for improvements to the local Deltona Blvd. corridor is made more acute because of the curvature of Deltona Blvd. south of Welcome Center Dr. and traffic queuing characteristics along Deltona Blvd. during the a.m. peak.

Based on input from the City engineer, the following actions are recommended to accommodate the proposed full movement access onto Deltona Blvd.:

1) A center turn lane shall be installed extending from the left turn lane at the Welcome Center Dr./Deltona Blvd. intersection to the left turn lane at the Deltona Blvd./Debary Av. intersection.

2) To accommodate the above mentioned center turn lane, the existing travel lanes of Deltona Blvd. need to be expanded. This expansion should be accommodated within the existing Deltona Blvd. platted right of way.

3) The full access point on Deltona Blvd. shall be designed consistent with Chapter 96 and Chapter 110-829 of the City Land Development Code. In addition, the access shall be designed and available to facilitate joint access for neighboring lot 4.

4) A signal warrant study, financed by the applicant, will be required within one year of an issuance of a certificate of occupancy to determine if there is a need for a traffic signal at the Welcome Center Dr./Deltona Blvd. intersection. If a signal is warranted, the City and the applicant will engage in a fair share agreement to pay for the signal installation.

All of the above improvements, with the exception of the Welcome Center Dr./Deltona Blvd. signal shall be the sole responsibility of the applicant to finance and construct (to City specifications).

5. **Any changes in circumstances or conditions affecting the area.**
   The Deltona Welcome Center PUD has underperformed for many years; even with the widening of Debary Avenue five years ago. The proposed project represents an opportunity for renewed investment in the Welcome Center area.

6. **Any mistakes in the original classification.**
   No known mistakes.

7. **Its effect upon the public health, welfare, safety, or morals.**
The BPUD, like all Planned Unit Developments, is associated with a written Development Agreement (DA). The DA as part of the subject rezoning addresses matters of public health, welfare, safety and morals. For example, the access and related conditions are part of the DA. Also, there are aesthetic parameters included within the DA, more specifically, building elevations and a landscape plan.

The property, by virtue of location at an entrance to the City, is covered by gateway standards known as the Enterprise Commercial Overlay District (EO). The EO is intended to promote a high quality built environment that is complementary to the historical character of the nearby unincorporated community of Enterprise. Upon reviewing the RaceTrac building elevations, staff has determined that the architectural design and treatments of the primary structure capture the building design elements of the EO. However, there are some aspects of the site design that could be upgraded to more thoroughly comport with the EO standards. The suggested upgrades are as follows:

a. The fueling canopy cannot be backlit;

b. The dumpster and outside storage is completely screened from public right-of-ways;

c. The pedestrian path from the fueling canopy is delineated with materials or textures and a matching building color that are different from the surrounding parking lot;

d. All mechanical equipment, including but not limited to, meters, utility boxes, wells, etc., freestanding or not, shall be completely screened;

e. A master lighting plan to include photometric details demonstrating that illumination will not exceed 1 foot candles along any property lines, will be required as part of the Site Plan review process. The master lighting plan shall also depict the location, type and height of lighting and freestanding light pole design; and

f. Non-recessed lighting is acceptable provided lights are not neon or fiber optic.

Finally, a landscape plan is included as an exhibit of the Development Agreement. Landscaping is a function of the City site plan review process. Therefore, the landscaping plan should be removed from the Development Agreement and a statement made that landscaping shall comply with Chapter 110-808.

CONCLUSION/STAFF RECOMMENDATION:

Staff recommends approval of Ordinance 02-2016 to include the changes suggested to the Development Agreement.

THIS INSTRUMENT PREPARED BY
AND AFTER RECORDING RETURN TO:

Gretchen R. H. Vose, Esq.
City Attorney
City of Deltona
2345 Providence Boulevard
Deltona, Florida 32725

For Recording Purposes Only

Exhibit "A" to Ordinance No. 02-2016

DEVELOPMENT AGREEMENT

for the project known as RaceTrac Neighborhood Market located within the Deltona Welcome Center Business Planned United Development (BPUD) (hereinafter referred to as the "Subject Property").

THIS DEVELOPMENT AGREEMENT (hereinafter referred to as the "Agreement") is entered into and made as of the ___ day of _____, 2016, by and between the CITY OF DELTONA, a Florida municipal corporation, with a mailing address of 2345 Providence Boulevard, Deltona, Florida 32725, (hereinafter referred to as the "City"), and RACETRAC PETROLEUM, INC., a Georgia corporation, with a mailing address of 3225 Cumberland Boulevard, Atlanta Georgia 30339 (hereinafter referred to as the "Developer").

W I T N E S S E T H

~~**WHEREAS**, the Developer is currently under contract to purchase the Subject Property and, in the event Developer ultimately acquires the Subject Property, intends to develop such property as a RaceTrac neighborhood market with fueling positions (the "RaceTrac Project"); and~~

WHEREAS, the Subject Property, more particularly described on **Exhibit "A"** attached hereto and incorporated herein by this reference, is a portion of the Deltona Welcome Center Business Planned Unit Development (BPUD) and the BPUD is subject to that certain

~~Developer's~~ Development Agreement dated April 25, 2003, and recorded among the Public Records of Volusia County, Florida at Official Records Book 5065, Page 415 (the "2003 Developer's Agreement"); and specific items covered by this agreement will supersede the 2003 Developer's Agreement and Ordinance No. 14-2015. However, if there is an issue that is not covered by this Development Agreement, the 2003 Developer's Agreement will take precedence.

WHEREAS, the Developer desires to facilitate the orderly development of the Subject Property in compliance with the laws and regulations of the City and of other governmental authorities, and the Developer desires to ensure that its development is compatible with other properties in the area and planned traffic patterns; and

WHEREAS, the development permitted or proposed under this Agreement is consistent with the City's Comprehensive Plan, concurrency management system, and all land development regulations and this Agreement does not replace, supersede, or grant variances to those regulations; and

WHEREAS, it is the purpose of this Agreement to clearly set forth the understanding and agreement of the parties concerning the development of the Subject Property only and not other ~~portions of the~~ areas within the 2003 BPUD; and

WHEREAS, the Developer has sought the City's approval to develop the Subject Property, and the City approved Ordinance No. 02-2016~~_____~~, through modifying the Subject Property's BPUD zoning designation on _____. The BPUD shall consist of this Agreement, ~~the 2003 Developer's Agreement and **Exhibit "B"**,~~ Master Development Plan **(EXHBIT "B")** (MDP), and all other exhibits attached hereto. ~~and by this reference made a part hereof as the Preliminary Plan, subject to the covenants, restrictions, and easements offered by the Developer and contained herein, (hereinafter the "Master Development Plan"). Where more detailed criteria for City required submittals exceed the criteria required for a Master Development Plan, the more detailed criteria applies provided it does not directly conflict with the Master Developer Plan or this Agreement.~~

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. **Recitals and Definitions.** The recitals herein contained are true and correct and are incorporated herein by reference. All capitalized terms not otherwise defined herein shall be as defined or described in the City's Land Development Code, as it may be amended from time to time, unless otherwise indicated.

2. **Contract Purchaser.** The Developer is the contract purchaser of the Subject Property.

3. **Duration.** The duration of this Agreement is binding ~~in the event that the Developer acquires fee title to the Subject Property~~ and thereafter runs with the land in perpetuity, unless amended or terminated pursuant to the terms of the Land Development Code ~~this Agreement~~.

4. **Development of the Subject Property**. Development of the Subject Property shall be subject to performance standards listed in this Agreement. Where a land use listed below differs from a defined use in the City of Deltona's Code of Ordinances, the use listed in this Agreement shall prevail.

A. ~~Development of the Subject Property for the RaceTrac Project~~ This BPUD is consistent with the Comprehensive Plan.

B. Permitted principal uses allowable on the Subject Property: Convenience Store with no more than 20 fueling positions ~~Gas Pumps~~ (Type C Automobile Service Station) and other uses as set forth in the ~~existing~~ 2003 BPUD.

C. Prohibited principal uses are as set forth in the ~~existing~~ 2003 BPUD.

~~**D.**~~ Proposed maximum intensity: 0.155 Floor Area Ratio ~~(measured in floor area ratio) is as set forth on the Master Development Plan (as hereinafter defined).~~

E. Impervious surface ratio is not to exceed ~~75%~~ 65% as calculated for the entire Deltona Welcome Center project. However, for the purpose of calculating impervious surface, no land located within the Welcome Center Dr. right-of-way of shall be included within the calculation. ~~of the gross square footage for the Subject Property~~. As part of site plan review process, the applicant will be responsible for calculating the amount of impervious surface throughout the Deltona Welcome Center project to ensure that total ISR control is not exceeded.

~~**F.**~~ Maximum lot coverage; 40% ~~(in %) (dry retention systems can be used towards open space) as depicted on the Master Development Plan (as hereinafter defined).~~

~~**G.** Minimum l~~Landscaping and bufferyard requirements shall comply with Section 110-808 of ~~are per~~ the City's Land Development Code, as it may be amended from time to time.~~, and the landscaping plan attached hereto as **Exhibit "C"** and incorporated herein by this reference satisfies all applicable standards. Stormwater management facilities shall not be placed within bufferyards.~~ However, it is recognized that, as function of an easement referenced on the Deltona Welcome Center Final Plat (MB 48, PG 18), a sidewalk is allowed within the landscape buffer area. The City will recognize the easement as a function of an approved plat and therefore, the sidewalk will be allowed within the landscape buffer along Deltona Blvd. and DeBary Av.

H. ~~The Subject Property satisfies the minimum lot size area (in acreage or square footage).~~ Minimum lot size: 1.9 acres

~~**I.** The Subject Property satisfies the minimum lot width (in feet).~~ Minimum lot width: As platted.

~~**J.**~~Minimum yard setbacks: Front yard – (Deltona Blvd., Debary Av., Welcome Center Dr.) 35 feet; Side yard – 15 feet. ~~are as set forth on the Master Development Plan (hereinafter defined).~~

K. Maximum building height (in feet): 35 feet.

~~**L.**~~ Minimum parking standards are per Sections. 110-828 and 110-829 of the City's Land Development Code as it may be amended from time to time.

L. Signs: Signs shall comply with Chapter 102 of the Land Development Code as it may be amended from time to time.

M. Architectural controls and development on the Subject Property shall follow a common architectural theme as listed in this Agreement by harmoniously coordinating the general appearance of all buildings and accessory structures. The City agrees that the architectural elevations attached hereto as **Exhibit "~~D~~C"** (Note: This section supersedes exhibit B of the 2003 Development Agreement.) and incorporated herein by ~~this~~ reference satisfy, all applicable standards, including the Enterprise Commercial Overlay District, provided that the following requirements are met: ~~.~~

1. The canopy cannot be backlit;
2. The dumpster and outside storage is completely screened from public right-of-ways;
3. The pedestrian path from the fueling canopy is delineated with materials or textures and a matching building color that are different from the surrounding parking lot;
4. All mechanical equipment, including but not limited to, meters, utility boxes, wells, etc., freestanding or not, shall be completely screened;
5. A master lighting plan to include photometric details demonstrating that illumination will not exceed 1 foot candles along any property lines, will be required as part of the Site Plan review process. The master lighting plan shall depict the location, type and height of lighting and freestanding light pole design; and

~~**M.**~~6. Non-recessed lighting is acceptable provided lights are not neon or fiber optic.

N. Utility provision and dedication: The Developer shall connect to the City of Deltona's central utility systems~~, when available, or to Volusia County's central utility systems, where applicable, at their sole cost and expense~~. Utility connection and tap fees shall be paid to Deltona Water ~~or Volusia County, respectively,~~ before any building permit is issued. Any utility systems serving more than the Subject Property are to be designed, permitted, and constructed to ~~the respective service provider~~ City specifications and dedicated to the respective service provider upon final inspection, clearance, and acceptance by the service provider.

O. Stormwater and environmental: The 2003 Developer's Agreement and related approvals established the stormwater systems or master stormwater system which shall remain in private ownership and shall not be dedicated to or become the responsibility of the City of Deltona. Developer shall document to the satisfaction of the City that the existing, joint shared, stromwater management system shall accommodate and treat stormwater from the proposed development. In addition, the applicant shall provide documentation that the existing system is in proper operating condition and any reported maintenance issues shall be addressed (repaired, replaced, etc.), to the satisfaction of the City prior to issuance of a Site Engineering permit. All environmental permitting, mitigation, and/or soil and erosion control for the Subject Property shall conform to all federal, state, and local permits/requirements, and shall be maintained in good condition/standing with the applicable permitting authorities. Best Management Practices and conformance to National Pollutant Discharge Elimination System (NPDES) criteria are required.

~~**P.**~~ Transportation, site access, and traffic devices: Site access will be limited to two full movements. One access will connect to Welcome Center Drive and the other access will connect to Deltona Blvd. The Welcome Center Drive connection will be facilitated by an existing joint access easement (OR 4040, PG 104) that is part of the Welcome Center plat. The Deltona Blvd. access point shall be located as far from the Deltona Blvd./Debary Av. intersection and be located as part of a platted ingress/egress easement (MB 50, PG 37). However, the aforementioned ingress/egress easement (MB 50, PG 37) is not large enough to support the full access onto Deltona Blvd. To address this deficiency, the Deltona Blvd. access is planned to be situated within a proposed 35' ingress/egress easement. The 35' width of the easement is estimated on the MDP and may need to be larger as the design becomes more finalized. The subject 35' ingress/egress easement as depicted on the MDP must be appropriately executed and recorded before any site plan approvals are granted by the City. In addition, the ingress/egress easement shall be designed and so dedicated to allow unencumbered access for the future development of Lot 4 of the Welcome Center plat. The Developer is responsible for all transportation improvements ~~within the~~ associated with the development of the Subject Property, both on site and off site. On-site parking and internal circulation shall comply with Chapter 110-828 and 110-829. On-site circulation will be subject to other requirements identified during the site

plan review process including, but not limited to, American Association of State Highway and Transportation Officials (AAHSTO) heavy truck turning radii. A right turn/deceleration lane shall be afforded to accommodate the Deltona Blvd. full access point. The right turn/deceleration lane shall be of adequate design and promote appropriate vehicle storage as to comply with the requirements of Chapter 96 of the City Land Development Code. In addition, the Developer will be responsible for the construction of a center turn lane on Deltona Blvd. extending from the southern extent of the left turn lane at the Deltona Blvd. and Welcome Center Drive intersection to the northern extent of the left turn lane associated with the Deltona Blvd./Debary Av. intersection. To accommodate the center turn lane, the existing Deltona Blvd travel lanes are going to have to be redesigned and widened. Part of the redesign includes the expansion of pavement within the Deltona Blvd. right of way window. The travel lane expansion will involve, at minimum, the segment of Deltona Blvd. from Welcome Center Drive to Debary Av. There may be other improvements needed to accommodate the lane expansion such as transitions, relocations, etc. Any improvements and other work associated with the lane expansion shall be designed and constructed in a manner that will not conflict with an eventual four lane upgrade to the subject segment of Deltona Blvd. The following improvements need to be designed and constructed before the City issues a certificate of occupancy for the project. Finally, all costs associated with the aforementioned improvements, including maintenance of traffic, design, construction, and other activities shall be the sole responsibility of the Developer and shall not be reimbursable by the City or any other government entity through impact fee credits or other arrangements. ~~Off-site transportation improvements which are the responsibility of the Developer are set forth in the traffic study dated _____, 2015 which was submitted to and accepted by the City. Additionally, the City and the Developer agree that a traffic signal at Welcome Center Drive and Deltona Boulevard is not warranted by existing conditions, including the RaceTrac Project.~~ The Developer agrees to cooperate with the City, upon written request, in connection with future monitoring to determine whether a traffic signal may be required in the future at the Welcome Center Drive and Deltona Blvd. intersection. Any such monitoring must be requested by the City within ~~two (2) years~~ one year of the issuance of a certificate of occupancy for the RaceTrac Project. In addition, the cost of the signal warrant study shall be the responsibility of the Developer or any entity in the succession of title. However, the City shall be responsible for contracting with a qualified consultant to perform the signal warrant study. If a study concludes that a signal will be warranted at the Welcome Center Dr./Deltona Blvd. intersection, the cost of signal installation shall be determined through a fair share agreement between the City and the Developer. ~~The City agrees that it has the exclusive permitting authority and jurisdiction to grant the site access depicted on the Master Development Plan, including without limitation the full access on Deltona Boulevard, to the Subject Property and hereby approves such access. The City agrees to work with Volusia County, as required, to appropriately document the City's exclusive permitting authority with respect to access to Deltona~~

~~Boulevard.~~

5. **Public Facilities/Land Dedication.** Any facilities or tracts that either are or shall become public facilities/tracts that will serve the development and/or are on the Subject Property shall be set forth on the re-plat for the Subject Property and approved by the City Commission.

6. **Development Permits/Fees.** The Developer is responsible for obtaining, permitting, and the payment of all fees for facilities and services for development of the Subject Property. Any site permits shall be kept current with the respective permitting agency. All impact fees are applicable and no impact fee credits shall be awarded through this Agreement.~~;~~ ~~unless a cessation exists through a City moratorium that is Citywide~~. ~~Proportionate fair share site improvements shall not be used in lieu of, but shall be credited against, impact fees.~~

7. **Obligations.** Should the Developer fail to undertake and complete its obligations as described in this Agreement to the City's specifications as set forth in this Agreement, then the City shall give the Owner/Developer or Developer thirty (30) days written notice to commence and ninety (90) days to complete said required obligation, subject to force majeure; provided, however, in the event it reasonably takes longer than thirty (30) days to commence and/or ninety (90) days to complete, then the cure period shall extend as long as reasonably necessary provided Developer is diligently prosecuting such cure to completion. Notice to the Owner/Developer or Developer and its successors in interest shall be deemed to have been given upon the mailing of notice to the address or addresses set forth in Section 16 hereof.

8. **Site Plan/Plat Approval.** **Exhibit "B"**, the Master Development Plan, is the Preliminary Plan of the Subject Property's portion of the BPUD and this Agreement. The Master Development Plan shall not replace, supersede, or absolve the Developer from approvals for any site plan, preliminary plat, and/or final plat and their respective regulations. Where more detailed criteria for City required submittals exceed the criteria required for a Master Development Plan, the more detailed criteria applies.

9. **Indemnification.** The Developer shall indemnify and hold the City harmless from any and against all claims, demands, disputes, damages, costs, expenses, (to include attorneys' fees whether or not litigation is necessary and if necessary, both at trial and on appeal), incurred by the City as a result, directly or indirectly, of the approvals and agreements contained in this Agreement, except those claims or liabilities caused by or arising from the negligence, default or intentional acts of the City, or its employees or agents. It is specifically understood that the City is not guaranteeing the appropriateness, efficiency, quality or legality of the use or development of the Subject Property, including but not limited to, drainage or water/sewer plans, fire safety, or quality of construction, whether or not inspected, approved, or permitted by the City.

10. **Compliance.** The Developer agrees that it, and their successors and assigns, will abide by the provisions of this Agreement, the City's Comprehensive Plan and the City's Code of

Ordinances, including but not limited to, the site plan regulations of the City as amended from time to time, which are incorporated herein by reference and such subsequent amendments hereto as may be applicable. Further, all required improvements, including landscaping, shall be continuously maintained by the Owner/Developer or Developer, or their successors and assigns, in accordance with the City's Code of Ordinances. The City may, without prejudice to any other legal or equitable right or remedy it may have, withhold permits, Certificates of Occupancy or plan/plat approvals to the Subject Property, should the Developer fail to comply with the terms of this Agreement. In the event of a conflict between this Agreement and the City's Land Development Code or the 2003 Developer's Agreement, this Agreement shall control.

11. **Obligations for Improvements.** Developer agrees that ~~A~~any surface improvement as described and required hereunder included, but not limited to such as signalization, walls, stormwater management facilities, medians, and utilities, or any other surface improvement shall be performed, prior to the issuance of the first Certificate of Occupancy on that portion of the Subject Property that the surface improvement(s) relates or is otherwise scheduled in this Agreement.

12. **Concurrency and Vested Rights.** Developer acknowledges and agrees that prior to the issuance of any development orders for the Property, the Owner/Developer or Developer must have received and be in the possession of a valid unexpired certificate of capacity/concurrency management system approval consistent with the City's Land Development Code. The capacity certificate/approval verifies the availability of infrastructure and service capacity sufficient to permit the proposed development of the Subject Property without causing a reduction in the levels of service adopted in the City's Comprehensive Plan. The certificate of capacity/approval shall be effective for a term, as defined in the City's Code of Ordinances. Neither this Agreement nor the approved Master Development Plan shall create or result in a vested right or rights to develop the Subject Property, as cited in Section 86-34 of the City's Land Development Code. ~~Notwithstanding the foregoing to the contrary, the City agrees that the RaceTrac Project fully and completely satisfies all applicable transportation concurrency requirements based on the provisions of Section 4(Q) of this Agreement, and that no such capacity certificate/approval contemplated above is necessary.~~

13. **Environmental and Tree Preservation.** The ~~Owner/Developer or~~ Developer is responsible to obtain all site related permits and approval prior to any development activity on or for the Subject Property. This may involve mitigation for habitat of threatened or endangered flora and fauna or for species identified for proportion (i.e. tree preservation). This Agreement does not vest or exempt the Developer from any permitting and mitigation obligations needed to develop a Subject Property.

14. **Enforcement.** Both parties may seek specific performance of this Agreement and/or bring an action for damages in a court within Volusia County, Florida, if this Agreement is breached by either party. In the event that either party to this Agreement files an action to enforce its rights hereunder, the prevailing party in such action shall be entitled to recover its

~~c~~costs and expenses from the other party, including attorney fees, whether or not litigation is necessary and, if necessary, both at trial and on appeal.

15. **Utility Easements.** For any easement not established on a plat for the Subject Property, the Developer shall provide to the City such easements and other legal documentation, in form mutually acceptable to the City Attorney and the Developer, as the City may deem reasonably necessary or appropriate for the installation and maintenance of the utility and other services, including but not limited to, sanitary sewer, potable water, and reclaimed water services, electric, cable, gas, fire protection and telecommunications.

16. **Notices.** Where notice is herein required to be given, it shall be by certified mail return receipt requested, hand delivery or nationally recognized reliable courier service. ~~, such as Federal Express or UPS.~~ E-mail delivery of documents shall not replace or be in lieu of the aforementioned process. Said notice shall be sent to the following, as applicable:

DEVELOPER'S REPRESENTATIVES:

Developer: RaceTrac Petroleum, Inc.
Attention: Corporate Counsel – Real Estate
3225 Cumberland Boulevard
Atlanta, Georgia 30339
Telephone: (770) 431-7600

Copy to: RaceTrac Petroleum, Inc.
Attention: Brian Thornton, VP
of Real Estate and Engineering
3225 Cumberland Boulevard
Atlanta, Georgia 30339
Telephone: (770) 431-7600

CITY'S REPRESENTATIVES:
City Manager
City of Deltona
2345 Providence Boulevard
Deltona, Florida 32725

With copy to:

Director
Planning & Development Services
City of Deltona
2345 Providence Boulevard
Deltona, Florida 32725

Should any party identified above change, it shall be said party's obligation to notify the remaining parties of the change in a fashion as is required for notices herein. It shall be the Owner/Developer's or Developer obligation to identify its lender(s) to all parties in a fashion as is required for notices herein.

17. **Compliance with the Law.** The failure of this Agreement to address a particular permit, condition, term, or restriction shall not relieve the Developer of the Subject Property from the necessity of complying with the law governing said permitting requirements, conditions, terms, or restrictions.

18. **Captions.** The captions used herein are for convenience only and shall not be relied upon in construing this Agreement.

19. **Binding Effect.** This Agreement shall run with the land ~~in the event the Developer acquires fee title to the Subject Property~~, and in such event shall be binding upon and inure to the benefit of the Developer and their successors and assigns in interest, and shall also be binding upon the City and its successor and assigns in interest. This Agreement shall become effective upon its execution with the Public Records of Volusia County, Florida. This Agreement does not, and is not intended to, prevent or impede the City from exercising its legislative authority as the same may affect the Subject Property.

20. **Subsequently Enacted State or Federal Law.** If either state of federal law is enacted after the effective date of this Agreement that is applicable to and precludes the parties' compliance with the terms of this Agreement, this Agreement and correlating zoning amendment shall be modified or revoked, as is necessary, to comply with the relevant state or federal law.

21. **Severability.** If any part of this Agreement is found invalid or unenforceable in any court, such invalidity or unenforceability shall not affect the other parts of this Agreement, if the rights and obligations of the parties contained herein are not materially prejudiced and if the intentions of the parties can be affected. To that end, this Agreement is declared severable.

22. **Covenant Running with the Land.** In the event the Developer acquires fee title to the Subject Property, this Agreement shall run with the Subject Property and inure to and be for the benefit of the parties hereto and their respective successors and assigns and any person, firm, corporation, or entity who may become the successor in interest to the Subject Property or any portion thereof.

23. **Recordation of Agreement.** The parties hereto agree that an executed original of this Agreement shall be recorded by the City, at the Developer's expense, in the Public Records of Volusia County, Florida.

24. **Applicable Law/Venue.** This Agreement and the provisions contained herein shall be construed, controlled, and interpreted according to the laws of the State of Florida. Venue of any litigation relating to this Agreement shall be in the courts of Volusia County, Florida.

25. **Time of the Essence.** Time is hereby declared of the essence to the lawful performance of the duties and obligations contained in this Agreement. The Developer shall execute this Agreement within ten (10) business days of City Commission adoption of Ordinance No. 02-2016_____; and agrees to pay the cost of recording this document in the Public Records of Volusia County, Florida. Failure to execute this Agreement within ten (10) business days of this ordinance adoption may result in the City not issuing development orders or permits until execution and recordation of this Agreement has occurred.

26. **Agreement; Amendment.** This Agreement constitutes the entire agreement between the parties, and supersedes all previous discussions, understandings and agreements, with respect to the subject matter hereof; provided, however, that it is agreed that this Agreement is supplemental to the City's Comprehensive Plan and does not in any way rescind or modify any provisions of the City's Comprehensive Plan. Amendments to and waivers of the provisions of this Agreement shall be made by the parties only in writing by formal amendment. Notwithstanding the foregoing, in the event the Developer does not acquire the Subject Property within six (6) months of the Effective Date, this Agreement shall automatically terminate and be of no further force or effect. Notwithstanding the foregoing, in the event the RaceTrac Project does not receive all necessary approvals from the City, Developer may terminate this Agreement which shall thereafter be of no further force or effect.

27. **Effective Date.** The Effective Date of this Agreement shall be the day this Agreement is recorded in the Public Records of Volusia County, Florida.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, the Developer and the City have executed this Agreement.

DEVELOPER

RACETRAC PETROLEUM, INC., a Georgia corporation

By:

_____	_____
Signature of Witness # 1	Signature
_____	_____
Print or type name	Print or type name

As:

_____
Signature of Witness #2

_____
Print or type

_____
Print or type name

ATTEST:

_____
Signature

_____
Print or Type Name

As:

_____

Mailing Address: _____
_____
_____

STATE OF GEORGIA
COUNTY OF COBB

The foregoing instrument was acknowledged before me this _____day of _____, 2016, by _____, and _____, of ___ _____, who is/are personally known to me or who has/have produced _____ _____ as identification and who did not (did) take an oath.

_____
Signature of Notary

(NOTARY SEAL)

_____
Print or type name

CITY OF DELTONA:

By: _____

Date: _____

ATTEST:

_____

Date: _____

Mailing Address:
City of Deltona
2345 Providence Boulevard
Deltona, Florida 32725

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____day of _____, 2016, by _____, and _____, who are personally known to me and acknowledge executing the same freely and voluntarily under authority vested in them by the City of Deltona.

