INTERCHANGE MODIFICATION REPORT

I-75 and Fruitville Road (SR 780) Interchange

Sarasota County, Florida

Financial Project Number 420613-2-32-01

May 2016

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FINAL INTERCHANGE MODIFICATION REPORT

MAY 2016

Prepared for

Florida Department of Transportation District One

Interchange Modification Report (IMR)

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Determination of Engineering and Operational Acceptability

Acceptance of this document indicates successful completion of the review and determination of engineering and operational acceptability of the Interchange Access Request. Approval of the access request is contingent upon compliance with applicable Federal requirements, specifically the National Environmental Policy Act (NEPA) or Department's Project Development and Environment (PD&E) Procedures. Completion of the NEPA/PD&E process is considered approval of the project location design concept described in the environmental document.

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study in 2008 along I-75 in Sarasota County to determine the ultimate needs for the interstate and interchanges. This study was updated in 2012 as part of a Systems Interchange Modification Report (SIMR). Both reports concluded the Preferred Alternative for the I-75 and Fruitville Road (SR 780) interchange to be Arterial Separation along with adding turn lanes to the on and off-ramp approaches at Fruitville Road. A new interchange reevaluation has developed an additional alternative which is a Diverging Diamond Interchange (DDI). The DDI reduces overall delay along the Fruitville Road corridor, including adjacent intersections as well as the interstate ramp terminals.

The purpose of this Interchange Modification Report (IMR) is to reevaluate the future traffic operations at the I-75 and Fruitville Road interchange, based on the revised population/traffic growth projections and reevaluate the need for the improvements recommended by the PD&E study and the SIMR. The need for this IMR is to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts, and improving safety for all modes of travel.

The methodology applied for the IMR is documented in the Methodology Letter of Understanding (MLOU), which was approved by the Federal Highway Administration (FHWA) in October 2014. This MLOU was developed in accordance with FDOT Policy No. 000-525-015-h: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160-j: New or Modified Interchanges, and FDOT Procedure No. 525-030-120-i: Project Traffic Forecasting.

This IMR evaluates two design alternatives:

- The 2012 SIMR recommended Arterial Traffic Separation as the preferred alternative. The Arterial Traffic Separation will be used in place of a No Build scenario and any new alternative must perform as well or better as compared with the SIMR alternative.
- Diverging Diamond Interchange (DDI) alternative.

Based on the results from the evaluation of alternatives, the recommended alternative is the DDI. The two distinguishing features between the SIMR preferred alternative and the DDI alternative are:

1) The increased lane utilization along Fruitville Road approaching I-75 with the DDI configuration.
2) The overall safety improvements for all modes of travel at the interchange intersections.

The SIMR arterial separation continues the existing traffic pattern by positioning all interstate bound vehicles in the right-most thru lanes approaching the interchange. By positioning vehicles destined for northbound and southbound I-75 on opposite sides of the road, the DDI configuration distributes traffic across all of the Fruitville Road approach lanes, increases lane utilization, and decreases travel time along the arterial.

The DDI alternative also provides improved capacity for the southbound on-ramp and requires fewer westbound thru lanes at the Fruitville Road intersections with the southbound off-ramp and Cattlemen

Road. The SIMR arterial separation alternative requires more lanes under I-75 and, therefore, a wider and longer bridge over Fruitville Road. The arterial separator also has operational constraints due to the close proximity of the adjacent signalized intersection at Cattlemen Road.

The DDI alternative provides a safer environment for pedestrians, bicycles, and vehicles. The SIMR arterial separation does not provide controlled crossings for pedestrians at the interchange and forces bicyclists to cross multiple lanes of thru vehicle traffic to properly position for the interchange. The DDI alternative incorporates a lower design speed, provides signal controlled crossings for pedestrians at the interchange, positions bicycles west of Cattlemen Road to safely ride through the interchange without crossing multiple lanes of vehicle traffic. The DDI alternative also relocates the on-ramps on the conventional side of the road and removes the loop on-ramps which should reduce the number of rear-end, sideswipe, and "run off the road" type crashes.

Since both alternatives fall within nearly the same footprint, potential environmental impacts are similar between the SIMR alternative and the proposed DDI alternative. In addition, both alternatives require less than ¼ acre of additional right-of-way from three parcels at the intersection of Fruitville Road and Cattlemen Road. However, the DDI alternative has a construction cost savings of $30.3 million when compared to the SIMR alternative.

FHWA'S 8 INTERSTATE ACCESS POLICY POINT REQUIREMENTS AND DISCUSSIONS

The following requirements serve as the primary decision criteria used in approval of interchange projects. Each of the eight policy points from the FHWA is described briefly and the detailed description is provided below in italic text. The justification response to each point follows.

Policy Point 1: ***The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).***

The existing I-75 and Fruitville Road (SR 780) interchange, with no capacity improvements, will fail in the design year 2038 as was proven in the I-75 Systems Interchange Modification Report (SIMR) dated May 2012. The SIMR preferred alternative provided arterial separation and additional thru lanes along Fruitville Road as well as additional turn lanes at the side street approaches. The SIMR improved delay at the ramp terminal intersections due to the free-flow lanes, but did not improve delay at the adjacent intersections or reduce congestion caused by poor lane utilization on Fruitville Road approaching the interchange. The existing interchange also fairs poorly in road safety as the recorded number of crashes over a five-year period from 2006-2010 exceeds the statewide average crash rate for similar interstate facilities. Adding lanes and arterial separation to the current interchange configuration would not increase safety and would create worse crossing conditions for pedestrians and bicyclists due to the uncontrolled, free-flow lanes at the ramp terminal intersections.

To improve corridor-wide operations and safety, an alternative interchange configuration with improved operational conditions and pedestrian/bicycle facilities is needed. The arterial separation as suggested in the SIMR does not improve the lane utilization along Fruitville Road as the eastbound vehicles would substantially queue up and create operational constraints in the rightmost lanes during the PM peak period to access the I-75 on-ramps. This condition cannot be improved with more thru lanes or side street improvements because vehicles approaching I-75 will continue to position in the limited number of lanes destined for the on-ramps. The proposed DDI alternative will separate vehicles destined for northbound I-75 from vehicles destined for southbound I-75 which increases lane utilization and provides acceptable LOS in the design year (2040) throughout the corridor. The DDI also allows for safe, signal controlled, pedestrian crossings through the interchange to improve connectivity with facilities east and west of the interchange.

Policy Point 2: ***The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).***

The current deficiency in the capacity at the I-75 and Fruitville Road Interchange cannot be solved by Transportation System Management (TSM) methods. The SIMR arterial separator alternative adds thru lanes on Fruitville Road and side street turn lanes, however, these improvements will not improve the main issue of poor lane utilization approaching the interchange. By changing the interchange configuration and removing the loop on-ramps, vehicles destined for northbound and southbound I-75 approach the interchange with increased lane utilization instead of most vehicles approaching in the right-most lanes. This reduces vehicle queuing and delays on Fruitville Road and helps facilitate movements onto I-75. There are existing transit (bus) stops adjacent to the interchange, but due to limited ridership, a substantial increase of traffic volumes, and the predominant travel mode being passenger cars, transit is not considered a viable alternative to satisfy the need at this interchange. Other multimodal options and HOT/HOV facilities do not have adjacent facilities for connectivity and would need to be implemented on a more system-wide basis rather than at a single interchange.

Policy Point 3: ***An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network***

(23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

The proposed DDI Alternative is anticipated to improve safety for motorists, pedestrians, and bicyclists. The arterial separator, as proposed in the SIMR, includes free flow traffic movements at the interchange and would not provide a signal controlled crossing for the pedestrians. It also does not provide an adequate means for bicycles in the bike lane to navigate thru the interchange without crossing multiple adjacent traffic lanes. The DDI operation provides signal controlled pedestrian crossings with median refuge and provides a continuous bike lane thru the interchange. The DDI alternative design speed of 30 mph thru the interchange will also improve the pedestrian and bicycle safety and reduce abrupt and last minute lane changes thereby reducing sideswipe crashes and enhancing the safety for motorists.

In addition to the above mentioned safety benefits of the DDI, the design year (2040) VISSIM comparative analysis for the DDI and SIMR alternatives indicates a reduction in vehicle delay at the adjacent signalized intersection at Cattlemen Road from 76 to 49 seconds/vehicle during the PM peak hour. The DDI alternative is also 83 seconds faster in PM eastbound arterial travel time from Cattlemen Road to the interchange on-ramps, which is the most congested segment of the interchange. These comparative analyses include the ultimate interchange and arterial improvements with additional thru lanes and side street improvements for both alternatives. This reduction in congestion along the corridor improves safety for all users.

Policy Point 4: ***The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case- by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).***

The existing full access interchange at I-75 and Fruitville Road will be maintained with the DDI configuration. The interchange and on/off-ramps will be designed to the I-75 Ultimate typical section which includes Special Use Lanes over Fruitville Road. The design of the DDI follows standards and criteria set forth in the most current version of the AASHTO design standards and the FDOT Plans Preparation Manual as well as best practices from the FHWA DDI Informational Guide.

It is anticipated that design variations will be needed for border width and number of lanes sloped in the same direction. These items will be documented per FDOT procedures, but do not violate AASHTO criteria.

Policy Point 5: ***The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.***

The proposed interchange improvement is included in the 2014 Edition of the FDOT SIS Cost Feasible Plan for 2024 – 2040 and the Sarasota/Manatee MPO 2040 Long Range Transportation Plan (LRTP) Financially Feasible Plan. Construction and Right-of-Way funding is planned between 2024 – 2040.

Policy Point 6: ***In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111).***

There are access requests at I-75 and University Parkway and I-75 and Bee Ridge Road, which are the adjacent interchanges north and south of Fruitville Road, respectively. Given that these access requests will only modify the existing interchanges and the relatively long distances from the I-75/Fruitville Road interchange, there is no anticipated interaction of traffic operations between these interchange access requests.

Policy Point 7: ***When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).***

The proposed interchange improvement is not driven by any planned future development, however, the adjacent three-leg signalized intersection at Coburn Road will be reconstructed to include a northern leg as part of private development in the northeast quadrant of the interchange. The alternative operational analyses include the additional traffic, modified driving patterns, and intersection reconstruction from this development. However, the DDI alternative roadway construction is independent of the private development roadway construction. Coordination has been on-going with Sarasota County concerning the private development and adjacent land use near the interchange.

Policy Point 8: ***The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).***

Both of the alternatives require less than ¼ acre of additional right-of-way from three parcels at the Fruitville Road and Cattlemen Road intersection. No other additional right-of-way will be needed for the DDI alternative. Based on the environmental screening performed as part of this IMR and the previously approved SIMR and PD&E studies, there are no natural, cultural, or socio economic impacts associated with implementing the proposed improvement and the FDOT will seek FHWA approval for the Type I / Programmatic Categorical Exclusion.

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Section 1.0
INTRODUCTION

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study in 2008 along I-75 in Sarasota County to determine the ultimate needs for the interstate and interchanges. This study was updated in 2012 as part of a Systems Interchange Modification Report (SIMR). Both reports concluded the Preferred Alternative for the I-75 and Fruitville Road (SR 780) interchange to be Arterial Separation along with adding turn lanes to the on and off-ramp approaches at Fruitville Road. A new interchange reevaluation has developed an additional alternative which is a Diverging Diamond Interchange (DDI). The DDI reduces overall delay along the Fruitville Road corridor, including adjacent intersections as well as the interstate ramp terminals.

1.1 PURPOSE AND NEED

The purpose of this Interchange Modification Report (IMR) is to reevaluate the future traffic operations at the I-75 and Fruitville Road interchange, based on the revised population/traffic growth projections and reevaluate the need for the improvements recommended by the PD&E study and the SIMR. The need for this IMR is to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts, and improving safety for all modes of travel.

I-75, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed, high-volume traffic movements within the State. The Project Development Summary Report (PDSR) that was submitted in July 2009 as part of the I-75 Sarasota County PD&E Study from south of SR 681 to north of University Parkway recommended improvements to the Fruitville Road interchange. These improvements included arterial separation along Fruitville Road to manage traffic, as well as the addition of a second lane to the eastbound to northbound loop-ramp. On Fruitville Road, additional travel lanes were recommended in both directions, as well as improvements to the intersection with Cattlemen Road.

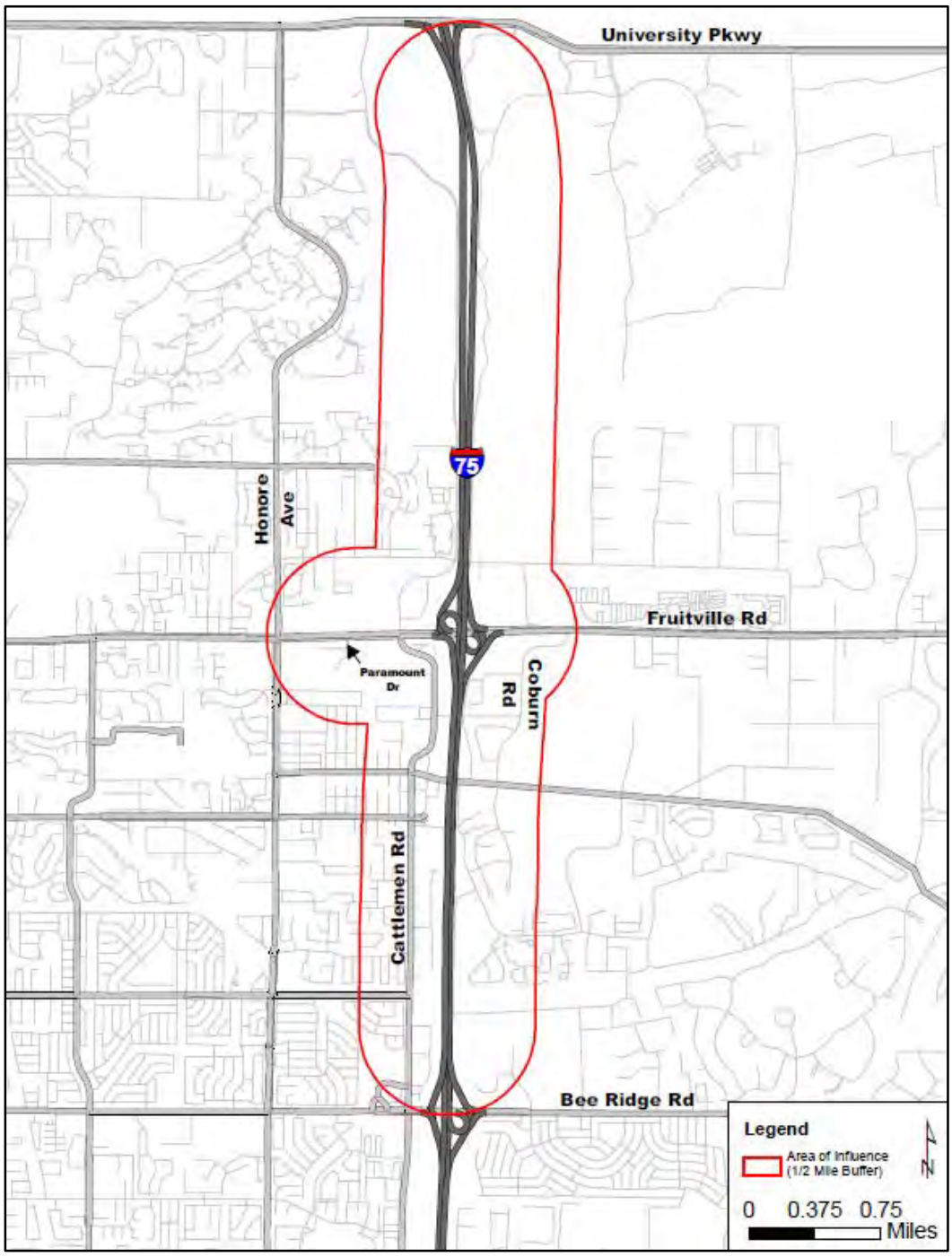
The Final I-75 SIMR from Laurel Road to North of Moccasin Wallow Road, dated May 2012, re-analyzed the I-75 and Fruitville Road interchange and recommended improving the interchange to the PD&E Ultimate Build configuration by year 2018. This includes arterial separation at the ramp terminal intersections, a second eastbound to northbound on-ramp lane, a second northbound and southbound off-ramp lane, the addition of auxiliary lanes on I-75 north and south of the interchange, two additional westbound thru lanes on Fruitville Road between I-75 and Cattlemen Road, and a third southbound left turn lane at the Cattlemen Road intersection.

The objective of this study is to alleviate congestion, improve overall safety and reduce delay within the influence area of the SR 780 (Fruitville Road) and I-75 interchange. This IMR summarizes the existing and projected traffic levels, lane configurations, and basic operating conditions for the interchange area.

1.2 PROJECT LOCATION

Figure 1-1 illustrates the project location and the area of influence. The project is located in Sarasota County, Florida. The Fruitville Road interchange is 2.72 miles north of the I-75 and Bee Ridge Road interchange and is 3.52 miles south of the I-75 and University Parkway interchange.

Figure 1-1: Project Location and Area of Influence



Section 2.0
METHODOLOGY

2.1 GENERAL

The methodology applied for the Interchange Modification Report (IMR) is documented in the Methodology Letter of Understanding (MLOU), which was approved by Federal Highway Administration (FHWA) in October 2014 (**See Appendix A**). This MLOU was developed in accordance with Florida Department of Transportation (FDOT) Policy No. 000-525-015-h: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160-j: New or Modified Interchanges and FDOT Procedure No. 525-030-120-i: Project Traffic Forecasting.

2.2 AREA OF INFLUENCE

The Fruitville Road interchange (*MP 39.156*) is between the interchanges at Bee Ridge Road (SR 758) to the south and University Parkway to the north. The area of influence along I-75 is between the Bee Ridge Road interchange *(MP 36.434)* and the University Parkway interchange *(MP 42.615)*, a distance of 6.181 miles and along Fruitville Road from west of Honore Avenue to east of Coburn Road, a distance of approximately 1.5 miles. The area of influence is illustrated in **Figure 1-1.**

2.3 ANALYSIS YEARS

The following analysis years were agreed upon:

- Existing Year: 2014
- Opening Year: 2020
- Design Year: 2040

2.4 DATA COLLECTION SOURCES

Various sources were used to collect all necessary traffic, socio-economic, and physical data used as part of the analysis. The sources include, but are not limited to:

- Straight Line Diagrams (SLD's)
- Roadway Characteristic Inventory
- Latest Five Year Crash History from FDOT CARS Database
- Traffic Count Information
- FDOT Standard Indexes, latest edition
- Project Traffic Forecasting Handbook
- 2013 Quality/Level of Service (LOS) Handbook
- Sarasota/Manatee County Comprehensive Plan
- SMC 2035 FSUTMS Cost Feasible Model
- Sarasota/Manatee County MPO Adopted Long Range Transportation Plan (LRTP)
- Other Project Development and Environment (PD&E) studies, master plans, approved Development of Regional Impacts (DRIs) within the area

2.5 TRAFFIC FACTORS AND CHARACTERISTICS

Design hour factors (K), directional distribution (D), and 24-hour percentage of trucks (T) were measured based on the results of the traffic count program and compared to the FDOT Florida Traffic Online 2013 database. They were also compared to the acceptable ranges obtained from the FDOT Project Traffic Forecasting Handbook, 2014. Traffic factors were also considered from the previously approved Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road dated September 2008. The results of the comparison were used to compare with the standard design hour factor (K_{std}), design hour directional distribution (D), and design hour truck percentage (DHT), which is taken as half of the design 24-hour percentage of trucks (T_{24}). The recommended traffic factors for this study are summarized in **Table 2.1.**

Table 2.1: Recommended Traffic Factors

Roadway	K-Factor	D – Factor	T_{24}	DHT (T-Peak)	PHF
Fruitville Road (SR 780)	9.0%	58.0%	6.0%	3.0%	0.95
I-75	9.0%	55.0%	8.0%	4.0%	0.95
Side streets	9.0%	Based on counts	Based on counts	Based on counts	0.95

For side streets, D factor and truck percentages were based on counts for each location rounded to the nearest whole number. DHT is calculated as one-half of the T_{24}.

2.6 LEVEL OF SERVICE CRITERIA

The FDOT LOS criteria used in this analysis is in accordance with Procedure No. 525-000-006, LOS Standards and Highway Capacity Analysis for the SHS (for urbanized areas) as summarized below:

- I-75: Mainline and Ramps: LOS D
- Fruitville Road: LOS D
- Study Intersections: LOS D

2.7 OPERATIONAL ANALYSIS PROCEDURES

A detailed operational analysis has been performed for all three analysis years for the two alternatives to compare the following Measures of Effectiveness (MOEs) to quantify potential betterment or non-significant degradation of the Alternative compared with operational conditions of the previously approved SIMR alternative.

MOEs used to evaluate and compare the alternatives will be as follows:

- Signalized intersections – Control Delay (VISSIM)
- Arterial Segments – Travel Speed (VISSIM)
- Ramps Merge/Diverge – LOS, Density, v/c ratios (HCS 2010 or HCM methodologies)
- Freeway Segments – LOS, Density, Travel Speed (HCS 2010)
- Interchange – Queue lengths and back up queue on ramps (VISSIM)

The following components within the area of influence will be included in the operational analysis:

- I-75 mainline segments
- Ramp merge and diverge areas
- Queuing analysis for ramps at cross-streets and on mainline
- Queuing analysis along arterial (Fruitville Road) at ramp termini intersections
- Cattlemen Road at Fruitville Road
- I-75 SB off-ramp/I-75 SB on-ramp at Fruitville Road
- I-75 NB off-ramp/I-75 NB on-ramp at Fruitville Road
- Coburn Road at Fruitville Road

Section 3.0
EXISTING CONDITIONS

3.1 EXISTING LAND USE

The land use in the vicinity of the interchange can be separated as east and west of I-75. West of I-75, development is primarily commercial including hotels, restaurants, and both small and large retail stores. East of I-75, the only existing developed land along Fruitville Road is a library at the Coburn Road intersection.

3.2 EXISTING ROADWAY AND INTERSECTION CHARACTERISTICS

I-75: I-75 is currently a six-lane, north-south limited access freeway facility that is part of the SIS. It is functionally classified as an urban principal arterial-interstate facility within the project influence area. I-75 within the area of influence has a posted speed limit of 70 miles per hour (mph).