_____
Signature of Notary

(NOTARY SEAL)

_____
Print or type name

Approved as to form and legality for use and reliance by the City of Deltona, Florida

_____
Gretchen R. H. Vose
City Attorney

Exhibit "A"
Subject Property

LOT 2, DELTONA WELCOME CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 45, PAGE 17 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

and

LOT 3, DELTONA WELCOME CENTER REPLAT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 50, PAGE 37 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Exhibit "B"
Master Development Plan

~~Exhibit "C"~~
~~Landscaping Plan~~

Exhibit "C~~D~~"

RaceTrac Project Renderings

LEGAL DESCRIPTION

LOT 2, DELTONA WELCOME CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 45, PAGE 17 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

and

LOT 3, DELTONA WELCOME CENTER REPLAT, ACCORING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 50, PAGE 37 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

MASTER DEVELOPMENT PLAN

PROJECT ADDRESS:
_____ DEBARY AVENUE
DELTONA, FL 32725

TAX PARCEL: 01-19-30-08-00-0020
01-19-30-08-00-0030

TOWNSHIP 19 SOUTH, RANGE 30 EAST, SECTION 01

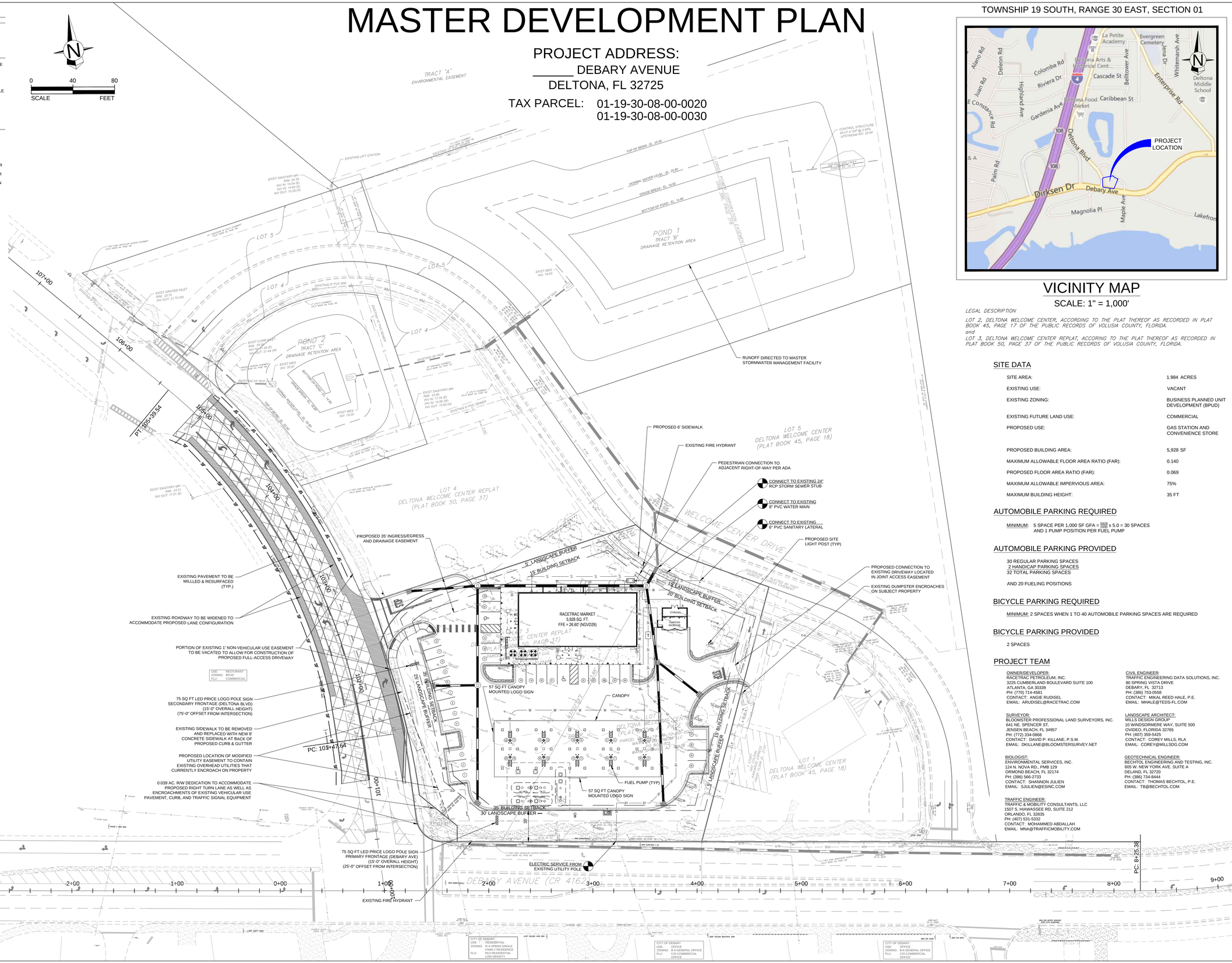
LEGEND

DRAINAGE SYMBOLS
- STORM SEWER
- DRAINAGE INLET
- DRAINAGE MANHOLE

UTILITY SYMBOLS
- DOMESTIC WATER SERVICE
- CHECK VALVE
- SANITARY SEWER PIPE
- SANITARY SEWER MANHOLE
- SANITARY CLEANOUT
- UNDERGROUND ELECTRIC
- TRANSFORMER PAD

SITE SURVEY SYMBOLS
- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- EXISTING EASEMENT LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SPOT ELEVATION
- SANITARY SEWER MAIN
- POTABLE WATER MAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND TELECOM
- OVERHEAD UTILITY LINE
- BORING LOCATION
- BENCHMARK
- WATERVALVE COVER
- SANITARY MANHOLE
- CONCRETE POWER POLE
- POWER POLE
- GUY ANCHOR
- LIGHT POLE
- TRAFFIC SIGN
- TELEPHONE BOX
- ELECTRIC BOX
- CONCRETE LIGHT POLE
- TRAFFIC CONTROL BOX
- RIGHT TURN ARROW
- LEFT TURN ONLY
- WATER VALVE
- TREE

0 40 80
SCALE FEET



VICINITY MAP

SCALE: 1" = 1,000'

LEGAL DESCRIPTION

LOT 2, DELTONA WELCOME CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 45, PAGE 17 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
and
LOT 3, DELTONA WELCOME CENTER REPLAT, ACCORING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 50, PAGE 37 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

SITE DATA

SITE AREA:	1.984 ACRES
EXISTING USE:	VACANT
EXISTING ZONING:	BUSINESS PLANNED UNIT DEVELOPMENT (BPUD)
EXISTING FUTURE LAND USE:	COMMERCIAL
PROPOSED USE:	GAS STATION AND CONVENIENCE STORE
PROPOSED BUILDING AREA:	5,928 SF
MAXIMUM ALLOWABLE FLOOR AREA RATIO (FAR):	0.140
PROPOSED FLOOR AREA RATIO (FAR):	0.069
MAXIMUM ALLOWABLE IMPERVIOUS AREA:	75%
MAXIMUM BUILDING HEIGHT:	35 FT

AUTOMOBILE PARKING REQUIRED

MINIMUM: 5 SPACE PER 1,000 SF GFA = [illegible] x 5.0 = 30 SPACES
AND 1 PUMP POSITION PER FUEL PUMP

AUTOMOBILE PARKING PROVIDED

30 REGULAR PARKING SPACES
2 HANDICAP PARKING SPACES
32 TOTAL PARKING SPACES

AND 20 FUELING POSITIONS

BICYCLE PARKING REQUIRED

MINIMUM: 2 SPACES WHEN 1 TO 40 AUTOMOBILE PARKING SPACES ARE REQUIRED

BICYCLE PARKING PROVIDED

2 SPACES

PROJECT TEAM

OWNER/DEVELOPER:
RACETRAC PETROLEUM, INC.
3225 CUMBERLAND BOULEVARD SUITE 100
ATLANTA, GA 30339
PH: (770) 714-4581
CONTACT: ANGIE RUDISEL
EMAIL: ARUDISEL@RACETRAC.COM

SURVEYOR:
BLOOMSTER PROFESSIONAL LAND SURVEYORS, INC.
641 NE. SPENCER ST.
JENSEN BEACH, FL 34957
PH: (772) 334-0868
CONTACT: DAVID P. KILLANE, P.S.M.
EMAIL: DKILLANE@BLOOMSTERSURVEY.NET

BIOLOGIST:
ENVIRONMENTAL SERVICES, INC.
124 N. NOVA RD., PMB 129
ORMOND BEACH, FL 32174
PH: (386) 566-2733
CONTACT: SHANNON JULIEN
EMAIL: SJULIEN@ESINC.COM

TRAFFIC ENGINEER:
TRAFFIC & MOBILITY CONSULTANTS, LLC
1507 S. HIAWASSEE RD, SUITE 212
ORLANDO, FL 32835
PH: (407) 531-5332
CONTACT: MOHAMMED ABDALLAH
EMAIL: MNA@TRAFFICMOBILITY.COM

CIVIL ENGINEER:
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713
PH: (386) 753-0558
CONTACT: MIKAL REED HALE, P.E.
EMAIL: MHALE@TEDS-FL.COM

LANDSCAPE ARCHITECT:
MILLS DESIGN GROUP
10 WINDSORMERE WAY, SUITE 500
OVIDEO, FLORIDA 32765
PH: (407) 359-5425
CONTACT: COREY MILLS, RLA
EMAIL: COREY@MILLSDG.COM

GEOTECHNICAL ENGINEER:
BECHTOL ENGINEERING AND TESTING, INC.
605 W. NEW YORK AVE. SUITE A
DELAND, FL 32720
PH: (386) 734-8444
CONTACT: THOMAS BECHTOL, P.E.
EMAIL: TB@BECHTOL.COM

NO.	REVISIONS	BY	DATE

TEDS
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
Phone: 386.753.0558 80 Spring Vista Drive
Fax: 386.753.0778 DeBary, FL 32713
CERTIFICATE OF AUTHORIZATION NO. 27592

811 Know what's below. Call before you dig.

THESE PLANS ARE SUBJECT TO FEDERAL COPYRIGHT LAWS. ANY USE OF THE SAME WITHOUT THE EXPRESSED WRITTEN PERMISSION OF RACETRAC PETROLEUM, INC. IS PROHIBITED.

RACETRAC
RACETRAC PETROLEUM, INC.
3225 CUMBERLAND BOULEVARD
SUITE 100 ATLANTA, GA 30339
(770) 431-7600

MASTER DEVELOPMENT PLAN
RACETRAC MARKET

SITE	RACETRAC #836		
SCALE	AS NOTED	DATE	12/14/2015
DRAWN	TAS	JOB NO.	10730

MDP 1
SHEET NO. REV.

Drawing name: Z:\2014 Projects\10730 (RaceTrac #836_DeBary Ave)\CAD\MDP\MDP.dwg MDP3 SITE PLAN Dec 14, 2015 12:45pm by: Andy

LANDSCAPE NOTES SCHEDULE

SYMBOL	DESCRIPTION
L-101	Landscape contractor is responsible for all materials and all work as called for on the Landscape Plans. The Plant List quantities provided are to be used strictly as a guide. It is the Landscape Conractors duty to field verify all quantities and notify any modifications to Mills Design Group (MDG) at the time of bidding.
L-102	Contractor shall familiarize himself/herself with existing site conditions prior to imitating planting. All existing site furnishings, paving, landscape,and other elements to remain shall be protected from any dam age unless otherwise noted.
L-103	Contractor shall notify all necessary utility companies 48 hours minimum prior to digging for verification of all underground utilities, irrigation and all other obstructions and coordinate with Owner`s Representative prior to initiating operations. Drawings are prepared according to the best information available at the time of preparing these documents.
L-104	The Contractor shall be responsible for removing existing groundcover for all planting beds as specified prior to planting installation.
L-105	All plants must meet Florida No. 1 Grade or better as outlined under Grades and Standards for Nursery Plants, Division of Plant Industry, State of Florida.
L-106	The Landscape Contractor shall review architectural engineering plans and become thoroughly familiar with surface and subsurface utilities. The Landscape Contractor shall coordinate with other trades to prevent conflicts, and shall coordinate the planting with the irrigation work to assure availability and proper location of irrigation items.
L-107	The Landscape Contractor shall be wholly responsible for stability and plumb condition of all trees and shrubs and be legally liable for any damage caused by instability of any plants. The Landscape Contractor shall determine trees to be staked or guyed. If necessary, guying and staking shall be done by a method approved by MDG prior to installation. It shall be the responsibility of the Landscape Contractor to remove guys and stakes after new root growth is firmly established. Landscape Contractor must remove Burlap from all trees prior to installation.
L-108	The Landscape Contractor shall insure that any of his work will not interrupt any existing or projected on-site drainage patterns. It is Necessary for the Landscape Contractor to Provide Proper drainage in all plant beds, planters and sod areas.
L-109	Landscape Contractor shall field adjust location of plant material as necessary to avoid damage to all existing underground utilities and/or existing above ground elements. All changes required shall be completed at the Contractor`s expense and shall be coordinated with the Owner`s Representative and the Landscape Architects.
L-110	Any substitutions in size and/or plant material must be approved by the Landscape Architect. All plants will be subject to approval by the Landscape Architect and/or Owner`s representative before planting can begin.
L-111	Contractor shall refer to the landscape planting details, plant list and general notes for further and complete landscape planting instructions.
L-112	Landscape Contractor shall coordinate all planting work with Irrigation work. Landscape Contractor shall be responsible for all hand watering as required by Owner`s Representative to supplement irrigation water and rainfall. Landscape contractor shall be responsible for hand water in all planting area, regardless of the status of existing or proposed irrigation.
L-113	Grass: All grass shall be recognized Empire Zoysia Grass. Grass must be weed free at time of install. The Landscape Contractor is responsible for measuring and determining the exact amount required.
L-114	Mulch: All plants shall be dressed with 2"-3" of Earthwise Virgin hardwood Mulch. Color must be DARK BROWN with no added dyes. No Mulch shall be placed within 4" of tree trunk.
L-115	The irrigation is designed as a permanent system and to provide 100% coverage.
L-116	The container size for the specified plant material must meet or exceed the plant material size specified in the plant schedule. The Landscape Architect and/or Owners representative may reject subpar plant material.

LANDSCAPE CODE REQUIREMENTS

General Notes

SYMBOL	DESCRIPTION	QTY	Location	Length	Required Plants
LC-102	At least 25% of the Site Total required landscape area shall be covered by shrubs, groundcovers, or vines.				
LC-103	Palm Trees may satisfy no more than 25% of requiredTree Count. Total Required Trees = 35 Max Palms Count Towards Canopy = 16 for 8 Canopy Trees				

General Notes

SYMBOL	DESCRIPTION	QTY	Location	Length	Required Plants
	Preserved Specimen Trees	5			

Tree Requirements

SYMBOL	DESCRIPTION	QTY	Location	Length	Required Plants
	25` Landscape Buffer - Canopy Trees 2 Per 40 Feet	8	Daytona BLVD	191	8
	25` Landscape Buffer - UnderstoryTrees 2 Per 80 Feet	8	Daytona BLVD	191	8
	30` Landscape Buffer - Canopy Trees 2 Per 40 Feet	16	Debary Ave	267	16
	30` Landscape Buffer - UnderstoryTrees 2 Per 80 Feet	16	Debary Ave	267	16
	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	3	PL East	162	3
	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	3	PL East	162	3
	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	3	PL North East	142	3
	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	3	PL North East	141	3
	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	3	PL North West	155	3
	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	3	PL North West	155	3

Building Requirments

SYMBOL	DESCRIPTION	QTY	Location	Length	Required Plants
	Building and Parking Trees	7			

Trees & Palms Planting Schedule

CANOPY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	CAL	CT	WATER	NATIVE	REMARKS
AR	11	Florida Flame Red Maple	Acer rubrum `Florida Flame`	65 Gal	13` - 15` Ht X 5` - 7` Sprd	3.5"	5`	Low	Yes	Well Developed Specimen
MB	3	Bracken`s Southern Magnolia	Magnolia grandiflora `Brackens Brown Beauty`	65 Gal	11` Ht x 5` Sprd	3.5"		Low	Yes	Full, Well Developed Pyramidal Form
TD	12	Bald Cypress	Taxodium distichum	65 Gal	13` - 15` Ht X 5` - 7` Sprd	3.5"	4`	Low	Yes	Specimen Form
PALM TREES	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**CAL**	**CT**	**WATER**	**NATIVE**	**REMARKS**
SP	6	Cabbage Palmetto	Sabal palmetto	10` CT			See Cont	Low	Yes	Bare Root, Full Well Developed Head, single straight heavy trunk w/out boots
	7	Cabbage Palmetto	Sabal palmetto	12` CT			See Cont	Low	Yes	Bare Root, Full Well Developed Head, single straight heavy trunk w/out boots
	7	Cabbage Palmetto	Sabal palmetto	8` CT			See Cont	Low	Yes	Bare Root, Full Well Developed Head, single straight heavy trunk w/out boots
UNDERSTORY TREES	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**CAL**	**CT**	**WATER**	**NATIVE**	**REMARKS**
IC	11	Dahoon Holly	Ilex cassine	30 Gal	12` x 5` -6` Sprd	2.5"		Low	Yes	Cont. 12` x 6` sprd.; 2 1/2" cal.; single straight trunk; full head
LIP	14	Purple Crape Myrtle	Lagerstroemia fauriei `Muskogee`	65 Gal	8`-10` Ht X 5` Sprd			Low	Yes	Multi Trunk Tree Form, 3 - 5 Trunks

Shrub, Shrub Areas, Groundcover, & Turf Planting Schedule

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	WATER	NATIVE	SPACING	REMARKS
PM	267	Podocarpus	Podocarpus macrophyllus	10 Gal	2.5`Ht x 2` Sprd	Medium	No	24" o.c.	very full specimens
	14	Podocarpus	Podocarpus macrophyllus	15 Gal	4`Ht X 2` Min Sprd	Medium	No	24" o.c.	very full specimens
SHRUB AREAS	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**WATER**	**NATIVE**	**SPACING**	**REMARKS**
IVS	249	Schillings Holly	Ilex vomitoria `Schillings`	3 Gal	12" x 15" OA	Low	Yes	30" o.c.	Full & Bushy Specimen
LCR	23	Plum Loropetalum	Loropetalum chinense rubrum `Plum Delight` TM	3 Gal	15" - 18" OA	Low	Yes	30" o.c.	Full & Bushy
MG	156	Pink Muhly Grass	Muhlenbergia capillaris	3 Gal	24" Ht	Low	Yes	36" o.c.	Full & Bushy Plants
RR	63	Knockout Rose	Rosa x `Knockout` TM	3 Gal	18" OA	Medium	No	30" o.c.	Full and bushy
ZP	280	Coontie	Zamia pumila	3 Gal	18" OA	Low	Yes	30" o.c.	Full Plants
GROUND COVERS	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**WATER**	**NATIVE**	**SPACING**	**REMARKS**
TA	371	Dwarf Asiatic Jasmine	Trachelospermum asiaticum `Asia Minor`	6" Pot	12" - 18" Runners	Low	No	12" o.c.	5 Runners Min per pot
SOD/SEED	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**WATER**	**NATIVE**	**SPACING**	**REMARKS**
PNS	16,499 sf	Bahia Grass	Paspalum notatum `Argentine`	N/A	N/A	Low	No		Solid Sod from Pallets, Weed & Pest Free

Perimeter and Foundation Landscaping

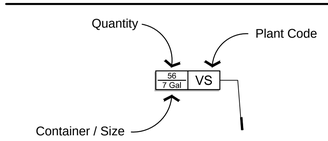
	Daytona BLVD		Debary Ave		East		PL North East		PL North West	
Buffer Length in Linear Feet	191		267		162		142		155	
Buffer Type	25'		30'		5'		5'		5'	
Perimeter Plants	Required	Provided	Required	Provided	Required	Provided	Required	Provided	Required	Provided
Canopy Trees	8	8	16	16	3	3	3	3	3	3
Understory Trees	8	8	16	16	3	3	3	3	3	3
Shrubs	76.4	220	133.5	247	32.4	259	28.4	89	31	35

Foundation Plants	Required Provided	
UnderStory	4	4*
Shurbs @ 65% of 114'	74	108

* Canopy Trees Provided

Plants	Totals
Canopy Trees	24
Understory Trees	24
Palms	24
Shrubs	937
Groundcover	614
Preserved Specimen	5

Plant Label



Landscape Sheet Index

Sheet #	Sheet Title
Landscape Sheets	
L2.01	Planting Notes & Schedule
L2.11	Planting Plan
L2.21	Planting Details -
Irrigation Sheets	
L3.01	Irrigation Notes
L3.11	Irrigation Plan
L3.21	Irrigation Details

NO.	REVISIONS	BY	DATE
1	Update Tables	AE	2015.8.10
2	Update Tables	AE	2015.8.10

COREY`J. MILLS
RLA# 6666831
DATE

MILLS DESIGN GROUP

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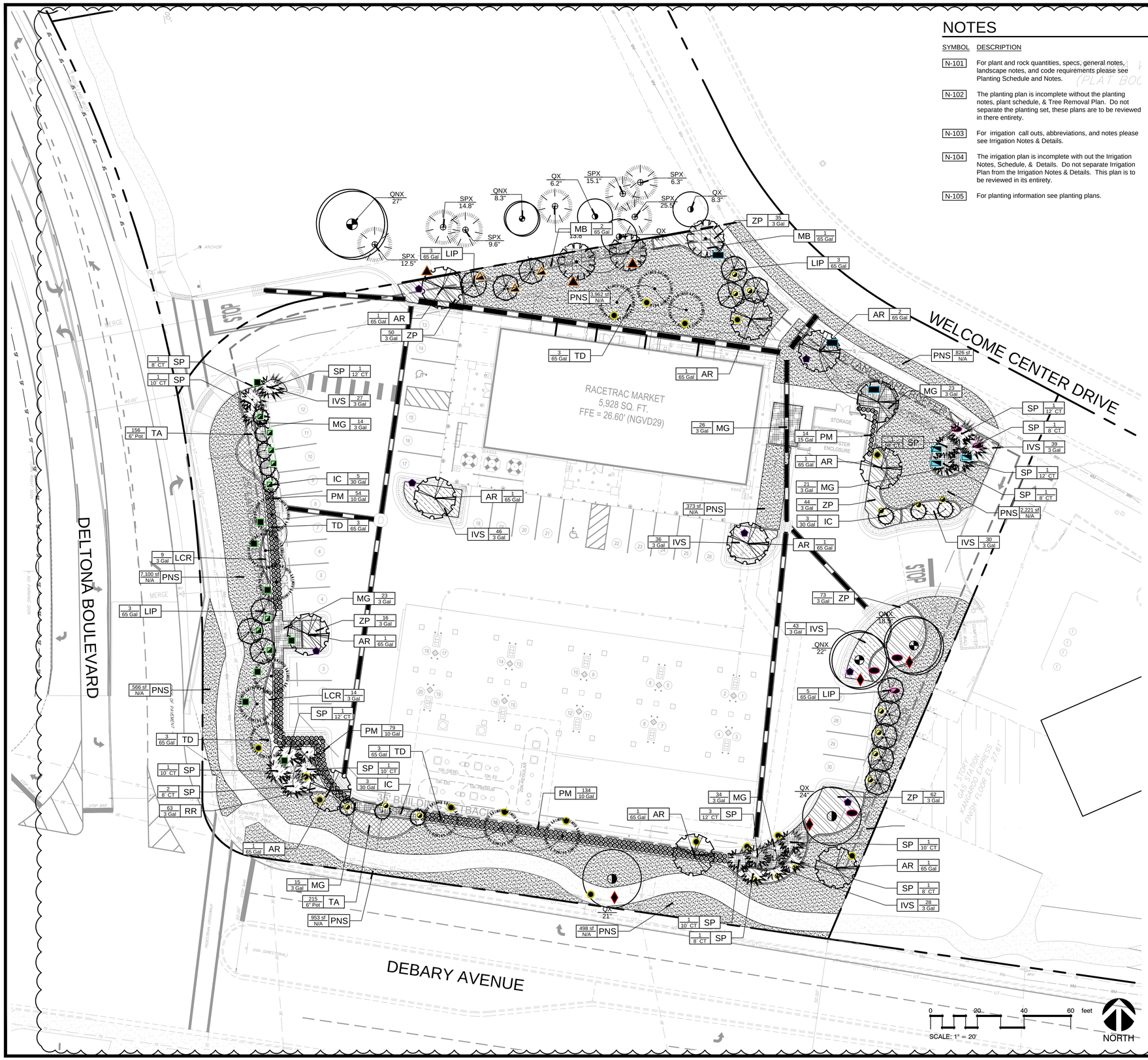
RACETRAC PETROLEUM, INC.
3225 CUMBERLAND BOULEVARD, SUITE 100
ATLANTA, GA 30339
(770) 431-7600

Planting Notes & Schedule

RACETRAC #863 - Debary

DeBary Ave. & Deltona Blvd.
Deltona, FL

DATE	2015.5.7
SCALE	N\A
DRAWN-BY	AE
PROJECT NUMBER: 2015.035	
L2.01	1
SHEET NO.	VERSION



NOTES

SYMBOL	DESCRIPTION
N-101	For plant and rock quantities, specs, general notes, landscape notes, and code requirements please see Planting Schedule and Notes.
N-102	The planting plan is incomplete without the planting notes, plant schedule, & Tree Removal Plan. Do not separate the planting set, these plans are to be reviewed in there entirety.
N-103	For irrigation call outs, abbreviations, and notes please see Irrigation Notes & Details.
N-104	The irrigation plan is incomplete with out the Irrigation Notes, Schedule, & Details. Do not separate Irrigation Plan from the Irrigation Notes & Details. This plan is to be reviewed in its entirety.
N-105	For planting information see planting plans.

Exsiting Trees To Remain

EXISTING	QTY	COMMON NAME	BOTANICAL NAME	CONT	REMARKS
QNX	1	Water Oak	Quercus nigra	18.5"	Specimen
	1	Water Oak	Quercus nigra	22"	Specimen
	1	Water Oak	Quercus nigra	27"	Specimen
	1	Water Oak	Quercus nigra	8.3"	
QX	1	Southern Live Oak	Quercus virginiana	21"	Specimen
	1	Southern Live Oak	Quercus virginiana	24"	Specimen
	1	Southern Live Oak	Quercus virginiana	6.1"	
	1	Southern Live Oak	Quercus virginiana	6.2"	
	1	Southern Live Oak	Quercus virginiana	8.2"	
	1	Southern Live Oak	Quercus virginiana	8.3"	
	1	Southern Live Oak	Quercus virginiana	8.6"	
SPX	1	Slash Pine	Pinus elliotti	10.8"	
	1	Slash Pine	Pinus elliotti	12.5"	
	1	Slash Pine	Pinus elliotti	13.8"	
	1	Slash Pine	Pinus elliotti	14.8"	
	1	Slash Pine	Pinus elliotti	15.1"	
	1	Slash Pine	Pinus elliotti	25.5"	
	1	Slash Pine	Pinus elliotti	6.3"	
	1	Slash Pine	Pinus elliotti	9.6"	

Plant Legend

CANOPY TREES	COMMON NAME	CONT
AR	Florida Flame Red Maple	65 Gal
MB	Bracken`s Southern Magnolia	65 Gal
TD	Bald Cypress	65 Gal
PALM TREES	**COMMON NAME**	**CONT**
SP	Cabbage Palmetto	10` CT
	Cabbage Palmetto	12` CT
	Cabbage Palmetto	8` CT
UNDERSTORY TREES	**COMMON NAME**	**CONT**
IC	Dahoon Holly	30 Gal
LIP	Purple Crape Myrtle	65 Gal
SHRUBS	**COMMON NAME**	**CONT**
PM	Podocarpus	10 Gal
	Podocarpus	15 Gal
SHRUB AREAS	**COMMON NAME**	**CONT**
IVS	Schillings Holly	3 Gal
LCR	Plum Loropetalum	3 Gal
MG	Pink Muhly Grass	3 Gal
RR	Knockout Rose	3 Gal
ZP	Coontie	3 Gal
GROUND COVERS	**COMMON NAME**	**CONT**
TA	Dwarf Asiatic Jasmine	6" Pot
SOD/SEED	**COMMON NAME**	**CONT**
PNS	Bahia Grass	N/A

Landscape Code Legend

SYMBOL	General Notes DESCRIPTION	Location
LC-102	At least 25% of the Site Total required landscape area shall be covered by shrubs, groundcovers, or vines.	
LC-103	Palm Trees may satisfy no more than 25% of requiredTree Count. Total Required Trees = 35 Max Palms Count Towards Canopy = 16 for 8 Canopy Trees	

SYMBOL	General Notes DESCRIPTION	Location
♦	Preserved Specimen Trees	

SYMBOL	Tree Requirements DESCRIPTION	Location
■	25` Landscape Buffer - Canopy Trees 2 Per 40 Feet	Daytona BLVD
◪	25` Landscape Buffer - UnderstoryTrees 2 Per 80 Feet	Daytona BLVD
●	30` Landscape Buffer - Canopy Trees 2 Per 40 Feet	Debary Ave
◔	30` Landscape Buffer - UnderstoryTrees 2 Per 80 Feet	Debary Ave
⬬	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	PL East
◔	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	PL East
▬	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	PL North East
◪	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	PL North East
▲	5` Landscape Buffer - Canopy Trees 1 Per 40 Feet	PL North West
◪	5` Landscape Buffer - UnderstoryTrees 1 Per 80 Feet	PL North West

SYMBOL	Building Requirments DESCRIPTION	Location
⬟	Building and Parking Trees	

NO.	REVISIONS	BY	DATE
1	Update Civil Base	AE	2015.8.10
2	Update Tables	AE	2015.8.10

COREY`J. MILLS
RLA# 6666831
DATE

MILLS DESIGN GROUP

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ATLANTA, GA 30339
(770) 431-7600

Planting Plan

RACETRAC #863 - Debary

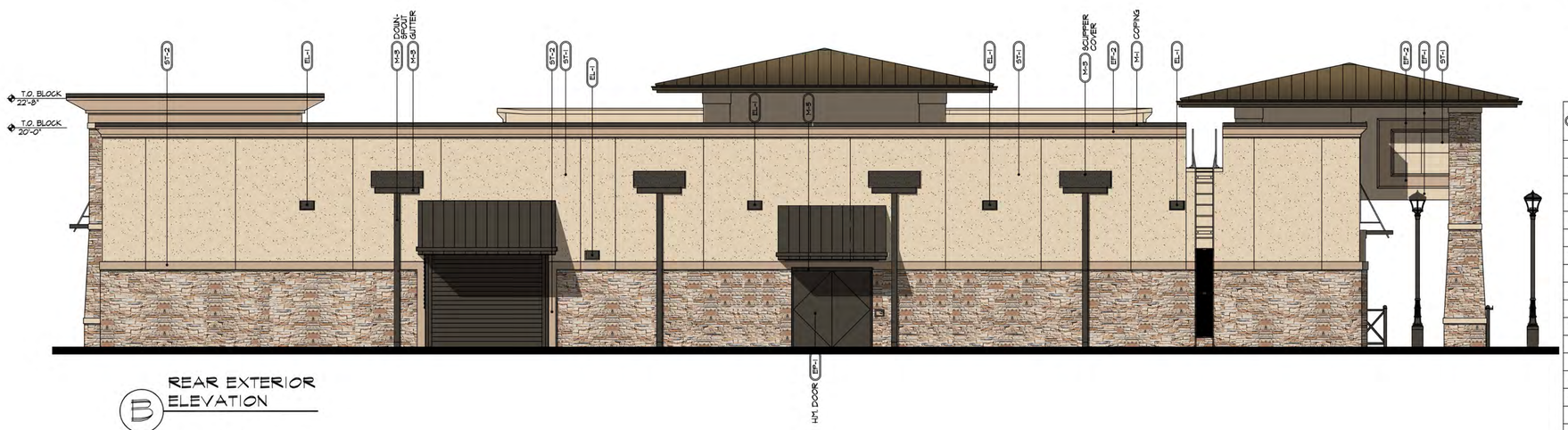
DeBary Ave. & Deltona Blvd.
Deltona, FL

DATE	2015.5.7
SCALE	1" = 20'-0"
DRAWN-BY	AE
PROJECT NUMBER:	2015.035
L2.11	1
SHEET NO.	VERSION

RaceTrac
RaceTrac
RaceTrac
RaceTrac
RaceTrac
RaceTrac
RaceTrac
RaceTrac
Frozen Yogurt Here
BLOCKBUSTER

D RIGHT EXTERIOR ELEVATION

C LEFT EXTERIOR ELEVATION



B REAR EXTERIOR ELEVATION

A FRONT EXTERIOR ELEVATION

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL EXTERIOR MATERIALS, COLORS AND FINISHES WITH THE ARCHITECT. ANY DISCREPENCIES NOTED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION
2. PROVIDE EXPANSION JOINTS (EJ) AS LOCATED ON ELEVATIONS. CAULKING SPECIFICATION FOR EXPANSION JOINTS SHALL BE "ADOBE TAN" (SL-2) BY TREMCO
3. MAXIMUM SPACING OF EXPANSION JOINTS ARE TO BE 20'-0" O.C.

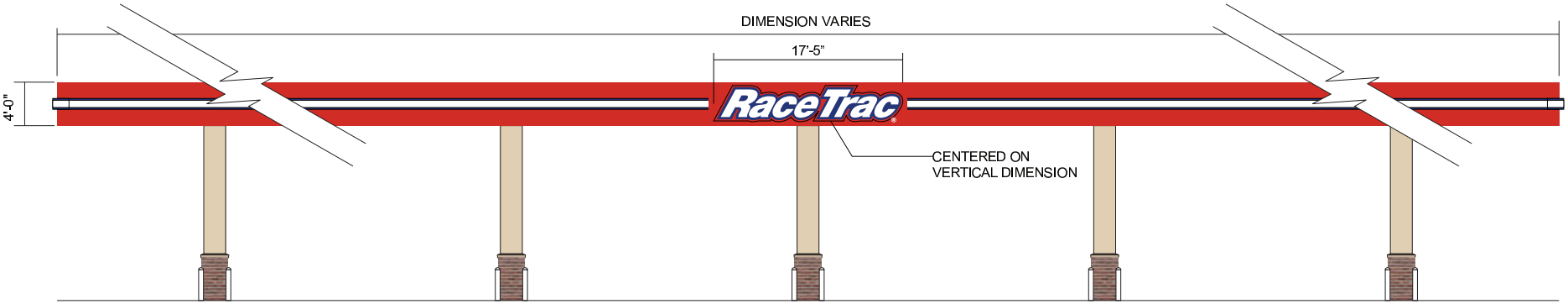
	EXTERIOR MATERIAL LEGEND
	EXTERIOR PAINT
EP-1	EXTERIOR METALS - PAINT TO MATCH ENGLERT METAL ROOF COLOR DK. BRONZE
	STUCCO
ST-1	3-COAT STUCCO SYSTEM (FINE FINISH) - 3/4" MINIMUM THICKNESS UNLESS NOTED OTHERWISE COLOR TO MATCH SHERWIN WILLIAMS #6115 - INTERACTIVE CREAM
ST-2	3-COAT STUCCO SYSTEM (FINE FINISH) - 3/4" MINIMUM THICKNESS UNLESS NOTED OTHERWISE COLOR TO MATCH SHERWIN WILLIAMS #6014 - SENSATIONAL SAND
	STACKED STONE
SS-1	ASPEN COUNTRY LEDGESTONE BY BORAL (DRY STACK APPLICATION)
	STONE BAND (LOWER BAND ONLY)
SB-1	TUSCAN LINTEL CHAMPAGNE BY BORAL
	AWNING
AW-1	ALUMINUM AWNING SYSTEM - SELECTED BY OWNER
	STUCCO - SYNTHETIC STUCCO (EIFS)
EF-1	"FINE FINISH" APPLICATION, COLOR TO MATCH SW #6115 "INTERACTIVE CREAM"
EF-2	"FINE FINISH" APPLICATION, COLOR TO MATCH SW # 6014 "SENSATIONAL SAND"
	WINDOW SILLS
SW-1	MOCHA WATERTABLE/SILL BY BORAL
	METAL
M-1	PREFINISHED 4" 2-PIECE COMPRESSION METAL COVER. METAL TO MATCH ENGLERT METAL ROOF COLOR DARK BRONZE
M-2	1" PREFINISHED ALUMINUM COMPOSITE PANEL SYSTEM, REYNOBOND - COLOR TO MATCH ALUMINUM STOREFRONT SYSTEM
M-3	METAL TO MATCH ENGLERT METAL ROOF COLOR DARK BRONZE
M-4	VISTAWALL FG-5000 OR FG-5100 IMPACT RESISTANT STOREFRONT SYSTEM PREFINISHED DARK BRONZE ANODIZED ALUMINUM AA-M32C22A44
M-5	PREFINISHED ALUMINUM DRIP EDGE
M-6	ENGLERT METAL ROOF SYSTEM SERIES 2000, 1-3/4" HIGH STRUCTURAL SNAP LOCK STANDING SEAM WITH NO BATTEN. PANELS ARE 18" WIDE, 24 GAUGE GALVALUME WITH BAKED-ON PERMACOLOR 2000 KYNAR 500 IN SMOOTH FINISH WITH (2) 1/8" HIGH x 1/8" WIDE STYRAN RIBS TO BE SPACED TO DIVIDE INTO THREE EQUAL PARTS, COLOR TO MATCH DARK BRONZE
	GLASS - SEE A600 FOR WINDOW FRAME DIMENSIONS
GL-1	1-5/16" IMPACT RATED INSULATED LAMINATED GLASS - CLIMATE ZONES 1 OR 2: 1GU AT STOREFRONT 0.60 U-FACTOR, SHGC FP$_{0.25}$ + 0.40 PPG SOLARBAN 70 XL LOW-E #2 (STOREFRONT WINDOWS & DOORS)
GL-2	1-5/16" IMPACT RATED FROSTED INSULATED LAMINATED GLASS - CLIMATE ZONES 1 OR 2: 1GU AT STOREFRONT 0.60 U-FACTOR, SHGC FP$_{0.25}$ + 0.40 PPG SOLARBAN 70 XL LOW-E #2 SATIN ETCH #4 (OUTER RESTROOM TRANSOM PANEL)
GL-3	1-5/16" IMPACT RATED FROSTED INSULATED LAMINATED GLASS - CLIMATE ZONES 1 OR 2: 1GU AT STOREFRONT 0.60 U-FACTOR, SHGC FP$_{0.25}$ + 0.40 PPG SOLARBAN 70 XL SATIN ETCH #2 & BLACK CERAMIC FRIT SPANDREL #6 (CENTER RESTROOM TRANSOM PANEL); SEE DETAIL C4D ON A600 FOR WINDOW GLAZING CONFIGURATION INFORMATION
GL-4	4/16" IMPACT RATED LAMINATED NON-INSULATED MONOLITHIC FROSTED PPG GLASS - SATIN ETCH #4 (GLASS TOWERS ONLY)
	LIGHTING
EL-1	SECURITY LIGHT - SEE ELECTRICAL DRAWINGS
EL-2	DECORATIVE POLE LIGHT - SEE ELECTRICAL DRAWINGS

SEE SHEET A000 FOR NOA INFORMATION
SEE SHEET A500 FOR ADDITIONAL MATERIALS INFO.
SEE SHEET A600 FOR WINDOW GLAZING CONFIGURATION FOR IMPACT RATED AND NON-IMPACT RATED GLASS SYSTEM
M.C.J. - MASONRY CONTROL JOINT; SEE DETAIL M/A124 FOR ADDITIONAL INFORMATION
S.C.J. - STUCCO CONTROL JOINT; SEE DETAIL N/A124 FOR ADDITIONAL INFORMATION

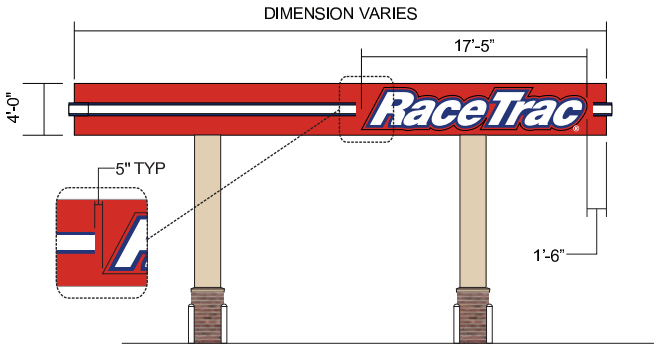
RaceTrac
RaceTrac Petroleum, Inc
3225 Cumberland Blvd, Suite 100
Atlanta, Georgia 30339

GENERAL NOTE: ALL WORK SHALL BE IN COMPLIANCE WITH RECOGNIZED INDUSTRY STANDARDS, MANUFACTURER'S RECOMMENDATIONS, AND ALL APPLICABLE STATE AND LOCAL CODES. NO SUBSTITUTIONS ALLOWED.

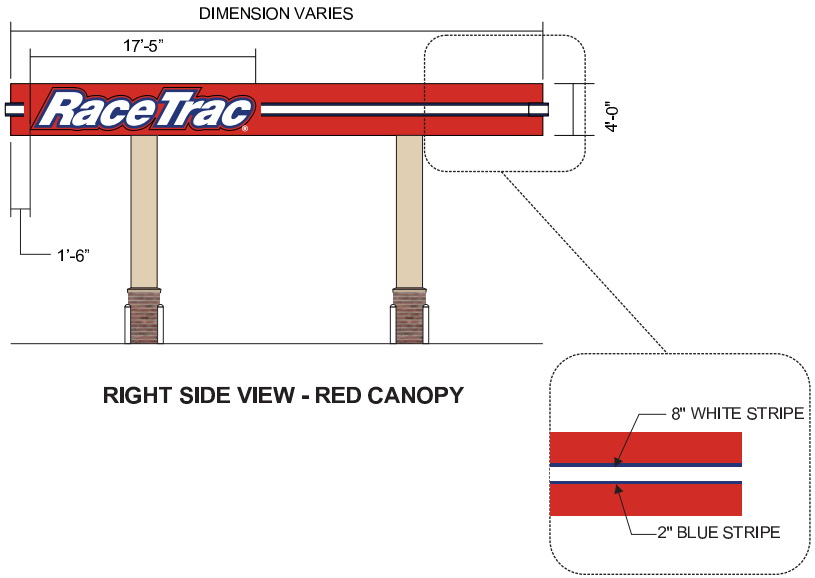
57 SF Canopy LED Cloud Sign - Red Canopy



GAS CANOPY FRONT ELEVATION



LEFT SIDE VIEW - RED CANOPY



RIGHT SIDE VIEW - RED CANOPY

COLOR SCHEDULE

RaceTrac Red
To Match RGB = 216, 30, 5

RaceTrac Blue
To Match RGB = 0, 43, 127

RACETRAC #863 – DEBARY AVE
Project № 15-027.1
December 2015
(Revised)

TRAFFIC IMPACT ANALYSIS
CITY OF DELTONA
FLORIDA

Prepared by:

Traffic & Mobility Consultants
3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

Prepared for:

RaceTrac Petroleum
3225 Cumberland Boulevard, Suite 100
Atlanta, Georgia 30339

EXECUTIVE SUMMARY

This traffic analysis was conducted to assess the traffic operations of the proposed RaceTrac convenience market with gas located in the northeast quadrant of the intersection of DeBary Avenue and Deltona Boulevard in the City of Deltona, Florida. The proposed project is a 5,928 square foot convenience store with 20 vehicle fueling positions.

The results of the traffic analysis are summarized as follows:

- The proposed development will generate a total of 1,704 net new daily trips, of which 82 new trips will occur in the AM peak hour and 102 new trips will occur in the PM peak hour.

- A review of roadway capacity indicates that currently all roadway segments operate within their capacities and are projected to continue to do so at project buildout.

- An analysis of intersection capacity and operations reveals that the study intersections currently operate adequately. The intersections are projected to continue to operate adequately for the projected background and project buildout.

- A review of the project access plan reveals the following:
  - The proposed access plan adequately serves the site.
  - The proposed full access driveway on Deltona Boulevard is a "Major Driveway Entrance"
  - Roadway improvements are necessary to accommodate the proposed full access on Deltona Avenue. The improvements include the addition of:
    - Northbound right-turn deceleration lane
    - Two-Way-Left-Turn lane on the road adjacent to the driveway

- An evaluation of the warrants for signal control at the intersection of Deltona Avenue and Welcome Center Drive indicate that a signal is not likely to be warranted at the intersection per the MUTCD.

- If conditions change or if significant safety considerations arise, the intersection of Welcome Center Drive and Deltona Boulevard may continue to be monitored and evaluated for future signalization.

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic & Mobility Consultants, LLC, a corporation authorized to operate as an engineering business, CA-30024, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: RaceTrac # 863 – DeBary Ave

LOCATION: City of Deltona, Florida

CLIENT: RaceTrac Petroleum

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

NAME: Mohammed Abdallah

P.E. No.: Florida P.E. No. 56169

DATE: December 29, 2015

SIGNATURE: _____

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Appendix C Historical Volumes & Seasonal Factors
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1.0 INTRODUCTION

This traffic analysis was conducted to assess the traffic operations of the proposed RaceTrac gas station located in the northeast quadrant of the intersection of DeBary Boulevard and Deltona Avenue Boulevard in the City of Deltona. The proposed project is a 5,928 square foot convenience store with 20 vehicle fueling positions. **Figure 1** depicts the site location and the surrounding transportation network. The proposed site plan is included in **Appendix A.**

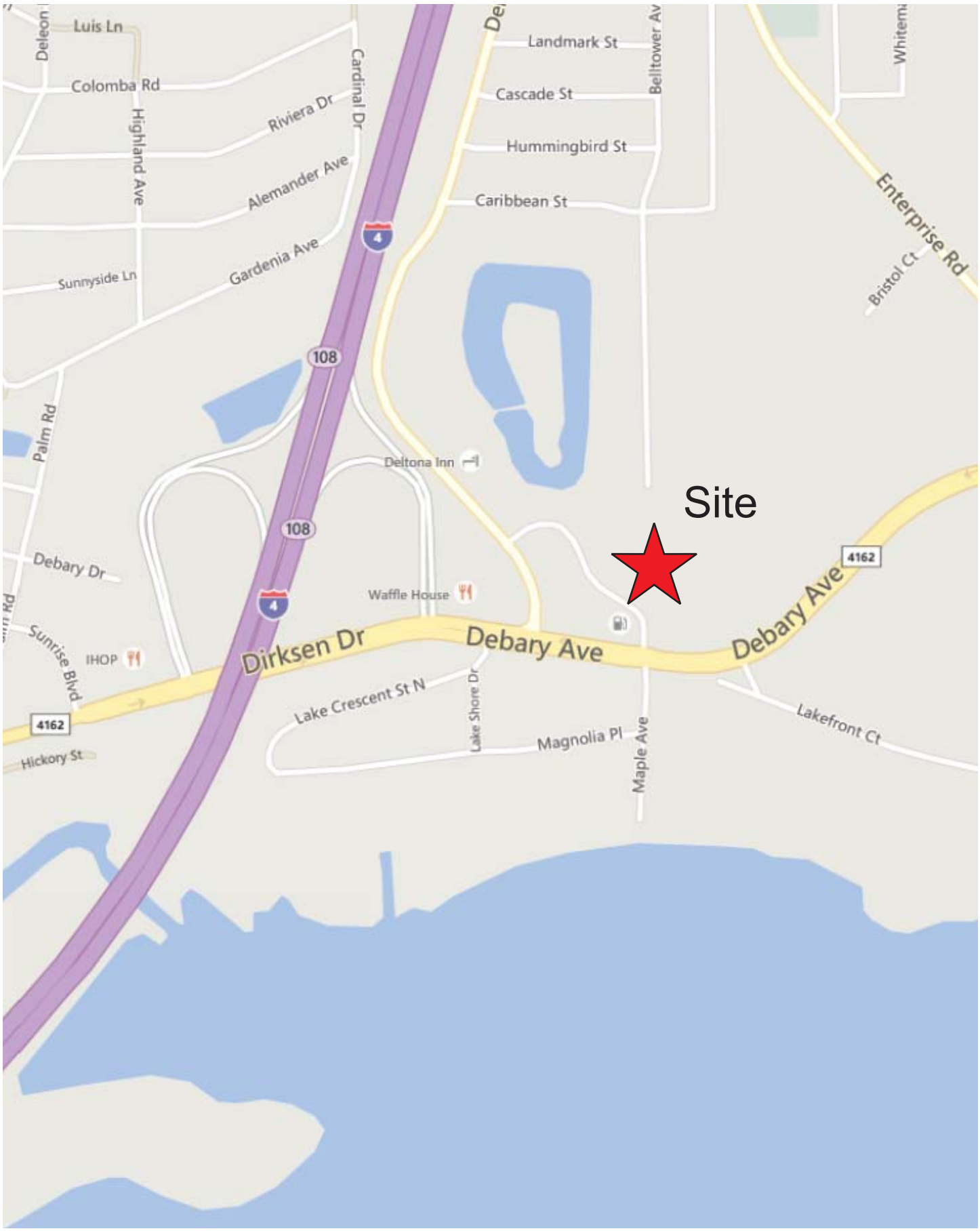
The analysis was conducted in accordance with City of Deltona requirements. The roadway segments considered in the analysis are listed in **Table 1**.

Table 1
Roadway Segments Analyzed

Roadway	Segment
DeBary Avenue	I-4 to Deltona Blvd
	Deltona Blvd to Enterprise Rd
Deltona Boulevard	DeBary Ave to Enterprise Rd

Additionally, the intersections within the project's influence area were analyzed:

1. DeBary Avenue & I-4 NB Ramps
2. DeBary Avenue & Deltona Boulevard
3. DeBary Avenue & Welcome Center Drive
4. Deltona Boulevard & Welcome Center Drive



Site Location Map

RaceTrac #863 DeBary Ave

15-027.1

2.0 PROJECT TRAFFIC

2.1 Trip Generation

Information published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 9th Edition* was used to determine the trip generation of the existing land use and the proposed development as summarized in **Table 2**. The ITE information sheets are included in **Appendix B**.

Table 2
Trip Generation Analysis

Description	LU Code	Quantity	Daily		AM Peak Hour Trips				PM Peak Hour Trips			
			Rate	Trips	Rate	Enter	Exit	Total	Rate	Enter	Exit	Total
Convenience w/Gas	853	5.928 KSF	845.60	5,013	40.92	122	121	243	50.92	151	151	302
Convenience Store Pass-by (66%)				*3,309*	*--*	*81*	*80*	*161*	*--*	*100*	*100*	*200*
Net New Trips				**1,704**	**--**	**41**	**41**	**82**	**--**	**51**	**51**	**102**

Based on this calculation, the proposed development will generate a total of 1,704 net new daily trips, of which 82 new trips will occur in the AM Peak hour and 102 new trips will occur during the PM peak hour.

2.2 Trip Distribution/Assignment

The distribution of primary project trips was developed using engineering judgment and is based on the prevailing traffic flow patterns in the vicinity of the site and on the location of related attractions and productions in the area.

The trip distribution is described as follows:

To/from West on DeBary Ave	45%
To/from East on DeBary Ave	30%
To/from North on Deltona Blvd	25%

Pass-by traffic is drawn from the existing traffic stream on DeBary Avenue and Deltona Boulevard.

3.0 CAPACITY ANALYSIS

A capacity analysis was conducted for the roadway segments and intersections within the project's influence area. The analysis was prepared for existing traffic, projected background traffic, and projected traffic with proposed development.

3.1 Existing and Projected Background Traffic

Existing traffic volume counts were obtained at the study intersections during the AM and PM peak hours. The FDOT seasonal adjustment factor is 1.0 for the time period of the count, therefore, the data did not require seasonal adjustment. The volume at the intersection of Welcome Center Drive and Deltona Boulevard was adjusted to balance the volume with the volume at the adjacent intersection. The existing volumes are illustrated in **Figures 2 and 3**. Existing PM peak hour segment volumes were calculated from the intersection volumes.

A review of historical traffic growth on DeBary Avenue and Deltona Boulevard indicates that traffic volumes have been decreasing consistently over the past few years and through the year 2015. Therefore, to project 2016 background traffic, a conservative 2% annual growth rate was applied to existing traffic volumes. Historical traffic volumes are included in **Appendix C.**

3.2 Roadway Segment Analysis

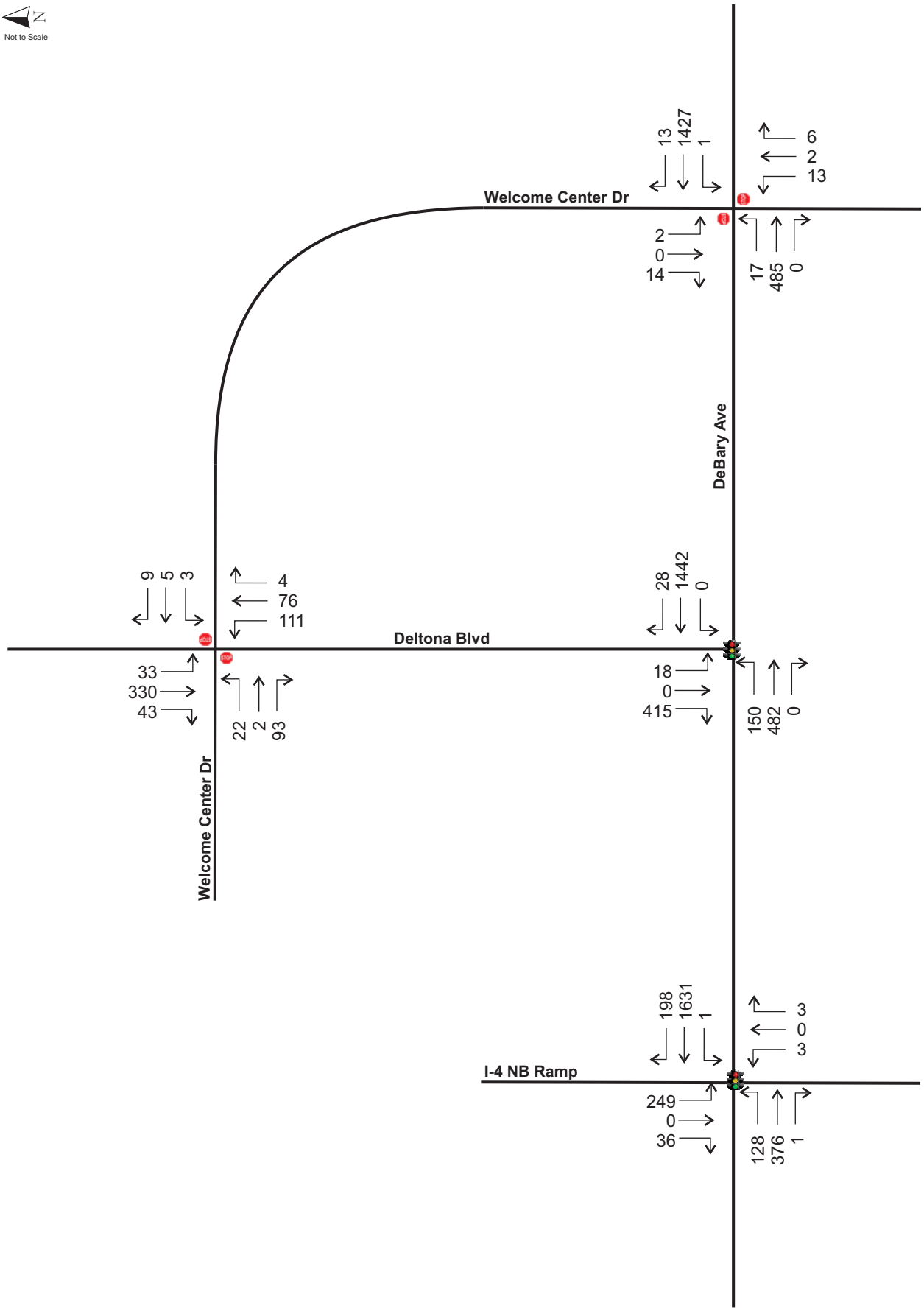
Roadway segment capacity was analyzed by comparing the traffic volumes on the study roadway segments to the service volumes at the adopted Level of Service (LOS) standard. The roadway segment analysis is summarized in **Table 3**.