Fruitville Road: Fruitville Road west of Paramount Drive is a divided six-lane urban principal arterial with a posted speed limit of 45 mph. It has seven lanes east of Paramount Drive, six lanes between Cattlemen Road and the I-75 eastbound to northbound on-ramp, transitions to a five-lane facility (two lanes eastbound, three lanes westbound) eastward to Old Coburn Road, and then a four-lane facility to the east of Old Coburn Road. The lane configurations and intersection spacing along Fruitville Road are illustrated in **Figure 3-1**.

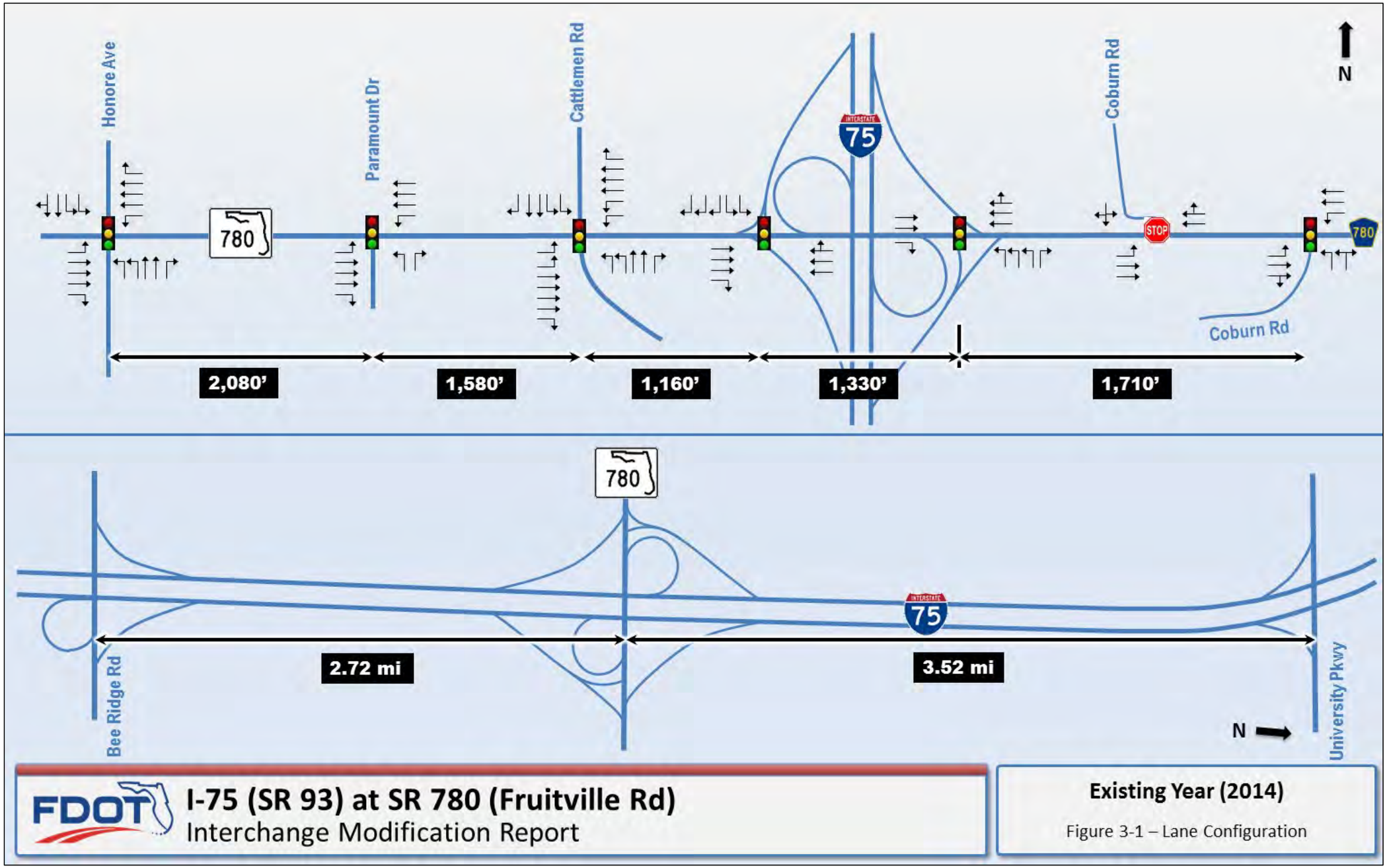
The existing interchange of Fruitville Road with I-75 is a partial cloverleaf interchange, including an eastbound to northbound free-flow loop ramp in the southeast quadrant and a westbound to southbound free-flow loop ramp in the northwest quadrant. Additional, the interchange offers the following free-flow ramps: eastbound Fruitville Road to southbound I-75, westbound Fruitville Road to northbound I-75, and northbound I-75 to eastbound Fruitville Road. The following ramps are under signalized control at the interface with Fruitville Road: northbound I-75 to westbound Fruitville Road, southbound I-75 to eastbound Fruitville Road and southbound I-75 to westbound Fruitville Road.

3.3 ENVIRONMENT

Natural Environment

- **Wetlands and Surface Waters**: The study area is dominated by agricultural and developed land uses, including existing roadways and commercial development. Minimal wetlands exist in the study area and are primarily located within the existing ramp infields. The southeast infield contains a dense-canopy cypress dome and the northwest infield contains a mixed species shrub/forest wetland. Smaller wetland areas are located in the remnant infield areas. The wetland function provided by the systems is minimal, despite acceptable vegetative assemblages, due to the isolation of the systems by the existing high traffic volume roadways. Surface waters present in the study area include large conveyance canals and roadside conveyance ditches that were constructed in both uplands and former wetlands. These surface waters vary in structure from open water features to ditches with hydro periods sufficient to support wetland marsh species. Invasive/exotic species are common within the roadside ditches.

Figure 3-1: Existing Year (2014) Lane Configuration



- **Threatened and Endangered Species and Conservation Areas:** The existing land use in the study area results in less than optimal habitat conditions for threatened and endangered species. The Endangered Species Biological Assessment (dated September 2008) completed as part of the I-75 from South of SR 681 to North of University Parkway PD&E Study concluded that "Based upon the evaluation detailed in the Endangered Species Wildlife Assessment, ongoing agency coordination, and commitments made by the FDOT, the proposed project is not likely to adversely affect the existence of any threatened or endangered species, even though they are known or expected to occur in the study area". This conclusion remains valid with potential threatened and endangered species utilization limited to wading bird forage and possible existence of gopher tortoises. Wood stork suitable forage habitat (SFH) likely exists within the study area and the study area falls within the core foraging area (CFA) of three known wood stork colonies.
- **Floodplains:** The project study area exists within the Phillippe Creek Watershed. Floodplain, as identified by Sarasota County's Celery Creek Flood Control Model, is shown to exist within the project study area. However, though floodplain impacts are anticipated due to the proposed interchange improvements, these impacts have already been accounted for in the County model. As a result, floodplain compensating storage will not be a requirement for this project. All flood control has been accomplished with the construction of the Celery Fields Flood Control Project. Evidence of this conclusion has been permitted through the Southwest Florida Water Management District.

Physical Environment

- **Contamination:** A draft Level I Contamination Screening Report (CSER) for pond site alternatives was prepared for this project. Due to distance, facilities/listings identified in the 2008 PD&E CSER were not considered significant potential contamination concerns. Four low ranked sites were identified in pond locations and Site BF12 (BK0P1, LLC) was included as part of the Fruitville Brownfields Area. A National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos survey and screening for metals-based coatings was performed for the Northbound and Southbound I-75 over Fruitville Road bridge structures and indicated no concerns.
- **Noise:** A Noise Study Report was prepared during the PD&E. The results of the evaluation indicated that noise barriers were not feasible and reasonable within the interchange limits.

Social/Cultural Environment

- **Social:** As indicated in the PD&E, the alignment avoids impacts to all identified community features and no neighborhoods are divided by the proposed improvements. The project is not anticipated to harm elderly persons, handicapped individuals, non-drivers, transit-dependent individuals or minorities. It is anticipated that the project improvements will not impact community cohesiveness.
- **Historical/Archaeological:** Based on the results of a historical field survey conducted for the approved PD&E dated 2009, the proposed improvements will not impact any resources on the National Register of Historic Places (NRHP) or the Sarasota County Register of Historic Places (SCRHP), nor will they impact any potentially eligible resources.

3.4 EXISTING YEAR (2014) TRAFFIC VOLUMES

Traffic counts for this study include FDOT 2013 traffic counts, traffic counts from adjacent interchange studies, as well as traffic counts conducted during 2014. These traffic counts include 72-hour classification counts, 24-hour bi-directional counts, and 8-hour turning movement counts (TMCs). All counts were conducted on Tuesday, Wednesday, or Thursday only to represent a typical weekday traffic condition. In accordance with Manual on Uniform Traffic Studies (MUTS) and the Project Traffic Forecasting Handbook, field traffic count data was collected at the following locations.

3.4.1 72-HOUR CLASSIFICATION COUNTS

- Fruitville Road east of Coburn Road

3.4.2 24 HOUR BI-DIRECTIONAL VOLUME COUNTS

- Honore Avenue – N/S of Fruitville Road
- Fruitville Road west of Honore Avenue
- Paramount Drive – S of Fruitville Road
- Fruitville Road west of Cattlemen Road
- Cattlemen Road – N/S of Fruitville Road
- Fruitville Road west of I-75 SB off ramp
- EB Fruitville Road to SB on ramp to I-75
- SB off ramp: I-75 to WB/EB Fruitville Road
- EB Fruitville Road to NB loop to I-75
- Fruitville Road under I-75 Bridges
- Fruitville Road west of Coburn Road
- Coburn Road – N/S of Fruitville Road
- WB Fruitville Road to NB I-75 on ramp
- WB Fruitville Road to SB I-75 on ramp
- WB Fruitville Road to SB loop to I-75

3.4.3 8 HOUR TURNING MOVEMENT COUNTS

- Honore Avenue at Fruitville Road
- Paramount Drive at Fruitville Road
- Cattlemen Road at Fruitville Road
- I-75 SB off ramp at Fruitville Road
- I-75 SB on ramp at Fruitville Road
- I-75 NB off ramp at Fruitville Road
- I-75 NB on Ramp at Fruitville Road
- Coburn Road (un-signalized intersection) at Fruitville Road
- Coburn Road (signalized intersection) at Fruitville Road

The existing year 2014 traffic volumes consist of the seasonally adjusted annual average daily traffic (AADT) and the existing year 2014 AM and PM peak hour traffic volumes. The existing year 2014 AADTs were established by applying the seasonal adjustment factor (SF) and the axle adjustment factor (AF), as appropriate, to the recently conducted traffic counts. **Figure 3-2** shows the adjusted Existing Year 2014 Annual Average Daily Traffic (AADT).

The existing year 2014 AM and PM peak hour traffic volumes were obtained from the recently conducted 8-hour turning movement counts. Based on the count data, it was determined that in the study area, the AM peak hour occurred between 7:15 AM – 8:15 AM and the PM peak hour occurred between 5:00 PM – 6:00 PM. The peak hour traffic volumes were balanced between intersections where traffic differences were not justifiable. **Figure 3-3** shows the Existing Year 2014 AM and PM peak hour balanced traffic volumes.

Figure 3-2: Existing Year (2014) AADT

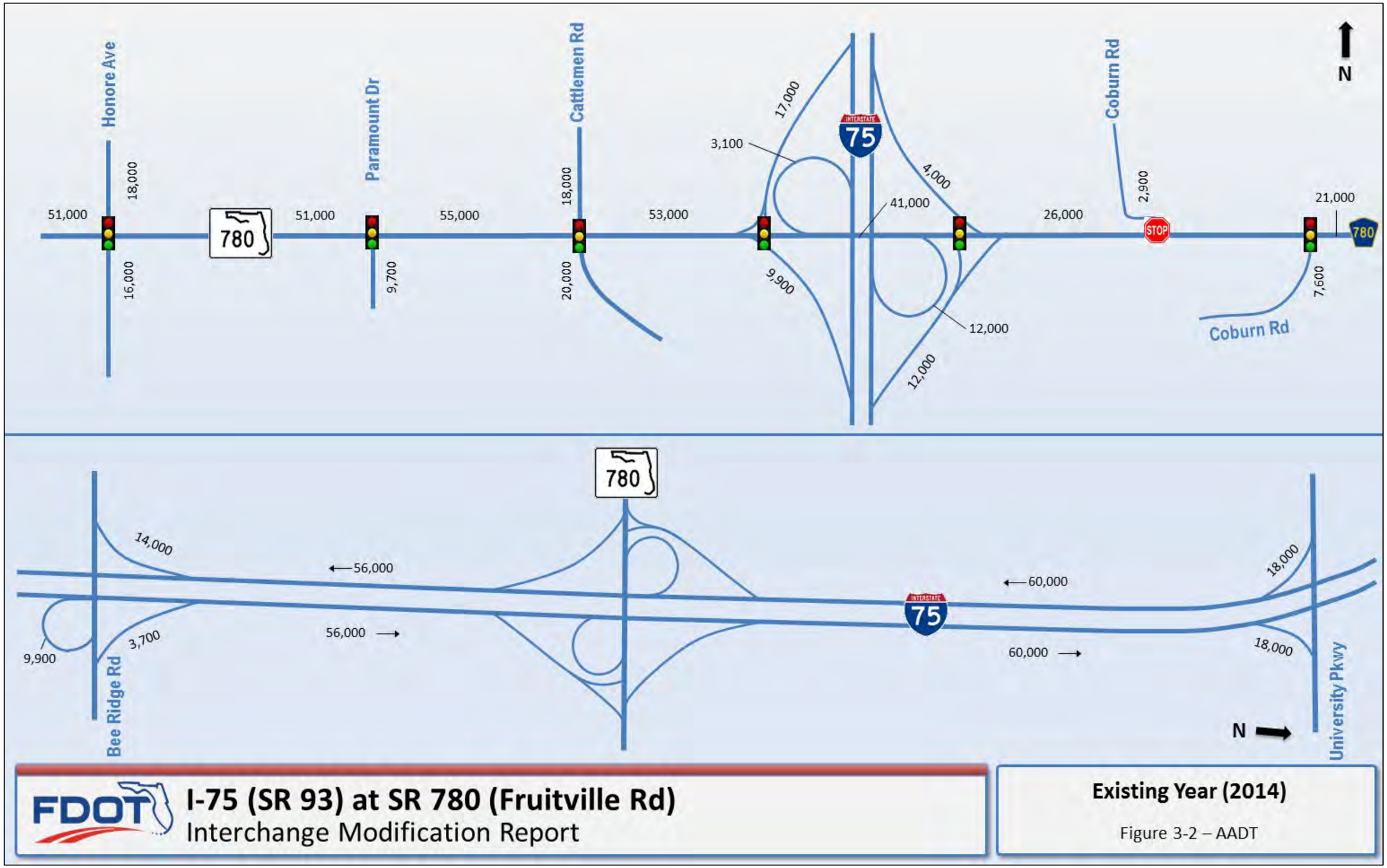
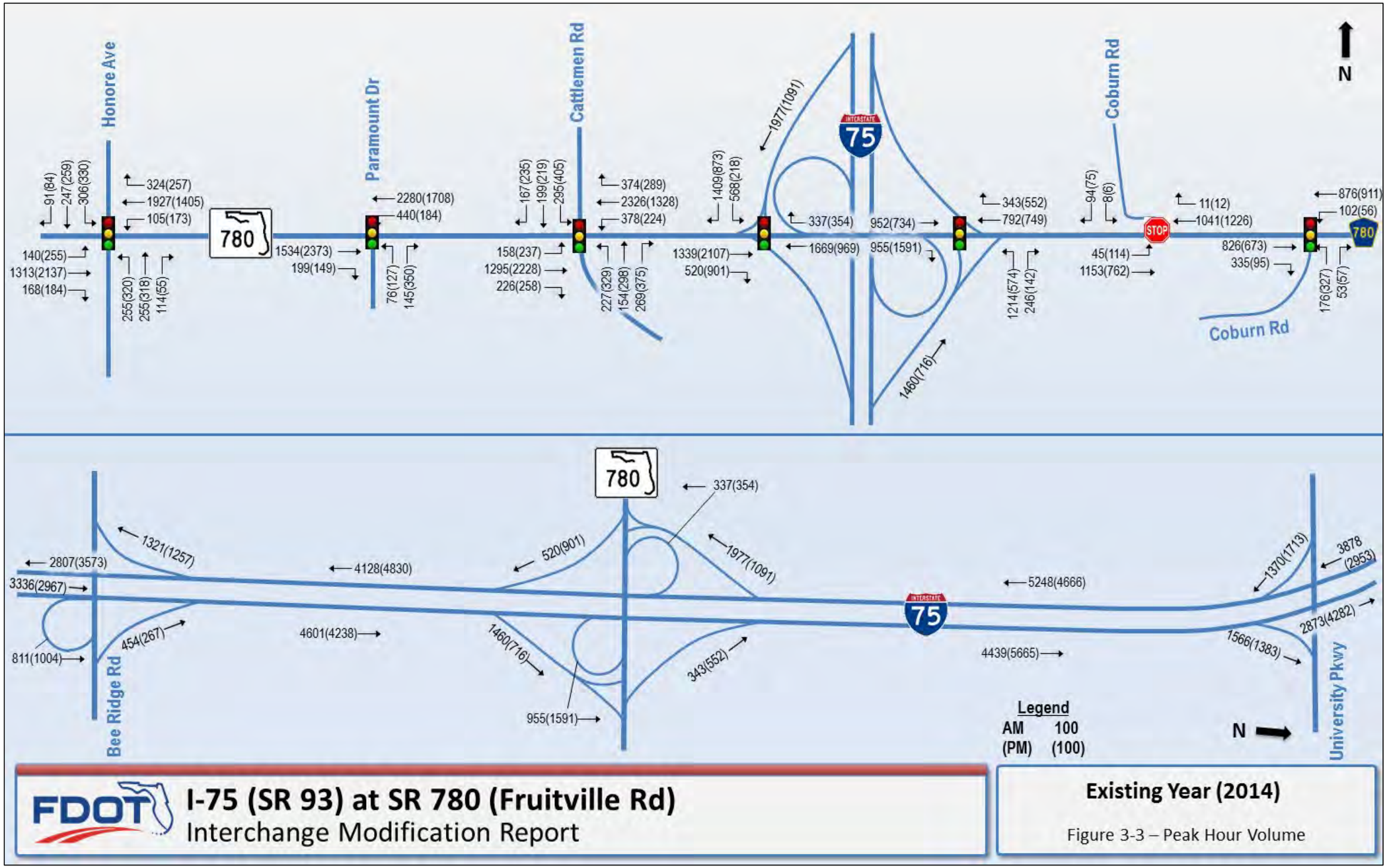


Figure 3-3: Existing Year (2014) Peak Hour Volume



3.5 EXISTING YEAR (2014) OPERATIONAL ANALYSIS

3.5.1 EXISTING YEAR (2014) I-75 MAINLINE AND RAMPS ANALYSIS

The I-75 mainline segments and merge/diverge points were analyzed with Highway Capacity Software (HCS) 2010 using the balanced 2014 AM and PM peak hour traffic volumes. A summary of the results can be found in **Table 3.1** and **Table 3.2**. All I-75 segments and merge/diverge points operate at an acceptable LOS D or better with the exception of the I-75 southbound off-ramp to Fruitville Road during the AM peak hour, which operates at LOS F.

Table 3.1: Existing (2014) I-75 Mainline Segment Analysis

Interstate Segment	AM		PM	
	Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
NB I-75 north of Fruitville Rd	22.3	C	32.0	D
SB I-75 north of Fruitville Rd	28.3	D	23.8	C
NB I-75 south of Fruitville Rd	24.3	C	22.0	C
SB I-75 south of Fruitville Rd	20.4	C	25.0	C

Table 3.2: Existing (2014) Ramp Operational Analysis

Ramp	AM		PM	
	Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
SB Off-ramp to Fruitville Rd	36.2	F	31.4	D
NB Off-ramp to Fruitville Rd	32.0	D	28.7	D
NB I-75 On-ramp from WB Fruitville Rd	23.7	C	30.5	D
NB I-75 Loop-ramp from EB Fruitville Rd	21.7	C	28.7	D
SB I-75 On-ramp from EB Fruitville Rd	22.7	C	27.3	C
SB I-75 Loop-ramp from WB Fruitville Rd	15.7	B	17.5	B

3.5.2 EXISTING YEAR (2014) INTERSECTION OPERATIONAL ANALYSIS

As outlined in the MLOU, included in **Appendix A**, VISSIM was chosen to perform the operational analysis at the study intersections along Fruitville Road, including the ramp terminal intersections, because of the closely spaced intersections within the DDI. The 2014 VISSIM models were developed using the balanced 2014 traffic volumes and the existing roadway geometry as outlined in the VISSIM Model Calibration Memorandum, included in **Appendix D**.

The VISSIM model includes all signalized intersections along SR 780 from Honore Avenue to Coburn Road as well as the non-signalized intersection at Coburn Road. In addition to the I-75 on and off-ramps at Fruitville Road, the model also includes the southbound on-ramp and northbound off-ramp at University Parkway to the north and the southbound off-ramp and northbound on-ramps at SR 758 (Bee Ridge Road) to the south.

The study intersections along Fruitville Road were analyzed in VISSIM using existing year (2014) AM and PM peak hour volumes to determine the existing delays and approach queue lengths. Existing signal timings were obtained from Sarasota County and used in the existing year analysis. On Fruitville Road, traffic tends to travel away from I-75 in the AM and towards I-75 in the PM. The approach delays are summarized in **Table 3.3** below and are illustrated in **Figure 3-4**.

The delays for interchange intersection approaches range from 7 to 61 seconds/vehicle and delays for the Cattlemen Road and Coburn Road intersection approaches range from 6 to 97 seconds/vehicle. All intersections meet the criteria for overall intersection delay except for Cattlemen Road during the PM peak hour, which experiences 70 seconds of delay overall. In the PM, the Cattlemen Road intersection delays eastbound traffic from accessing the southbound ramp intersection, which explains the decreased delay east of Cattlemen Road. The metering is due to the heavy volume of eastbound vehicles approaching I-75 and only utilizing the two right most thru lanes in order to position for the downstream I-75 on-ramps. This trend was observed during field reviews and was replicated in the PM VISSIM model during calibration.

Vehicle queues were also collected using the 2014 VISSIM model as detailed in **Table 3.4**. Similar to the delay results, the PM eastbound vehicles heading towards the interstate experienced the highest queues. All queues were within the available storage length with the exception of the following:

- PM eastbound thru vehicles at the Cattlemen Road intersection
- AM and PM eastbound thru vehicles at the southbound ramp terminal intersection

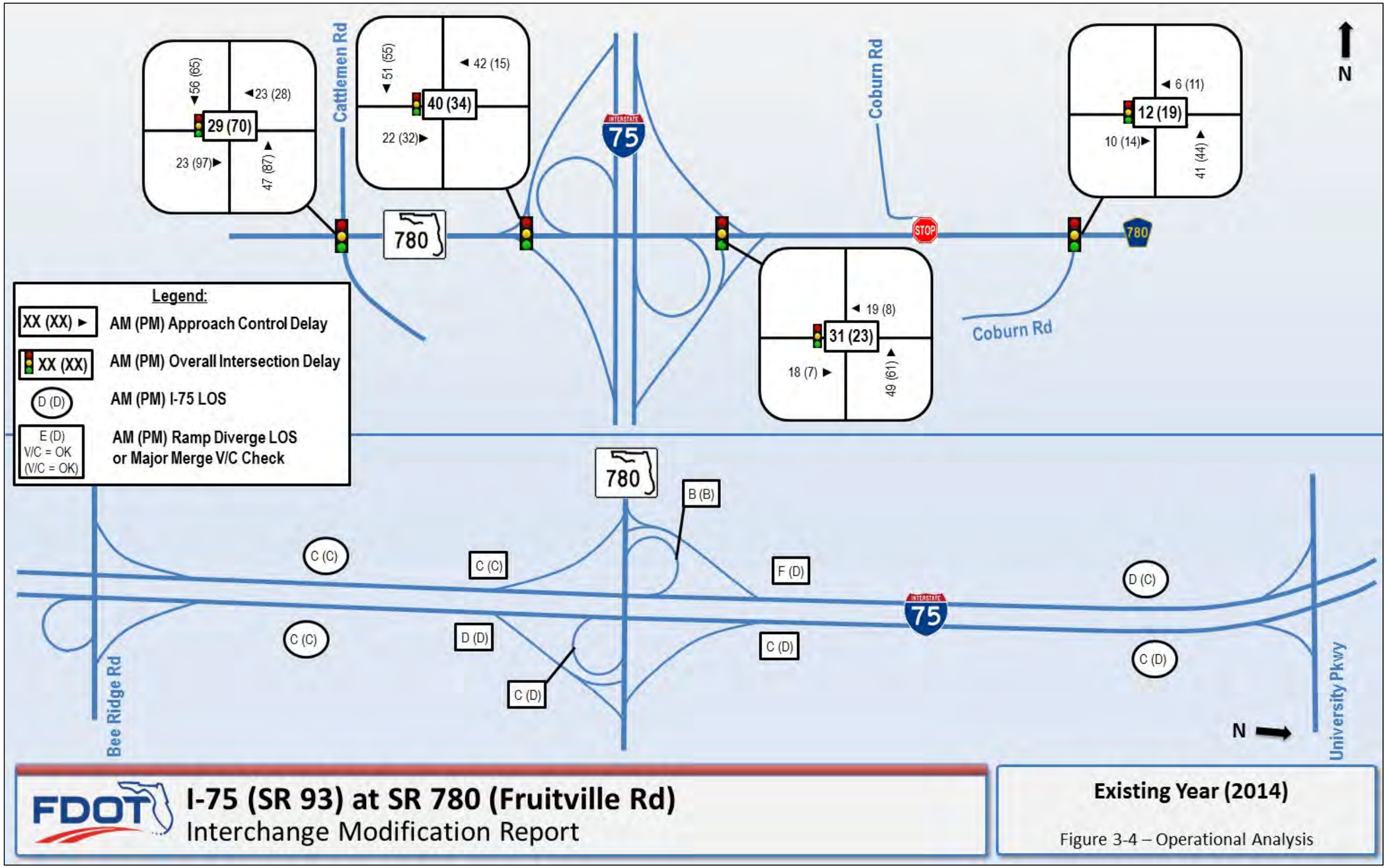
Table 3.3: Existing Year (2014) Intersection Operational Analysis

Intersection	AM Peak		PM Peak	
	Approach	Control Delay (Sec/Veh)	Approach	Control Delay (Sec/Veh)
Cattlemen Road	NB	47	NB	87
	SB	56	SB	65
	EB	23	EB	97
	WB	23	WB	28
Overall Intersection		**29**	**-**	**70**
SB Off-ramp	SB	51	SB	55
	EB	22	EB	32
	WB	42	WB	15
Overall Intersection		**40**	**-**	**34**
NB Off-ramp	NB	49	NB	61
	EB	18	EB	7
	WB	19	WB	8
Overall Intersection		**31**	**-**	**23**
Coburn Road (Signal)	NB	41	NB	44
	EB	10	EB	14
	WB	6	WB	11
Overall Intersection		**12**	**-**	**19**

Table 3.4: Existing Year (2014) Intersection Queue Length

Intersection		AM	PM
	Approach	Queue (Feet)	Queue (Feet)
Cattlemen Road	NB	216	672
	SB	371	555
	EB	685	1,580
	WB	716	532
SB Off-ramp	SB	606	447
	EB	1,176	1,336
	WB	976	304
NB Off-ramp	NB	543	318
	EB	490	199
	WB	379	305
Coburn Road (Signal)	NB LT	299	771
	EB TH	579	317
	WB TH	221	375

Figure 3-4: Existing Year (2014) Operational Analysis



3.6 SAFETY ANALYSIS

In order to analyze the safety conditions in the study area, five years of crash data was collected from 2009 to 2013 using the FDOT Crash Analysis Reporting System (CARS) and Signal4 Analytics website. The reports were reviewed and summaries were prepared to determine if any significant patterns exist and what countermeasures could be installed to improve safety within the interchange influence area. The reports were summarized by crash severity, crash type, and crash rate.

3.6.1 CRASH TYPES AND LOCATIONS

The type of crash is summarized in **Table 3.5** below for each intersection within the study area and the I-75 mainline segment. The most common type of crash was rear end which accounted for 77% of all the crashes. There was one pedestrian crash identified on I-75 involving a construction worker and one angle crash was identified during the study period.

Table 3.5: Crash Type and Location Summary

	Intersection with Fruitville Road							
	Cattlemen Road		I-75 Ramp Terminals		Coburn Road		I-75 Mainline	
Crash Type	5-Year Total	Average per year	5-Year Total	Average per year	5-Year Total	Average per year	5-Year Total	Average per year
Angle	1	0.2	0	0	0	0	0	0
Head-On	2	0.4	0	0	0	0	4	0.8
Left Turn	4	0.8	1	0.2	3	0.6	0	0
Right Turn	3	0.6	0	0	0	0	0	0
Rear-End	97	19.4	14	4	9	1.8	61	12.2
Sideswipe	7	1.4	4	0.8	0	0	39	7.8
Single Car	0	0	6	0	0	0	59	11.8
Pedestrian	0	0	0	0	0	0	1	0.2
Other	5	1	2	0.4	5	1	27	5.4
Total	**119**	**23.8**	**27**	**5.4**	**17**	**3.4**	**191**	**38.2**

3.6.2 CRASH SEVERITY

The number of property damage only (PDO), injury, and fatal crashes is summarized by year and intersection in **Table 3.6**. There were a total of 163 crashes on the Fruitville Road arterial segment, including side street approaches and I-75 on/off-ramps, and 111 crashes on the I-75 mainline within the study area. Out of the 27 crashes occurring on the I-75 ramps, 22% were single car “run off the road” type crashes on the loop on-ramps, including one fatality. There were also two fatal “run off the road” type crashes on the I-75 Mainline. The number of crashes at Cattlemen Road and on I-75 increased during the study period while the number of crashes decreased at the other locations.

Table 3.6: Injury Severity Summary

Year	Fruitville Road arterial segment										I-75 Mainline			
	Cattleman Road			I-75 Ramp Terminals				Coburn Road						
	PDO	Injuries	Total	PDO	Injuries	Fatal	Total	PDO	Injuries	Total	PDO	Injuries	Fatal	Total
2009	6	5	11	5	9	0	14	1	4	5	18	7	0	25
2010	8	15	23	6	3	0	9	4	3	7	18	10	1	29
2011	17	8	25	2	0	0	2	2	0	2	14	15	3	32
2012	22	8	30	0	2	0	2	0	1	1	18	20	1	39
2013	19	11	30	0	0	1	0	2	0	2	43	24	0	67
Total	**72**	**47**	**119**	**13**	**14**	**1**	**27**	**9**	**8**	**17**	**111**	**76**	**5**	**192**

3.6.3 CRASH RATES

The crash rates are identified in **Table 3.7** for the Fruitville Road arterial segment and I-75 freeway segment within the study area. The five year average crash rate was 0.326 per million vehicle-miles for I-75 and 1.227 per million vehicle-miles for Fruitville Road. The Fruitville Road crash rate was found to be above the five year Statewide Crash Rate average and hence crash mitigation measures are recommended along the Fruitville Road.

Table 3.7: Crash Rate Summary

	Length (Miles)	Year	Total Crashes	AADT	Crash Rate[1]	Statewide Crash Rate[1]
I-75	3	2009	25	103500	0.221	0.400
		2010	29	105500	0.251	0.382
		2011	32	104000	0.281	0.339
		2012	39	105500	0.338	0.366
		2013	67	113000	0.541	0.439
		5 Year Avg	38.4	106300	0.326	0.385
Fruitville Road	1.5	2009	34	50000	1.242	0.847
		2010	43	49000	1.603	1.098
		2011	27	49000	1.006	1.383
		2012	32	50500	1.157	1.386
		2013	33	53500	1.127	1.030
		5 Year Avg	33.8	50400	1.227	1.149

1) Crashes per 1 million vehicle-miles of travel

Section 4.0
DESCRIPTION OF ALTERNATIVES

The 2012 Systems Interchange Modification Report (SIMR) recommended Arterial Traffic Separation as the preferred alternative at the I-75 and Fruitville Road interchange. Therefore, Arterial Traffic Separation will be used in place of a No Build scenario and any new alternative must perform as well or better as compared with the SIMR alternative.

4.1 SIMR PREFERRED ALTERNATIVE – ARTERIAL TRAFFIC SEPARATION

As provided in the SIMR, this alternative adds arterial separation on Fruitville Road at the ramp terminal intersections and maintains the existing Partial Cloverleaf Interchange. This allows southbound and northbound left turn traffic along Fruitville Road to turn while eastbound and westbound thru traffic, respectively, continues to flow uninterrupted. Additional lanes will be added to the eastbound to northbound loop-ramp, and eastbound to southbound on-ramp.

Along eastbound Fruitville Road, an additional thru lane will be added beginning east of Cattlemen Road to create five total thru lanes approaching the I-75 interchange. Eastbound Fruitville Road east of the interchange contains four thru lanes approaching the Coburn Road signalized intersection where the right and left-most lanes drop as the right and left turn lanes, respectively.

Along westbound Fruitville Road, two lanes will be added beginning west of the stop controlled Coburn Road approach to lead to the north and southbound on-ramps at the I-75 interchange, although only 2 thru lanes exist at the northbound ramp terminal intersection. Westbound Fruitville Road west of the interchange contains five thru lanes (two more than existing) approaching Cattlemen Road. The fifth thru lane merges to create four thru lanes west of Cattlemen Road and the fourth thru lane is dropped as the westbound right turn lane at the Honore Avenue intersection.

Figure 4-1 illustrates the arterial separation alternative and more detailed concept plans can be found in **Appendix F**.

4.2 PROPOSED ALTERNATIVE – DIVERGING DIAMOND INTERCHANGE

This alternative converts the existing Partial Cloverleaf Interchange to a Diverging Diamond Interchange (DDI). Both loop-ramps will be removed and replaced with new on-ramps and the northbound off-ramp right turn will be modified from a single free-flow lane to a dual lane signalized approach. At the Cattlemen Road intersection, a third southbound left turn lane is proposed.

Along eastbound Fruitville Road, two additional eastbound thru lanes will be added beginning west of Paramount Drive to create five total thru lanes approaching the I-75 interchange. Both the eastbound to southbound and northbound I-75 on-ramps contain two turn lanes. Eastbound Fruitville Road east of the interchange contains three thru lanes approaching the Coburn Road signalized intersection where the right-most lane drops as the right turn lane.

Along westbound Fruitville Road, one thru lane will be added beginning west of the signalized Coburn Road intersection and an additional thru lane will be added west of the Coburn Road stop controlled approach to create four total thru lanes approaching the I-75 interchange. The westbound to northbound I-75 on-ramp contains a single lane and the I-75 southbound on-ramp has two lanes. Westbound Fruitville Road west of the interchange contains four thru lanes (one fewer than the SIMR) approaching Cattlemen Road. The fourth westbound thru lane is dropped as the westbound right turn lane at the Honore Avenue intersection.

Figure 4-2 illustrates the DDI alternative and additional concept plans beyond the interchange can be found in **Appendix G**.

Figure 4-1: SIMR Preferred Alternative – Arterial Separation

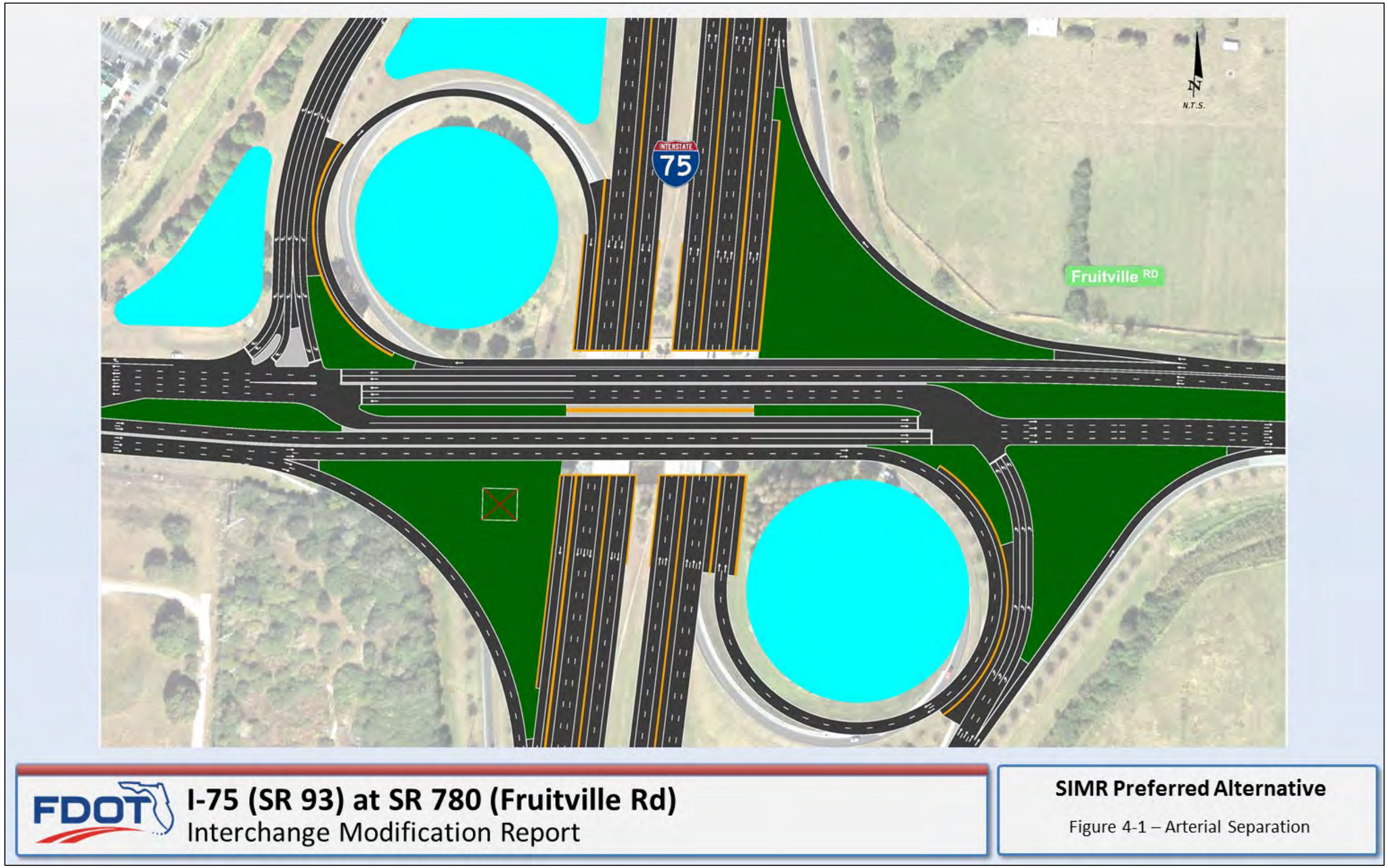
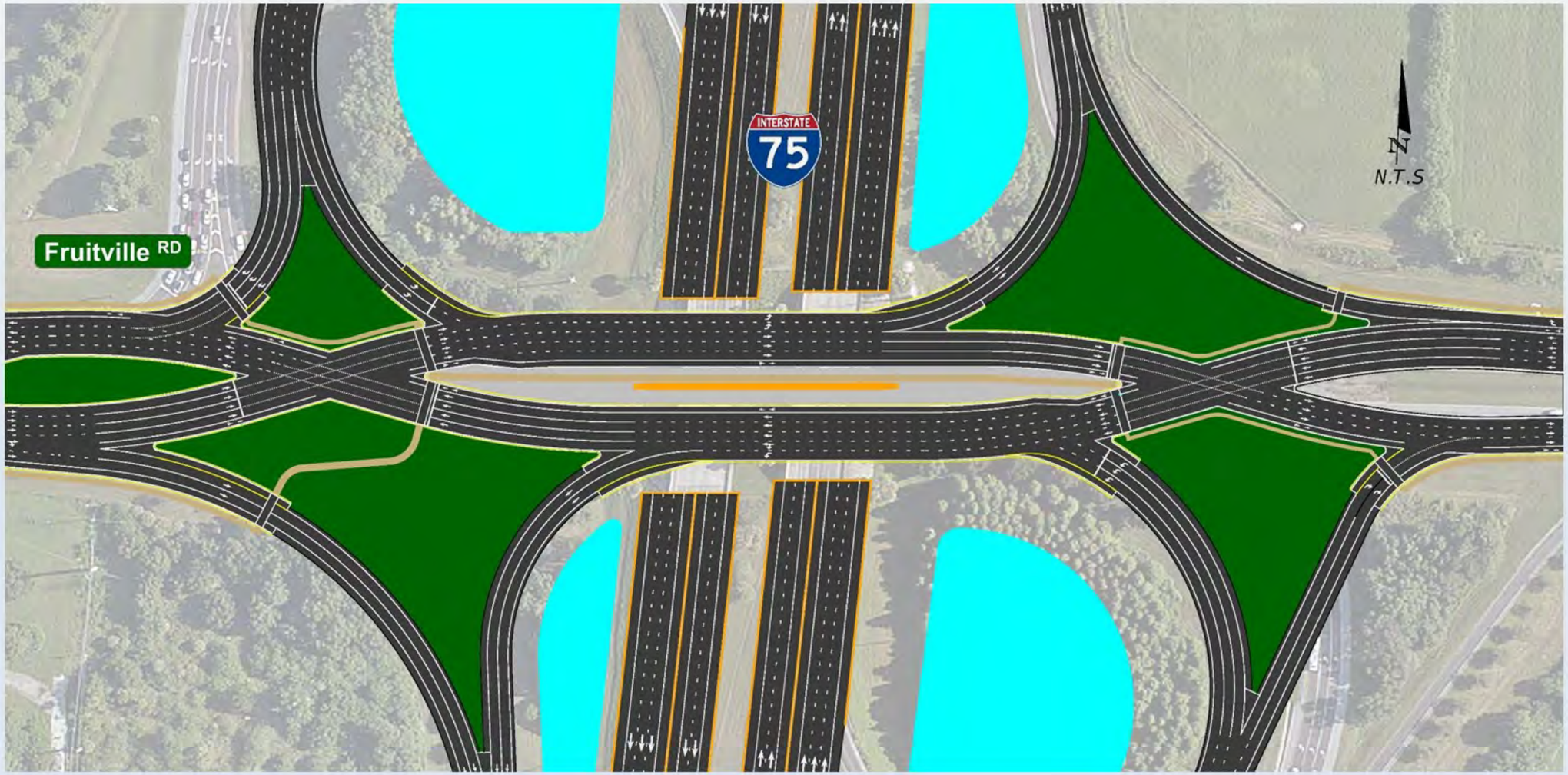


Figure 4-2: Proposed Alternative – Diverging Diamond Interchange



Section 5.0
FUTURE TRAFFIC FORECASTING

The purpose of this section is to document the travel demand modeling and development of future year Annual Average Daily Traffic (AADT) and Directional Design Hour Volumes (DDHVs) for the interchange and the adjacent arterial roadways and intersections. 2040 and 2020 were established as the Design Year and Opening Year, respectively. Specifically tasks such as assessment of validation accuracy of the base year (2007) model, review of network connectivity for reasonable loadings, review of socioeconomic data (ZDATA), and review of model consistency with Sarasota County Long Range Transportation Plan and network consistency with adjacent Manatee County were performed.