Table 3
Segment Capacity Analysis

Roadway	Segment	# of Lns	Max Service Volume	Existing		Projected Backg'd		Project Trips		Total Projected	
				Volume	Deficient (Yes/No)?	Peak Hr	Deficient (Yes/No)?	Distrib (%)	Volume	Volume	Deficient (Yes/No)?
DeBary Ave	I-4 to Deltona Blvd	4	2,740	2,431	No	2,480	No	45%	46	2,526	No
	Deltona Blvd to Enterprise Rd	4	2,740	1,813	No	1,849	No	30%	31	1,880	No
Deltona Blvd	DeBary Ave to Enterprise Rd	2	1,330	874	No	891	No	25%	26	917	No

Existing Volumes were obtained from intersection volume counts

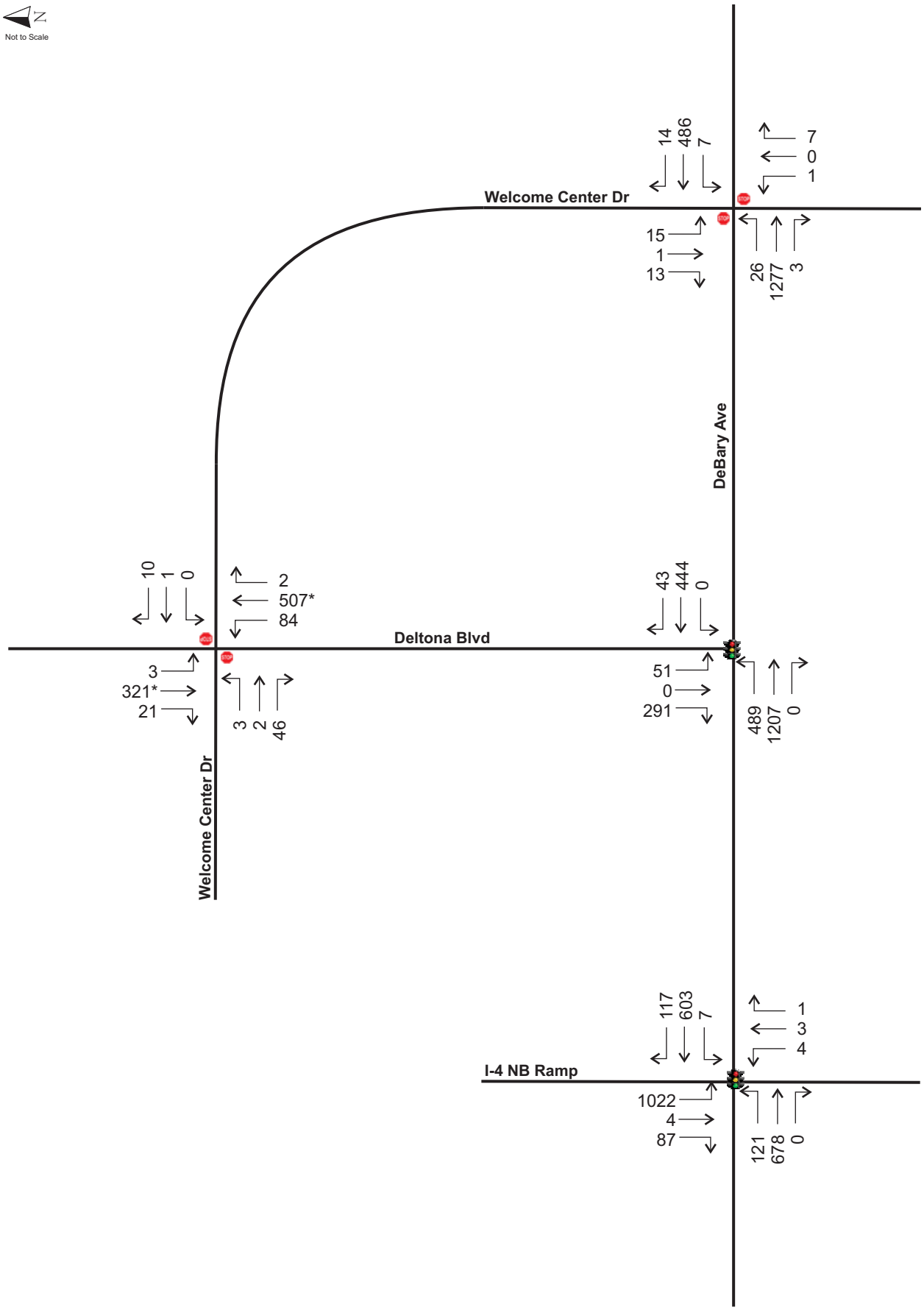
The results of the analysis indicate that all the study roadway segments currently operate within their adopted capacity and are projected to continue to do so at project buildout.



Existing AM Intersection Volumes

RaceTrac #863 DeBary Ave

15-027.1



** Volume was reduced to balance intersections*

3.3 Proposed Access Plan

The proposed access plan includes two full access driveways, one on Welcome Center Drive and one on Deltona Boulevard. The site will not have direct access to the DeBary Avenue.

Welcome Center Drive Access

A driveway is proposed on Welcome Center Drive, which is a local access road located to the east of the site. The full access driveway will provide low volume/secondary access to DeBary Avenue and to Deltona Boulevard via Welcome Center Drive. Other than improvements associated with the driveway construction, no capacity improvements are anticipated or recommended at this driveway.

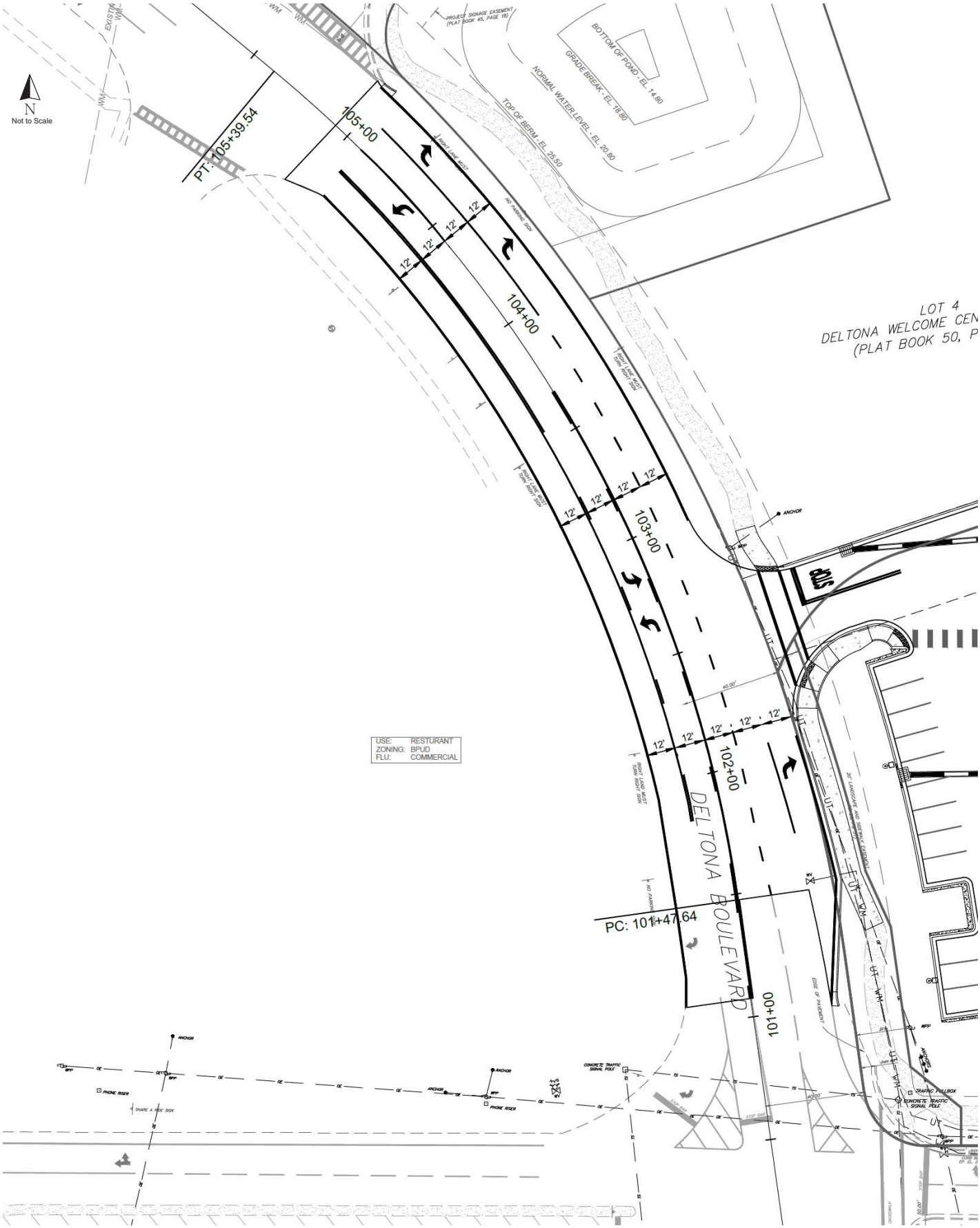
Deltona Boulevard Access

A full access driveway is proposed on Deltona Boulevard. The location of the driveway is approximately 250 feet north of the signal at DeBary Avenue. The driveway will serve as the primary point of ingress and egress to the site. It should be noted that the proposed driveway configuration/geometry will meet the City's requirements for a "Major Driveway Entrance".

Due to the proximity of the driveway to the signalized intersection at DeBary Boulevard, offsite improvements to the roadway adjacent to the site are recommended to minimize the influence of the access point on traffic operations. The recommended offsite improvements are outlined as follows and are depicted in **Figure 4**:

- Construct a northbound right turn deceleration lane at the project driveway. The right turn lane will remove project trips from the through and merge lane existing on Deltona Boulevard and reduce friction in traffic departing the intersection.

- Construct a Two-Way-Left-Turn-Lane (TWLTL) on Deltona Avenue between Welcome Center Drive and DeBary Avenue. The TWLTL will allow for variable queue management at the three intersections on the segment and will remove all left turning traffic from the path of the southbound right turning traffic. The improvement significantly increases the capacity and operational integrity of the southbound right turn movement. Additionally, the turn lane provides a refuge for traffic turning left out of the proposed RaceTrac site, which improves the safety and capacity of the exiting left turn movement.


N
Not to Scale
PT: 105+39.54
105+00
104+00
103+00
102+00
101+00
PC: 101+47.64
12'
DELTONA BOULEVARD
USE: RESTURANT
ZONING: BPUD
FLU: COMMERCIAL
BOTTOM OF POND - EL. 14.80
GRADE BREAK - EL. 18.80
NORMAL WATER LEVEL - EL. 20.80
TOP OF BERM - EL. 25.50
LOT 4
DELTONA WELCOME CEN
(PLAT BOOK 50, P
ANCHOR
PHONE RISER
CONCRETE TRAFFIC SIGNAL POLE
TRAFFIC MULLBOX
STOP BAR
EDGE OF PAVEMENT

3.4 Intersection Analysis

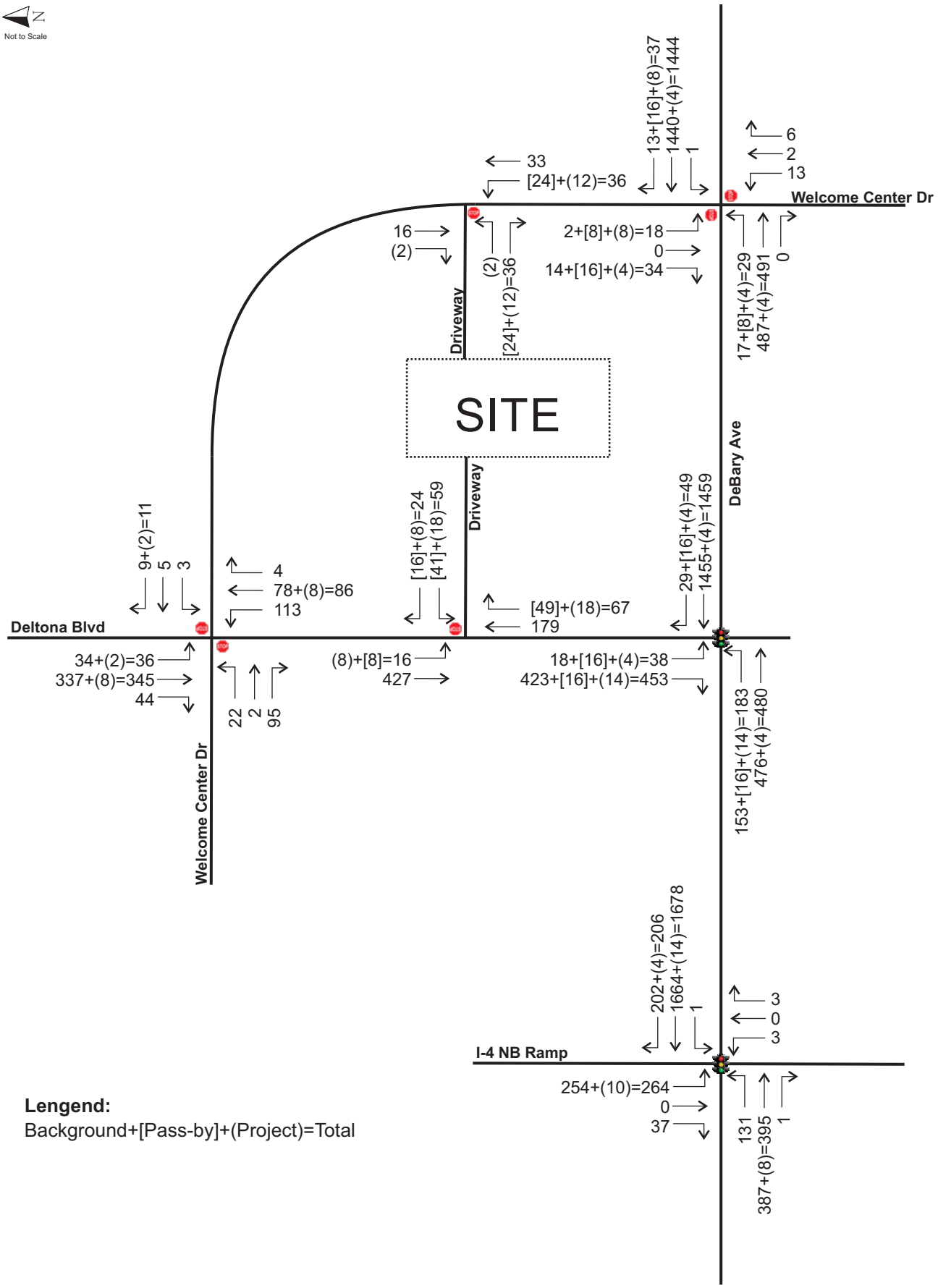
An intersection analysis was conducted using the *Synchro s*oftware and the methods of the *Highway Capacity Manual (HCM) 2010*. The capacity analysis was performed using the existing and projected traffic volumes during the AM and PM peak hour. Existing turning movement counts were obtained at the study intersections and adjusted using an annual growth rate of 2%. **Figures 5 and 6** illustrate the projected AM and PM peak hour volumes, respectively.

A summary of the intersection capacity analysis is provided in **Table 4**. This analysis indicates that all the study intersections and the project's access points operate at satisfactory LOS and are projected to continue to do so at project buildout. It is noted that the southbound approach to the intersection of DeBary Avenue and Deltona Boulevard operates at LOS F due to the delay experienced by the significant right turn volume toward I-4. The intersection counts are included in **Appendix D** and the detailed capacity analysis worksheets are included in **Appendix E**.

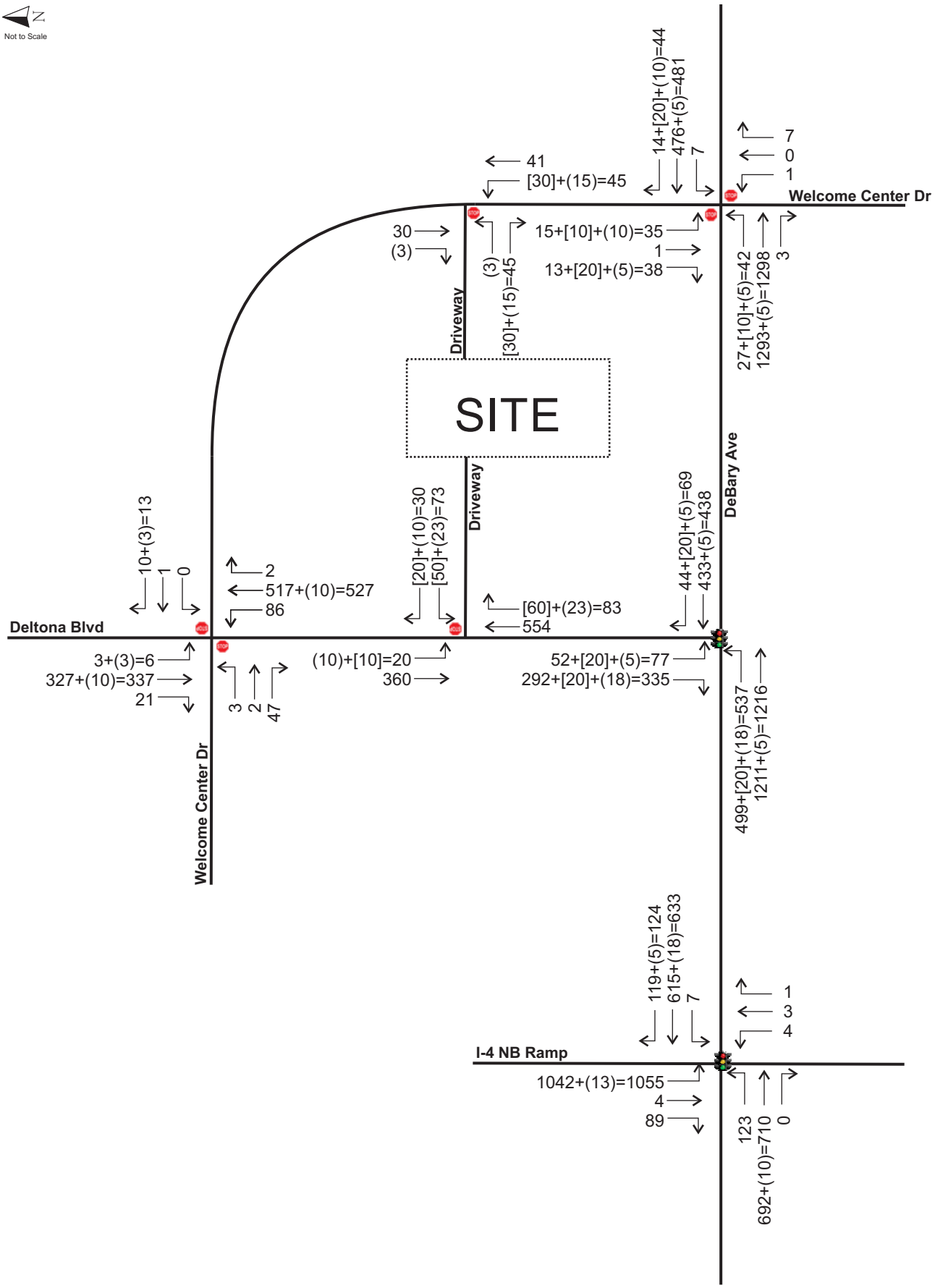
Table 4
Intersection Capacity Analysis

Intersection	Control	Analysis	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
AM Peak Hour												
DeBary Ave & I4 NB Ramps	Signal	Existing	8.6	A	3.4	A	73.0	E	76.8	E	13.1	B
		Projected	8.7	A	3.9	A	73.0	E	79.6	E	13.3	B
DeBary Ave & Deltona Blvd	Signal	Existing	6.6	A	17.7	B	--	--	122.8	F	28.2	C
		Projected	8.9	A	18.3	B	--	--	149.7	F	34.3	C
DeBary Ave & Welcome Ctr	Stop	Existing	13.9	B	8.5	A	20.7	C	19.3	C	--	--
		Projected	14.6	B	8.5	A	22.9	C	30.6	D	--	--
Deltona Blvd & Welcome Ctr	Stop	Existing	12.3	B	12.8	B	8.3	A	7.4	A	--	--
		Projected	12.6	B	12.8	B	8.3	A	7.5	A	--	--
Deltona Blvd & Driveway	Stop	Projected	--	--	12.1	B	--	--	7.6	A	--	--
Welcome Center & Driveway	Stop	Projected	8.6	A	--	--	7.3	A	--	--	--	--
PM Peak Hour												
DeBary Ave & I4 NB Ramps	Signal	Existing	28.9	C	54.9	D	49.3	D	43.6	D	41.7	D
		Projected	29.8	C	57.0	E	49.6	D	47.1	D	44.0	D
DeBary Ave & Deltona Blvd	Signal	Existing	1.8	A	41.1	D	--	--	19.8	B	17.5	B
		Projected	9.6	A	44.3	D	--	--	23.2	C	18.1	B
DeBary Ave & Welcome Ctr	Stop	Existing	8.6	A	12.4	B	17.3	C	16.7	C	--	--
		Projected	8.9	A	12.3	B	18.0	C	31.9	D	--	--
Deltona Blvd & Welcome Ctr	Stop	Existing	11.6	B	12.5	B	8.1	A	8.4	A	--	--
		Projected	11.8	B	12.6	B	8.2	A	8.5	A	--	--
Deltona Blvd & Driveway	Stop	Projected	--	--	15.1	C	--	--	8.7	A	--	--
Welcome Center & Driveway	Stop	Projected	8.7	A	--	--	7.4	A	--	--	--	--

Average delay is expressed in Seconds/Vehicle



Lengend:
Background+[Pass-by]+(Project)=Total


Not to Scale
Welcome Center Dr
DeBary Ave
Driveway
Driveway
SITE
Deltona Blvd
Welcome Center Dr
I-4 NB Ramp
41
[30]+(15)=45
14+[20]+(10)=44
476+(5)=481
7
7
0
1
30
(3)
(3)
[30]+(15)=45
15+[10]+(10)=35
1
13+[20]+(5)=38
27+[10]+(5)=42
1293+(5)=1298
3
10+(3)=13
1
0
2
517+(10)=527
86
[20]+(10)=30
[50]+(23)=73
[60]+(23)=83
554
44+[20]+(5)=69
433+(5)=438
3+(3)=6
327+(10)=337
21
3
2
47
(10)+[10]=20
360
52+[20]+(5)=77
292+[20]+(18)=335
499+[20]+(18)=537
1211+(5)=1216
119+(5)=124
615+(18)=633
7
1
3
4
1042+(13)=1055
4
89
123
692+(10)=710
0

4.0 SIGNAL WARRANT EVALUATION

The intersection of Welcome Center Drive and Deltona Avenue provides access to multiple properties along Deltona Avenue. The Deltona Avenue approaches are fully improved with left turn and right turn deceleration lanes, with a single through lane in each direction. The minor approaches provide dedicated left/through lanes and right turn lanes at the intersection.

A signal warrant evaluation was performed for the intersection based on the observed and projected peak hour volumes. This review is intended to assess the likelihood that signal control would be warranted at this relatively low volume intersection in accordance with the requirements of the Manual on Uniform Traffic Control Devices (MUTCD).

Applicable volume warrants that would be assessed in full signal warrant analysis are described as follows:

4.1 Warrant 1 – 8-hour Volume Warrant (Conditions A & B)

Warrant 1, Condition A – "intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal." This warrant is not likely to be satisfied at this intersection since the minor street volumes are relatively low during day. For the 35 mph roadway, the required number of intersecting vehicles is:

Condition	Total Major Approaches	Highest Minor Approach
A	500 vph	200 vph

This minimum requirement would have to be met for 8 hours out of the typical day. At the subject intersection the highest intersecting volume is projected to be 628 vph on Deltona Avenue (major approaches) and 119 vph at the McDonald's driveway (minor approach).

Since the peak hour volume does not meet the minimum required traffic volume threshold for Warrant 1, Condition A, it is likely that there are no hours during the day that would satisfy the minimum thresholds. Therefore, Warrant 1 - Condition A is **<u>not met</u>** at this intersection.

Warrant 1, Condition B – "intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street." This warrant is not likely to be satisfied at this intersection since the minor street volumes are relatively low during day. For the 35 mph roadway, the required number of intersecting vehicles is:

Condition	Total Major Approaches	Highest Minor Approach
B	900 vph	100 vph

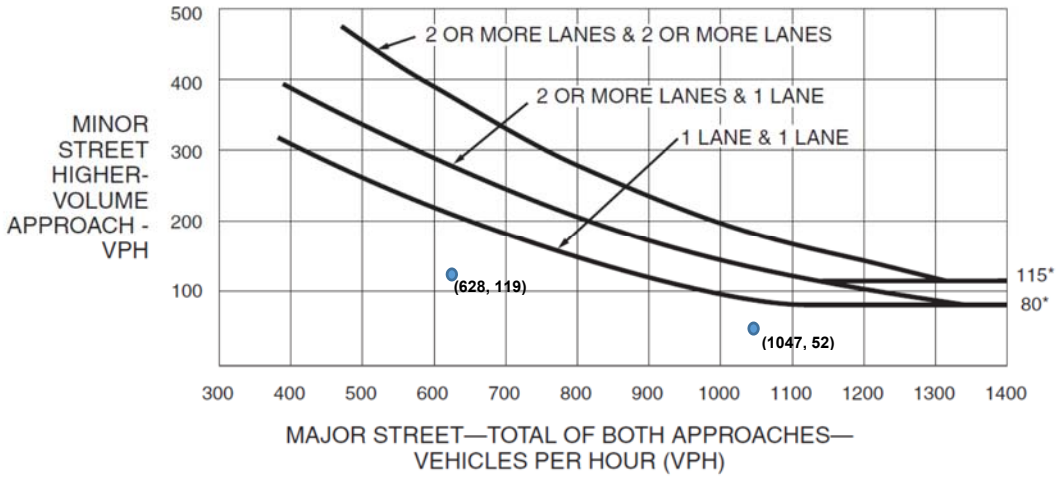
This minimum requirement would have to be met for 8 hours out of the typical day. As stated above, the peak hour volumes are projected to be 628 vph on Deltona Avenue and 119 vph at the McDonald's driveway.

Since the peak hour volume does not meet the minimum required traffic volume threshold for Warrant 1, Condition B, it is likely that there are no hours during the day that would satisfy the minimum thresholds. Therefore, Warrant 1 - Condition B is **not met** at this intersection.

4.2 Warrant 2 – 4- hour Volume Warrant

Warrant 2 – "intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal." The warrant is met if for four hours during the typical day, the intersecting traffic volumes exceed the threshold graph illustrated below and obtained from ***MUTCD Figure 4C-1***. The projected AM and PM peak hours were graphed on the chart for illustration of the highest two hours of the day as compared to the warrant thresholds, established as the middle curve "2 or more lanes & 1 lane". It is clear from this illustration that the projected volumes at the intersection will not exceed the required thresholds, therefore, Warrant 2 is **not met**.

Warrant 2 - Thresholds Chart



4.3 Warrant 3 – Peak Hour Volume Warrant

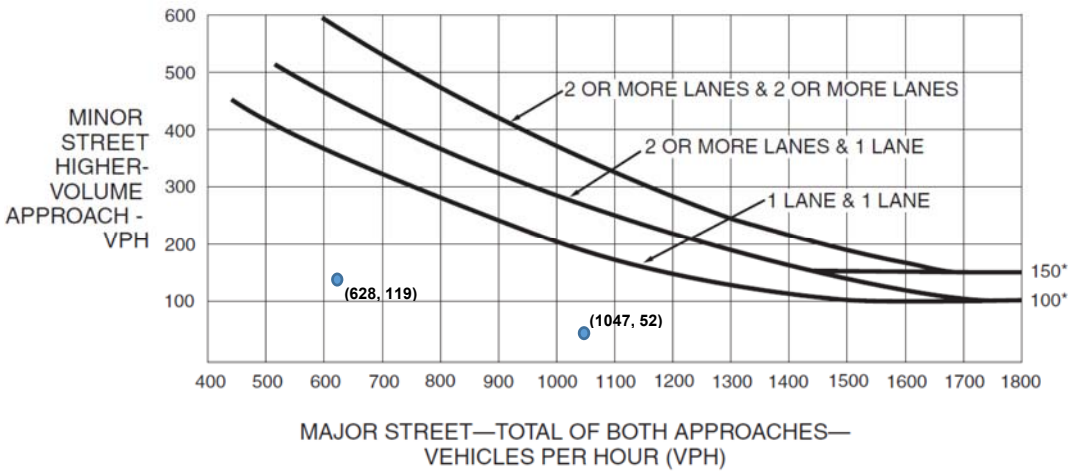
Warrant 3 – "intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street." In order to be met, this warrant requires that the location is a high peaking facility that "attract or discharge large numbers of vehicles over a short period of time". Although this intersection does not qualify as an "unusual case", the volumes were checked to understand if the traffic volumes would meet the warrant thresholds.