5.1 SOCIO-ECONOMIC AND ROADWAY NETWORK

Future traffic projections for this project were developed using the current adopted Sarasota-Manatee-Charlotte (SMC) regional travel demand model. This model is developed by the Florida Department of Transportation (FDOT) District One and Sarasota-Manatee Metropolitan Planning Organization (MPO). This model reflects the 2035 Long Range Transportation Plan (LRTP) for Sarasota and Manatee counties. This model has a base validation year of 2007 and has a future horizon year of 2035. The SMC travel demand model is based on the Florida Standard Urban Transportation Modeling Structure (FSUTMS) using Citilabs' CUBE software and is recognized by the Florida Department of Transportation District One, as well as the Sarasota-Manatee MPO as the accepted travel demand forecasting model for Sarasota County (SMC Model). The most recently adopted Cost Affordable (CA) roadway network along with the ultimate ten- lane cross section along I-75 is included in this model. The SMC Model was specifically refined by FDOT District One for use in the interchange projects along I-75 in Manatee and Sarasota County. The SMC Model was validated for the base year 2007 by FDOT and met the required regional model validation criteria.

The 420 acre area located at the Fruitville Road interchange, east of Interstate 75, has been referred to as the "Fruitville Initiative". This area represents a coordinated public-private partnership and was designated in the County's Comprehensive Plan in 2010. It is designated as a major employment center, allowing for a variety of uses to be considered. Due to the vicinity of this development to the I-75 and Fruitville Road interchange, the land use and network review were coordinated with FDOT and their model consultant. After due diligence review, adjustments and coordination with FDOT, it was confirmed that the Fruitville Initiative and the roadway network in the 2035 model network were adequately incorporated in this model.

5.2 HISTORIC GROWTH TRENDS

A review of historic traffic counts for FDOT count stations along I-75 and Fruitville Road was conducted. Trend annual historic growth rates were calculated using FDOT's Traffic Trend Analysis tool. The trends analysis indicates that the average annual growth rate for I-75 north of Fruitville Road was 2.89% per year and was 3.68% south of Fruitville Road. Along Fruitville Road, the average growth rate was 1.04%.

5.3 HORIZON YEAR 2035 SMC MODEL

Prior to obtaining future traffic volumes from the SMC Model, the 2035 SMC Model was reviewed to verify that nearby major development land uses and cost feasible projects were adequately represented in the model ZDATA (socioeconomic data) and network, respectively. The following land use data and roadway network inclusions were specifically verified:

- Four (two in each direction) special use lanes (SUL) along I-75 are included in the 2035 CA network.
- An additional traffic analysis zone (TAZ 1660) was added to reflect the more recent Fruitville Initiative future land uses. The land uses from Fruitville Initiative are adequately included in the model ZDATA.
- Lakewood Ranch Boulevard four-lane extension to Fruitville Road connecting at existing Coburn Road south intersection.
- A two-lane East-west Road connecting Lakewood Ranch Boulevard and Cattlemen Road with an overpass on I-75 just north of Fruitville Road.

The Sarasota-Manatee Long-Range Transportation Plan (LRTP), FDOT Five-Year Adopted Work Program for 2014 to 2018, and the Sarasota-Manatee Metropolitan Planning Organization (MPO) Transportation Improvement Plan (TIP) for 2014 to 2018 were reviewed to determine if there were any funded network improvements that were not represented in the Horizon Year (2035) SMC CA Model. All fully funded improvements were represented in the Horizon Year (2035) Model network.

5.4 DEVELOPMENT OF DESIGN YEAR (2040) TRAFFIC VOLUMES

5.4.1 DESIGN YEAR (2040) ANNUAL AVERAGE DAILY VOLUMES

The 2035 AADT volumes along I-75, Fruitville Road and the side streets located within the I- 75/Fruitville Road project study area were obtained from the 2035 SMC model using a Model Output Conversion Factor (MOCF) factor of 0.92 along I-75 and 0.90 for Fruitville Road and the connecting side streets. The Design Year (2040) AADT volumes were developed using a combination of 2035 AADT, historic trend analysis and FDOT recommended growth rates. Manual adjustments were made based on reasonableness checks, balancing and comparison to existing year (2014) AADT. **Table 5.1** shows the comparison of the 2007 model AADT, 2014 existing AADT, 2035 model AADT, and 2040 AADT.

The AADT volumes for Special Use Lanes (SULs) were developed based on the percentage of traffic using the SUL compared to the General Use Lanes (GULs) as shown in the 2035 SMC regional travel demand model. The AADTs along mainline I-75 were balanced after the AADTs for slip ramps and SULs were established. The AADTs at the I-75 and Fruitville Road interchange were developed for current interchange configuration. For Build interchange configurations, the traffic volumes will be reassigned using logical movements. **Figure 5-1** and **Figure 5-2** show the Design Year (2040) AADTs for the Systems Interchange Modification Report (SIMR) preferred alternative and the DDI alternative.

Table 5.1: Development of Design Year (2040) Traffic Volumes

Roadway	Location	2007 AADT (Model)	2014 AADT (Counts)	2035 AADT (Model)	2040 AADT	Applied Growth Rate
I-75	Bee Ridge Rd to SUL slip	113800	112000	195000	199400	3.00%
	SUL slip ramps to Fruitville Rd	113800	112000	195000	199400	3.00%
	Fruitville Rd to University	116200	120000	178800	204200	2.60%
Fruitville Rd	Honore Ave to Paramount Dr	45500	51000	62300	70900	1.50%
	Paramount Dr to Cattlemen	46200	55000	63800	76500	1.50%
	Cattlemen Rd to I-75	60800	53000	75500	79000	1.89%
	I-75 to Lakewood Ranch Blvd	30400	26000	48500	50900	3.68%
Honore Ave	North of Fruitville Rd	11000	18000	15900	25000	1.50%
	South of Fruitville Rd	13900	16000	16600	22200	1.50%
Cattlemen Rd	North of Fruitville Rd	18400	18000	30300	33000	3.20%
	South of Fruitville Rd	18900	20000	26100	28400	1.62%
I-75 and Fruitville Rd Interchange	SB Off-ramp	15800	17000	17200	25800	2.00%
	WB to SB Loop On-ramp	4500	3100	12500	8400	6.50%
	EB to SB On-ramp	11200	9900	13600	15000	2.00%
	NB Off-ramp	14300	12000	21000	23400	3.65 %
	EB to NB Loop On-ramp	11800	12000	10600	18200	2.00%
	NB On-ramp	4900	4000	3000	7600	3.46%

Figure 5-1: Design Year (2040) SIMR Preferred Alternative AADT

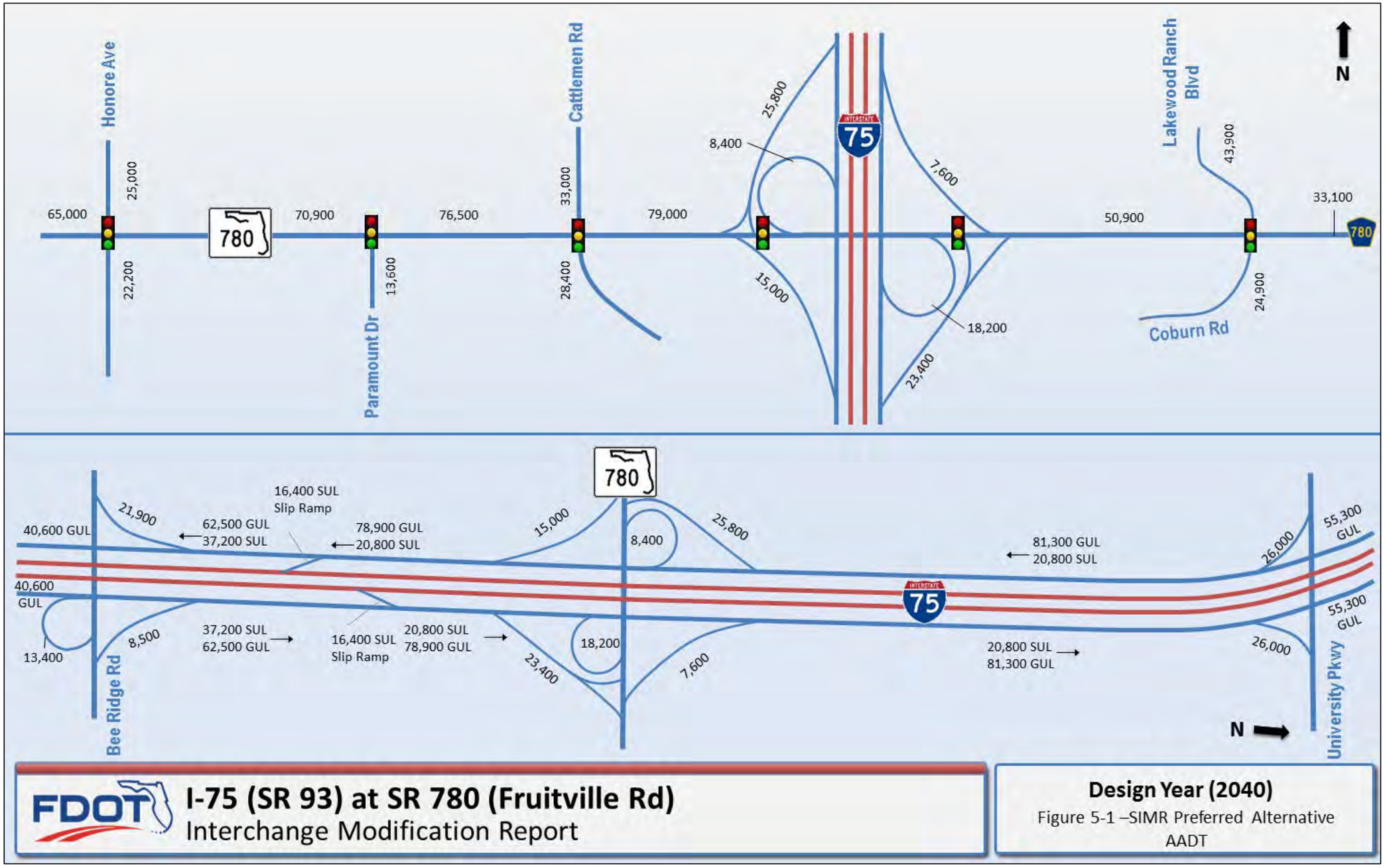
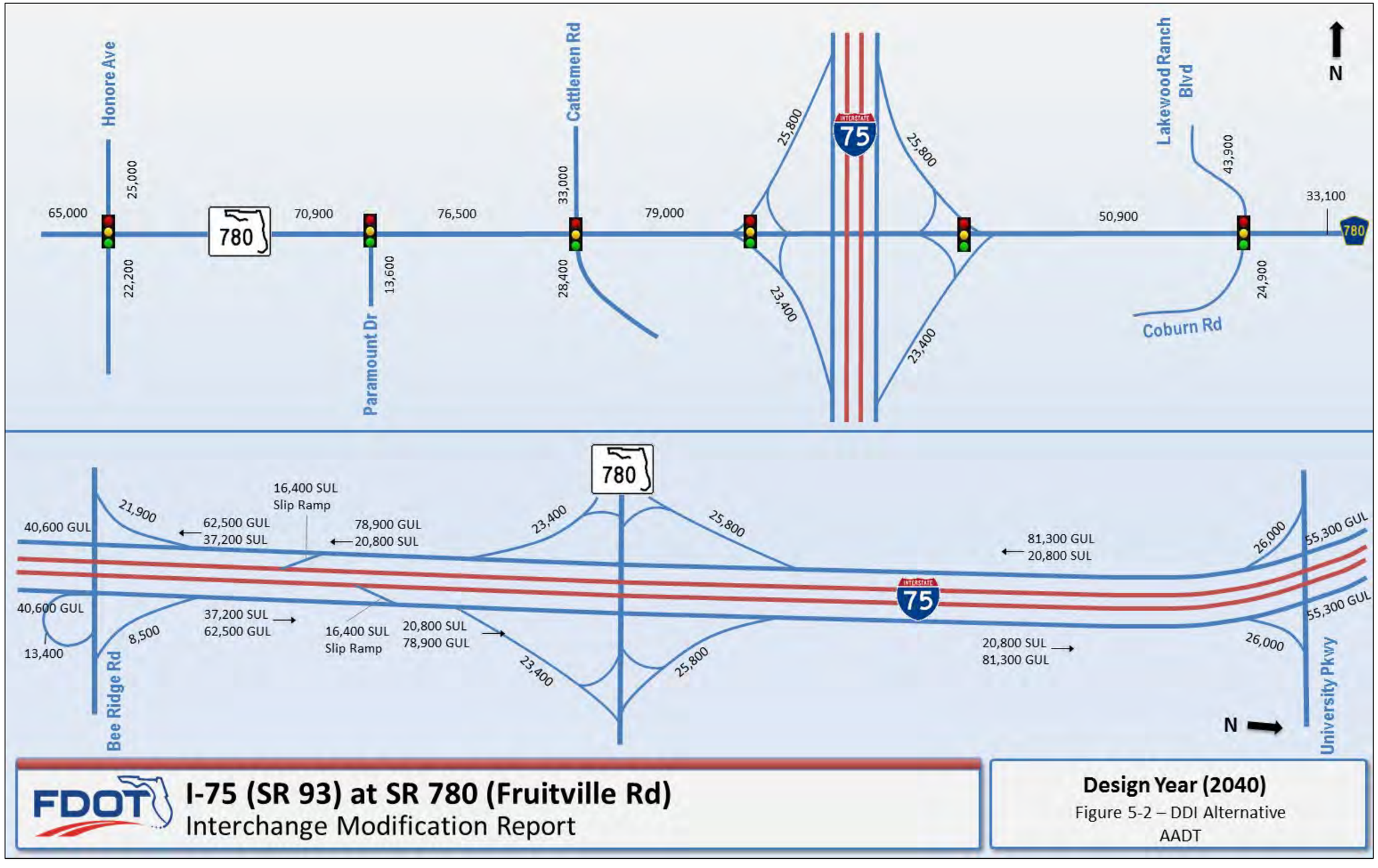


Figure 5-2: Design Year (2040) DDI Alternative AADT



5.4.2 CONSISTENCY WITH ADJACENT STUDIES

For reasonable consistency, the design year (2040) projected traffic volumes were compared to the traffic forecasts from the two adjacent projects:

- I-75 and Bee Ridge Road interchange (Final Traffic Forecast Memorandum, June 2014), and
- I-75 and University Parkway interchange (Final Traffic Forecast Memorandum, February 2014)

The Design Year is 2040 for the Bee Ridge Road study and 2038 for the University Study. **Table 5.2** shows a comparison of I-75 mainline and ramp volumes from adjacent studies. It should be noted that the two studies have different study limits from each other and therefore it is not possible to match I-75 volumes from both studies and balance them with this project's volumes. After balancing from I-75 south to north, the volumes were lower south of Fruitville Road and higher north of Fruitville Road in comparison to adjacent studies. This approach matches the existing traffic pattern where traffic on I-75 north of Fruitville Road is higher than traffic south of Fruitville Road and keeps the difference in traffic on the mainline more comparable to adjacent studies.

Table 5.2: Comparison of Design Year AADT from Adjacent Projects

Roadway	Location	Fruitville Road Project (2040)	Bee Ridge Road Project (2040)	University Parkway Project (2038)
I-75 mainline	Bee Ridge Rd to SUL slip ramps (GUL plus SUL)	199400	219200	N/A
	SUL slip ramps to Fruitville Rd (GUL plus SUL)	199400	219200	N/A
	Fruitville Rd to University Pkwy (GUL plus SUL)	204200	N/A	196100
	SB slip ramp to SUL	16400	16300	N/A
	NB slip ramp to GUL	16400	16300	N/A
I-75 and Fruitville Rd Interchange	SB Off-ramp	25800	N/A	N/A
	SB Loop On-ramp	8400	N/A	N/A
	SB On-ramp	15000	17200	N/A
	NB Off-ramp	23400	22800	N/A
	NB Loop On-ramp	18200	N/A	N/A
	NB On-ramp	7600	N/A	N/A
I-75 and Bee Ridge Rd	SB Off-ramp	21900	21900	N/A
	NB On-ramp (both ramps)	21900	21900	N/A
I-75 and University Parkway	SB On-ramp	26000	N/A	26000
	NB Off-ramp	26000	N/A	26000

Note: N/A – not included in the study

5.4.3 DESIGN YEAR (2040) DIRECTIONAL DESIGN HOUR VOLUMES

The Design Year (2040) DDHVs were developed by multiplying the 2040 AADT volumes by the approved design traffic factors. The existing year (2014) turning movement volumes were entered into the TURNS5 (V-02) volume development spreadsheet and used as a basis for developing the design year (2040) turning movement volumes. A manual smoothing process was then performed to ensure that traffic flows were balanced between adjacent intersections:

- For consistency of volume flows between count locations.
- To obtain peak hour volumes that closely represents approved K-factor and D-factor.
- To balance the approach and departure volumes associated with adjacent intersections.
- To increase individual movement volumes that were estimated to be lower than the existing volumes.
- To reduce individual turning movement volumes that were estimated to be significantly higher than the existing volumes.

After the DDHVs were balanced, the design factors were checked to verify that they were maintained within acceptable ranges as specified in the FDOT Project Traffic Forecasting Handbook 2012.

For SULs, the directional peak hour volume was limited to a maximum of 3,660 per two lanes. This was done to maintain acceptable flow on the SULs. For the Bee Ridge Road north side ramps, the volumes have been kept consistent with the volumes from the Bee Ridge Road project. For the University Parkway south side ramps, the volumes have been slightly revised to represent a better D-factor than what was shown in the University Parkway study.

The DDHVs for AM peak hour were developed by reversing the reciprocal movements from PM peak hour volumes. **Figure 5-3** and **Figure 5-4** show the Design Year (2040) DDHVs for the SIMR preferred alternative and the DDI alternative, respectively.

5.4.4 DEVELOPMENT OF OPENING YEAR (2020) TRAFFIC VOLUMES

The Opening Year (2020) AADTs and DDHVs were developed using the linear interpolation of Design Year (2040) and Existing Year (2014), and historic growth trends. The SULs along I-75 were not assumed in 2020 for this project. The Opening Year (2020) AADTs are shown in **Figure 5-5** and **Figure 5-6**. The DDHVs for Opening Year (2020) are shown in **Figure 5-7** and **Figure 5-8** for the SIMR Preferred Alternative and the DDI Alternative, respectively. Reasonable consistency checks were also conducted for Opening Year volumes similar to the Design Year Volumes.

Figure 5-3: Design Year (2040) SIMR Preferred Alternative DDHV

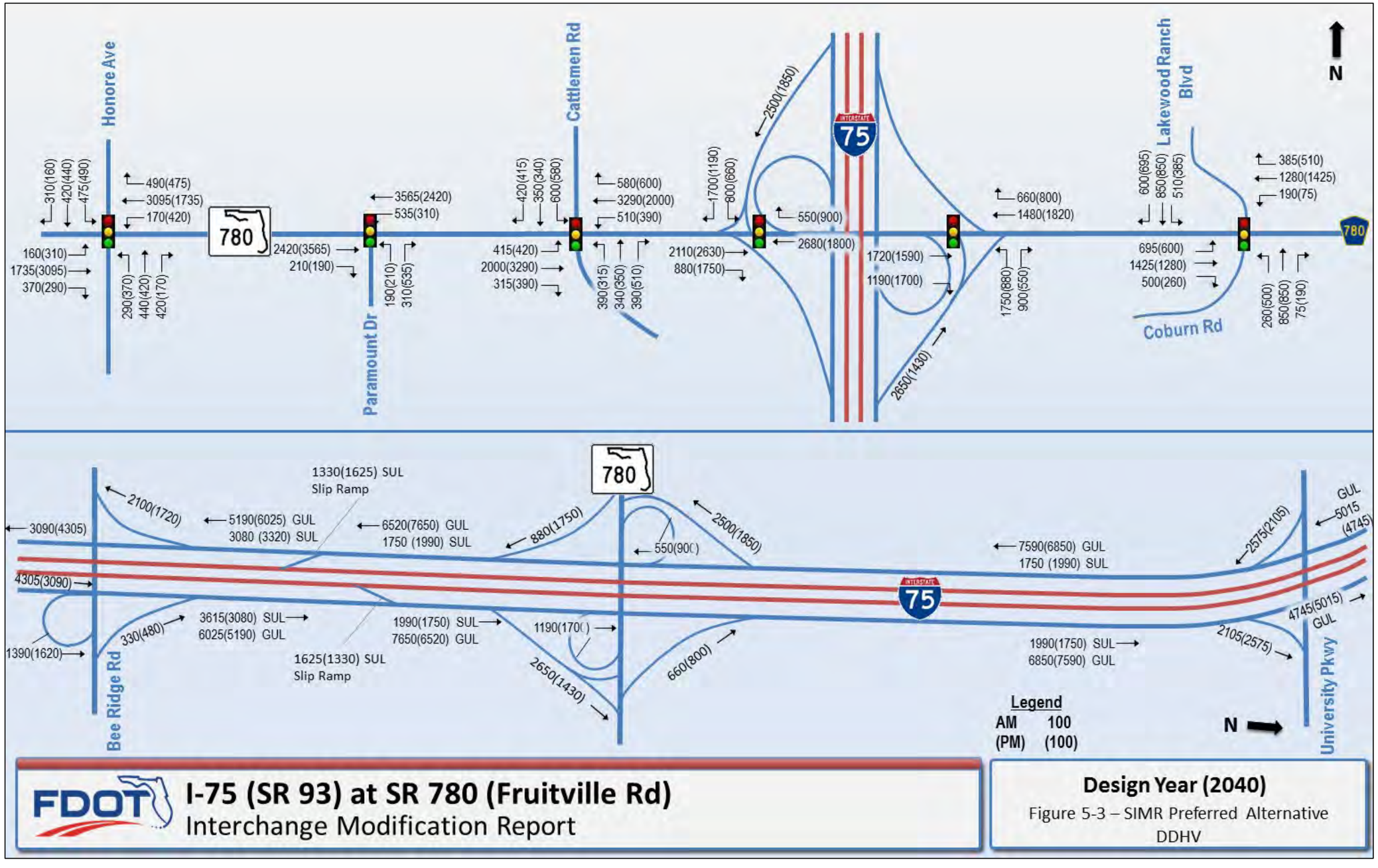


Figure 5-4: Design Year (2040) DDI Alternative DDHV

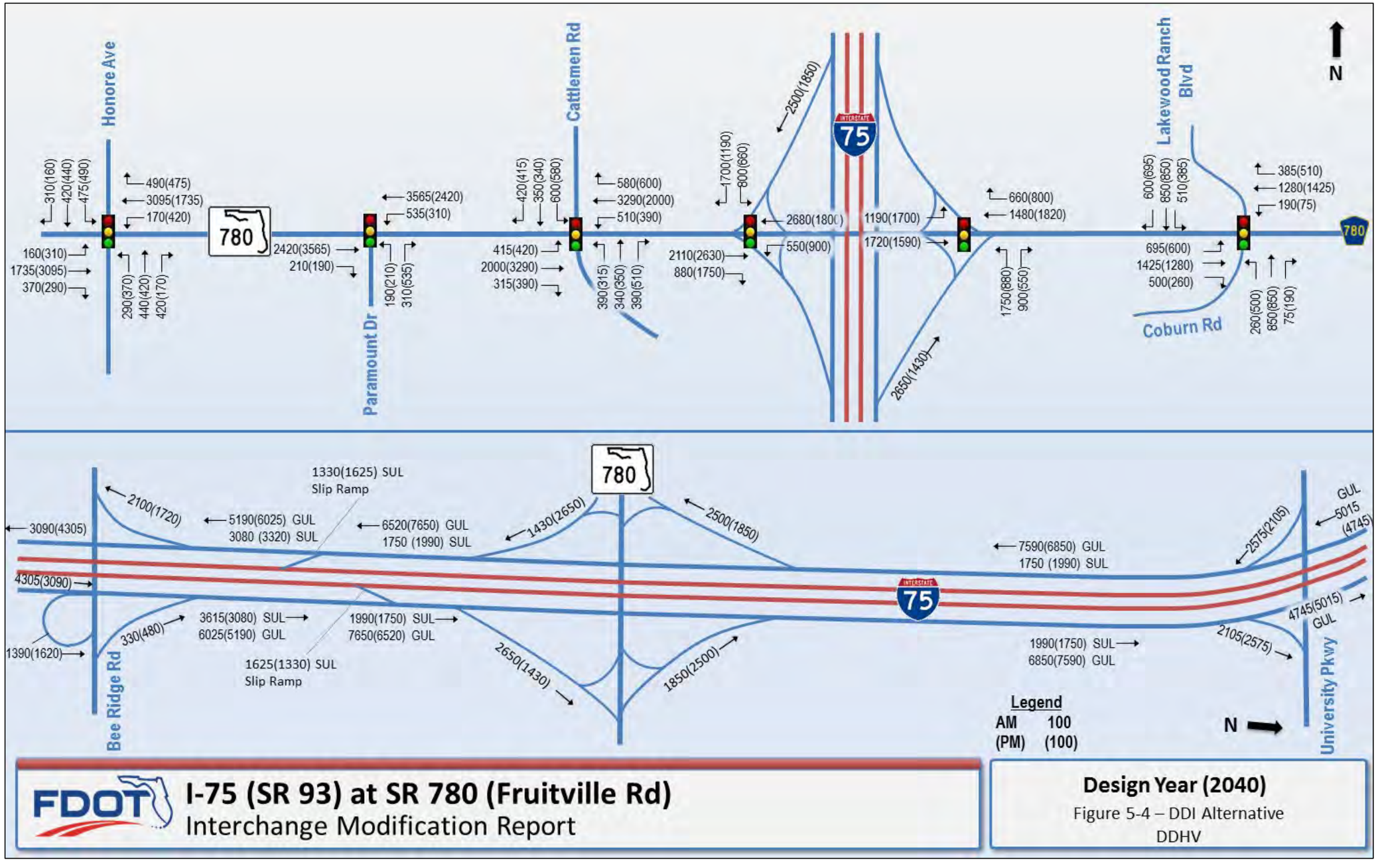


Figure 5-5: Opening Year (2020) SIMR Preferred Alternative AADT

Figure 5-6: Opening Year (2020) DDI Alternative AADT

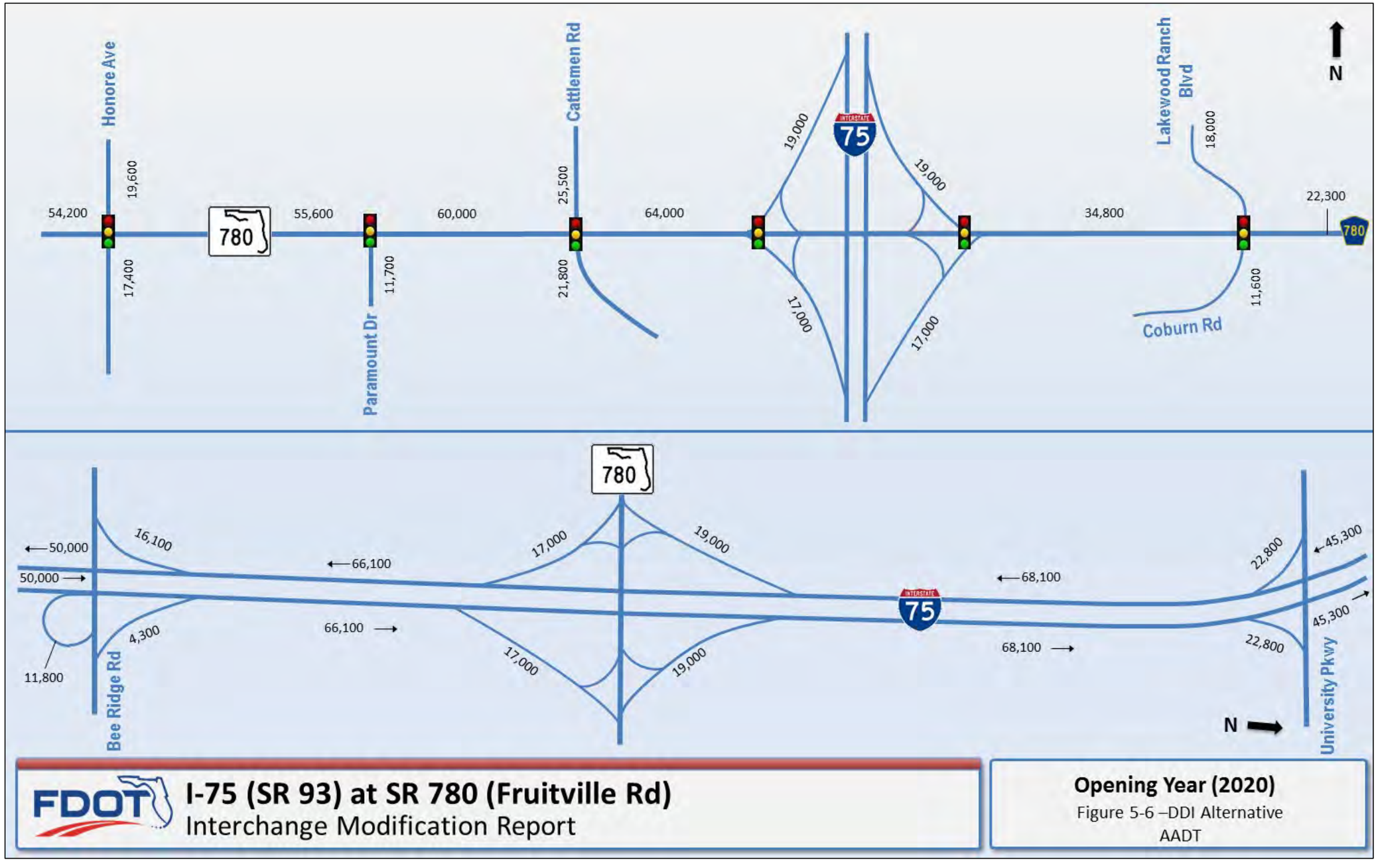


Figure 5-7: Opening Year (2020) SIMR Preferred Alternative DDHV

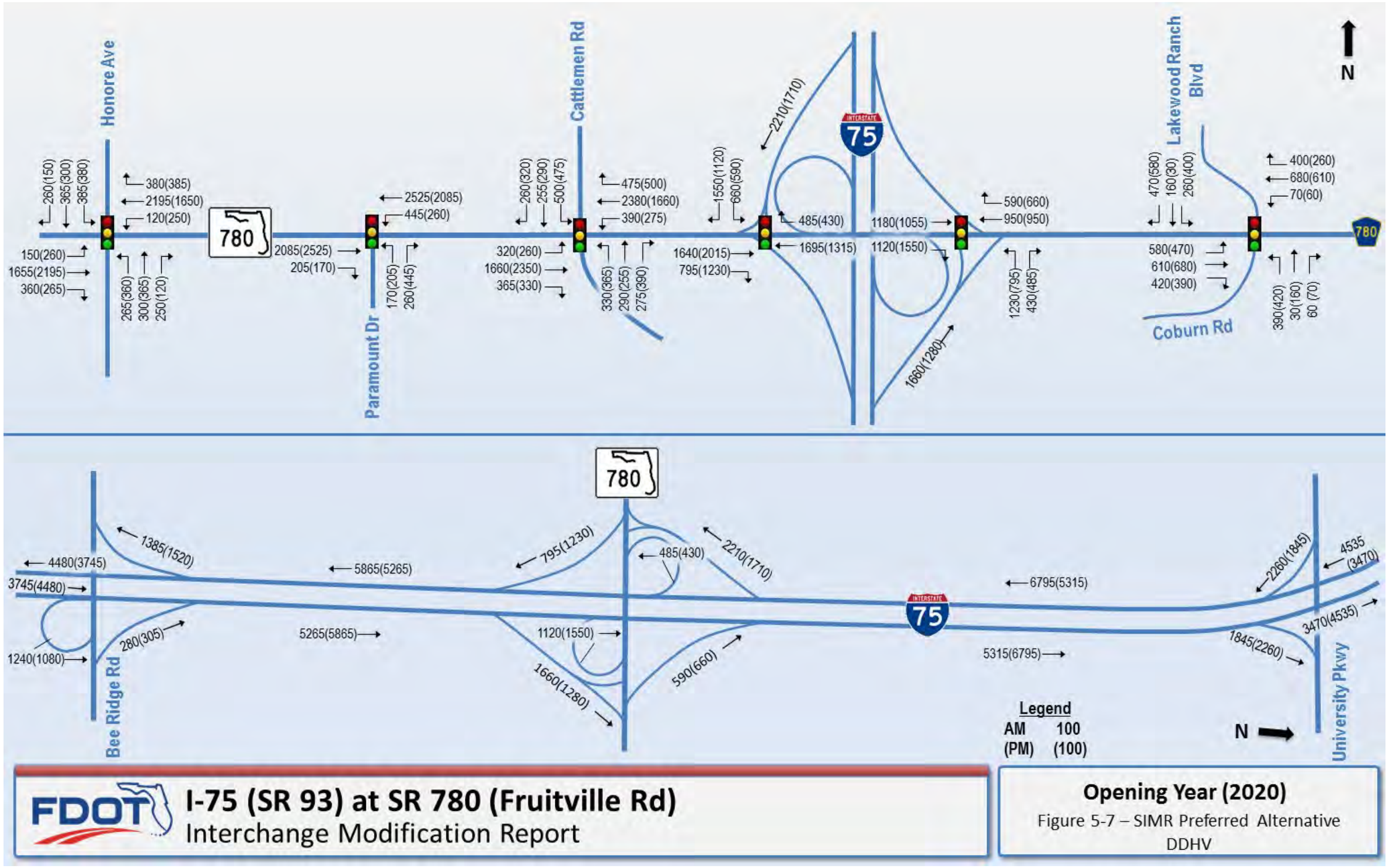
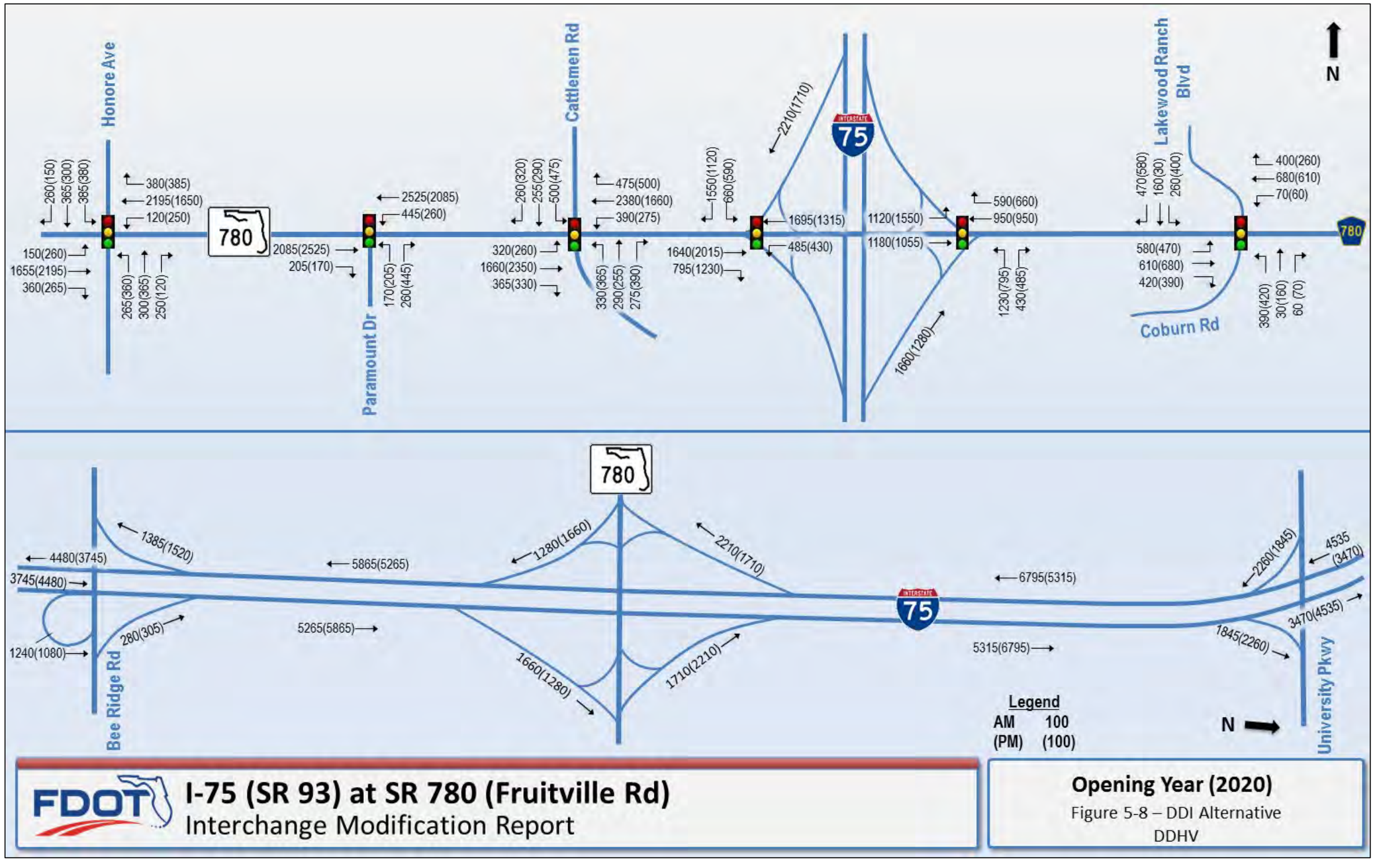


Figure 5-8: Opening Year (2020) DDI Alternative DDHV



Section 6.0
ALTERNATIVES ANALYSIS

6.1 CONFORMANCE WITH TRANSPORTATION PLANS

The proposed interchange improvement is included in the 2014 Edition of the Florida Department of Transportation (FDOT) Strategic Intermodal System (SIS) Cost Feasible Plan for 2024 – 2040 and the Sarasota/Manatee Metropolitan Planning Organization (MPO) 2040 Long Range Transportation Plan (LRTP) Financially Feasible Plan. Construction and Right-of-Way funding is planned between 2024 – 2040.

6.2 OPERATIONAL PERFORMANCE

The two alternatives were analyzed in the AM and PM peak periods in both the opening year (2020) and design year (2040). The I-75 mainline and ramp merge/diverge points were analyzed using HCS 2010 or HCM 2010 methodologies and the intersection operations and queues were analyzed using VISSIM models. The VISSIM model for the arterial separation alternative was created based on the conceptual design plan included in the 2008 I-75 Project Development and Environment (PD&E) Study. The Diverging Diamond Interchange (DDI) VISSIM model was created based on the developed design concepts. The analyses included a 30 minute warm up period, followed by the peak hour, and a 45 minute cool down period to allow any oversaturated conditions to dissipate and document that model-wide latent demand had peaked and was decreasing. The models include all intersections along Fruitville Road from Honore Avenue to the signalized intersection at Coburn Road east of I-75, but only the signalized intersections from Cattlemen Road to Coburn Road were analyzed for delay and queueing. The intersections at Honore Avenue and Paramount Drive were included because that is where positioning for the I-75 on-ramps in the right most thru lanes begins to occur during the PM peak. The signalized intersection at Coburn Road was modified to a four-leg intersection based on the future extension of Lakewood Ranch Boulevard, which has been approved by the Sarasota County MPO. 2020 and 2040 Design Hour Traffic Volumes were created as part of the Traffic Forecasting for this intersection and were used in the VISSIM models.

Signal timings were modified and optimized for the 2020 and 2040 analyses for both alternatives because of the modified interchange geometry and addition of thru lanes along Fruitville Road. All existing turning restrictions were maintained in the future year models.

6.3 DESIGN YEAR (2040) ANALYSIS

6.3.1 DESIGN YEAR (2040) I-75 MAINLINE ANALYSIS

The I-75 mainline segment analysis was performed using Highway Capacity Software (HCS) 2010 for the Ultimate Build condition which includes two Special Use Lanes (SUL), three General Use Lanes (GUL), and one auxiliary lane in each direction both north and south of the Fruitville Road interchange. The results are independent of the interchange configuration and are shown below in **Table 6.1**. All segments of I-75 are anticipated to operate at an acceptable Level of Service in the design year 2040.

Table 6.1: 2040 I-75 Mainline Segment Analysis

Interstate Segment	AM		PM	
	Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
NB I-75 north of Fruitville Rd	27.4	D	32.3	D
SB I-75 north of Fruitville Rd	32.3	D	27.4	D
NB I-75 south of Fruitville Rd	32.7	D	25.4	C
SB I-75 south of Fruitville Rd	25.4	C	32.7	D

6.3.2 DESIGN YEAR (2040) RAMP OPERATIONAL ANALYSIS

Merge and diverge analyses were conducted for the I-75 on and off-ramps within the study area and are summarized in **Table 6.2**. According to Chapter 13 'Ramp Merge and Diverge Segments' of the HCM 2010, analyzing the diverge and merge areas at the Fruitville Road interchange and adjacent interchanges requires the use of major merge and diverge methodology because of the auxiliary lanes along I-75. This methodology involves checking the capacities of the intersecting roadway segments both upstream and downstream of the merge or diverge and comparing it with the criteria of Exhibit 13-2 in the HCM 2010 to determine the Level of Service. Both the northbound and southbound off-ramps are projected to operate at LOS E in the AM in 2040 based on the density calculation for major diverge methodology which is driven by the number of lanes on the I-75 mainline prior to the diverge. The only ramp with a volume/capacity ratio greater than one is the Systems Interchange Modification Report (SIMR) preferred alternative southbound on-ramp.

6.3.3 DESIGN YEAR (2040) INTERSECTIONS OPERATIONAL ANALYSIS

The study intersections were analyzed and the Measurements of Effectiveness (MOE's) outlined in the methodology section were evaluated to ensure the minimum criteria was met. The intersection analysis focused on obtaining minimum delays along Fruitville Road and minimizing queues adjacent to the interchange ramp terminal intersections. The results are summarized in the following sections.

6.3.3.1 DESIGN YEAR (2040) INTERSECTION OPERATIONAL ANALYSIS - SIMR PREFERRED ALTERNATIVE

The study intersections were analyzed using the VISSIM models with the arterial traffic separator geometry shown in the SIMR Conceptual Plans. The approach control delays were recorded for the AM and PM peak hour for the study intersections along Fruitville Road from Cattlemen Road to Coburn Road. The approach delays are summarized in **Table 6.3** and the intersection delays are depicted in **Figure 6-1**. The approach queue lengths, taken as the maximum queue length of all the movements of an approach, are summarized in **Table 6.4**. A detailed queue storage analysis is included in **Appendix E**. The approach delays for interchange intersections range from 1 to 54 seconds/vehicle and the Cattlemen Road and Coburn Road intersection approaches range from 33 to 236 seconds/vehicle. The Fruitville Road approach delays are all 179 seconds/vehicle or lower.