The warrant is met if the following three conditions are met for the peak hour:

- The intersection serves 800 vehicles per hour or more
- The minor approach experiences more than 5 vehicle-hours of delay
- The intersecting volumes exceed the threshold

The projected highest hour is graphed as compared to the warrant thresholds from ***MUTCD Figure 4C-3***, established as the middle curve "2 or more lanes & 1 lane". It is evident that the intersection does not meet all of these conditions during the peak hour. Therefore, Warrant 3 is **<u>not met</u>**.

Warrant 3 - Threshold Chart



4.4 Summary of Warrant Evaluation

The signal warrant evaluation based on the warrant thresholds of the MUTCD yields the following results:

Warrant 1 – Not Met

Warrant 2 – Not Met

Warrant 3 – Not Met

Based on this assessment it is not likely that signal control will be warranted at the intersection of Deltona Avenue and Welcome Center Drive under the projected traffic volumes. Further growth and additional increases in traffic volumes or if a significant safety issue materialize at the intersection, a signal may become warranted and necessary.

Therefore, it is recommended that the intersection remain under two-way stop control and continue to be monitored for signal warrants as conditions change in the future.

5.0 STUDY CONCLUSIONS

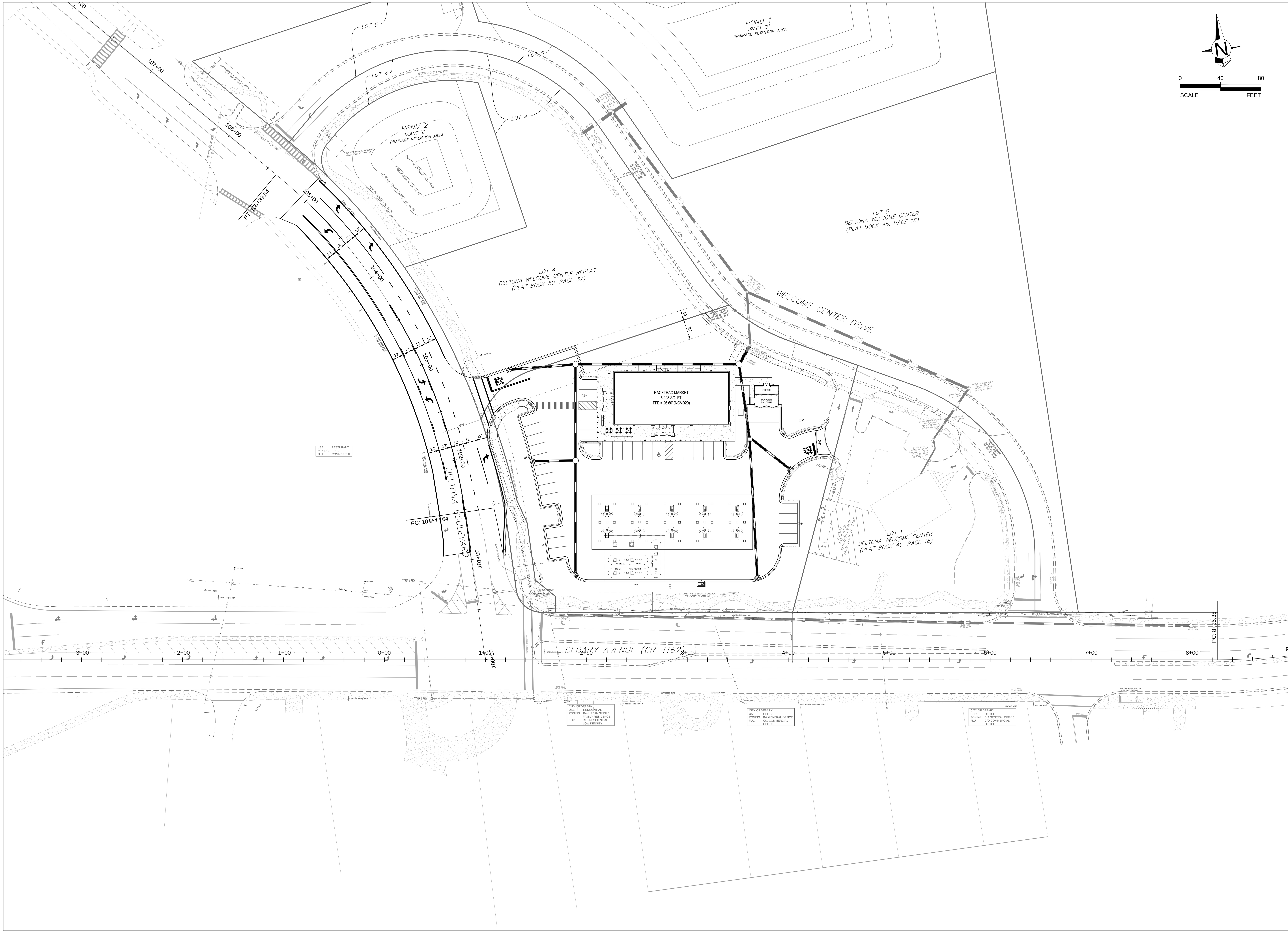
This traffic analysis was conducted to assess the traffic operations of the proposed RaceTrac convenience market with gas located in the northeast quadrant of the intersection of DeBary Avenue and Deltona Boulevard in the City of Deltona, Florida. The proposed project is a 5,928 square foot convenience store with 20 vehicle fueling positions. The analysis included a determination of project trip generation, a review of existing and projected roadway and intersection capacity, and a review of the proposed site access plan.

The results of the traffic analysis are summarized as follows:

- The proposed development will generate a total of 1,704 net new daily trips, of which 82 new trips will occur in the AM peak hour and 102 new trips will occur in the PM peak hour.
- A review of roadway capacity indicates that currently all roadway segments operate within their capacities and are projected to continue to do so at project buildout.
- An analysis of intersection capacity and operations reveals that the study intersections currently operate adequately. The intersections are projected to continue to operate adequately for the projected background and project buildout.
- A review of the project access plan reveals the following:
  - The proposed access plan adequately serves the site.
  - The proposed full access driveway on Deltona Boulevard is a “Major Driveway Entrance”
  - Roadway improvements are necessary to accommodate the proposed full access on Deltona Avenue. The improvements include the addition of:
    - Northbound right-turn deceleration lane
    - Two-Way-Left-Turn lane on the road adjacent to the driveway
- An evaluation of the warrants for signal control at the intersection of Deltona Avenue and Welcome Center Drive indicate that a signal is not likely to be warranted at the intersection per the MUTCD.
- If conditions change or if significant safety considerations arise, the intersection of Welcome Center Drive and Deltona Boulevard may continue to be monitored and evaluated for future signalization.

APPENDICES

Appendix A
Proposed Site Plan



NO.	REVISIONS	BY	DATE

TEDS
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
Phone: 386.753.0558 80 Spring Vista Drive
Fax: 386.753.0778 DeBary, FL 32713
CERTIFICATE OF AUTHORIZATION NO. 27392

811
Know what's below.
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RaceTrac
RACETRAC PETROLEUM, INC.
3225 CUMBERLAND BOULEVARD
SUITE 100 ATLANTA, GA 30339
(770) 431-7600

POTENTIAL ROADWAY IMPROVEMENTS
RACETRAC MARKET

SITE RACETRAC #836

SCALE	AS NOTED	DATE	8/10/2015
DRAWN	TAS	JOB NO.	10730

SHEET NO. 1
REV.

Drawing name: Z:\2014 Projects\10730 (RaceTrac #836_Debary Ave)\CAD\EXHIBIT\ROADWAY IMPROVEMENTS - FOR TRAFFIC STUDY Nov 19, 2015 1:44pm by: Andy

Appendix B

ITE Information Sheets

Convenience Market with Gasoline Pumps
(853)

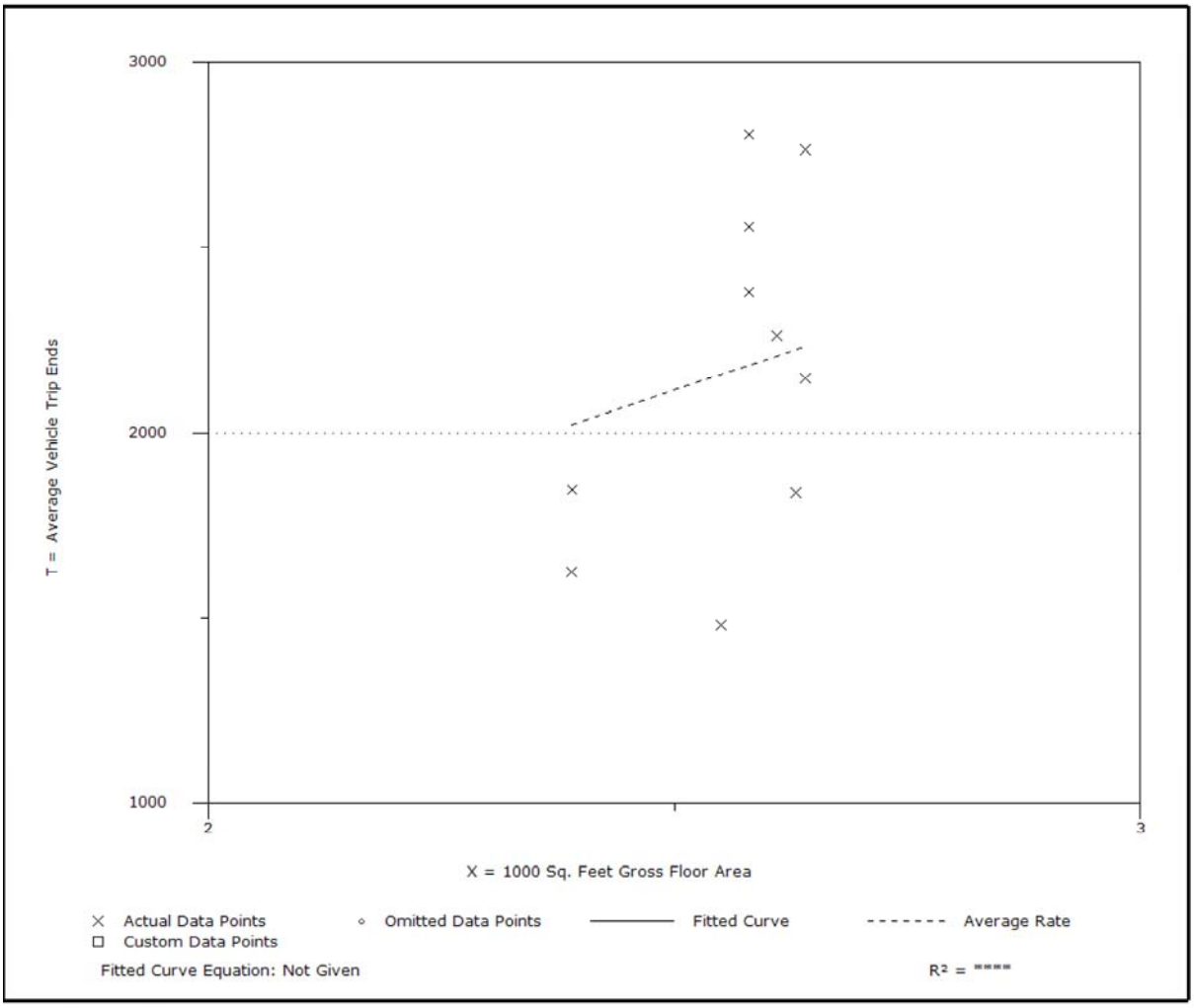
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday**

Number of Studies: 10
Average 1000 Sq. Feet GFA: 3
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
845.60	578.52 - 1,084.72	163.67

Data Plot and Equation



Trip Generation, 9th Edition

Convenience Market with Gasoline Pumps
(853)

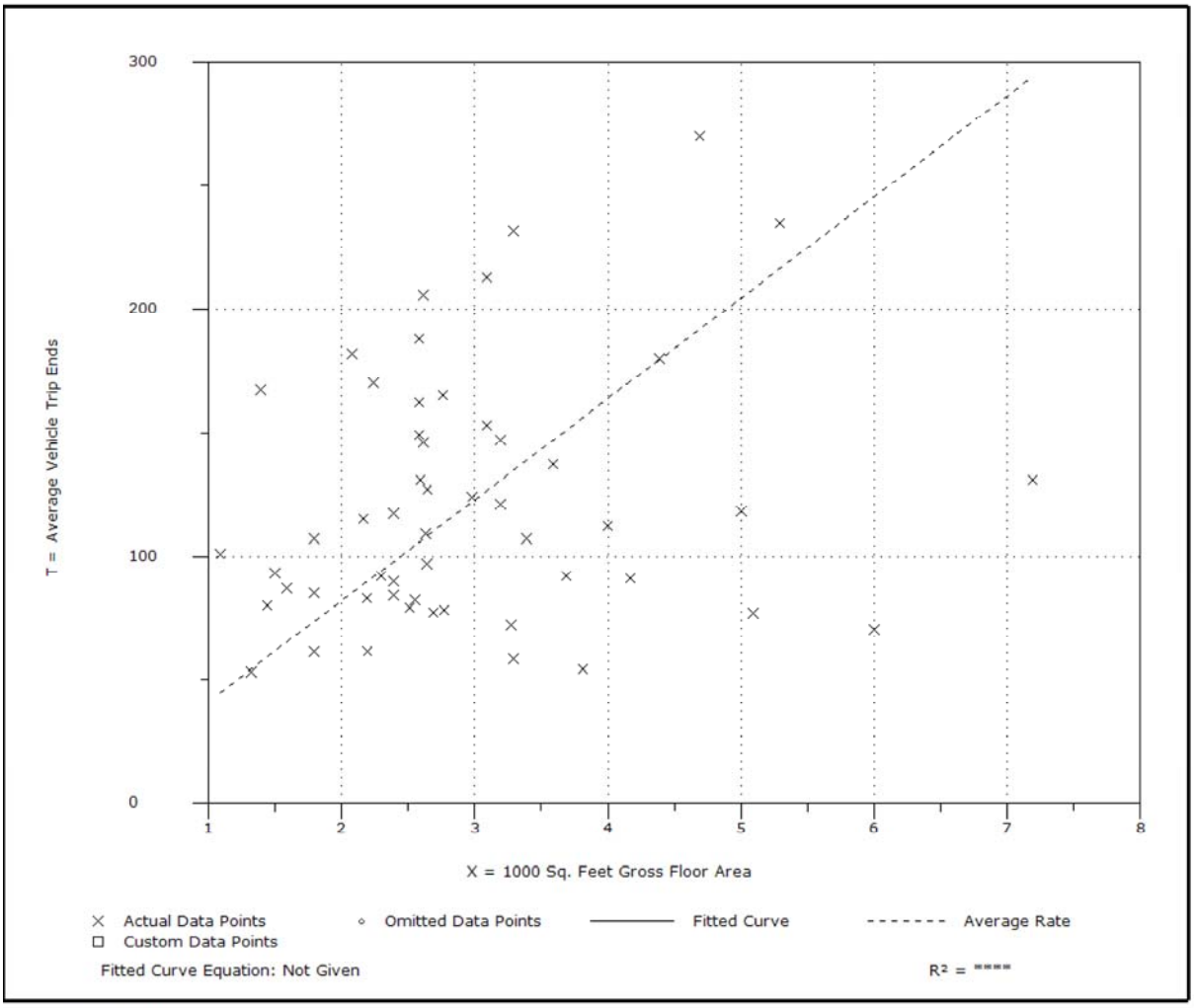
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday**
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Number of Studies: 53
Average 1000 Sq. Feet GFA: 3
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
40.92	11.67 - 119.29	20.75

Data Plot and Equation



Trip Generation, 9th Edition

Convenience Market with Gasoline Pumps
(853)

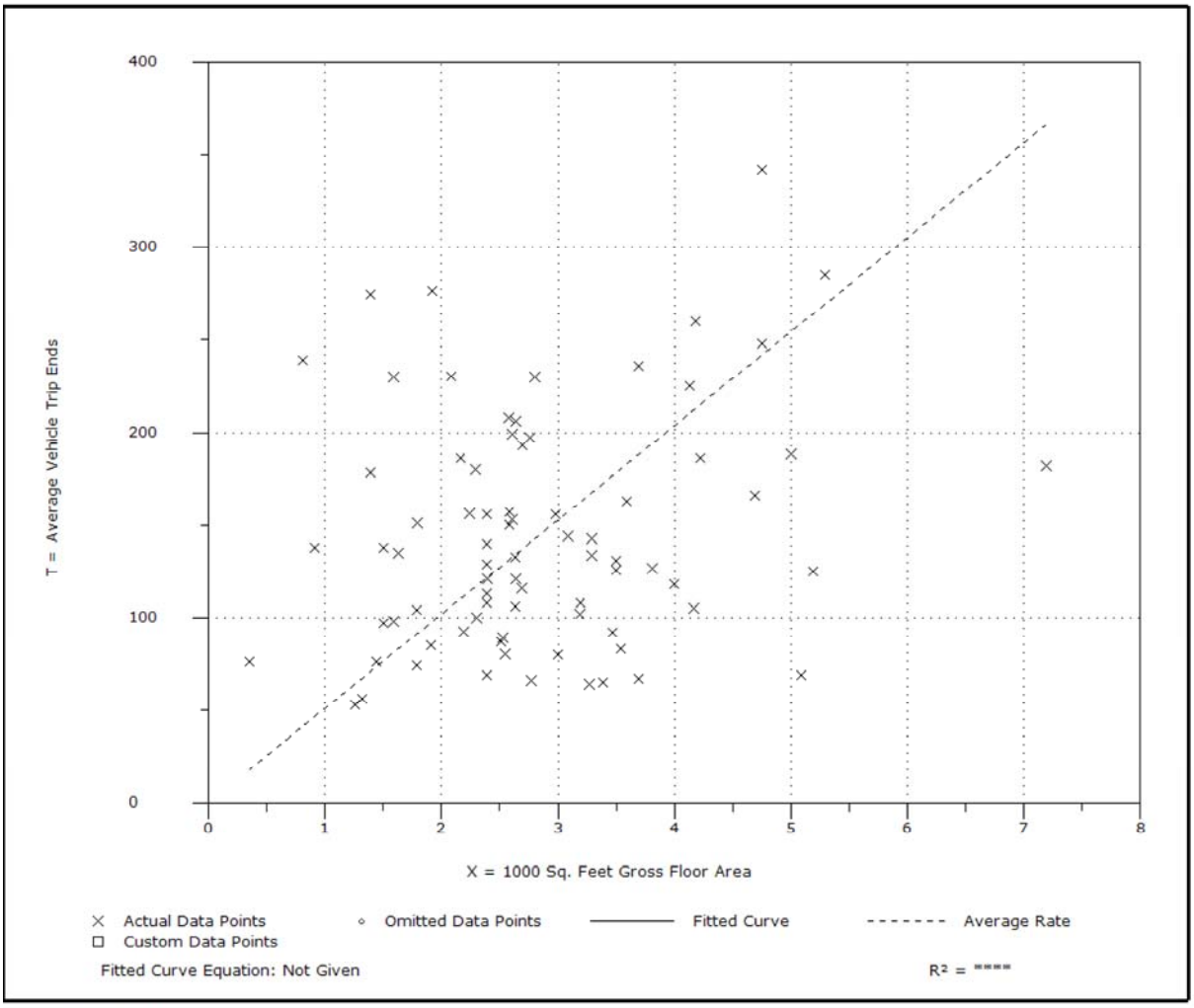
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday**
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Number of Studies: 78
Average 1000 Sq. Feet GFA: 3
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
50.92	13.53 - 292.89	32.15