Table 6.2: 2040 Ramp Operational Analysis

Ramp			Capacity (pc/h)	AM				PM			
				Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS	Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS
Northbound Off-ramp	NB I-75 Mainline Upstream of Diverge		9600	8214	0.9	35.9	E	7000	0.7	30.6	D
	Off-ramp		4200	2845	0.7			1535	0.4		
	NB I-75 Mainline Downstream of Diverge		7200	5369	0.7			5465	0.8		
	Max. Desirable Flow Rate Entering Diverge Influence Area		4400	5261	1.2			3994	0.9		
Southbound Off-ramp	SB I-75 Mainline Upstream of Diverge		9600	8149	0.8	35.7	E	7355	0.8	32.2	D
	Off-ramp		4200	2684	0.6			1986	0.5		
	SB I-75 Mainline Downstream of Diverge		7200	5465	0.8			5369	0.7		
	Max. Desirable Flow Rate Entering Diverge Influence Area		4400	5143	1.2			4402	1.0		
Northbound On-ramp	NB I-75 Mainline Upstream of Merge		7200	5368	0.7	-	-	5465	0.8	-	-
	On-ramp		4200	1986	0.5	-	-	2684	0.6	-	-
	NB I-75 Mainline Downstream of Merge		9600	7354	0.8	-	-	8149	0.8	-	-
	Max. Desirable Flow Rate Entering Merge Influence Area		4600	5053	1.1	-	-	5806	1.3	-	-
Southbound On-ramp		SB I-75 Mainline Upstream of Merge	7200	6056	0.8	-	-	6335	0.9	-	-
	SIMR	On-ramp	2400	1535	0.6	-	-	2845	1.2	-	-
	DDI		4200		0.4	-	-		0.7	-	-
		SB I-75 Mainline Downstream of Merge	9600	7591	0.8	-	-	9180	0.9	-	-
	SIMR	Max. Desirable Flow Rate Entering Merge Influence Area	4600	4995	1.1	-	-	6480	1.4	-	-
	DDI		4600	5287	1.1	-	-	6770	1.5	-	-

Ramp		Capacity (pc/h)	AM				PM			
			Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS	Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS
Northbound University Parkway Off-ramp	NB I-75 Mainline Upstream of Diverge	9600	7355	0.8	32.2	D	8149	0.8	35.7	E
	Off-ramp	4200	2260	0.5			2765	0.7		
	NB I-75 Mainline Downstream of Diverge	7200	5095	0.7			5384	0.7		
	Max. Desirable Flow Rate Entering Diverge Influence Area	4400	4553	1.0			2765	0.6		
Southbound Bee Ridge Road Off-ramp	SB I-75 Mainline Upstream of Diverge	9600	5572	0.6	24.4	C	6469	0.7	28.3	D
	Off-ramp	4200	2255	0.5			1847	0.4		
	SB I-75 Mainline Downstream of Diverge	7200	3317	0.5			4622	0.6		
	Max. Desirable Flow Rate Entering Diverge Influence Area	4400	3748	0.9			3927	0.9		
Northbound Bee Ridge Road On-ramp	NB I-75 Mainline Upstream of Merge	7200	4622	0.6	-	-	3318	0.5	-	-
	On-ramp	4200	1847	0.4	-	-	2255	0.5	-	-
	NB I-75 Mainline Downstream of Merge	9600	6469	0.7	-	-	5573	0.6	-	-
	Max. Desirable Flow Rate Entering Merge Influence Area	4600	4488	1.0	-	-	4151	0.9	-	-
Southbound University Parkway On-ramp	SB I-75 Mainline Upstream of Merge	7200	5385	0.7	-	-	5095	0.7	-	-
	On-ramp	4200	2765	0.7	-	-	2260	0.5	-	-
	SB I-75 Mainline Downstream of Merge	9600	8150	0.8	-	-	7355	0.8	-	-
	Max. Desirable Flow Rate Entering Merge Influence Area	4600	5842	1.3	-	-	5171	1.1	-	-

Table 6.3: SIMR Preferred Alternative 2040 Intersection Operational Analysis

Intersection	AM		PM	
	Approach	Control Delay (Sec/Veh)	Approach	Control Delay (Sec/Veh)
Cattlemen Road	NB	80	NB	190
	SB	54	SB	66
	EB	33	EB	47
	WB	37	WB	70
Overall Intersection		44	-	76
SB Off-ramp	SB	41	SB	54
	EB	1	EB	3
	WB	24	WB	35
Overall Intersection		21	-	25
NB Off-ramp	NB	42	NB	24
	EB	14	EB	12
	WB	6	WB	7
Overall Intersection		22	-	13
Coburn Road (Signal)	NB	179	NB	236
	SB	208	SB	174
	EB	69	EB	57
	WB	164	WB	179
Overall Intersection		142	-	155

Figure 6-1: SIMR Preferred Alternative 2040 Operational Analysis

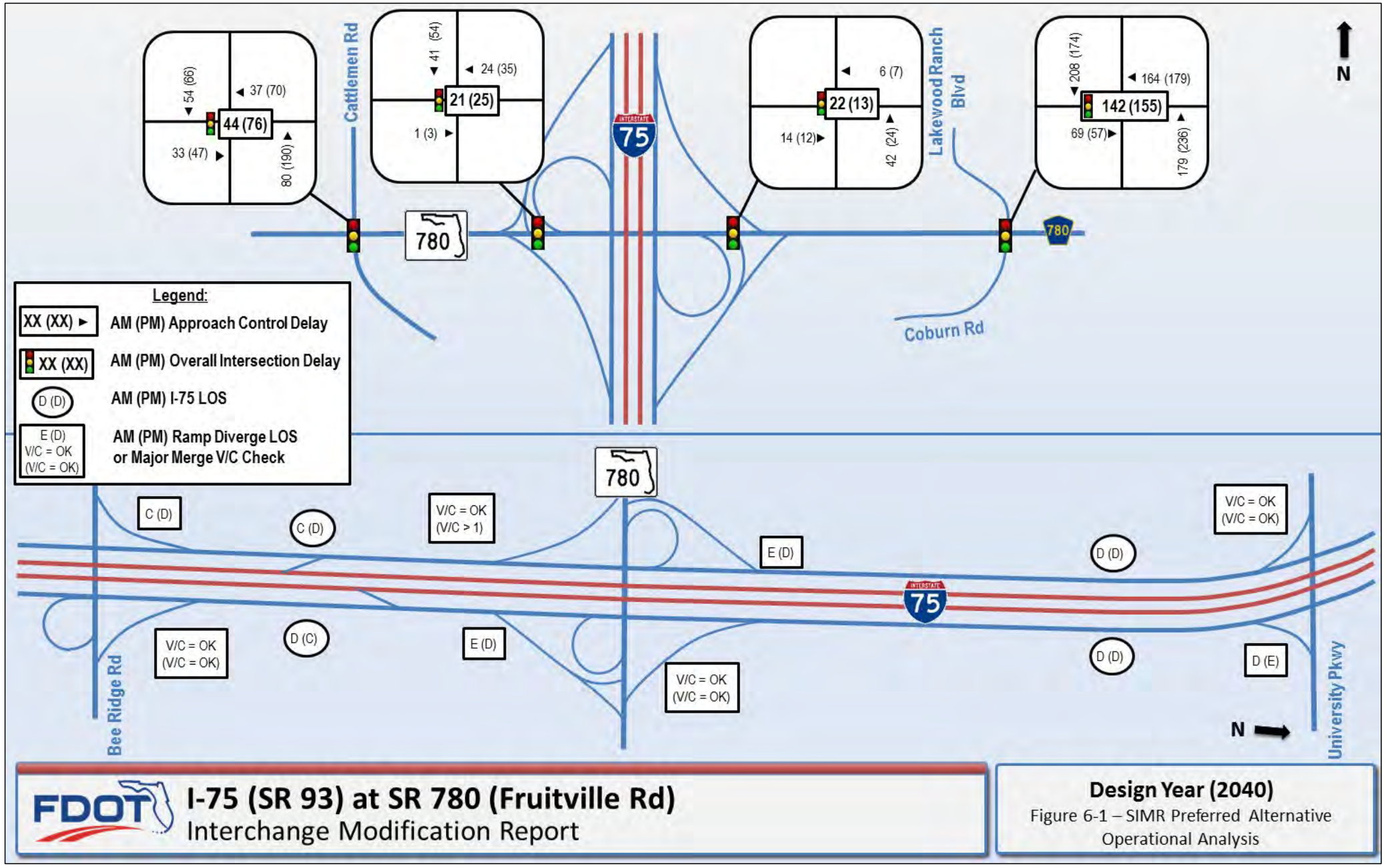


Table 6.4: SIMR Preferred Alternative 2040 Intersection Queue Length

Intersection	AM		PM	
	Approach	Queue (Feet)	Approach	Queue (Feet)
Cattlemen Road	NB	622	NB	1061
	SB	384	SB	555
	EB	481	EB	751
	WB	735	WB	959
SB Off-ramp	SB	643	SB	1527
	EB	N/A*	EB	N/A*
	WB	873	WB	778
NB Off-ramp	NB	1388	NB	404
	EB	523	EB	596
	WB	N/A*	WB	N/A*
Coburn Road (Signal)	NB	1440	NB	1511
	SB	1508	SB	1510
	EB	1224	EB	887
	WB	1621	WB	1627

*Movements are free flow conditions.

At Cattlemen Road, the poor lane utilization and high volume of eastbound traffic approaching I-75 during the PM peak hour causes all other approaches to experience significant delays in order to move eastbound volume thru the intersection. Although five thru lanes exist for eastbound traffic, most vehicles are positioned in the three right-most thru lanes which lead to the I-75 southbound on-ramp and northbound loop-ramp. Once vehicles travel east of Cattlemen Road, they travel unimpeded until the traffic signal at the northbound off-ramp intersection, which explains the lower delays experienced at both off-ramp intersections. Although there are large vehicle queues within the arterial corridor, none of the queues at the adjacent signalized intersections backup into the interchange.

The SIMR design includes bottle necks and design constraints that prohibit a large volume of vehicles from entering the VISSIM models in design year 2040. The delays reported in the following tables are based on the number of vehicles observed at the various intersections in the model. For this reason, the delays reported may be lower than the actual delay experienced by drivers upstream of the study intersections. The following constraints were identified as causing the majority of the delay:

- Only four eastbound thru lanes on Fruitville Road west of Paramount Road. A fifth thru lane would increase capacity as vehicles begin to position for the I-75 on-ramps.
- Only two westbound thru lanes on Fruitville Road west of Coburn Road. The third westbound thru lane does not begin until west of the stop controlled Coburn Road approach.
- The one westbound left turn lane at Paramount Drive overflows into the adjacent thru lane. A second westbound left turn lane would increase storage and eliminate the overflow.

- Westbound arterial separation at the southbound ramp terminal forces westbound thru vehicles in the right-most thru lanes to maneuver across three thru lanes to turn left at Cattlemen Road.
- Eastbound arterial separation at Cattlemen Road eliminates the ability of northbound right turn vehicles to turn on red because of the large number of thru lanes. The northbound right turn vehicles overflow into the adjacent thru lane and the entire approach experiences a high level of delay.

6.3.3.2 DESIGN YEAR (2040) INTERSECTIONS OPERATIONAL ANALYSIS – DDI ALTERNATIVE

For the DDI alternative, the approach control delay was recorded for the AM and PM peak hour for the study intersections along Fruitville Road from Cattlemen Road to Coburn Road. The approach delays and queue lengths, taken as the maximum queue length of all the movements of an approach are summarized in **Table 6.5** and **Table 6.6** below and are illustrated in **Figure 6-2**. A detailed queue storage analysis is included in **Appendix E.** The approach delays at the interchange intersection range from 11 to 55 seconds/vehicle and the Cattlemen Road and Coburn Road intersection approaches range from 38 to 285 seconds/vehicle. The Fruitville Road approach delays are all 147 seconds/vehicle or lower. Although the delays are slightly higher at the interchange approaches, the PM delay at Cattlemen Road is at an acceptable level because of the better lane utilization approaching I-75 from the west. The Coburn Road intersection experiences a high level of delay due to high demand and low capacity, but the eastbound queue does not affect the interchange operations. Also, the westbound queue at the Cattleman Road intersection does not affect the interchange operations.

6.4 OPENING YEAR (2020) ANALYSIS

The SIMR recommended the arterial separator be constructed in the opening year, 2018, to accommodate future traffic. To be consistent, this IMR will also evaluate the two alternatives as having been fully constructed in the opening year, 2020.

6.4.1 OPENING YEAR (2020) I-75 MAINLINE ANALYSIS

The I-75 mainline segment analysis was performed using HCS 2010 for the opening year condition which includes three general purpose lanes and one auxiliary lane in each direction both north and south of the Fruitville Road interchange. The results are independent of the interchange configuration and are shown below **Table 6.1**. All segments of I-75 are anticipated to operate at an acceptable Level of Service in the opening year 2020.

6.4.2 OPENING YEAR (2020) RAMP OPERATIONAL ANALYSIS

The auxiliary lane on I-75 is proposed to be built as part of the opening year (2020) improvements. For this reason, the opening year ramps were also analyzed using major merge and diverge methodology using HCM 2010 and the results are summarized in **Table 6.8**. The off-ramps are projected to operate at LOS D based on the density calculation for major diverge methodology and the on-ramps are projected to have volume/capacity ratios less than one.

Table 6.5: DDI 2040 Intersection Operational Analysis

Intersection	AM		PM	
	Approach	Control Delay (Sec/Veh)	Approach	Control Delay (Sec/Veh)
Cattlemen Road	NB	52	NB	61
	SB	78	SB	59
	EB	40	EB	38
	WB	38	WB	41
Overall Intersection		46	-	45
SB Off-ramp	SB	39	SB	35
	EB	22	EB	24
	WB	44	WB	43
Overall Intersection		30	-	24
NB Off-ramp	NB	42	NB	32
	EB	11	EB	22
	WB	47	WB	55
Overall Intersection		32	-	26
Coburn Road (Signal)	NB	224	NB	285
	SB	150	SB	153
	EB	81	EB	53
	WB	110	WB	147
Overall Intersection		127	-	149

Table 6.6: DDI 2040 Intersection Queue Length

Intersection	AM		PM	
	Approach	Queue (Feet)	Approach	Queue (Feet)
Cattlemen Road	NB	349	NB	601
	SB	536	SB	498
	EB	482	EB	980
	WB	1225	WB	741
SB Off-ramp	SB	635	SB	463
	EB	819	EB	1054
	WB	923	WB	543
NB Off-ramp	NB	944	NB	399
	EB	625	EB	520
	WB	651	WB	902
Coburn Road (Signal)	NB	1585	NB	1666
	SB	1511	SB	1516
	EB	1689	EB	800
	WB	1618	WB	1643

Table 6.7: 2020 I-75 Mainline Segment Analysis

Interstate Segment	AM		PM	
	Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
NB I-75 north of Fruitville Rd	19.6	C	27.0	D
SB I-75 north of Fruitville Rd	27.0	D	19.6	C
NB I-75 south of Fruitville Rd	19.3	C	22.1	C
SB I-75 south of Fruitville Rd	22.1	C	19.3	C

Figure 6-2: DDI Alternative 2040 Operational Analysis

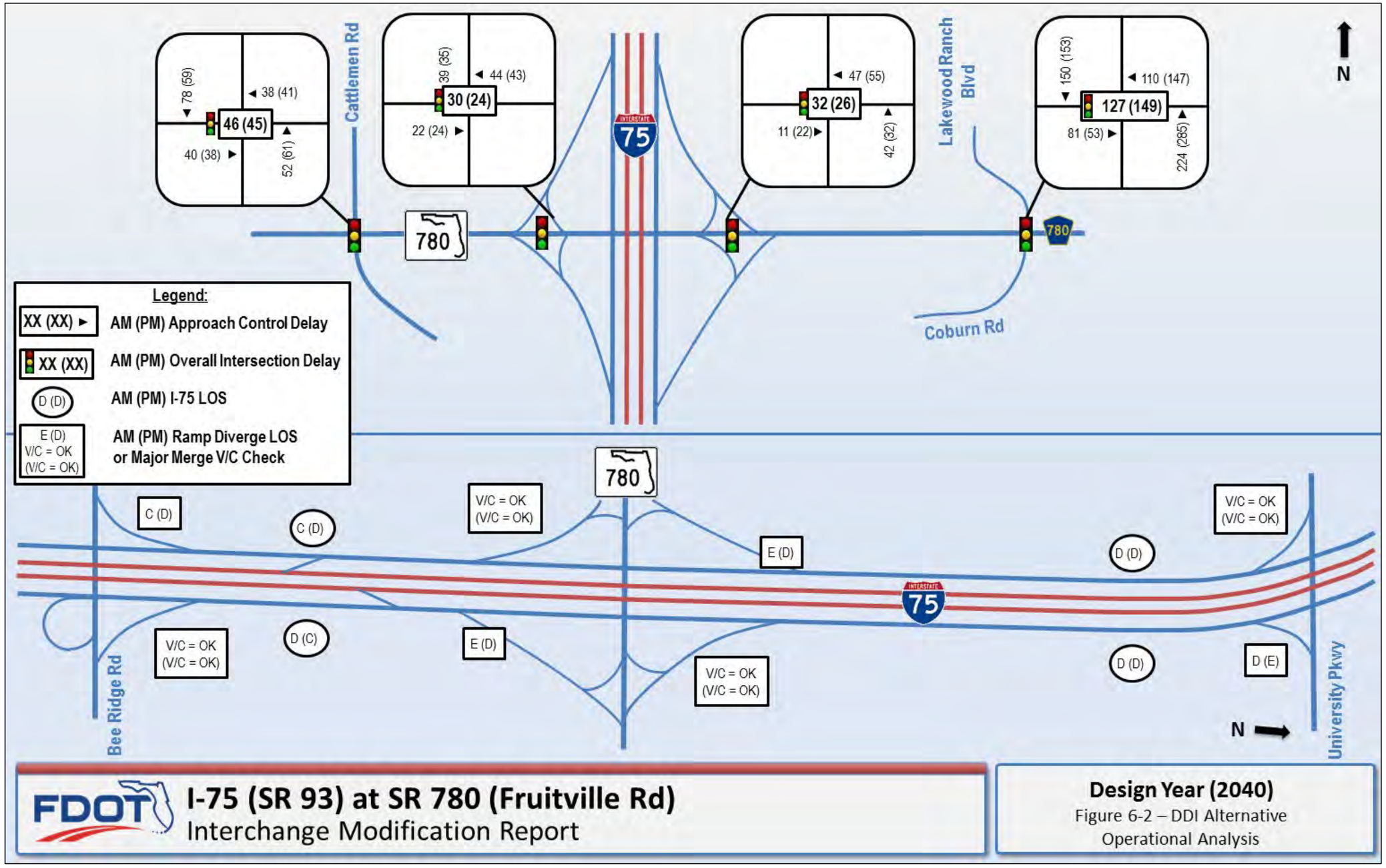


Table 6.8: Opening Year (2020) Ramp Operational Analysis

Ramp			Capacity (pc/h)	AM				PM			
				Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS	Flowrate (pc/h)	v/c Ratio	Density (pc/ln/mi)	LOS
Northbound Off-ramp		NB I-75 Mainline Upstream of Diverge	9600	5653	0.6	24.7	C	6297	0.7	27.5	C
		Off-ramp	4200	1782	0.4			1374	0.3		
		NB I-75 Mainline Downstream of Diverge	7200	3871	0.5			4923	0.7		
		Max. Desirable Flow Rate Entering Diverge Influence Area	4400	3524	0.8			3589	0.8		
Southbound Off-ramp		SB I-75 Mainline Upstream of Diverge	9600	7296	0.8	31.9	D	5707	0.6	25.0	C
		Off-ramp	4200	2373	0.6			1836	0.4		
		SB I-75 Mainline Downstream of Diverge	7200	4923	0.7			3871	0.5		
		Max. Desirable Flow Rate Entering Diverge Influence Area	4400	4588	1.0			3578	0.8		
Northbound On-ramp		NB I-75 Mainline Upstream of Merge	7200	3871	0.5	-	-	4923	0.7	-	-
		On-ramp	4200	633	0.2	-	-	709	0.2	-	-
		NB I-75 Mainline Downstream of Merge	9600	4505	0.5	-	-	5632	0.6	-	-
		Max. Desirable Flow Rate Entering Merge Influence Area	4600	2845	0.6	-	-	3522	0.8	-	-
Southbound On-ramp		SB I-75 Mainline Upstream of Merge	7200	4923	0.7	-	-	3871	0.5	-	-
	SIMR	On-ramp	2400	1374	0.6	-	-	1782	0.7	-	-
	DDI		4200		0.3	-	-		0.4	-	-
		SB I-75 Mainline Downstream of Merge	9600	6297	0.7	-	-	5653	0.5	-	-
	SIMR	Max. Desirable Flow Rate Entering Merge Influence Area	4600	4187	0.9	-	-	3994	0.9	-	-
	DDI		4600	4424	0.9	-	-	4180	0.9	-	-

6.4.3 OPENING YEAR (2020) INTERSECTION OPERATIONAL ANALYSIS

6.4.3.1 OPENING YEAR (2020) INTERSECTION OPERATIONAL ANALYSIS – SIMR PREFERRED ALTERNATIVE

The study intersections were analyzed using the VISSIM models with the geometry shown in the SIMR Conceptual Plans for the ultimate arterial and opening year interstate configuration.

The approach control delay was recorded for the AM and PM peak hour for the study intersections along Fruitville Road from Cattlemen Road to Coburn Road. The approach delays are summarized in **Table 6.9** below and the approach queue lengths, taken as the maximum queue length of all the movements of an approach, are summarized in **Table 6.10** below and are illustrated in **Figure 6-3**. A detailed queue storage analysis is included in **Appendix E.** The approach delays for the interchange intersections range from 1 to 47 seconds/vehicle and the Cattlemen Road and Coburn Road intersection approaches range from 27 to 66 seconds/vehicle. The Fruitville Road approach delays are all 50 seconds/vehicle or lower and the approach queues fit within the available storage. The overall study area operational analysis is illustrated in **Figure 6-3**.

Table 6.9: SIMR Preferred Alternative 2020 Intersection Operational Analysis

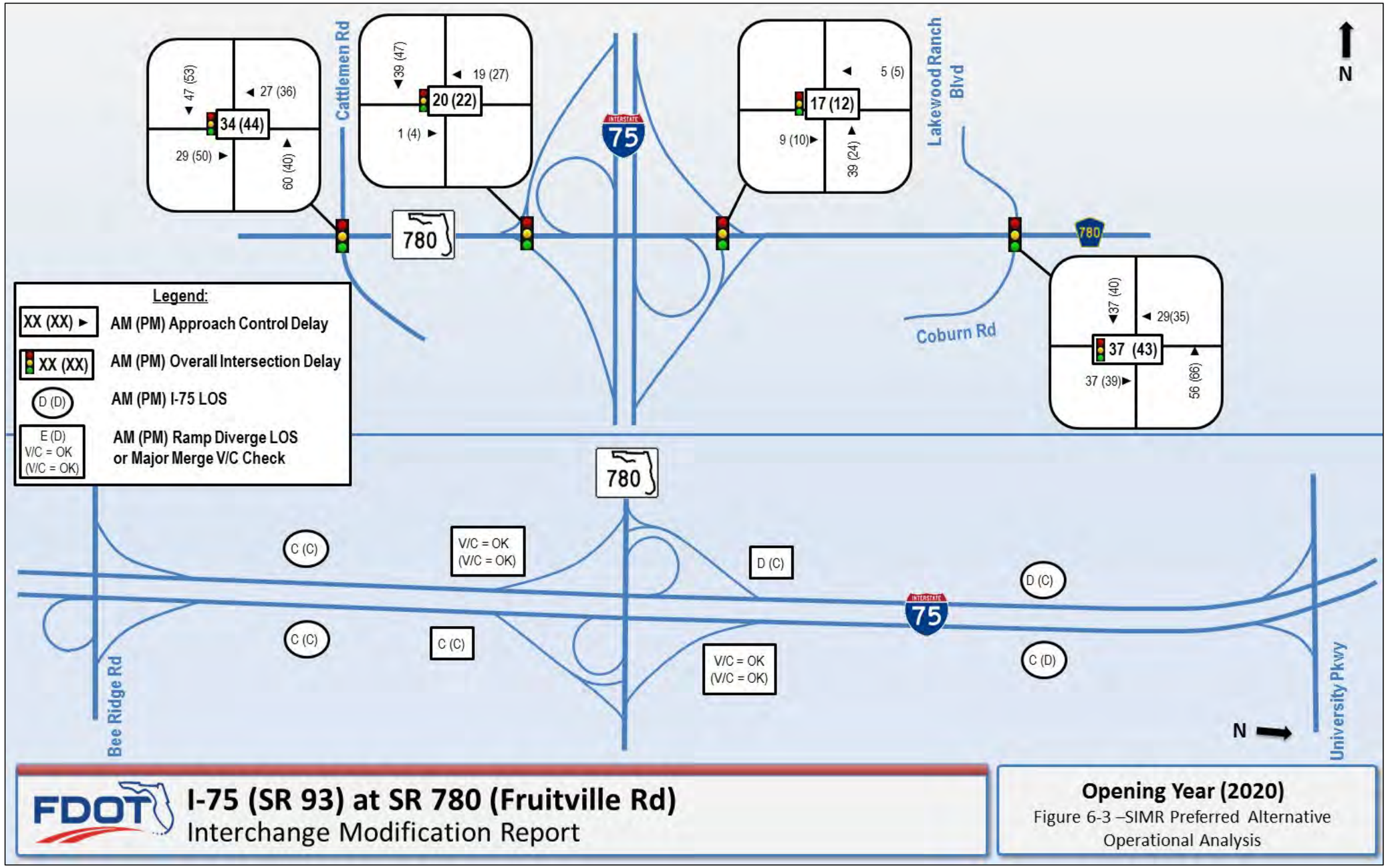
Intersection	AM		PM	
	Approach	Control Delay (Sec/Veh)	Approach	Control Delay (Sec/Veh)
Cattlemen Road	NB	60	NB	40
	SB	47	SB	53
	EB	29	EB	50
	WB	27	WB	36
Overall Intersection		34	-	44
SB Off-ramp	SB	39	SB	47
	EB	1	EB	4
	WB	19	WB	27
Overall Intersection		20	-	22
NB Off-ramp	NB	39	NB	24
	EB	9	EB	10
	WB	5	WB	5
Overall Intersection		17	-	12
Coburn Road (Signal)	NB	56	NB	66
	SB	37	SB	40
	EB	37	EB	39
	WB	29	WB	35
Overall Intersection		37	-	43

Table 6.10: SIMR Preferred Alternative 2020 Intersection Queue Length

Intersection	AM		PM	
	Approach	Queue (Feet)	Approach	Queue (Feet)
Cattlemen Road	NB	432	NB	228
	SB	314	SB	411
	EB	502	EB	755
	WB	523	WB	363
SB Off-ramp	SB	636	SB	526
	EB	N/A*	EB	N/A*
	WB	657	WB	489
NB Off-ramp	NB	604	NB	366
	EB	438	EB	486
	WB	N/A*	WB	N/A*
Coburn Road (Signal)	NB	346	NB	909
	SB	366	SB	589
	EB	473	EB	459
	WB	412	WB	567

*Movements are free flow conditions.

Figure 6-3: SIMR Preferred Alternative 2020 Operational Analysis



6.4.3.2 OPENING YEAR (2020) INTERSECTION OPERATIONAL ANALYSIS – DDI ALTERNATIVE

The study intersections were analyzed using the DDI VISSIM models based on preliminary designs developed during the IMR process. The approach control delay was recorded for the AM and PM peak hour for the study intersections along Fruitville Road from Cattlemen Road to Coburn Road. The approach delays are summarized in **Table 6.11** below and the approach queue lengths, taken as the maximum queue length of all the movements of an approach, are summarized in **Table 6.12** below and are illustrated in **Figure 6-4**. A detailed queue storage analysis is included in **Appendix E.** The approach delays for the interchange intersections range from 9 to 42 seconds/vehicle and the Cattlemen Road and Coburn Road intersection approaches range from 28 to 89 seconds/vehicle. The Fruitville Road approach delays are all 42 seconds/vehicle or lower and the approach queues fit within the available storage.

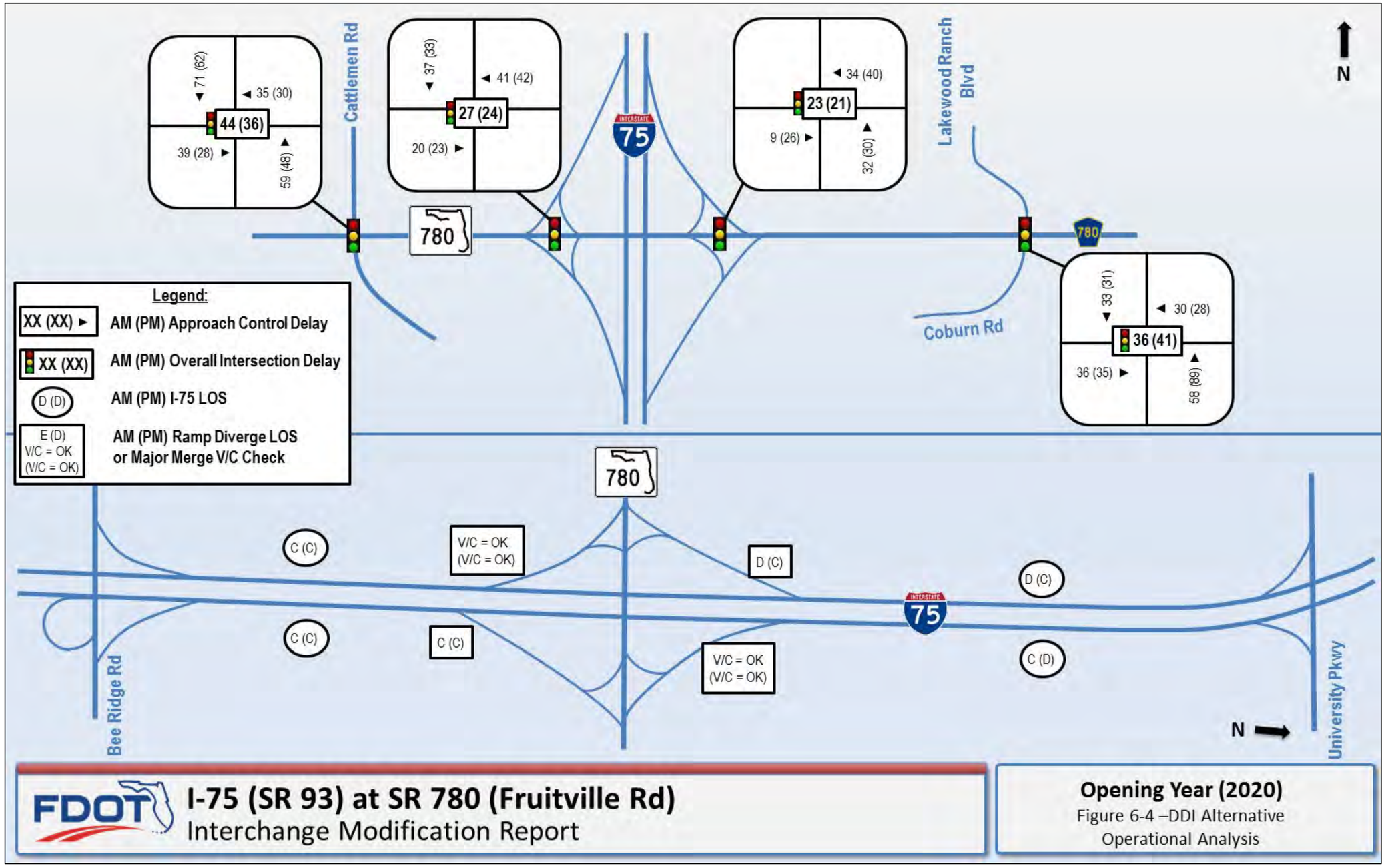
Table 6.11: DDI Alternative 2020 Intersection Operational Analysis

Intersection	AM		PM	
	Approach	Control Delay (Sec/Veh)	Approach	Control Delay (Sec/Veh)
Cattlemen Road	NB	59	NB	48
	SB	71	SB	62
	EB	39	EB	28
	WB	35	WB	30
Overall Intersection		44	-	36
SB Off-ramp	SB	37	SB	33
	EB	20	EB	23
	WB	41	WB	42
Overall Intersection		27	-	24
NB Off-ramp	NB	32	NB	30
	EB	9	EB	26
	WB	34	WB	40
Overall Intersection		23	-	21
Coburn Road (Signal)	NB	58	NB	89
	SB	33	SB	31
	EB	36	EB	35
	WB	30	WB	28
Overall Intersection		36	-	41

Table 6.12: DDI Alternative 2020 Intersection Queue Length

Intersection	AM		PM	
	Approach	Queue (Feet)	Approach	Queue (Feet)
Cattlemen Road	NB	346	NB	294
	SB	662	SB	539
	EB	472	EB	654
	WB	781	WB	509
SB Off-ramp	SB	565	SB	415
	EB	458	EB	988
	WB	600	WB	465
NB Off-ramp	NB	461	NB	336
	EB	455	EB	428
	WB	453	WB	431
Coburn Road (Signal)	NB	466	NB	1113
	SB	302	SB	562
	EB	466	EB	393
	WB	432	WB	457

Figure 6-4: DDI Alternative 2020 Operational Analysis



Section 7.0
COMPARATIVE EVALUATION OF ALTERNATIVES

7.1 OPERATIONAL COMPARISON

7.1.1 I-75 MAINLINE

The I-75 mainline cross section and operations will be identical for the two alternatives. As previously shown in **Table 6.1**, I-75 will operate at an acceptable LOS D in the design year 2040 with either interchange configuration.

7.1.2 I-75 RAMPS

Although the on and off-ramps differ in length, the only merge or diverge condition that is different between the two alternatives with respect to the number of lanes is the southbound on-ramp merge. According to the Systems Interchange Modification Report (SIMR) concept plans, included in **Appendix F**, this ramp merges from three lanes to one lane prior to the I-75 mainline merge point while the proposed DDI alternative includes three lanes at the I-75 merge point. The proposed DDI alternative continues this third on-ramp lane an additional 0.5 mile south of the interchange, based on 70 mph merge length criteria, at which point it ends and merges with the I-75 southbound auxiliary lane. The SIMR preferred alternative southbound on-ramp is projected to be over capacity by 2040 and will fail to operate at an acceptable LOS. The northbound on-ramp will also be extended to meet 70 mph merge length criteria in the DDI alternative, however, both alternatives include two on-ramp lanes at the merge point and will operate at an acceptable LOS in 2040.

7.1.3 ARTERIAL TRAVEL TIME COMPARISON

To quantify the increased efficiency in lane utilization along the Fruitville Road arterial approaching I-75, vehicle travel times were measured in the VISSIM models for the critical movements summarized in **Table 7.1** below. The critical movements were based on the AM/PM directional flow of traffic on Fruitville Road westbound exiting I-75 in the AM peak and eastbound entering I-75 in the PM peak. The first critical movement is eastbound travel time towards I-75 during the PM peak hour. With the DDI interchange configuration, PM eastbound travel time is 83 and 84 seconds shorter to the southbound and northbound on-ramps, respectively, in design year 2040 than the arterial separator. This result is due to improved arterial lane utilization approaching the interchange from the west as well as longer merge areas on the on-ramps. This improved lane utilization relieves delay conditions and improves Fruitville Road operations from the interchange ramp terminals to the intersections further west. The other high volume critical movement is the westbound traffic during the AM peak hour. The arterial separator alternative has five thru lanes, compared with four thru lanes in the DDI alternative, which is why the DDI alternative travel time is 36 seconds longer from the southbound off-ramp. The DDI alternative travel time is also 13 seconds shorter from the northbound off-ramps, which means that vehicles are able to travel thru the actual interchange quicker in the DDI alternative. An additional factor to note is that the arterial separator only requires four thru lanes to accommodate the total capacity of westbound vehicles thru the interchange. However, since the northbound off-ramp triple left turns require three receiving lanes and the westbound thru movement requires two thru lanes, five total lanes are needed.

Table 7.1: 2040 Arterial Travel Time Comparison

	Direction	Begin	End	DDI	SIMR
				Travel Time (sec)	Travel Time (sec)
AM	WB	SB Off-ramp	Fruitville West of Cattlemen	172	134
		NB Off-ramp		198	211
PM	EB	Fruitville West of Cattlemen	SB On-ramp	162	245
			NB On-ramp	195	279

7.1.4 INTERSECTION CONTROL DELAY COMPARISON

The overall intersection control delay was evaluated using the 2020 and 2040 VISSIM models for the SIMR and DDI alternative at the four study intersections. The results are summarized in **Table 7.2 and Table 7.3**. In general, the AM and PM peak hour delays are similar for both alternatives in the 2020 model. In the 2040 model, the AM delays are similar for both alternatives, but the PM peak hour delay is 31 seconds lower at the Cattlemen Road intersection and 13 seconds higher at the northbound off-ramp intersection with the DDI alternative. All Fruitville Road and off-ramp intersections meet the delay criteria as outlined in the MLOU with the exception of the following in the 2040 analysis:

- Cattlemen Road in the PM peak hour
- Coburn Road in the AM and PM peak hours

As previously mentioned, the lower delay for the DDI alternative at Cattlemen Road during the PM peak hour is attributed to the improved lane utilization along Fruitville Road. The lower delay at the ramp terminal intersections in the SIMR preferred alternative is due to the free-flow for eastbound vehicles. However, these same vehicles experience higher travel times throughout the arterial corridor prior to reaching the free-flow on-ramps in the SIMR preferred alternative.

Table 7.2: 2040 Intersection Control Delay Comparison

Intersection	Control Delay (Sec/Veh)			
	AM		PM	
	DDI	SIMR	DDI	SIMR
Cattlemen Road	46	44	45	76
SB Off-ramp	30	21	24	25
NB Off-ramp	32	22	26	13
Coburn Road (Signal)	127	142	149	155

Table 7.3: 2020 Intersection Control Delay Comparison

Intersection	Control Delay (Sec/Veh)			
	AM		PM	
	DDI	SIMR	DDI	SIMR
Cattlemen Road	44	34	36	44
SB Off-ramp	27	20	24	22
NB Off-ramp	23	17	21	12
Coburn Road (Signal)	36	37	41	43

7.2 SAFETY COMPARISON

7.2.1 PEDESTRIANS / BICYCLES

As part of the SIMR arterial separator, the free-flow lanes at the interchange off-ramps would not provide a signal controlled crossing for pedestrians across Fruitville Road or across the on-ramp acceleration lanes. At the northbound and southbound ramp terminal intersections, this includes three and four free-flow lanes, respectively. The DDI alternative proposes crossing pedestrians into the median at the signal controlled crossover intersections. At the multi-lane eastbound to southbound on-ramp, a pedestrian actuated signal would be installed to give pedestrians a controlled crossing. The DDI alternative also proposes a 30 mph design speed at the crossover intersections which would enhance both pedestrian and bicycle safety.

In SIMR alternative, approaching the interchange from the west, eastbound bicycles in the outside bike lane would need to shift across three thru vehicle lanes to position correctly to pass through the interchange safely. The lane change would occur along Fruitville Road where unfamiliar drivers are also positioning their vehicles and not as likely to notice a bike. Depending on where the physical arterial separation begins, bicycles will have a reduced distance to make the lane change than if no arterial separation was present. In the DDI alternative, a buffered bike lane and keyhole beginning west of the Cattlemen Road intersection will guide bicycles thru the interchange safely and at a reduced design speed of 30 mph.

7.2.2 VEHICLES

The existing conditions safety analysis determined that the highest crash types along Fruitville Road were rear end collisions and sideswipes. Rear-end collisions are common at signalized intersections and can be caused by high levels of congestion. In the SIMR arterial separation configuration, rear-end crashes could potentially increase because of the poor lane utilization and congestion approaching the intersection. By reducing the delay and arterial travel time upstream of the I-75 interchange and using a lower design

speed of 30 mph, the DDI alternative can reduce congestion and potentially reduce the number of rear-end collisions.

Sideswipe and "run off the road" crashes can also be reduced by removing the loop-ramp. Loop-ramps often confuse drivers because they require a right-turn instead of a left-turn for a typical on-ramp. Unfamiliar drivers must make quick lane changes in order to correctly position on the right side of the road to enter the loop-ramp. By relocating the I-75 entrance ramp to the conventional side of the road, the DDI configuration can reduce sideswipes and rear end crashes on Fruitville Road approaching the on-ramps. Out of the 27 crashes occurring on the I-75 ramps, 22% were single car "run off the road" type crashes on the loop on-ramps, including one fatality. The tight turning radius and high speeds of the loop-ramp lead to drivers losing control of their vehicles and sliding off of the road. The DDI alternative proposes more conventional on-ramps that will be designed to 70 mph merge criteria to provide acceleration distance prior to merging with the I-75 mainline traffic.

7.3 COST COMPARISON

The Long-Range Estimating (LRE) system was used to develop construction cost estimates for the I-75 SIMR Alternative as part of the I-75 PD&E Study. The I-75 SIMR Alternative construction cost was estimated to be approximately $156.0 million for the ultimate configuration of I-75 (general use and express use lanes), with an additional $2.9 million for stormwater ponds. The LRE costs, when adjusted for current costs and elimination of the express lanes, is estimated to be $106.0 million. The LRE system was also used to estimate the Proposed DDI Alternative (Diverging Diamond Interchange), which was determined to be approximately $75.7 million. The LRE cost estimates for the I-75 SIMR Alternative and Proposed DDI Alternative can be found in **Appendix I**. The construction cost of the Proposed DDI Alternative is estimated to be approximately $30.3 million less than the I-75 SIMR Alternative.

7.4 ENVIRONMENTAL IMPACTS

Since both alternatives fall within nearly the same footprint, potential environmental impacts are similar between the SIMR alternative and the proposed DDI alternative.

7.5 RIGHT-OF-WAY COMPARISON

Since both alternatives will utilize the in-field areas within the interchange for the required stormwater management needs, right-of-way is needed in both alternatives for roadway impacts only. The primary need is for the inclusion of the proposed eastbound travel lanes and eastbound right turn lane along Fruitville Road west of Cattlemen Road, where the proposed curb and gutter and sidewalk for both alternatives falls outside of the existing right-of-way. In addition, both alternatives include corner-clip right-of-way acquisition at the southwest and southeast quadrants of Fruitville Road at Cattlemen Road. With either alternative, the additional right-of-way required is less than ¼ acre from a total of three parcels.

Section 8.0
RECOMMENDED ALTERNATIVE

Based on the results from the evaluation of alternatives, the recommended alternative is the Diverging Diamond Interchange (DDI). The two distinguishing features between the Systems Interchange Modification Report (SIMR) preferred alternative and the DDI alternative are:

1) The increased lane utilization along Fruitville Road approaching I-75 with the DDI configuration.
2) The overall safety improvements for all modes of travel at the interchange intersections.

The SIMR arterial separation continues the existing traffic pattern by positioning all interstate bound vehicles in the right-most thru lanes approaching the interchange. By positioning vehicles destined for northbound and southbound I-75 on opposite sides of the road, the DDI configuration distributes traffic across all of the Fruitville Road approach lanes, increases lane utilization, and decreases travel time along the arterial.

The DDI alternative also provides improved capacity for the southbound on-ramp and requires fewer westbound thru lanes at the Fruitville Road intersections with the southbound off-ramp and Cattlemen Road. The SIMR arterial separation alternative requires more lanes under I-75 and, therefore, a wider and longer bridge over Fruitville Road. The arterial separator also has operational constraints due to the close proximity of the adjacent signalized intersection at Cattlemen Road.

The DDI alternative provides a safer environment for pedestrians, bicycles, and vehicles. The SIMR arterial separation does not provide controlled crossings for pedestrians at the interchange and forces bicyclists to cross multiple lanes of thru vehicle traffic to properly position for the interchange. The DDI alternative incorporates a lower design speed, provides signal controlled crossings for pedestrians at the interchange, positions bicycles west of Cattlemen Road to safely ride through the interchange without crossing multiple lanes of vehicle traffic. The DDI alternative also relocates the on-ramps on the conventional side of the road and removes the loop on-ramps which should reduce the number of rear-end, sideswipe, and “run off the road” type crashes.

Since both alternatives fall within nearly the same footprint, potential environmental impacts are similar between the SIMR alternative and the proposed DDI alternative. In addition, both alternatives require less than ¼ acre of additional right-of-way from three parcels at the intersection of Fruitville Road and Cattlemen Road. However, the DDI alternative has a construction cost savings of $30.3 million when compared to the SIMR alternative.

8.1 CONCEPTUAL FUNDING AND CONSTRUCTION SCHEDULE

Per the current FDOT Five Year Work Program, no additional phases beyond design have been programmed.

Section 9.0
ANTICIPATED DESIGN EXCEPTIONS AND VARIATIONS

There are two anticipated design variations related to the proposed Diverging Diamond Interchange (DDI) Alternative and no design exceptions. The first variation is for border width, and the second variation is for the number of lanes sloped in same direction. These design variations are not expected to impact safety or operations along I-75 or Fruitville Road.

9.1 BORDER WIDTH

A design variation for border width will be necessary to allow for border width less than 94 feet along various locations of the on and off-ramps from Fruitville Road where they interface with I-75 and along I-75 in locations of the ramp transitions to the mainline (reference PPM, Volume I, Chapter 2, Table 2.5.3). Both the Systems Interchange Modification Report (SIMR) alternative and the Diverging Diamond Alternative require the reduced border width. The proposed design will utilize a retaining wall to retain an area for maintenance between the retaining wall and the existing limited-access right-of-way.