Data Plot and Equation



Trip Generation, 9th Edition

Appendix C

Historical Volumes & Seasonal Factors

Volusia County 2013 Average Annual Daily Traffic & Historical Counts

Road Name	Limits (From - To)	Count Station Number	2013 SIS Facility	Cycle 10-2 2013 Evacuation Route	Roadway Maintaining Agency	2013 Roadway on County's Thoroughfare	Distance (in miles)	2013 No. of Lanes	Posted Speed	Direction	2013 Facility Type	2000 Federal Functional Classification	2004 AADT	2005 AADT	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	2013 Vol. Co. Allowable LOS	DAILY 2013 LOS Capacity	DAILY 2013 V/C Ratio	DAILY 2013 LOS	PEAK 2Way 2013 LOS Capacity
Big Tree Rd.	Magnolia Ave. to Kenilworth Ave.	195			County	Yes	0.45	2	35	E+W	UA_NSSRC2_2W_2L_D_WL	Urban Collector	9,850	13,710	12,120	13,530	11,640	11,180	11,310	10,850	10,160	9,290	E	14,740	0.63	D	1,330
Big Tree Rd.	Kenilworth Ave. to US 1	196			County	Yes	0.55	2	35	E+W	UA_NSSRC2_2W_2L_D_WL	Urban Collector	10,020	9,190	8,400	9,450	9,260	8,190	7,010	7,270	6,790	6,570	E	14,740	0.45	C	1,330
Bill France Blvd.	Clyde Morris Blvd. to Mason Ave.	202			City	No	0.38	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Collector	5,550	7,330	6,830	7,850	7,050	5,750	5,850	5,230	4,970	5,140	E	37,970	0.14	C	3,410
Bill France Blvd.	Mason Ave. to Dunn Ave.	201			City	No	0.63	4	40	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Collector	9,600	11,150	10,580	11,820	11,290	8,930	8,930	7,960	7,790	7,950	E	37,970	0.21	C	3,410
Bill France Blvd.	Dunn Ave. to US 92	200			City	No	0.60	4	35	N+S	UA_NSSRC2_2W_4L_D_WL	Urban Collector	12,450	16,110	13,740	15,020	13,920	10,260	11,410	10,250	10,750	11,270	E	28,900	0.39	C	2,600
Blackburn Rd.	CR 3 to Emporia Rd	211			County	No	1.25	2	35	N+S	RUA_UFH_2W_2L_U_0L	Rural Minor Collector	590	680	680	750	660	730	560	550	550	550	C	6,300	0.09	B	590
Blackwelder Rd.	Lake Winona Rd. to SR 11	221			County	No	3.25	2	35	E+W	RUA_UFH_2W_2L_U_0L	Rural Local	210	270	400	420	200	240	190	180	180	170	C	6,300	0.03	B	590
Blue Lake Ave.	Plymouth Ave. to Minnesota Ave.	237			County	Yes	1.00	2	40	N+S	UA_NSSRC1_2W_2L_U_0L	Urban Collector	4,270	4,900	3,960	7,690	5,460	5,090	5,100	5,780	5,380	5,200	E	13,640	0.38	C	1,230
Blue Lake Ave.	Minnesota Ave. to SR 44	236			County	Yes	0.55	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	2,760	3,430	3,650	5,320	4,230	3,920	3,760	4,330	4,190	4,060	E	13,640	0.30	C	1,020
Blue Lake Ave.	SR 44 to Voorhis Ave.	235			County	Yes	0.25	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	2,660	3,290	2,900	3,760	3,000	3,260	3,200	3,480	3,520	3,370	E	13,640	0.25	C	1,020
Blue Lake Ave.	Voorhis Ave. to Beresford Ave.	234			County	Yes	0.75	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	3,600	4,160	3,710	4,690	4,140	3,950	3,940	4,180	4,310	4,010	E	13,640	0.29	C	1,020
Blue Lake Ave.	Beresford Ave.. to Taylor Rd.	232			County	Yes	1.05	2	45	N+S	UA_NSSRC1_2W_2L_U_WL	Urban Collector	4,000	4,860	4,840	6,260	5,280	4,970	4,890	5,200	5,730	5,440	E	13,640	0.40	C	1,230
Blue Lake Ave.	Taylor Rd. to Orange Camp Rd.	231			County	Yes	1.05	2	45	N+S	UA_NSSRC1_2W_2L_U_WL	Urban Collector	4,040	4,550	3,440	5,440	4,290	4,190	4,130	4,110	4,250	3,980	E	17,050	0.23	C	1,540
Blue Springs Av (West)	Sparkman Dr to Lawton Dr	239			County	No	0.60	2	35	E+W	UA_NSSRC2_2W_2L_U_0L	Urban Collector	-	-	-	7,260	6,940	7,710	6,120	5,830	5,410	5,080	E	13,640	0.37	C	1,020
Brownlee Rd.	Rauleson Rd. #1 to Rauleson Rd.	240			County	No	1.70	2	35	N+S	RUA_UFH_2W_2L_U_0L	n/c	190	210	210	250	140	100	260	140	180	180	C	6,300	0.03	B	590
Captain Dr.	Lake Helen-Osteen Rd. to Snow Dr	DLT-15.000			City	No	0.50	2	35	E+W	UA_NSSRC2_2W_2L_U_0L	Urban Local	4,370	4,630	4,700	6,113	4,912		-	-	-	-	E	13,640	-	-	1,020
Captain Dr.	Snow Dr to Courtland Blvd.	DLT-15.010			City	No	1.00	2	35	E+W	UA_NSSRC2_2W_2L_U_0L	Urban Local	2,620	2,190	2,240	3,562	3,340		-	-	-	-	E	13,640	-	-	1,020
Cardinal Blvd.	SR 421/Dunlawton Ave. to Marcelle Ave	260			County	No	0.15	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	4,770	2,590	2,780	3,370	4,530	4,630	4,830	5,090	5,160	4,740	E	13,640	0.35	C	1,020
Cardinal Blvd.	Marcelle Ave to Major St.	261			County	No	2.00	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	1,530	-	430	1,120	1,100	940	940	790	870	730	E	13,640	0.05	C	1,020
Carter Rd.	SR 11 to Marsh Rd.	270			County	No	1.75	2	40	E+W	UA_NSSRC1_2W_2L_U_0L	n/c	1,440	1,590	1,540	1,340	1,400	1,470	1,540	1,400	1,460	1,420	E	13,640	0.10	C	1,230
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280			County	Yes	1.80	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	2,340	2,490	2,410	2,380	1,670	2,170	2,100	1,970	2,190	2,010	E	13,640	0.15	C	1,020
Catalina Blvd.	Howland Blvd. to Sixma Rd.	DLT-20.020			City	No	0.50	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Local	9,560	11,560	12,750	15,799	12,089		-	-	-	11,700	E	13,640	0.86	E	1,020
Catalina Blvd.	Sixma Rd. to Lake Helen-Osteen Rd.	DLT-20.030			City	No	0.40	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Local	8,440	9,700	10,120	9,401	10,733		-	-	-	9,780	E	13,640	0.72	D	1,020
Clara Ave.	Beresford Ave. to New Hampshire Ave.	303			County	No	0.50	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	2,870	2,690	2,490	2,840	2,390	1,350	1,910	2,070	2,040	2,270	E	13,640	0.17	C	1,020
Clara Ave.	New Hampshire Ave. to SR 15A	301			County	No	0.50	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	1,630	1,710	1,570	1,800	1,780	1,410	1,540	1,640	1,640	1,850	E	13,640	0.14	C	1,020
Clifton Rd.	Lake Winona Rd. to SR 11	311			County	No	1.70	2	30	E+W	RUA_UFH_2W_2L_U_0L	Rural Local	150	140	180	250	180	200	180	190	160	170	C	6,300	0.03	B	590
Clyde Morris Blvd.	SR 40 to Hand Ave	348			County	Yes	0.80	4	35	N+S	UA_NSSRC2_2W_4L_D_WL	Urban Principal Arterial - Other	15,160	16,050	16,380	18,450	12,060	12,220	13,030	12,340	11,940	11,230	E	30,420	0.37	C	2,740
Clyde Morris Blvd.	Hand Ave. to LPGA Blvd.	343			County	Yes	1.50	4	50	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	13,960	15,090	15,640	17,500	11,790	11,970	13,000	14,070	13,560	12,280	E	37,970	0.32	C	3,410
Clyde Morris Blvd.	LPGA Blvd. to Bill France Blvd.	341			County	Yes	1.25	4	50	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	18,110	15,430	15,920	17,890	12,700	12,660	13,690	13,450	12,880	12,290	E	37,970	0.32	C	3,410
Clyde Morris Blvd.	Bill France Blvd. to Mason Ave.	338			County	Yes	0.60	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	13,330	14,470	14,390	16,700	12,420	12,610	13,630	13,140	12,310	11,990	E	37,970	0.32	C	3,410
Clyde Morris Blvd./SR 483	SR 430/Mason Ave. to US 92	5182			FDOT	Yes	1.20	4	45	N+S	UA_SSAC1_2W_4L_U_WL	Urban Principal Arterial - Other	21,500	22,000	20,500	20,500	18,400	17,700	18,300	20,000	18,100	18,900	D	37,800	0.50	C	3,400
Clyde Morris Blvd./SR 483	US 92 to Beville Rd.	5193			FDOT	Yes	2.00	4	45	N+S	UA_SSAC1_2W_4L_U_WL	Urban Principal Arterial - Other	34,000	34,000	34,000	32,000	31,500	26,500	31,000	30,500	27,000	26,000	D	37,800	0.69	C	3,400
Clyde Morris Blvd.	Beville Rd. to Big Tree Rd.	337			County	Yes	0.90	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	26,000	25,670	25,470	28,340	24,640	23,350	23,290	24,600	22,880	21,790	E	37,970	0.57	C	3,410
Clyde Morris Blvd.	Big Tree Rd. to Madeline Ave.	335			County	Yes	1.00	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	23,870	25,290	25,040	27,880	22,640	21,970	23,010	24,200	22,260	20,800	E	37,970	0.55	C	3,410
Clyde Morris Blvd.	Madeline Ave. to Willow Run Blvd.	333			County	Yes	1.30	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	24,820	24,800	24,690	27,290	25,290	21,200	22,130	22,750	21,460	20,000	E	37,970	0.53	C	3,410
Clyde Morris Blvd.	Willow Run Blvd. to SR 421/Dunlawton A	332			County	Yes	0.65	4	45	N+S	UA_NSSRC1_2W_4L_D_WL	Urban Principal Arterial - Other	23,150	22,890	22,760	24,710	19,550	19,810	19,890	21,310	19,060	18,420	E	37,970	0.49	C	3,410
Clyde Morris Blvd.	SR 421/Dunlawton Ave to Taylor Rd	330			County	Yes	0.95	2	40	N+S	UA_NSSRC1_2W_2L_U_WL	Urban Minor Arterial	11,980	11,440	11,390	12,670	8,730	10,300	10,530	10,060	9,900	9,190	E	17,050	0.54	C	1,540
Commonwealth Blvd.	Spruce Creek Rd. to Orange Ave.	360			County	No	0.55	2	30	E+W	UA_NSSRC2_2W_2L_U_0L	Urban Local	4,810	6,010	5,900	6,410	6,620	5,210	5,380	5,250	5,450	5,220	E	13,640	0.38	C	1,020
Commonwealth Blvd.	Orange Ave. to US 1	361			County	No	0.35	2	30	E+W	UA_NSSRC2_2W_2L_U_0L	Urban Local	6,420	4,130	3,730	4,120	3,970	3,460	3,590	3,670	3,540	3,530	E	13,640	0.26	C	1,020
CR 3	US 17 to Washington Ave.	386			County	Yes	2.20	2	35	N+S	RDA_UFH_2W_2L_U_0L	Rural Local	1,120	1,130	1,200	1,320	1,250	1,220	1,200	1,040	1,100	1,060	C	12,300	0.09	B	1,160
CR 3	Washington Ave. to Emporia Rd	384			County	Yes	1.20	2	30	N+S	RDA_UFH_2W_2L_U_0L	Rural Local	2,020	1,990	2,070	2,320	1,740	1,980	1,870	1,650	1,680	1,660	C	12,300	0.13	B	1,160
CR 3	Emporia Rd to SR 40	382			County	Yes	3.40	2	45	N+S	RDA_UFH_2W_2L_U_0L	Rural Local	950	890	980	1,100	760	880	760	700	680	720	C	12,300	0.06	B	1,160
CR 3	SR 40 to Lake Winona Rd.	380			County	Yes	5.04	2	35	N+S	RDA_UFH_2W_2L_U_0L	n/c	940	910	1,050	1,150	770	680	690	670	610	680	C	12,300	0.06	B	1,160
CR 3	Lake Winona Rd. to Ponce DeLeon Blvd	380			County	Yes	0.45	2	45	N+S	TA_NSSRC1_2W_2L_U_0L	n/c	940	910	1,050	1,150	770	680	690	670	610	690	E	13,640	0.05	C	1,120
CR 15A	US 17 to Airport Rd.	440			County	Yes	0.90	2	50	N+S	UA_UFH_2W_2L_U_0L	Urban Minor Arterial	4,280	4,970	4,100	4,320	4,700	4,380	4,300	4,220	4,160	3,980	E	24,975	0.16	B	2,240
CR 15A	Airport Rd. to SR 11	441			County	Yes	1.25	2	40	E+W	UA_UFH_2W_2L_U_0L	Urban Minor Arterial	2,200	2,770	2,420	2,530	2,530	2,230	2,150	2,190	2,060	2,070	E	24,975	0.08	B	2,240
CR 92 (Intrn'l Spdwy Blvd.)	SR 15A to Stone St.	450		Yes	County	Yes	0.25	4	45	E+W	UA_NSSRC1_2W_4L_D_WL	Urban Minor Arterial	11,790	12,600	14,030	14,900	13,810	12,350	12,040	11,970	11,770	12,070	E	37,970	0.32	C	3,410
CR 92 (Intrn'l Spdwy Blvd.)	Stone St. to US 17/92	452		Yes	County	Yes	0.75	4	35	E+W	UA_NSSRC1_2W_4L_D_WL	Urban Minor Arterial	15,050	14,890	16,710	17,690	16,590	15,630	14,870	14,370	14,000	14,510	E	30,420	0.48	D	2,740
CR 305 (Bunnell Rd.)	US 17 to Cowart Rd.	460			County	Yes	1.50	2	50	E+W	RUA_UFH_2W_2L_U_0L	Rural Minor Collector	1,890	2,080	2,050	2,120	2,200	1,660	1,220	1,490	1,420	1,360	C	6,300	0.22	B	590
CR 305 (Bunnell Rd.)	Cowart Rd. to Flagler Co.	461			County	Yes	3.00	2	50	E+W	RUA_UFH_2W_2L_U_0L	Rural Minor Collector	1,240	1,410	1,520	1,530	1,710	1,140	710	990	890	910	C	6,300	0.14	B	590
Courtland Blvd.	Beckwith St. to Captain Dr.	DLT-30.010			City	No	1.00	2	40	N+S	UA_NSSRC1_2W_2L_U_0L	Urban Collector	3,820	3,990	4,040	7,975	3,681		-	-	-	2,010	E	13,640	0.15	C	1,230
Courtland Blvd.	Captain Dr. to Elkcam Blvd	DLT-30.030			City	No	1.50	2	40	N+S	UA_NSSRC1_2W_2L_U_0L	Urban Collector	5,950	5,870	5,870	9,975	5,068		-	-	-	4,570	E	13,640	0.34	C	1,230
Courtland Blvd.	Elkcam Blvd. to end of road (Puerto Rico	DLT-30.040			City	No	0.75	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	1,940	2,120	2,110	4,331	1,899		-	-	-	1,160	E	13,640	0.09	C	1,020
Courtland Blvd.	Tallwood Dr. to Newmark Dr.	DLT-30.050			City	No	0.25	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	1,640	1,720	1,680	1,907	1,870		-	-	-	1,280	E	13,640	0.09	C	1,020
Courtland Blvd.	Newmark Dr. to Howland Blvd	DLT-30.070			City	No	1.00	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	3,150	3,170	3,180	5,973	3,575		-	-	-	2,400	E	13,640	0.18	C	1,020
Courtland Blvd.	Howland Blvd. to India Blvd	DLT-30.090			City	No	1.20	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	5,310	6,370	6,400	12,066	7,764		-	-	-	6,470	E	13,640	0.47	D	1,020
Courtland Blvd.	India Blvd. to Ft Smith Blvd	DLT-30.100			City	No	0.70	2	35	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	6,070	6,280	6,230	6,972	8,397		-	-	-	8,000	E	13,640	0.59	D	1,020
Courtland Blvd.	Ft Smith Blvd. to Doyle Rd	DLT-30.130			City	No	1.80	2	40	N+S	UA_NSSRC1_2W_2L_U_0L	Urban Collector	6,040	6,040	6,040	6,377	6,241		-	-	-	6,080	E	13,640	0.45	C	1,230
Courtland Blvd.	Doyle Rd. to Enterprise-Osteen Rd.	DLT-30.140			City	No	0.90	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	2,110	2,050	2,000	3,106	1,609		-	-	-	1,600	E	13,640	0.12	C	1,020
Cowart Rd.	Bunnell Rd to Little Brown Church Rd.	430			County	No	2.05	2	40	N+S	RUA_UFH_2W_2L_U_0L	Rural Local	240	370	390	440	390	280	310	260	230	220	C	6,300	0.03	B	590
Cow Creek Rd.	SR 442 to Volco Rd.	420			County	Yes	3.50	2	50	N+S	RUA_UFH_2W_2L_U_0L	n/c	820	840	970	1,020	780	750	720	750	740	760	C	6,300	0.12	B	590
Daugharty Rd.	SR 11 to Marsh Rd.	472			County	No	0.95	2	35	N+S	RUA_UFH_2W_2L_U_0L	Rural Local	570	670	600	530	540	540	610	550	550	510	C	6,300	0.08	B	590
Daugharty Rd. (S. End)	Marsh Rd. to SR 11	470			County	Yes	0.80	2	35	N+S	RUA_UFH_2W_2L_U_0L	Rural Local	570	650	620	560	590	520	500	510	510	490	C	6,300	0.08	B	590
Deltona Blvd.	Normandy Blvd. to Cloverleaf Blvd./Ande	DLT-35.000			City	No	1.25	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Collector	14,420	16,130	-	14,802	14,966		-	-	-	11,420	E	30,420	0.38	C	2,740
Deltona Blvd.	Cloverleaf Blvd./Anderson Dr. to Enterpr	DLT-35.030			City	No	0.50	4	35	N+S	UA_NSSRC2_2W_4L_D_WL	Urban Collector	17,620	18,980	-	18,396	15,546		-	-	-	14,270	E	30,420	0.47	D	2,740
Deltona Blvd.	Enterprise Rd. to DeBary Ave	DLT-35.040			City	No	0.85	2	35	N+S	UA_NSSRC2_2W_2L_D_WL	Urban Collector	12,840	13,550	-	15,305	13,780		-	-	-	9,320	E	14,740	0.63	D	1,330
Demotte Ave.	Peninsula Dr. to Atlantic Ave.	500			County	No	0.20	2	25	E+W	UA_NSSRC2_2W_2L_U_0L	n/c	4,420	2,820	2,270	2,450	2,450	3,900	4,250	3,940	4,480	4,050	E	13,640	0.30	C	1,020
Derbyshire Rd.	Flomich St. to LPGA Blvd.	512			County	Yes	0.75	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	7,080	8,420	8,320	9,010	7,870	7,420	7,680	7,930	7,470	7,320	E	13,640	0.54	D	1,020
Derbyshire Rd.	LPGA Blvd. to SR 430/Mason Ave.	511			County	No	1.45	2	30	N+S	UA_NSSRC2_2W_2L_U_0L	Urban Collector	6,710	7,230	6,810	7,400	6,830	6,400	6,160	5,950	5,980	5,870	E	13,640	0.43	D	1,020
Dirksen/DeBary/Doyle	US 17/92 to Sunrise Blvd.	520			County	Yes	1.75	2	45	E+W	UA_NSSRC1_2W_2L_U_0L	Urban Minor Arterial	10,180	7,750	8,110	8,950	7,110	6,330	6,270	6,910	6,230	6,190	E	13,640	0.45	C	1,230
Dirksen/DeBary/Doyle	Sunrise Blvd to WB I-4 Ramps	521			County	No	0.20	2	45	E+W	UA_NSSRC1_2W_2L_U_0L	Urban Minor Arterial	14,630	13,370	13,170	16,300	11,510	10,980	10,720	11,180	10,690	9,980	E	13,640	0.73	C	1,230
Dirksen/DeBary/Doyle	WB I-4 Ramps to EB I-4 Ramps	522			County	Yes	0.20	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Minor Arterial	24,220	21,200	21,670	22,930	18,940	18,470	17,940	18,660	17,850	17,380	E	30,420	0.57	D	2,740
Dirksen/DeBary/Doyle	I-4 to Deltona Blvd.	480			County	Yes	0.10	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Minor Arterial	31,400	29,800	31,030	31,210	27,480	26,450	25,730	26,830	26,260	25,480	E	30,420	0.84	D	2,740
Dirksen/DeBary/Doyle	Deltona Blvd. to Enterprise St.	481			County	Yes	0.65	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Minor Arterial	20,530	20,040	20,900	20,510	17,820	17,680	17,220	17,190	17,630	17,240	D	30,420	0.57	D	2,630
Dirksen/DeBary/Doyle	Enterprise St. to Main St.	482			County	Yes	0.15	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Minor Arterial	20,230	19,650	20,070	19,980	17,150	16,970	22,090	23,180	23,030	22,400	D	30,420	0.74	D	2,630
Dirksen/DeBary/Doyle	Main St. to Providence Blvd.	484			County	Yes	0.80	4	35	E+W	UA_NSSRC2_2W_4L_D_WL	Urban Minor Arterial	22,300	21,940	22,160	21,930	19,300	18,560	19,280	20,230	21,260	20,460	D	30,420	0.67	D	2,630

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7900 VOLUSIA COUNTYWIDE

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2012 - 01/07/2012	1.01	1.07
2	01/08/2012 - 01/14/2012	1.00	1.06
3	01/15/2012 - 01/21/2012	1.00	1.06
4	01/22/2012 - 01/28/2012	0.98	1.04
* 5	01/29/2012 - 02/04/2012	0.97	1.03
* 6	02/05/2012 - 02/11/2012	0.95	1.00
* 7	02/12/2012 - 02/18/2012	0.94	0.99
* 8	02/19/2012 - 02/25/2012	0.93	0.98
* 9	02/26/2012 - 03/03/2012	0.93	0.98
*10	03/04/2012 - 03/10/2012	0.93	0.98
*11	03/11/2012 - 03/17/2012	0.92	0.97
*12	03/18/2012 - 03/24/2012	0.93	0.98
*13	03/25/2012 - 03/31/2012	0.94	0.99
*14	04/01/2012 - 04/07/2012	0.95	1.00
*15	04/08/2012 - 04/14/2012	0.96	1.01
*16	04/15/2012 - 04/21/2012	0.97	1.03
*17	04/22/2012 - 04/28/2012	0.98	1.04
18	04/29/2012 - 05/05/2012	0.99	1.05
19	05/06/2012 - 05/12/2012	1.00	1.06
20	05/13/2012 - 05/19/2012	1.01	1.07
21	05/20/2012 - 05/26/2012	1.02	1.08
22	05/27/2012 - 06/02/2012	1.02	1.08
23	06/03/2012 - 06/09/2012	1.02	1.08
24	06/10/2012 - 06/16/2012	1.03	1.09
25	06/17/2012 - 06/23/2012	1.03	1.09
26	06/24/2012 - 06/30/2012	1.04	1.10
27	07/01/2012 - 07/07/2012	1.04	1.10
28	07/08/2012 - 07/14/2012	1.04	1.10
29	07/15/2012 - 07/21/2012	1.05	1.11
30	07/22/2012 - 07/28/2012	1.05	1.11
31	07/29/2012 - 08/04/2012	1.05	1.11
32	08/05/2012 - 08/11/2012	1.05	1.11
33	08/12/2012 - 08/18/2012	1.05	1.11
34	08/19/2012 - 08/25/2012	1.05	1.11
35	08/26/2012 - 09/01/2012	1.04	1.10
36	09/02/2012 - 09/08/2012	1.04	1.10
37	09/09/2012 - 09/15/2012	1.04	1.10
38	09/16/2012 - 09/22/2012	1.03	1.09
39	09/23/2012 - 09/29/2012	1.02	1.08
40	09/30/2012 - 10/06/2012	1.01	1.07
41	10/07/2012 - 10/13/2012	1.00	1.06
42	10/14/2012 - 10/20/2012	0.99	1.05
43	10/21/2012 - 10/27/2012	1.00	1.06
44	10/28/2012 - 11/03/2012	1.00	1.06
45	11/04/2012 - 11/10/2012	1.00	1.06
46	11/11/2012 - 11/17/2012	1.00	1.06
47	11/18/2012 - 11/24/2012	1.01	1.07
48	11/25/2012 - 12/01/2012	1.01	1.07
49	12/02/2012 - 12/08/2012	1.01	1.07
50	12/09/2012 - 12/15/2012	1.01	1.07
51	12/16/2012 - 12/22/2012	1.01	1.07
52	12/23/2012 - 12/29/2012	1.00	1.06
53	12/30/2012 - 12/31/2012	1.00	1.06

* PEAK SEASON

Site Information	
Feature	**1**
Site	792042
Description	I-4, RAMP FROM DIRKSON DR. TO I-4 EB
Section	79110007
Milepoint	0.1
AADT	**2800**
Site Type	Portable
Class Data	No
K Factor	8.4
D Factor	99.9
T Factor	4.4
TRAFFIC REPORTS (provided in format)	
Volusia County	**Annual Average Daily Traffic**
	Historical AADT Data
	Synopsis 792042-20140716

Print this window. Close this window.

Appendix D

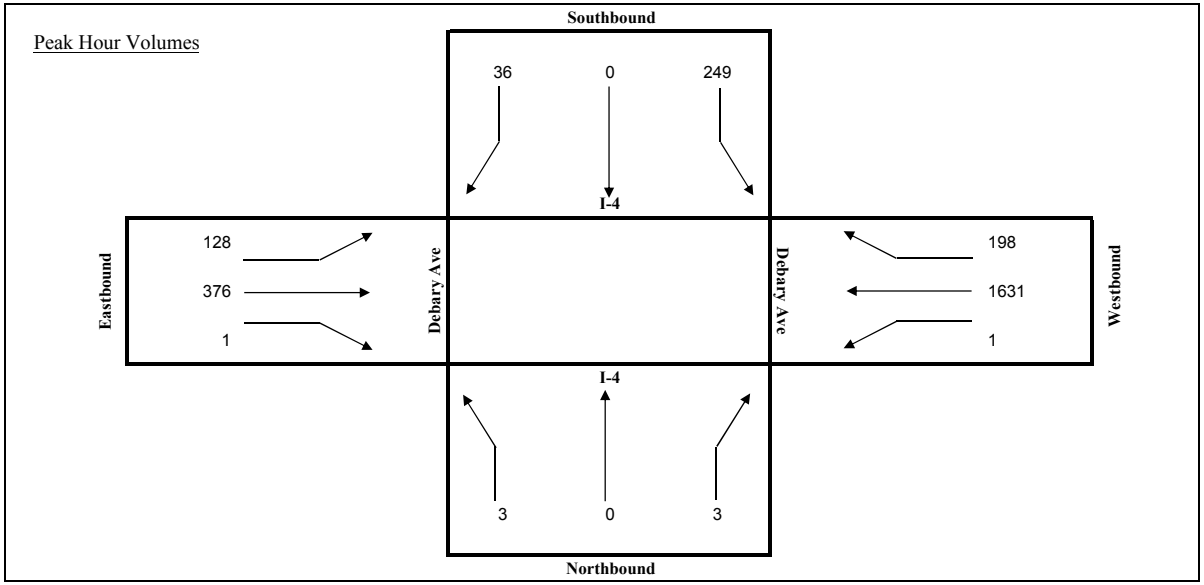
Intersections Traffic Volume

TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): I-4
Intersection (E/W): Debary Ave
Date: 5/7/2015

		I-4			I-4			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	3	0	2	37	0	2	28	59	0	1	422	37	591
7:15 AM	7:30 AM	1	0	0	61	0	8	25	96	0	0	444	40	675
7:30 AM	7:45 AM	1	0	1	55	0	6	33	88	1	1	389	51	626
7:45 AM	8:00 AM	0	0	0	70	0	12	29	105	0	0	420	48	684
8:00 AM	8:15 AM	1	0	2	63	0	10	41	87	0	0	378	59	641
8:15 AM	8:30 AM	0	0	1	59	0	9	30	66	1	1	359	47	573
8:30 AM	8:45 AM	1	0	1	72	0	17	33	49	0	1	303	36	513
8:45 AM	9:00 AM	1	0	0	51	0	11	36	51	1	2	275	32	460
Total for:	7:00 AM	8:00 AM	5	0	3	223	0	28	115	348	1	2	1675	176	2576
Total for:	8:00 AM	9:00 AM	3	0	4	245	0	47	140	253	2	4	1315	174	2187
Tota Peak Hour:	7:15 AM	8:15 AM	3	0	3	249	0	36	128	376	1	1	1631	198	2626
Overall PHF:	0.96														

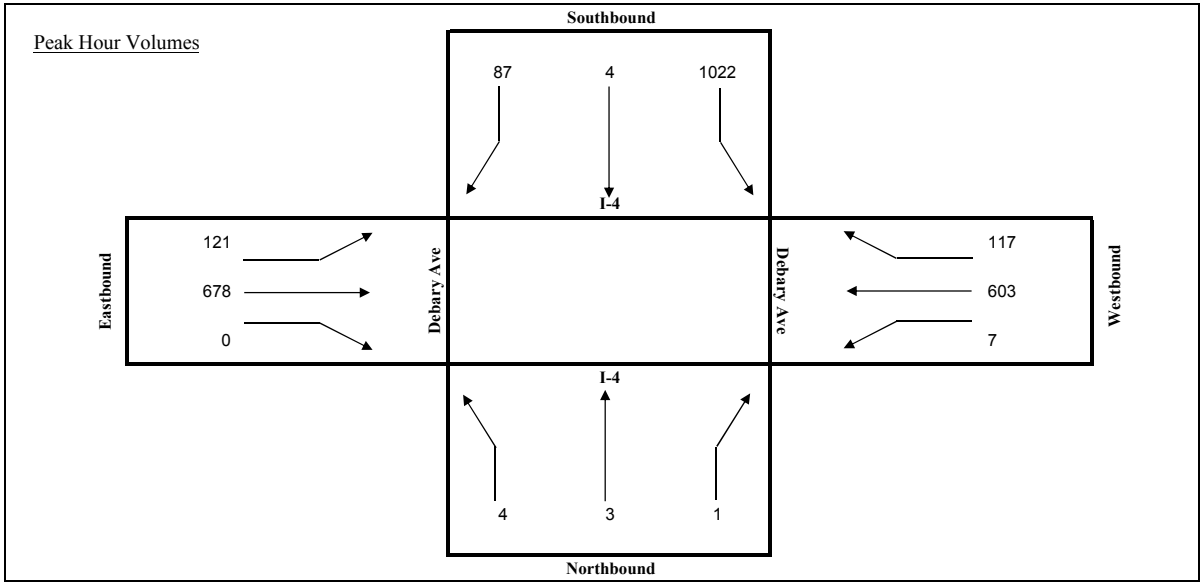


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): I-4
Intersection (E/W): Debary Ave
Date: 5/7/2015

		I-4			I-4			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	1	0	259	2	23	24	103	0	2	130	37	582
4:15 PM	4:30 PM	1	0	1	268	0	28	27	108	0	2	122	29	586
4:30 PM	4:45 PM	2	1	1	246	1	33	25	111	0	6	137	31	594
4:45 PM	5:00 PM	0	0	0	222	1	25	30	133	0	1	155	30	597
5:00 PM	5:15 PM	1	2	0	243	2	22	25	175	0	3	141	28	642
5:15 PM	5:30 PM	2	1	1	291	0	22	36	169	0	1	163	32	718
5:30 PM	5:45 PM	1	0	0	266	1	18	30	201	0	2	144	27	690
5:45 PM	6:00 PM	0	1	1	205	0	10	27	166	0	3	137	36	586
Total for:	4:00 PM	5:00 PM	4	2	2	995	4	109	106	455	0	11	544	127	2359
Total for:	5:00 PM	6:00 PM	4	4	2	1005	3	72	118	711	0	9	585	123	2636
Tota Peak Hour:	4:45 PM	5:45 PM	4	3	1	1022	4	87	121	678	0	7	603	117	2647
Overall PHF:	0.92														

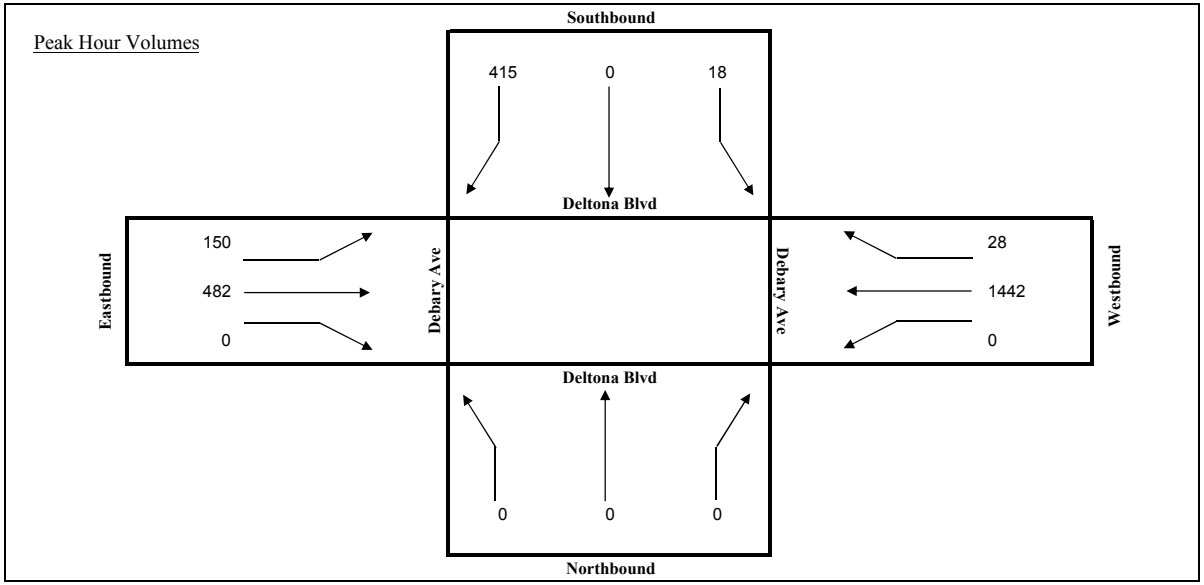


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Deltona Blvd
Intersection (E/W): Debary Ave
Date: 5/7/2015

		Deltona Blvd			Deltona Blvd			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	0	0	7	0	96	25	74	0	0	360	6	568
7:15 AM	7:30 AM	0	0	0	3	0	110	41	120	0	0	378	4	656
7:30 AM	7:45 AM	0	0	0	7	0	105	36	107	0	0	340	10	605
7:45 AM	8:00 AM	0	0	0	5	0	99	40	140	0	0	372	5	661
8:00 AM	8:15 AM	0	0	0	3	0	101	33	115	0	0	352	9	613
8:15 AM	8:30 AM	0	0	0	7	0	88	29	99	0	0	336	11	570
8:30 AM	8:45 AM	0	0	0	2	0	75	18	108	0	0	275	9	487
8:45 AM	9:00 AM	0	0	0	6	0	81	23	87	0	0	241	8	446
Total for:	7:00 AM	8:00 AM	0	0	0	22	0	410	142	441	0	0	1450	25	2490
Total for:	8:00 AM	9:00 AM	0	0	0	18	0	345	103	409	0	0	1204	37	2116
Tota Peak Hour:	7:15 AM	8:15 AM	0	0	0	18	0	415	150	482	0	0	1442	28	2535
Overall PHF:	0.96														

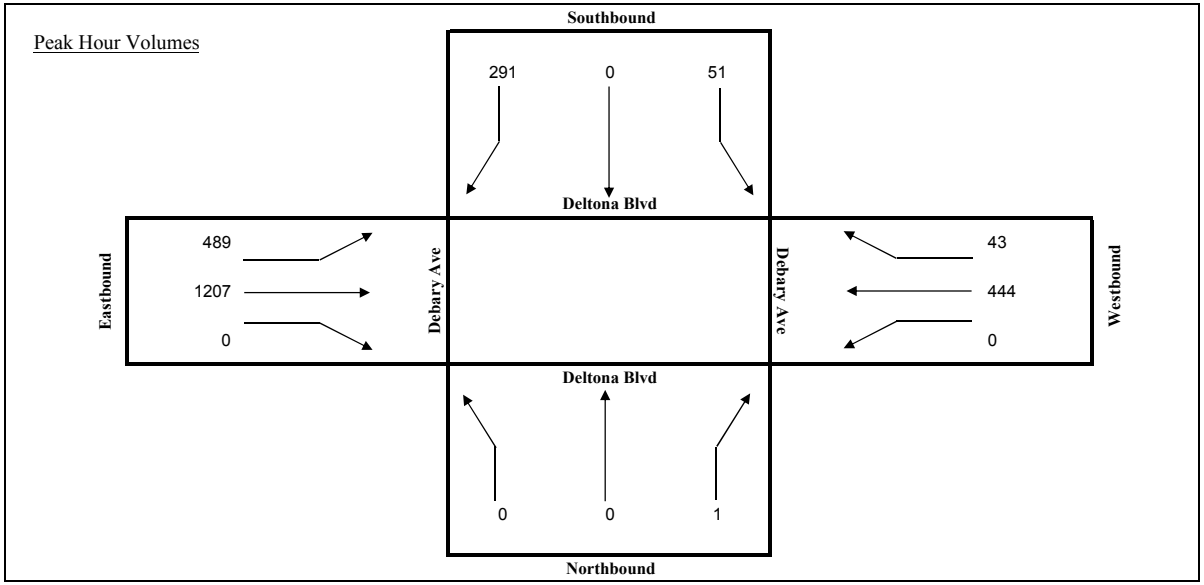


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Deltona Blvd
Intersection (E/W): Debary Ave
Date: 5/7/2015

		Deltona Blvd			Deltona Blvd			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	0	0	0	9	0	53	88	274	0	0	115	3	542
4:15 PM	4:30 PM	0	0	1	11	0	62	115	280	0	0	99	4	572
4:30 PM	4:45 PM	0	0	1	12	0	70	121	242	0	0	102	5	553
4:45 PM	5:00 PM	0	0	0	14	0	80	133	230	0	0	109	9	575
5:00 PM	5:15 PM	0	0	0	11	0	74	115	298	0	0	102	11	611
5:15 PM	5:30 PM	0	0	1	15	0	72	122	341	0	0	125	8	684
5:30 PM	5:45 PM	0	0	0	11	0	65	119	338	0	0	108	15	656
5:45 PM	6:00 PM	0	0	0	15	0	57	94	274	0	0	123	9	572
Total for:	4:00 PM	5:00 PM	0	0	2	46	0	265	457	1026	0	0	425	21	2242
Total for:	5:00 PM	6:00 PM	0	0	1	52	0	268	450	1251	0	0	458	43	2523
Tota Peak Hour:	4:45 PM	5:45 PM	0	0	1	51	0	291	489	1207	0	0	444	43	2526
Overall PHF:	0.92														

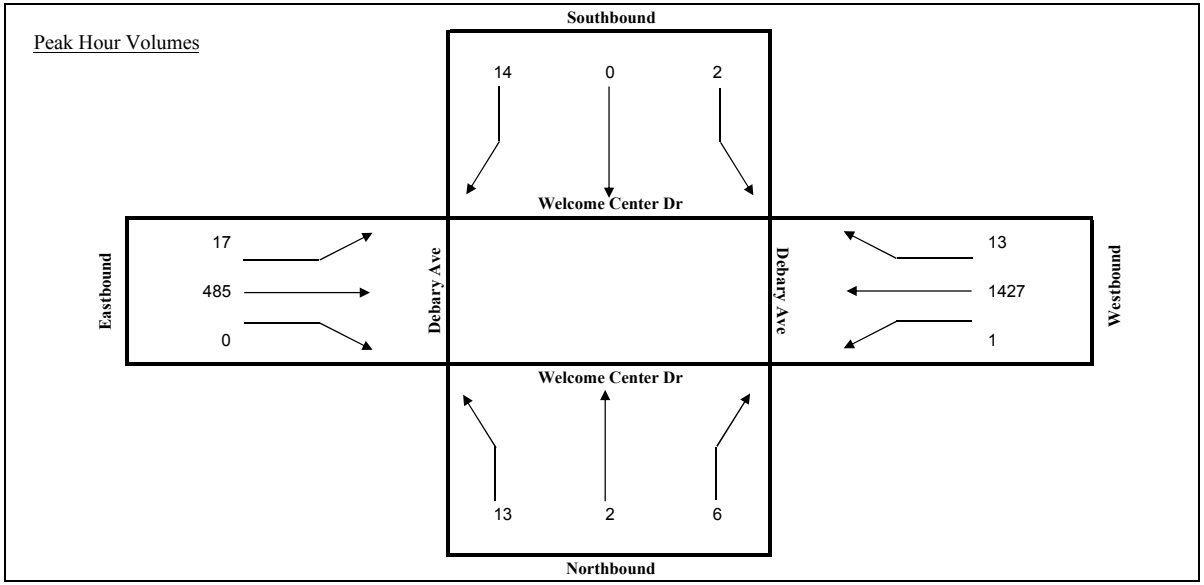


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Welcome Center Dr
Intersection (E/W): Debary Ave
Date: 5/7/2015

		Welcome Center Dr			Welcome Center Dr			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	2	0	0	2	0	2	2	78	0	0	357	2	445
7:15 AM	7:30 AM	1	1	3	0	0	5	2	120	0	0	370	1	503
7:30 AM	7:45 AM	5	0	1	1	0	3	5	108	0	0	337	3	463
7:45 AM	8:00 AM	4	0	0	0	0	0	3	146	0	0	375	4	532
8:00 AM	8:15 AM	3	1	2	1	0	6	7	111	0	1	345	5	482
8:15 AM	8:30 AM	3	0	0	2	0	6	6	98	2	1	328	4	450
8:30 AM	8:45 AM	2	1	1	4	0	2	5	103	1	0	270	6	395
8:45 AM	9:00 AM	4	0	3	3	0	4	6	84	0	0	246	5	355
Total for:	7:00 AM	8:00 AM	12	1	4	3	0	10	12	452	0	0	1439	10	1943
Total for:	8:00 AM	9:00 AM	12	2	6	10	0	18	24	396	3	2	1189	20	1682
Tota Peak Hour:	7:15 AM	8:15 AM	13	2	6	2	0	14	17	485	0	1	1427	13	1980
Overall PHF:	0.93														

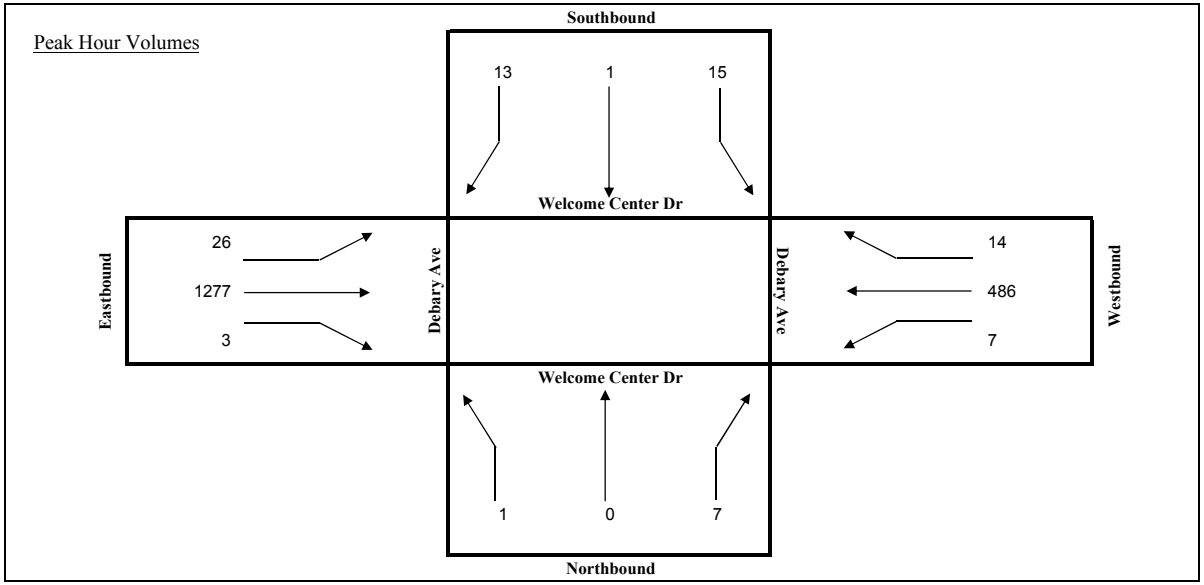


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Welcome Center Dr
Intersection (E/W): Debary Ave
Date: 5/7/2015

		Welcome Center Dr			Welcome Center Dr			Debary Ave			Debary Ave			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	0	2	2	0	3	2	250	0	1	116	1	378
4:15 PM	4:30 PM	0	0	1	3	1	5	5	287	2	2	101	2	409
4:30 PM	4:45 PM	1	0	0	2	0	2	6	260	0	0	103	5	379
4:45 PM	5:00 PM	2	0	3	4	0	6	3	235	4	3	116	3	379
5:00 PM	5:15 PM	0	0	0	5	1	3	8	302	0	0	107	7	433
5:15 PM	5:30 PM	0	0	2	3	0	1	5	351	1	1	130	2	496
5:30 PM	5:45 PM	1	0	2	5	0	3	6	343	1	4	121	2	488
5:45 PM	6:00 PM	0	0	3	2	0	6	7	281	1	2	128	3	433
Total for:	4:00 PM	5:00 PM	4	0	6	11	1	16	16	1032	6	6	436	11	1545
Total for:	5:00 PM	6:00 PM	1	0	7	15	1	13	26	1277	3	7	486	14	1850
Tota Peak Hour:	5:00 PM	6:00 PM	1	0	7	15	1	13	26	1277	3	7	486	14	1850
Overall PHF:	0.93														

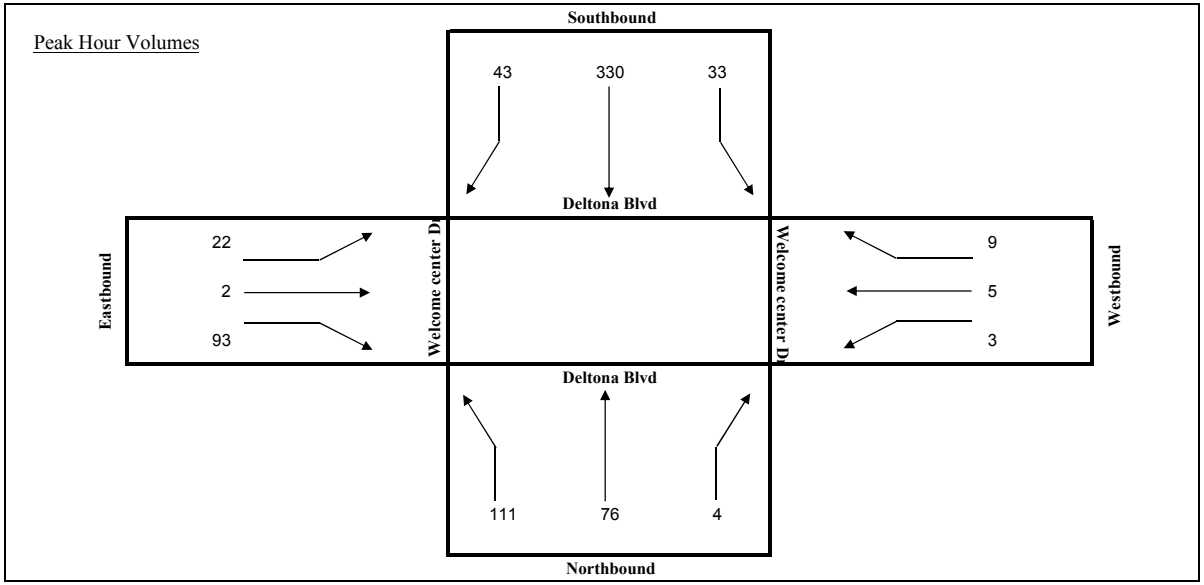


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Deltona Blvd
Intersection (E/W): Welcome center Dr
Date: 5/7/2015

		Deltona Blvd			Deltona Blvd			Welcome center Dr			Welcome center Dr			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	15	18	1	3	85	7	1	1	20	3	1	1	156
7:15 AM	7:30 AM	24	21	0	8	90	8	2	0	27	0	0	0	180
7:30 AM	7:45 AM	33	18	2	7	81	10	7	0	24	2	2	2	188
7:45 AM	8:00 AM	29	16	2	7	75	14	7	2	24	1	3	7	187
8:00 AM	8:15 AM	25	21	0	11	84	11	6	0	18	0	0	0	176
8:15 AM	8:30 AM	28	12	1	8	70	15	5	0	30	1	2	2	174
8:30 AM	8:45 AM	18	15	0	3	59	9	7	1	22	2	1	3	140
8:45 AM	9:00 AM	20	14	1	5	73	10	2	0	17	2	3	1	148
Total for:	7:00 AM	8:00 AM	101	73	5	25	331	39	17	3	95	6	6	10	711
Total for:	8:00 AM	9:00 AM	91	62	2	27	286	45	20	1	87	5	6	6	638
Tota Peak Hour:	7:15 AM	8:15 AM	111	76	4	33	330	43	22	2	93	3	5	9	731
Overall PHF:	0.97														

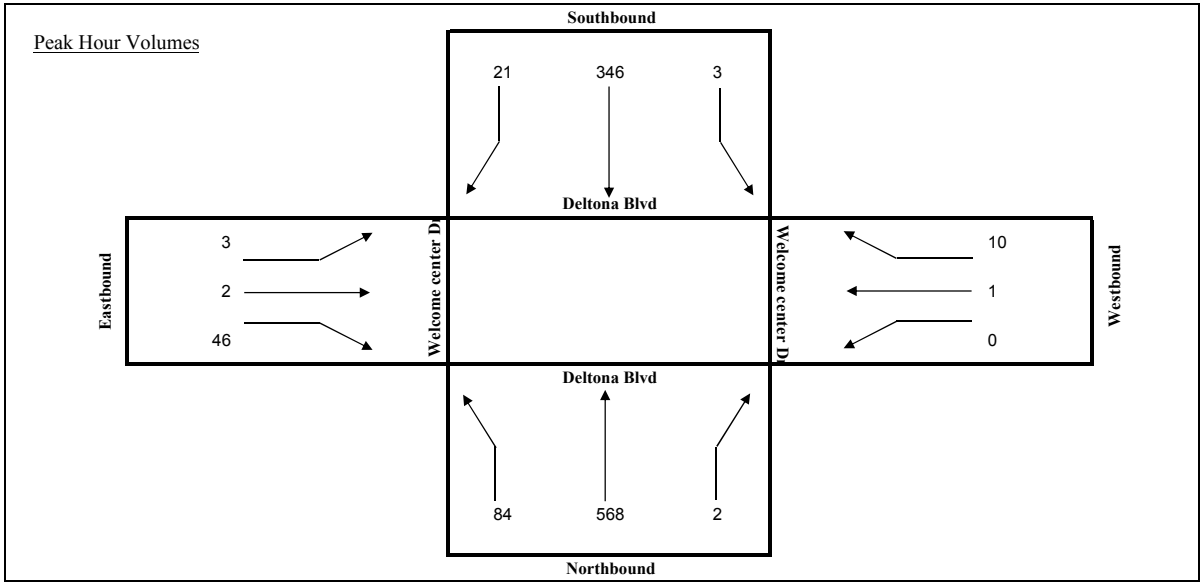


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Deltona Blvd
Intersection (E/W): Welcome center Dr
Date: 5/7/2015

		Deltona Blvd			Deltona Blvd			Welcome center Dr			Welcome center Dr			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	10	91	1	0	65	2	1	0	5	0	2	1	178
4:15 PM	4:30 PM	15	119	0	0	72	5	0	1	9	0	0	2	223
4:30 PM	4:45 PM	20	126	2	1	86	7	2	0	11	0	1	1	257
4:45 PM	5:00 PM	22	142	0	0	97	6	0	1	10	0	0	0	278
5:00 PM	5:15 PM	24	122	1	1	86	7	2	0	15	0	1	6	265
5:15 PM	5:30 PM	18	150	0	0	88	3	1	0	12	0	0	3	275
5:30 PM	5:45 PM	20	154	1	2	75	5	0	1	9	0	0	1	268
5:45 PM	6:00 PM	21	103	0	0	74	4	1	0	12	0	1	3	219
Total for:	4:00 PM	5:00 PM	67	478	3	1	320	20	3	2	35	0	3	4	936
Total for:	5:00 PM	6:00 PM	83	529	2	3	323	19	4	1	48	0	2	13	1027
Tota Peak Hour:	4:45 PM	5:45 PM	84	568	2	3	346	21	3	2	46	0	1	10	1086
Overall PHF:	0.98														



COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Debary Ave/Dirksen Dr & I-4 EB Ramp
Deltona

ISOLATED:

DATE: 3/27/2015

SIGNAL #: 188

CO-ORD: X

Design By: M. Tobin

System #: 6

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	EBL	WB	NB	SB	-	EB	-	-	
TURN TYPE	PERM/PROT	-	SPLIT LEAD	SPLIT LAG	-	-	-	-	
MIN GREEN	5	12	5	6		12			
EXTENSION	3	3	3	4		3			
CLEARANCE	4.0	5.0	3.5	4.0		4.0			
ALL RED	2.5	2.0	2.5	2.5		2.0			
WALK	-	-	-	-		-			
FDW	-	-	-	-		-			
MAX 1	15	30	15	30		30			
MAX 2	-	-	-	-		-			
MAX 3	30	-	-	-		-			
ADJUST	10	-	-	-		-			
RECALL	-	MIN	-	-		MIN			
DETECTOR	NON-LOCK	LOCK	NON-LOCK	LOCK		LOCK			
FLASH	-	YELLOW	RED	RED		YELLOW			
SET	2	-	-	-		-			
CLEAR	2	-	-	-		-			

BASE DAY		1	2	3	4	5	6	7
MON #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00		
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE		
TUES#1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00		
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE		
WED #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00		
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE		
THU #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00		
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE		
FRI #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00		
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE		
SAT #2	TIME	00:01-09:00	09:00-18:00	18:00-00:00				
	PLAN	FREE	C1O1S1	FREE				
SUN #3	TIME	00:01-09:00	09:00-18:00	18:00-00:00				
	PLAN	FREE	C1O1S1	FREE				

Crosswalk Length
P2
-
P4
-
P6
-
P8
-

CONTROLLER TYPE		CONDITION OF OVERHEAD	New	PROM NUMBER	
3000E		OVERHEAD STREET NAMES	NO		SIGNAL OWNER
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	8216A 3.7.3	
CABINET TYPE	V	PRE-EMPTION	NO	IP ADDRESS	County
CABINET DATE	02/1997	PRE-EMPTION TYPE	N/A	10.77.8.34	LED YES

REMARKS:

Omit Phase 1 when Phase 2 is On

1	2	3	4
	6		

VOLUSIA COUNTY TRAFFIC ENGINEERING
SYSTEM INVENTORY

Switch IP.# 10.77.8.2
Controller IP.# 10.77.8.34
Camera IP # -

DATE: 3/27/2015 DESIGNED BY: M. Tobin

LOCATION: Debary Ave/Dirksen Dr & I-4 EB Ramp

CITY: Deltona ID NO: 188 SYSTEM ID: 6

CONTROLLER TIME CHART

MVMNT	MIN	EXT	CLR	A.R.	WALK	FDW	MAX1	MAX2	MAX3	ADJST	REC	DET	FL	SET	CLR
1	5	3	4	2.5	-	-	15	-	30	10	-	NL	-	2	2
2	12	3	5	2	-	-	30	-	-	-	MIN	L	Y	-	-
3	5	3	3.5	2.5	-	-	15	-	-	-	-	NL	R	-	-
4	6	4	4	2.5	-	-	30	-	-	-	-	L	R	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	12	3	4	2	-	-	30	-	-	-	MIN	L	Y	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TP# 1

CO-ORDINATION

PLAN	C1/S1	C2/S1	C3/S1	C4/S1	C5/S1	C6/S1		
CYCLE	100	115	160					
OFF 1	0	3	0					
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	19	17	19	-	-	-		
PH 2	42	35	102	-	-	-		
PH 3	16	16	15	-	-	-		
PH 4	23	47	24	-	-	-		
PH 5	-	-	-	-	-	-		
PH 6	61	52	121	-	-	-		
PH 7	-	-	-	-	-	-		
PH 8	-	-	-	-	-	-		

1	2	3	4
	6		

BASE DAY		1	2	3	4	5	6	7	8	9	10	11
MON #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00						
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE						
TUES#1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00						
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE						
WED #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00						
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE						
THU #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00						
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE						
FRI #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00						
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE						
SAT	TIME	00:01-09:00	09:00-18:00	18:00-00:00								
	PLAN	FREE	C1O1S1	FREE								
SUN	TIME	00:01-09:00	09:00-18:00	18:00-00:00								
	PLAN	FREE	C1O1S1	FREE								

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Debary Avenue & Deltona Blvd
Deltona

ISOLATED:

DATE: 1/15/2015

SIGNAL #: 258

CO-ORD: X

Design By: M. Tobin

System #: 6

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB	-	-	-	EB	-	SB
TURN TYPE	PERM/PROT	-	-	-	-	-	-	-
MIN GREEN	5	11				11		5
EXTENSION	4	4				4		4
CLEARANCE	4.5	4.5				4.5		3.5
ALL RED	3.5	3.5				3.5		3.5
WALK	-	-				-		7
FDW	-	-				-		24
MAX 1	20	35				35		20
MAX 2						-		-
MAX 3	-	-				-		-
ADJUST	-	-				-		-
RECALL	-	MIN				MIN		-
DETECTOR	NON-LOCK	LOCK				LOCK		NON-LOCK
FLASH	-	YELLOW				YELLOW		RED
SET	-	-				-		-
CLEAR	-	-				-		-

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
MON #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00			P2
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE			
TUES#1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00			-
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE			
WED #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00			P4
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE			
THU #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00			-
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE			
FRI #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00			P6
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE			
SAT #2	TIME	00:01-09:00	09:00-18:00	18:00-00:00					-
	PLAN	FREE	C1O1S1	FREE					
SUN #3	TIME	00:01-09:00	09:00-18:00	18:00-00:00					P8
	PLAN	FREE	C1O1S1	FREE					

CONTROLLER TYPE		CONDITION OF OVERHEAD	New - 2010	PROM NUMBER	
3000E		OVERHEAD STREET NAMES	NO		84
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	8216A 3.7.3	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	NO	IP ADDRESS	County
CABINET DATE	09/2008	PRE-EMPTION TYPE	N/A	10.77.8.35	LED -

REMARKS:

No Uturn on EB Left.

1 & 8R	2	
	6	8

VOLUSIA COUNTY TRAFFIC ENGINEERING
SYSTEM INVENTORY

Switch IP.# 10.77.8.3
Controller IP.# 10.77.8.35
Camera IP # -

DATE: 1/15/2015 DESIGNED BY: M. Tobin

LOCATION: Debary Avenue & Deltona Blvd

CITY: Deltona ID NO: 258 SYSTEM ID: 6

CONTROLLER TIME CHART

MVMNT	MIN	EXT	CLR	A.R.	WALK	FDW	MAX1	MAX2	MAX3	ADJST	REC	DET	FL	SET	CLR
1	5	4	4.5	3.5	-	-	20	-	-	-	-	NL	-	-	-
2	11	4	4.5	3.5	-	-	35	-	-	-	MIN	L	Y	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	11	4	4.5	3.5	-	-	35	-	-	-	MIN	L	Y	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	5	4	3.5	3.5	7	24	20	-	-	-	-	NL	R	-	-

TP# 1

CO-ORDINATION

PLAN	C1/S1	C2/S1	C3/S1	C4/S1	C5/S1	C6/S1		
CYCLE	100	115	160					
OFF 1	2	109	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	22	55	24	-	-	-		
PH 2	58	37	115	-	-	-		
PH 3	-	-	-	-	-	-		
PH 4	20	23	21	-	-	-		
PH 5	-	-	-	-	-	-		
PH 6	80	92	139	-	-	-		
PH 7	-	-	-	-	-	-		
PH 8	20	23	21	-	-	-		

1 & 8R	2	
	6	8

BASE DAY		1	2	3	4	5	6	7	8	9	10	11	
MON #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00							
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE							
TUES#1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00							
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE							
WED #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00							
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE							
THU #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00							
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE							
FRI #1	TIME	00:01-06:00	06:00-09:00	09:00-14:00	14:00-19:00	19:00-00:00							
	PLAN	FREE	C301S1	C1O1S1	C2O1S1	FREE							
SAT	TIME	00:01-09:00	09:00-18:00	18:00-00:00									
	PLAN	FREE	C1O1S1	FREE									
SUN	TIME	00:01-09:00	09:00-18:00	18:00-00:00									
	PLAN	FREE	C1O1S1	FREE									

Appendix E

Intersection Analysis Worksheets

HCM 2010 Signalized Intersection Summary
7: DeBary Ave & I4 NB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	376	1	1	1631	198	3	0	3	249	0	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	133	392	1	1	1699	0	3	0	0	259	0	35
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	2	0	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	2587	7	633	2110	0	94	0	0	386	0	172
Arrive On Green	0.08	0.71	0.71	1.00	1.00	0.00	0.05	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1774	3621	9	987	3632	0	1774	0	0	3548	0	1583
Grp Volume(v), veh/h	133	192	201	1	1699	0	3	0	0	259	0	35
Grp Sat Flow(s),veh/h/ln	1774	1770	1861	987	1770	0	1774	0	0	1774	0	1583
Q Serve(g_s), s	4.1	5.6	5.6	0.0	0.0	0.0	0.3	0.0	0.0	11.3	0.0	3.2
Cycle Q Clear(g_c), s	4.1	5.6	5.6	0.0	0.0	0.0	0.3	0.0	0.0	11.3	0.0	3.2
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	1264	1329	633	2110	0	94	0	0	386	0	172
V/C Ratio(X)	0.38	0.15	0.15	0.00	0.81	0.00	0.03	0.00	0.00	0.67	0.00	0.20
Avail Cap(c_a), veh/h	354	1264	1329	633	2110	0	94	0	0	386	0	172
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	7.4	7.4	0.0	0.0	0.0	72.3	0.0	0.0	69.0	0.0	65.4
Incr Delay (d2), s/veh	3.0	0.3	0.2	0.0	3.4	0.0	0.6	0.0	0.0	9.0	0.0	2.7
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(50%),veh/ln	2.3	2.8	2.9	0.0	1.0	0.0	0.1	0.0	0.0	6.0	0.0	1.6
LnGrp Delay(d),s/veh	11.6	7.6	7.6	0.0	3.4	0.0	73.0	0.0	0.0	78.0	0.0	68.0
LnGrp LOS	B	A	A	A	A		E			E		E
Approach Vol, veh/h		526			1700			3			294	
Approach Delay, s/veh		8.6			3.4			73.0			76.8	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		15.0		122.0		24.0	19.0	103.0
Change Period (Y+Rc), s		6.5		* 7		6.5	6.5	7.0
Max Green Setting (Gmax), s		8.5		* 1.2E2		17.5	12.5	95.0
Max Q Clear Time (g_c+I1), s		2.3		7.6		13.3	6.1	2.0
Green Ext Time (p_c), s		0.0		30.5		0.4	0.1	29.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
7: DeBary Ave & I4 NB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	395	1	1	1678	206	3	0	3	264	0	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	136	411	1	1	1748	0	3	0	0	275	0	8
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	2	0	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	2587	6	623	2110	0	94	0	0	386	0	172
Arrive On Green	0.08	0.71	0.71	1.00	1.00	0.00	0.05	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1774	3622	9	970	3632	0	1774	0	0	3548	0	1583
Grp Volume(v), veh/h	136	201	211	1	1748	0	3	0	0	275	0	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1861	970	1770	0	1774	0	0	1774	0	1583
Q Serve(g_s), s	4.2	5.9	5.9	0.0	0.0	0.0	0.3	0.0	0.0	12.1	0.0	0.7
Cycle Q Clear(g_c), s	4.2	5.9	5.9	0.0	0.0	0.0	0.3	0.0	0.0	12.1	0.0	0.7
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	1264	1329	623	2110	0	94	0	0	386	0	172
V/C Ratio(X)	0.39	0.16	0.16	0.00	0.83	0.00	0.03	0.00	0.00	0.71	0.00	0.05
Avail Cap(c_a), veh/h	346	1264	1329	623	2110	0	94	0	0	386	0	172
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	7.4	7.4	0.0	0.0	0.0	72.3	0.0	0.0	69.3	0.0	64.3
Incr Delay (d2), s/veh	3.3	0.3	0.3	0.0	3.9	0.0	0.6	0.0	0.0	10.7	0.0	0.5
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(50%),veh/ln	2.3	2.9	3.1	0.0	1.1	0.0	0.1	0.0	0.0	6.5	0.0	0.3
LnGrp Delay(d),s/veh	11.9	7.7	7.7	0.0	3.9	0.0	73.0	0.0	0.0	80.0	0.0	64.8
LnGrp LOS	B	A	A	A	A		E			F		E
Approach Vol, veh/h		548			1749			3			283	
Approach Delay, s/veh		8.7			3.9			73.0			79.6	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		15.0		122.0		24.0	19.0	103.0
Change Period (Y+Rc), s		6.5		* 7		6.5	6.5	7.0
Max Green Setting (Gmax), s		8.5		* 1.2E2		17.5	12.5	95.0
Max Q Clear Time (g_c+I1), s		2.3		7.9		14.1	6.2	2.0
Green Ext Time (p_c), s		0.0		32.9		0.3	0.2	32.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
3: DeBary Ave & Deltona Blvd

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	150	482	1442	28	18	415
Number	7	4	8	18	1	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	156	502	1502	29	19	301
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	366	2898	2375	46	150	292
Arrive On Green	0.10	0.82	0.67	0.67	0.08	0.08
Sat Flow, veh/h	1774	3632	3645	69	1774	1583
Grp Volume(v), veh/h	156	502	748	783	19	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1851	1774	1583
Q Serve(g_s), s	3.4	4.8	38.8	38.9	1.6	13.5
Cycle Q Clear(g_c), s	3.4	4.8	38.8	38.9	1.6	13.5
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	366	2898	1183	1238	150	292
V/C Ratio(X)	0.43	0.17	0.63	0.63	0.13	1.03
Avail Cap(c_a), veh/h	366	2898	1183	1238	150	292
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	3.1	15.2	15.2	67.8	65.3
Incr Delay (d2), s/veh	3.6	0.1	2.6	2.5	1.7	60.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.4	19.7	20.7	0.9	28.4
LnGrp Delay(d),s/veh	17.5	3.2	17.8	17.7	69.5	126.2
LnGrp LOS	B	A	B	B	E	F
Approach Vol, veh/h		658	1531		320	
Approach Delay, s/veh		6.6	17.7		122.8	
Approach LOS		A	B		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				139.0		21.0	24.0	115.0
Change Period (Y+Rc), s				8.0		7.5	8.0	8.0
Max Green Setting (Gmax), s				131.0		13.5	16.0	107.0
Max Q Clear Time (g_c+I1), s				6.8		15.5	5.4	40.9
Green Ext Time (p_c), s				25.7		0.0	0.3	23.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
3: DeBary Ave & Deltona Blvd

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	183	480	1459	49	38	453
Number	7	4	8	18	1	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	191	500	1520	51	40	331
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	357	2898	2337	78	150	292
Arrive On Green	0.10	0.82	0.67	0.67	0.08	0.08
Sat Flow, veh/h	1774	3632	3588	117	1774	1583
Grp Volume(v), veh/h	191	500	768	803	40	331
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1842	1774	1583
Q Serve(g_s), s	4.2	4.8	40.6	40.9	3.4	13.5
Cycle Q Clear(g_c), s	4.2	4.8	40.6	40.9	3.4	13.5
Prop In Lane	1.00			0.06	1.00	1.00
Lane Grp Cap(c), veh/h	357	2898	1183	1232	150	292
V/C Ratio(X)	0.54	0.17	0.65	0.65	0.27	1.13
Avail Cap(c_a), veh/h	357	2898	1183	1232	150	292
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	18.2	3.1	15.5	15.6	68.6	65.3
Incr Delay (d2), s/veh	5.7	0.1	2.8	2.7	4.3	93.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	2.3	20.5	21.7	1.8	31.1
LnGrp Delay(d),s/veh	23.9	3.2	18.3	18.2	72.9	159.0
LnGrp LOS	C	A	B	B	E	F
Approach Vol, veh/h		691	1571		371	
Approach Delay, s/veh		8.9	18.3		149.7	
Approach LOS		A	B		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				139.0		21.0	24.0	115.0
Change Period (Y+Rc), s				8.0		7.5	8.0	8.0
Max Green Setting (Gmax), s				131.0		13.5	16.0	107.0
Max Q Clear Time (g_c+I1), s				6.8		15.5	6.2	42.9
Green Ext Time (p_c), s				27.2		0.0	0.3	24.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	485	0	1	1427	13	13	2	6	2	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	522	0	1	1534	14	14	2	6	2	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1548	0	0	522	0	0	1327	2109	261	1842	2102	774
Stage 1	-	-	-	-	-	-	558	558	-	1544	1544	-
Stage 2	-	-	-	-	-	-	769	1551	-	298	558	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	424	-	-	1041	-	-	113	51	738	47	51	341
Stage 1	-	-	-	-	-	-	482	510	-	120	175	-
Stage 2	-	-	-	-	-	-	360	173	-	686	510	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	424	-	-	1041	-	-	104	49	738	44	49	341
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	123	-	98	134	-
Stage 1	-	-	-	-	-	-	462	488	-	115	175	-
Stage 2	-	-	-	-	-	-	344	173	-	648	488	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	20.7	19.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	252	424	-	-	1041	-	-	98	341
HCM Lane V/C Ratio	0.09	0.043	-	-	0.001	-	-	0.022	0.044
HCM Control Delay (s)	20.7	13.9	-	-	8.5	-	-	42.6	16
HCM Lane LOS	C	B	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	29	491	0	1	1444	37	13	2	6	18	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	528	0	1	1553	40	14	2	6	19	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1592	0	0	528	0	0	1368	2185	264	1902	2165	796
Stage 1	-	-	-	-	-	-	590	590	-	1575	1575	-
Stage 2	-	-	-	-	-	-	778	1595	-	327	590	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	408	-	-	1035	-	-	106	45	734	42	47	330
Stage 1	-	-	-	-	-	-	461	493	-	115	169	-
Stage 2	-	-	-	-	-	-	355	165	-	660	493	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	408	-	-	1035	-	-	89	42	734	39	43	330
Mov Cap-2 Maneuver	-	-	-	-	-	-	194	107	-	90	127	-
Stage 1	-	-	-	-	-	-	426	456	-	106	169	-
Stage 2	-	-	-	-	-	-	315	165	-	602	456	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	22.9	30.6
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	224	408	-	-	1035	-	-	90	330
HCM Lane V/C Ratio	0.101	0.076	-	-	0.001	-	-	0.215	0.111
HCM Control Delay (s)	22.9	14.6	-	-	8.5	-	-	55.6	17.3
HCM Lane LOS	C	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	0.8	0.4

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	2	93	3	5	9	111	76	4	33	330	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	0	0	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	96	3	5	9	114	78	4	34	340	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	718	715	340	716	715	78	340	0	0	78	0	0
Stage 1	408	408	-	307	307	-	-	-	-	-	-	-
Stage 2	310	307	-	409	408	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	344	356	702	345	356	983	1219	-	-	1520	-	-
Stage 1	620	597	-	703	661	-	-	-	-	-	-	-
Stage 2	700	661	-	619	597	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	307	315	702	271	315	983	1219	-	-	1520	-	-
Mov Cap-2 Maneuver	307	315	-	271	315	-	-	-	-	-	-	-
Stage 1	562	584	-	637	599	-	-	-	-	-	-	-
Stage 2	623	599	-	521	584	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	12.8	4.8	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1219	-	-	308	702	297	983	1520	-	-
HCM Lane V/C Ratio	0.094	-	-	0.08	0.137	0.028	0.009	0.022	-	-
HCM Control Delay (s)	8.3	-	-	17.7	10.9	17.5	8.7	7.4	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.5	0.1	0	0.1	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	2	95	3	5	11	113	86	4	36	345	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	75	-	0	0	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	98	3	5	11	116	89	4	37	356	45

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	754	752	356	753	752	89	356	0	0	89	0	0
Stage 1	430	430	-	322	322	-	-	-	-	-	-	-
Stage 2	324	322	-	431	430	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	326	339	688	326	339	969	1203	-	-	1506	-	-
Stage 1	603	583	-	690	651	-	-	-	-	-	-	-
Stage 2	688	651	-	603	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	289	299	688	253	299	969	1203	-	-	1506	-	-
Mov Cap-2 Maneuver	289	299	-	253	299	-	-	-	-	-	-	-
Stage 1	545	569	-	623	588	-	-	-	-	-	-	-
Stage 2	609	588	-	503	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	12.8	4.6	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1203	-	-	290	688	280	969	1506	-	-
HCM Lane V/C Ratio	0.097	-	-	0.085	0.142	0.029	0.012	0.025	-	-
HCM Control Delay (s)	8.3	-	-	18.6	11.1	18.2	8.8	7.5	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.5	0.1	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	59	24	179	67	16	427
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	0	-	175	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	25	188	71	17	449

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	671	94	0	0	188	0
Stage 1	188	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.14	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.22	-
Pot Cap-1 Maneuver	405	945	-	-	1384	-
Stage 1	826	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	399	945	-	-	1384	-
Mov Cap-2 Maneuver	493	-	-	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	493	945	1384	-
HCM Lane V/C Ratio	-	-	0.126	0.027	0.012	-
HCM Control Delay (s)	-	-	13.4	8.9	7.6	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	2	36	36	33	16	2
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	38	38	35	17	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	129	18	19	0	-	0
Stage 1	18	-	-	-	-	-
Stage 2	111	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	865	1061	1597	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	844	1061	1597	-	-	-
Mov Cap-2 Maneuver	844	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	892	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1597	-	1047	-	-
HCM Lane V/C Ratio	0.024	-	0.038	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
7: DeBary Ave & I4 NB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	678	0	7	603	117	4	3	1	1022	4	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	132	737	0	8	655	0	4	3	1	1114	0	95
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	1400	0	233	877	0	73	55	18	1250	0	558
Arrive On Green	0.09	0.40	0.00	0.08	0.08	0.00	0.08	0.08	0.08	0.35	0.00	0.35
Sat Flow, veh/h	1774	3632	0	718	3632	0	890	667	222	3548	0	1583
Grp Volume(v), veh/h	132	737	0	8	655	0	8	0	0	1114	0	95
Grp Sat Flow(s),veh/h/ln	1774	1770	0	718	1770	0	1779	0	0	1774	0	1583
Q Serve(g_s), s	5.9	18.3	0.0	1.2	20.8	0.0	0.5	0.0	0.0	34.1	0.0	4.8
Cycle Q Clear(g_c), s	5.9	18.3	0.0	2.5	20.8	0.0	0.5	0.0	0.0	34.1	0.0	4.8
Prop In Lane	1.00		0.00	1.00		0.00	0.50		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	276	1400	0	233	877	0	147	0	0	1250	0	558
V/C Ratio(X)	0.48	0.53	0.00	0.03	0.75	0.00	0.05	0.00	0.00	0.89	0.00	0.17
Avail Cap(c_a), veh/h	276	1400	0	233	877	0	147	0	0	1250	0	558
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	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	26.5	0.0	41.4	49.3	0.0	48.6	0.0	0.0	35.2	0.0	25.7
Incr Delay (d2), s/veh	5.8	1.4	0.0	0.3	5.8	0.0	0.7	0.0	0.0	9.9	0.0	0.7
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(50%),veh/ln	3.3	9.2	0.0	0.3	10.9	0.0	0.3	0.0	0.0	18.4	0.0	2.2
LnGrp Delay(d),s/veh	34.3	27.9	0.0	41.7	55.0	0.0	49.3	0.0	0.0	45.0	0.0	26.3
LnGrp LOS	C	C		D	E		D			D		C
Approach Vol, veh/h		869			663			8			1209	
Approach Delay, s/veh		28.9			54.9			49.3			43.6	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		16.0		52.0		47.0	17.0	35.0
Change Period (Y+Rc), s		6.5		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		9.5		45.5		40.5	10.5	28.5
Max Q Clear Time (g_c+I1), s		2.5		20.3		36.1	7.9	22.8
Green Ext Time (p_c), s		0.0		9.9		2.2	0.1	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	41.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
7: DeBary Ave & I4 NB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	710	0	7	633	124	4	3	1	1055	4	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	134	772	0	8	688	0	4	3	1	1150	0	97
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1394	0	219	873	0	73	55	18	1244	0	555
Arrive On Green	0.09	0.39	0.00	0.08	0.08	0.00	0.08	0.08	0.08	0.35	0.00	0.35
Sat Flow, veh/h	1774	3632	0	695	3632	0	890	667	222	3548	0	1583
Grp Volume(v), veh/h	134	772	0	8	688	0	8	0	0	1150	0	97
Grp Sat Flow(s),veh/h/ln	1774	1770	0	695	1770	0	1779	0	0	1774	0	1583
Q Serve(g_s), s	6.1	19.5	0.0	1.2	22.0	0.0	0.5	0.0	0.0	36.0	0.0	4.9
Cycle Q Clear(g_c), s	6.1	19.5	0.0	3.8	22.0	0.0	0.5	0.0	0.0	36.0	0.0	4.9
Prop In Lane	1.00		0.00	1.00		0.00	0.50		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	266	1394	0	219	873	0	146	0	0	1244	0	555
V/C Ratio(X)	0.50	0.55	0.00	0.04	0.79	0.00	0.05	0.00	0.00	0.92	0.00	0.17
Avail Cap(c_a), veh/h	266	1394	0	219	873	0	146	0	0	1244	0	555
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	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	27.1	0.0	42.9	50.1	0.0	48.9	0.0	0.0	36.0	0.0	25.9
Incr Delay (d2), s/veh	6.7	1.6	0.0	0.3	7.1	0.0	0.7	0.0	0.0	12.8	0.0	0.7
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(50%),veh/ln	3.4	9.9	0.0	0.3	11.7	0.0	0.3	0.0	0.0	19.8	0.0	2.2
LnGrp Delay(d),s/veh	35.7	28.7	0.0	43.2	57.2	0.0	49.6	0.0	0.0	48.9	0.0	26.6
LnGrp LOS	D	C		D	E		D			D		C
Approach Vol, veh/h		906			696			8			1247	
Approach Delay, s/veh		29.8			57.0			49.6			47.1	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		16.0		52.5		47.0	17.0	35.5
Change Period (Y+Rc), s		6.5		* 7		6.5	6.5	7.0
Max Green Setting (Gmax), s		9.5		* 46		40.5	10.5	28.0
Max Q Clear Time (g_c+I1), s		2.5		21.5		38.0	8.1	24.0
Green Ext Time (p_c), s		0.0		10.3		1.4	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
3: DeBary Ave & Deltona Blvd

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	489	1207	444	43	51	291
Number	7	4	8	18	1	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	532	1312	483	47	55	216
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	930	2631	865	84	255	895
Arrive On Green	0.84	1.00	0.27	0.27	0.14	0.14
Sat Flow, veh/h	1774	3632	3353	316	1774	1583
Grp Volume(v), veh/h	532	1312	261	269	55	216
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1807	1774	1583
Q Serve(g_s), s	6.9	0.0	14.6	14.8	3.2	7.9
Cycle Q Clear(g_c), s	6.9	0.0	14.6	14.8	3.2	7.9
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	930	2631	469	479	255	895
V/C Ratio(X)	0.57	0.50	0.56	0.56	0.22	0.24
Avail Cap(c_a), veh/h	930	2631	469	479	255	895
HCM Platoon Ratio	2.00	2.00	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	2.0	0.0	36.4	36.5	43.5	12.6
Incr Delay (d2), s/veh	2.6	0.7	4.7	4.7	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.2	7.7	8.0	1.7	10.0
LnGrp Delay(d),s/veh	4.6	0.7	41.1	41.1	45.5	13.2
LnGrp LOS	A	A	D	D	D	B
Approach Vol, veh/h		1844	530		271	
Approach Delay, s/veh		1.8	41.1		19.8	
Approach LOS		A	D		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				92.0		23.0	55.0	37.0
Change Period (Y+Rc), s				6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s				85.5		16.5	48.5	30.5
Max Q Clear Time (g_c+I1), s				2.0		9.9	8.9	16.8
Green Ext Time (p_c), s				20.5		0.5	1.7	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: DeBary Ave & Deltona Blvd

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	537	1216	438	69	77	335
Number	7	4	8	18	1	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	584	1322	476	75	84	264
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	908	2585	773	121	231	874
Arrive On Green	0.42	0.73	0.25	0.25	0.13	0.13
Sat Flow, veh/h	1774	3632	3160	481	1774	1583
Grp Volume(v), veh/h	584	1322	274	277	84	264
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1778	1774	1583
Q Serve(g_s), s	17.4	18.5	15.7	15.9	5.0	10.3
Cycle Q Clear(g_c), s	17.4	18.5	15.7	15.9	5.0	10.3
Prop In Lane	1.00			0.27	1.00	1.00
Lane Grp Cap(c), veh/h	908	2585	446	448	231	874
V/C Ratio(X)	0.64	0.51	0.61	0.62	0.36	0.30
Avail Cap(c_a), veh/h	908	2585	446	448	231	874
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	11.3	6.7	38.0	38.1	45.6	13.8
Incr Delay (d2), s/veh	3.5	0.7	6.2	6.3	4.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	9.1	8.4	8.6	2.7	12.4
LnGrp Delay(d),s/veh	14.8	7.4	44.2	44.4	50.0	14.7
LnGrp LOS	B	A	D	D	D	B
Approach Vol, veh/h		1906	551		348	
Approach Delay, s/veh		9.6	44.3		23.2	
Approach LOS		A	D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				92.0		23.0	55.0	37.0
Change Period (Y+Rc), s				8.0		8.0	6.5	8.0
Max Green Setting (Gmax), s				84.0		15.0	48.5	29.0
Max Q Clear Time (g_c+I1), s				20.5		12.3	19.4	17.9
Green Ext Time (p_c), s				20.3		0.3	1.9	8.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	26	1277	3	7	486	14	1	0	7	15	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	1373	3	8	523	15	1	0	8	16	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	538	0	0	1376	0	0	1708	1984	688	1287	1977	269
Stage 1	-	-	-	-	-	-	1431	1431	-	545	545	-
Stage 2	-	-	-	-	-	-	277	553	-	742	1432	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1026	-	-	494	-	-	59	61	389	121	61	729
Stage 1	-	-	-	-	-	-	141	198	-	490	517	-
Stage 2	-	-	-	-	-	-	706	513	-	374	198	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1026	-	-	494	-	-	56	58	389	115	58	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	116	146	-	235	143	-
Stage 1	-	-	-	-	-	-	137	193	-	477	509	-
Stage 2	-	-	-	-	-	-	680	505	-	357	193	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	17.3	16.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	301	1026	-	-	494	-	-	226	729
HCM Lane V/C Ratio	0.029	0.027	-	-	0.015	-	-	0.076	0.019
HCM Control Delay (s)	17.3	8.6	-	-	12.4	-	-	22.2	10
HCM Lane LOS	C	A	-	-	B	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	72	1263	3	7	496	19	1	0	7	60	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	1358	3	8	533	20	1	0	8	65	1	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	554	0	0	1361	0	0	1797	2084	681	1393	2075	277
Stage 1	-	-	-	-	-	-	1515	1515	-	559	559	-
Stage 2	-	-	-	-	-	-	282	569	-	834	1516	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1012	-	-	501	-	-	50	52	393	101	53	720
Stage 1	-	-	-	-	-	-	125	180	-	481	509	-
Stage 2	-	-	-	-	-	-	701	504	-	329	180	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1012	-	-	501	-	-	45	47	393	92	48	720
Mov Cap-2 Maneuver	-	-	-	-	-	-	98	125	-	200	125	-
Stage 1	-	-	-	-	-	-	115	166	-	444	501	-
Stage 2	-	-	-	-	-	-	675	496	-	298	166	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	18	28.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	286	1012	-	-	501	-	-	198	720
HCM Lane V/C Ratio	0.03	0.077	-	-	0.015	-	-	0.331	0.019
HCM Control Delay (s)	18	8.9	-	-	12.3	-	-	31.9	10.1
HCM Lane LOS	C	A	-	-	B	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	1.4	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	2	46	0	1	10	84	507	2	3	321	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	0	0	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	2	47	0	1	10	86	517	2	3	328	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1023	1023	328	1024	1023	517	328	0	0	517	0	0
Stage 1	334	334	-	689	689	-	-	-	-	-	-	-
Stage 2	689	689	-	335	334	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	214	236	713	214	236	558	1232	-	-	1049	-	-
Stage 1	680	643	-	436	446	-	-	-	-	-	-	-
Stage 2	436	446	-	679	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	198	219	713	188	219	558	1232	-	-	1049	-	-
Mov Cap-2 Maneuver	198	219	-	188	219	-	-	-	-	-	-	-
Stage 1	633	641	-	406	415	-	-	-	-	-	-	-
Stage 2	397	415	-	630	641	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	12.5	1.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	206	713	219	558	1049	-	-
HCM Lane V/C Ratio	0.07	-	-	0.025	0.066	0.005	0.018	0.003	-	-
HCM Control Delay (s)	8.1	-	-	22.9	10.4	21.5	11.6	8.4	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.2	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	2	47	0	1	13	86	527	2	6	337	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	75	-	0	0	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	2	48	0	1	13	88	538	2	6	344	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1070	1069	344	1070	1069	538	344	0	0	538	0	0
Stage 1	356	356	-	713	713	-	-	-	-	-	-	-
Stage 2	714	713	-	357	356	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	199	221	699	199	221	543	1215	-	-	1030	-	-
Stage 1	661	629	-	423	435	-	-	-	-	-	-	-
Stage 2	422	435	-	661	629	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	182	204	699	173	204	543	1215	-	-	1030	-	-
Mov Cap-2 Maneuver	182	204	-	173	204	-	-	-	-	-	-	-
Stage 1	613	625	-	392	403	-	-	-	-	-	-	-
Stage 2	381	403	-	610	625	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	12.6	1.1	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1215	-	-	190	699	204	543	1030	-	-
HCM Lane V/C Ratio	0.072	-	-	0.027	0.069	0.005	0.024	0.006	-	-
HCM Control Delay (s)	8.2	-	-	24.5	10.5	22.7	11.8	8.5	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.2	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	73	30	554	83	20	360
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	0	-	175	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	32	583	87	21	379

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1004	292	0	0	583	0
Stage 1	583	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.14	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.22	-
Pot Cap-1 Maneuver	253	705	-	-	987	-
Stage 1	522	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	246	705	-	-	987	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	373	705	987	-
HCM Lane V/C Ratio	-	-	0.206	0.045	0.021	-
HCM Control Delay (s)	-	-	17.1	10.3	8.7	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	0.1	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	3	45	45	41	30	3
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	47	47	43	32	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	171	33	35	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	819	1041	1576	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	794	1041	1576	-	-	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	861	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1576	-	1021	-	-
HCM Lane V/C Ratio	0.03	-	0.049	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Memorandum

To:	**Mr. Thomas Pauls, AICP**	**Date:**	**January 5, 2016**
		Project #:	**VHB Project No. 62534.02**
From:	**Jorge Tolosa, P.E.**	**Re:**	**RaceTrac #863 – DeBary Avenue (File # FSP 15-005) Traffic Impact Analysis (December 2015) Peer Review Comments**

The purpose of this memorandum to provide review comments for the RaceTrac #863 – DeBary Avenue (File # FSP 15-005) Transportation Impact Analysis (TIA) and the associated Responses to Comment Letter dated December 29, 2015. Specific comments and findings are provided below.

Comment # 1:

According to the anticipated traffic volumes shown in Figures 5 and 6, and the narrative in page 7 of the TIA, the proposed driveway configuration/geometry (at Deltona Boulevard) will meet the City's requirements for a "Major Driveway Entrance". According to the City of Deltona Land Development Code (LDC) Section 96-37(a)(10)b. a "Major Driveway Entrance" should provide a minimum of two (2) 12-foot wide egress lanes, and one (1) 14-foot wide ingress lane. However, the recommended access improvements (included in Figure 4) and the site plan included in Appendix A only show one (1) ingress lane and one (1) egress lane.

Comment # 2:

LDC Section 96-37(a)(10)c.1.(iii), states that "*the minimum acceptable spacing between intermediate or major driveways and an intersection shall be similar to the criteria for intersections of local streets with a thoroughfare. Refer to subsection 96-37(3)a.2*". According to Section 96-37(3)a.2, the minimum distance between a local street intersection and any other intersection of the thoroughfare shall be a 660 feet. However, as described in page 7 of the TIA, the proposed driveway entrance (a T-type intersection) along Deltona Boulevard is located approximately 250 feet north of the signal at Deltona Boulevard and DeBary Avenue.

Comment # 3:

Based on field observations, it is noted that the queue in the southbound right turn lane at the intersection of DeBary Avenue and Deltona Boulevard regularly extends beyond the location of the proposed site access driveway at Deltona Boulevard (approximately 250 ft. north of DeBary Avenue). This observation is further validated by the intersection analysis sheets provided in Appendix E, which indicate that the 50th percentile queue in this traffic lane is projected to be approximately 31 vehicles (620 ft-775 ft.) in the a.m. peak hour and 12 vehicles (240 ft. - 300 ft.) in the p.m. peak hour during the buildout conditions.

As such, it is to be noted that the interaction between the project trips that intend to make a left turn out of the project to travel south along Deltona Boulevard (59 trips in the a.m. peak and 73 trips in the p.m. peak) and the projected queue in the southbound right turn lane at the intersection of DeBary Avenue and Deltona Boulevard could result in safety and operational deficiencies, especially during the a.m. peak hour conditions.

Memorandum

Conclusions and Recommendations

Based on the peer review relating to the TIA supporting the RaceTrac #863 at DeBary Avenue (dated December 2015), VHB notes that all the study roadway segments and intersections are not anticipated to be adversely impacted by the development during the buildout year, with the exception of the intersection of Deltona Boulevard at the proposed project driveway. VHB recommends that the applicant considers revising the project driveway at Deltona Boulevard to restrict the left turn movements exiting the project to avoid any potential safety or operational deficiencies resulting from the interaction of trips in this movement and the queue in southbound right turn lane at the intersection of DeBary Avenue and Deltona Boulevard.

Should you have any questions on the above, please feel free to call me at (407) 965-0591 or email me at jtolosa@vhb.com.