9.2 CROSS SLOPE - NUMBER OF LANES SLOPED IN SAME DIRECTION

A design variation for cross slope will be necessary for the portion of Fruitville Road that falls within the area of the diverging diamond crossovers to allow for all travel lanes to slope to the outside. According to the FDOT PPM, the maximum number of travel lanes with the same cross slope in one direction is three lanes. The outer four lanes will transition to two percent cross slope prior to the diverging diamond cross over and transition back to three percent cross slope after the diverging diamond cross over. When using the PPM standard requirement, the two inside lanes (in both directions) would slope towards the median, which would require the addition additional drainage facilities within the median and would complicate the grading to insure minimum slopes are met to eliminate potential ponding. In addition, due to the geometry of the horizontal shifts through the diverging diamond crossovers, cross slope transitions should be minimized to ensure the motorists have the best ability to travel through the crossovers. A full hydroplaning analysis will be conducted and provided with the design variation request.

Section 10.0
CONCEPTUAL SIGNING PLAN

A conceptual signing plan was prepared for the Proposed Diverging Diamond Interchange (DDI) Alternative. In developing the concept signing plan, the FHWA's Diverging Diamond Interchange Informational Guide dated April 2014, the 2009 MUTCD and other applied experiences were used for guidance on signage placement and design.

As with all interchanges, the usage of junction and destination signage upstream along Fruitville Road are recommended. Guide signs begin with advanced overhead signing to provide information well upstream of any queues allowing good lane discipline. Prior to the DDI, overhead signing is placed to identify lane assignments and the right exit. Past the first crossover, reinforcing lane assignment signage for the left merge onto the I-75 on-ramp is provided.

Overhead lane assignments and destination guide signs are used at the I-75 off-ramps approaching Fruitville Road. Placement will be clearly visible prior to reaching the ramp terminal intersections.

The conceptual signing plan for the I-75 and Fruitville Road interchange is shown in **Appendix J.** The concept provides clear and simple vehicle guidance, minimizes lane changing maneuvers, safely positions vehicles in the appropriate travel lanes, and is consistent with adjacent interchanges' proposed sign guidance.

Section 11.0
FHWA'S 8 INTERSTATE ACCESS POLICY POINT REQUIREMENTS AND DISCUSSIONS

The following requirements serve as the primary decision criteria used in approval of interchange projects. Each of the eight policy points from the FHWA is described briefly and the detailed description is provided below in italic text. The justification response to each point follows.

Policy Point 1: ***The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).***

The existing I-75 and Fruitville Road (SR 780) interchange, with no capacity improvements, will fail in the design year 2038 as was proven in the I-75 Systems Interchange Modification Report (SIMR) dated May 2012. The SIMR preferred alternative provided arterial separation and additional thru lanes along Fruitville Road as well as additional turn lanes at the side street approaches. The SIMR improved delay at the ramp terminal intersections due to the free-flow lanes, but did not improve delay at the adjacent intersections or reduce congestion caused by poor lane utilization on Fruitville Road approaching the interchange. The existing interchange also fairs poorly in road safety as the recorded number of crashes over a five-year period from 2006-2010 exceeds the statewide average crash rate for similar interstate facilities. Adding lanes and arterial separation to the current interchange configuration would not increase safety and would create worse crossing conditions for pedestrians and bicyclists due to the uncontrolled, free-flow lanes at the ramp terminal intersections.

To improve corridor-wide operations and safety, an alternative interchange configuration with improved operational conditions and pedestrian/bicycle facilities is needed. The arterial separation as suggested in the SIMR does not improve the lane utilization along Fruitville Road as the eastbound vehicles would substantially queue up and create operational constraints in the rightmost lanes during the PM peak period to access the I-75 on-ramps. This condition cannot be improved with more thru lanes or side street improvements because vehicles approaching I-75 will continue to position in the limited number of lanes destined for the on-ramps. The proposed DDI alternative will separate vehicles destined for northbound I-75 from vehicles destined for southbound I-75 which increases lane utilization and provides acceptable LOS in the design year (2040) throughout the corridor. The DDI also allows for safe, signal controlled, pedestrian crossings through the interchange to improve connectivity with facilities east and west of the interchange.

Policy Point 2: ***The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).***

The current deficiency in the capacity at the I-75 and Fruitville Road Interchange cannot be solved by Transportation System Management (TSM) methods. The SIMR arterial separator alternative adds thru lanes on Fruitville Road and side street turn lanes, however, these improvements will not improve the main issue of poor lane utilization approaching the interchange. By changing the interchange configuration and removing the loop on-ramps, vehicles destined for northbound and southbound I-75 approach the interchange with increased lane utilization instead of most vehicles approaching in the right-most lanes. This reduces vehicle queuing and delays on Fruitville Road and helps facilitate movements onto I-75. There are existing transit (bus) stops adjacent to the interchange, but due to limited ridership, a substantial increase of traffic volumes, and the predominant travel mode being passenger cars, transit is not considered a viable alternative to satisfy the need at this interchange. Other multimodal options and HOT/HOV facilities do not have adjacent facilities for connectivity and would need to be implemented on a more system-wide basis rather than at a single interchange.

Policy Point 3: ***An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).***

The proposed DDI Alternative is anticipated to improve safety for motorists, pedestrians, and bicyclists. The arterial separator, as proposed in the SIMR, includes free flow traffic movements at the interchange and would not provide a signal controlled crossing for the pedestrians. It also does not provide an adequate means for bicycles in the bike lane to navigate thru the interchange without crossing multiple adjacent traffic lanes. The DDI operation provides signal controlled pedestrian crossings with median refuge and provides a continuous bike lane thru the interchange. The DDI alternative design speed of 30 mph thru the interchange will also improve the pedestrian and bicycle safety and reduce abrupt and last minute lane changes thereby reducing sideswipe crashes and enhancing the safety for motorists.

In addition to the above mentioned safety benefits of the DDI, the design year (2040) VISSIM comparative analysis for the DDI and SIMR alternatives indicates a reduction in vehicle delay at the adjacent signalized intersection at Cattlemen Road from 76 to 49 seconds/vehicle during the PM peak hour. The DDI alternative is also 83 seconds faster in PM eastbound arterial travel time from Cattlemen Road to the

interchange on-ramps, which is the most congested segment of the interchange. These comparative analyses include the ultimate interchange and arterial improvements with additional thru lanes and side street improvements for both alternatives. This reduction in congestion along the corridor improves safety for all users.

Policy Point 4: ***The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case- by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).***

The existing full access interchange at I-75 and Fruitville Road will be maintained with the DDI configuration. The interchange and on/off-ramps will be designed to the I-75 Ultimate typical section which includes Special Use Lanes over Fruitville Road. The design of the DDI follows standards and criteria set forth in the most current version of the AASHTO design standards and the FDOT Plans Preparation Manual as well as best practices from the FHWA DDI Informational Guide.

It is anticipated that design variations will be needed for border width and number of lanes sloped in the same direction. These items will be documented per FDOT procedures, but do not violate AASHTO criteria.

Policy Point 5: ***The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.***

The proposed interchange improvement is included in the 2014 Edition of the FDOT SIS Cost Feasible Plan for 2024 – 2040 and the Sarasota/Manatee MPO 2040 Long Range Transportation Plan (LRTP) Financially Feasible Plan. Construction and Right-of-Way funding is planned between 2024 – 2040.

Policy Point 6: ***In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111).***

There are access requests at I-75 and University Parkway and I-75 and Bee Ridge Road, which are the adjacent interchanges north and south of Fruitville Road, respectively. Given that these access requests will only modify the existing interchanges and the relatively long distances from the I-75/Fruitville Road interchange, there is no anticipated interaction of traffic operations between these interchange access requests.

Policy Point 7: ***When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).***

The proposed interchange improvement is not driven by any planned future development, however, the adjacent three-leg signalized intersection at Coburn Road will be reconstructed to include a northern leg as part of private development in the northeast quadrant of the interchange. The alternative operational analyses include the additional traffic, modified driving patterns, and intersection reconstruction from this development. However, the DDI alternative roadway construction is independent of the private development roadway construction. Coordination has been on-going with Sarasota County concerning the private development and adjacent land use near the interchange.

Policy Point 8: ***The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).***

Both of the alternatives require less than ¼ acre of additional right-of-way from three parcels at the Fruitville Road and Cattlemen Road intersection. No other additional right-of-way will be needed for the DDI alternative. Based on the environmental screening performed as part of this IMR and the previously approved SIMR and PD&E studies, there are no natural, cultural, or socio economic impacts associated with implementing the proposed improvement and the FDOT will seek FHWA approval for the Type I / Programmatic Categorical Exclusion.

Section 12.0
GLOSSARY OF TERMS

Term	Definition
AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
AF	Axle Adjustment Factor
CARS	Crash Analysis Reporting System
DDHV	Directional Design Hour Volume
DDI	Diverging Diamond Interchange
DHV	Design Hour Volume
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FSUTMS	Florida Standard Urban Transportation Modelling Structure
GUL	General Use Lane
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
LRTP	Long-Range Transportation Plan
LOS	Level of Service
MLoU	Methodology Letter of Understanding
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
MUTS	Manual on Uniform Traffic Studies
OD	Origin/Destination
PDO	Property Damage Only crash
PPM	FDOT Plans Preparation Manual
PD&E	Project Development and Environment
SF	Seasonal Adjustment Factor
SIMR	Systems Interchange Modification Report
SIS	Strategic Intermodal System
SLD	Straight Line Diagram
SMC	Sarasota-Manatee-Charlotte
SUL	Special Use Lane
TAZ	Traffic Analysis Zone
TIP	Transportation Improvement Plan

Section 13.0
REFERENCES

1. *I-75 Project Development and Environmental Study from south of SR 681 to north of Bee Ridge Road, Florida department of Transportation, District One, FPID: 201277-1-22-01.*
2. *I-75 Project Development Summary Report from south of SR 681 to north of Bee Ridge Road, Florida department of Transportation, District One, FPID: 201277-1-22-01.*
3. *I-75 Systems Interchange Modification Report from Laurel Road to Moccasin Wallow Road, Sarasota and Manatee Counties. FDOT District 1, May 2012.*
4. *VISSIM 8.00 – 03.*
5. *FDOT Quality/Level of Service Handbook (2013).*
6. *Highway Capacity Software (HCS) v6.50, 2010, McTrans, University of Florida.*
7. *Highway Capacity Manual (HCM), Transportation Research Board (TRB), 2010.*
8. *FDOT Project Traffic Forecasting Handbook. 2012.*
9. *Sarasota/Manatee MPO Long Range Transportation Plan 2030, February 2006.*

Appendix A: METHODOLOGY LETTER OF UNDERSTANDING

METHODOLOGY LETTER OF UNDERSTANDING

INTERSTATE 75 AT FRUITVILLE ROAD (SR 780)

INTERCHANGE MODIFICATION REPORT

FINANCIAL PROJECT ID NO. 420613-2-32-01
SARASOTA COUNTY, FLORIDA

Prepared by:

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
801 North Broadway Avenue
Bartow, Florida 33831

OCTOBER 2014

METHODOLOGY LETTER OF UNDERSTANDING
CONCURRENCE

The Requestor will provide upon request all modeling data, networks and input/output files needed to run the complete validated model used to analyze the proposed interchange action.

The MLOU will not be binding upon the FDOT and FHWA to approve the proposal under any circumstances, nor will it nullify the FDOT's or FHWA's right to request changes to the study design or require additional data collection, analysis, or documentation at any point during the interchange proposal process. The Requestor also acknowledges that full compliance of the MLOU requirements does not obligate the FDOT and FHWA to approve the interchange proposal.

10/06/14

Lawrence Massey — **Date**
Requestor/Interchange Review Coordinator
FDOT District One

Martha Hodgson 10/9/14

Martha Hodgson — **Date**
Systems Planning Office
FDOT Central Office

10/15/14

Chad Thompson, P.E. — **Date**
Program Operations Engineer
FHWA, Florida Division

1.0 INTRODUCTION

This document serves as the Methodology Letter of Understanding (MLOU) submitted by the Florida Department of Transportation (FDOT) District 1 (Requestor), to the Florida Department of Transportation Office of Systems Planning (SPO), and Federal Highway Administration (FHWA). This MLOU describes the preparation of an Interchange Modification Report (IMR) for the I-75 (SR 93) interchange with Fruitville Road (SR 780) in Sarasota County, and has been developed in accordance with FDOT Policy No. 000-525-015-h: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160-j: New or Modified Interchanges and FDOT Procedure No. 525-030-120-i: Project Traffic Forecasting.

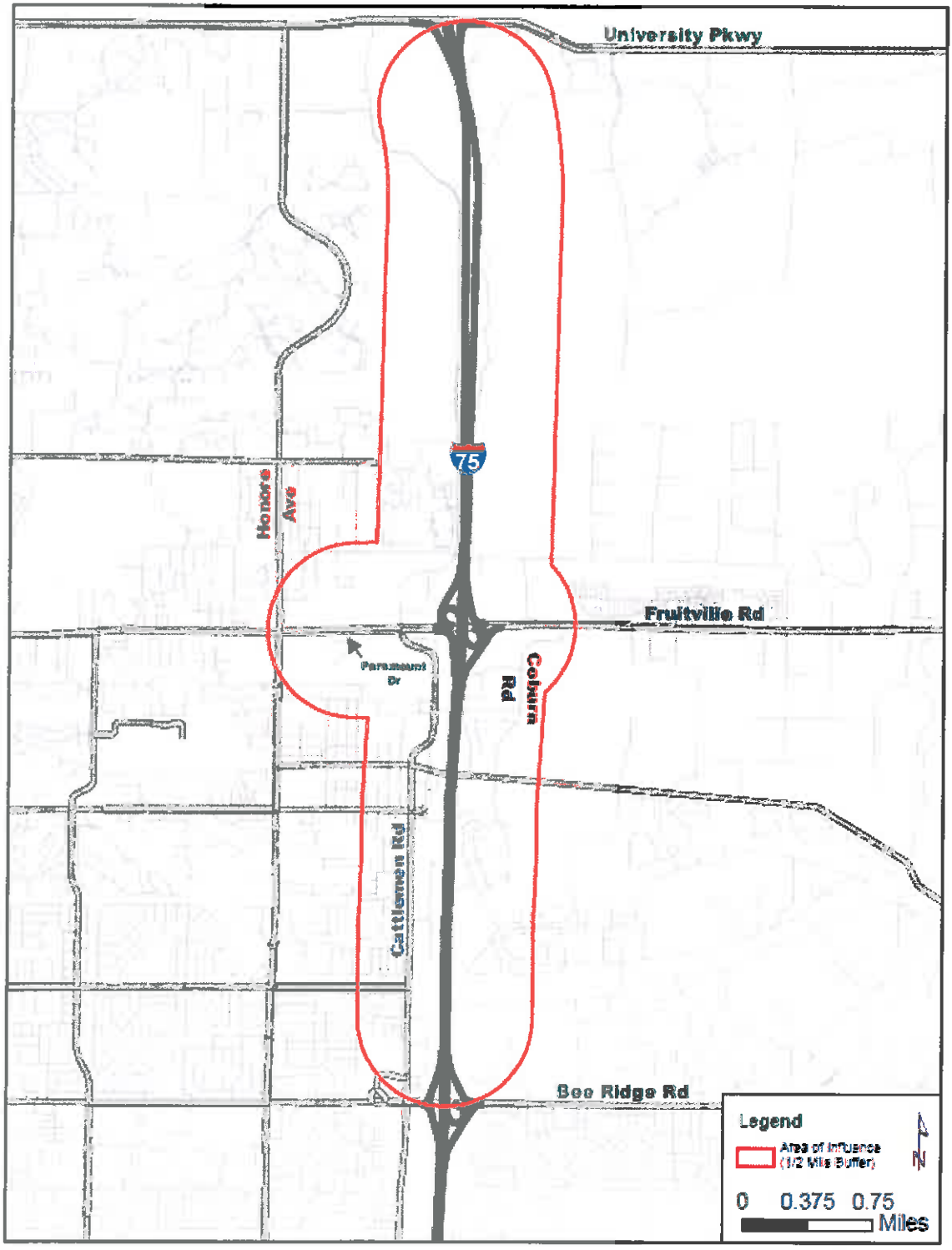
2.0 PURPOSE AND NEED FOR PROJECT

I-75, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed, high-volume traffic movements within the State. The Project Development Summary Report (PDSR) that was submitted in July 2009 as part of the I-75 Sarasota County Project Development and Environment (PD&E) Study from south of SR 681 to north of University Parkway, recommended improvements to the Fruitville Road interchange. These improvements included arterial separation along Fruitville Road to manage traffic, as well as the addition of a second lane to the eastbound to northbound loop-ramp. On Fruitville Road, additional travel lanes were recommended in both directions, as well as improvements to the intersection with Cattlemen Road.

The Final I-75 Systems Interchange Modification Report (SIMR) from Laurel Road to North of Moccasin Wallow Road dated May 2012, re-analyzed the I-75 and Fruitville Road interchange and recommended improving the interchange to the PD&E Ultimate Build configuration by year 2018. This includes arterial separation at the ramp terminal intersections, a second eastbound to northbound on-ramp lane, a second northbound and southbound off-ramp lane, the addition of auxiliary lanes on I-75 north and south of the interchange, two additional westbound through lanes on Fruitville Road between I-75 and Cattlemen Road, and a third southbound left turn lane at the Cattlemen Road intersection.

The purpose of this IMR is to reevaluate the future traffic operations at the I-75 and Fruitville Road interchange, based on the revised population/traffic growth projections and reevaluate the need for the improvements recommended by the PD&E study and the SIMR. The need for this IMR is to identify the most suitable interchange configuration to meet the demands of future travelers while minimizing project costs and impacts.

Figure 1: Project Location and Area of Influence



3.0 PROJECT LOCATION

Figure 1: Project Location Map illustrates the project location and the assumed area of influence. The project is located in Sarasota County, Florida. The Fruitville Road interchange is 2.72 miles north of I-75 and Bee Ridge Road interchange and is 3.52 miles south of the I-75 and University Parkway interchange.

4.0 ALTERNATIVES CONSIDERED

In the preliminary phase of the IMR, the following interchange configuration alternatives will be considered for the I-75 and Fruitville Road interchange:

- 2012 I-75 SIMR Approved Alternative – Arterial traffic separation (This will serve as the No-Build Alternative).
- An additional Build Alternative based on re-analysis and comparison with the SIMR Approved Alternative. The Build Alternative will consider all available ROW and associated impacts.

5.0 ANTICIPATED AREA OF INFLUENCE

Figure 1 provides an overview of the study interchange location and total area of influence. The Fruitville Road interchange (MP 39.156) is between the interchanges at Bee Ridge Road (SR 758) to the south and University Parkway to the north. The area of influence along I-75 is between the I-75 and Bee Ridge Road interchange (MP 36.434) and the I-75 and University Parkway interchange (MP 42.615), a distance of 6.181 miles and along Fruitville Road from west of Cattlemen Road to east of Coburn Road, a distance of approximately 1.0 mile.

6.0 ANALYSIS YEARS

The analysis years proposed for this project are as follows:

- Existing Year – 2014
- Opening Year – 2020
- Design Year – 2040

7.0 EXISTING CONDITIONS

I-75: I-75 is currently a 6-lane, north-south limited access freeway facility that is part of the SIS. It is functionally classified as an urban principal arterial-interstate facility within the project influence area. I-75 within the area of influence has a posted speed limit of 70 miles per hour (mph).

Fruitville Road: Fruitville Road west of Cattlemen Road is a divided seven-lane urban principal arterial with a posted speed limit of 45 mph. It has six lanes between Cattlemen Road and the I-75 eastbound to northbound on-ramp, and transitions to a five-lane facility east of there.

8.0 *FUTURE TRAVEL DEMAND FORECASTING & MODEL ADJUSTMENTS*

The adopted 2007 SMC Model and 2035 SMC Cost Feasible Models that were refined for Sarasota / Manatee I-75 Design Projects will be utilized for the purposes of forecasting future travel demand. Modifications made to the travel demand forecasting model, including facility type, area type, socioeconomic data centroid connectors, and other refinements, will be clearly noted and justified. All the base year model refinements will be carried over to the future year 2035 which will be used for the purpose of the future traffic forecasts. In addition, the year 2035 model land use data and roadway networks will be reviewed for consistency with LRTP and major developments such as Fruitville Initiative, east-west road over I-75, and Lakewood Ranch Boulevard Connectivity. This model includes a ten-lane ultimate mainline typical section on I-75, consisting of two special use lanes and three general purpose lanes in each direction. This configuration is also consistent with the I-75 typical section used in the approved PD&E studies.

The travel demand forecasts from the 2035 model will be extrapolated using growth rates to obtain design year (2040) traffic projections. The growth rates will be developed based on comparison of historic trends, 2014 existing traffic counts and forecasted model output volumes. Future year traffic projections will be developed for Opening Year (2020) and Design Year (2040) only. The opening year (2020) traffic projections will be developed by interpolating the existing volumes (2014) and the design year (2040) traffic projections. Future year Annual Average Daily Traffic (AADT) volumes will be provided for all locations as identified for the existing conditions and where applicable additional locations as necessitated by alternatives considered.

Future year DDHVs for the No-Build and Build Alternatives will be developed by applying the design traffic factors to the AADT volumes. Future year turning movement volumes will be developed using TURNS5 spreadsheet which balances AADT's and calculates DHV's based on Standard K and D factors used as input. The DDHVs will be derived for No-Build and Build Alternatives. Reasonableness checks will be performed on future traffic projections and manual adjustments will be made for one or more of the following reasons:

- For consistent volume flows between intersections and to balance the approach and departure volumes associated with adjacent intersections,
- To obtain peak hour volumes that more closely represent Design Traffic Factors
- To increase individual turning movement volumes that were estimated to be lower than the actual count volumes, and
- To reduce individual turning movement volumes that were estimated to be significantly higher than the actual count volumes.

At project match lines with adjacent Design Projects, the DDHVs will be made consistent to those used in the adjacent projects.

9.0 DATA COLLECTION

Data collection for the study shall consist of information from various sources. It shall be comprised of existing information and field collected data. Sources of information to be collected shall include but not be limited to:

- Straight Line Diagrams (SLD's)
- Roadway Characteristic Inventory
- Latest Five Year Crash History
- Traffic Count Information
- Florida Geographic Data Library (FGDL) Geographic Information System (GIS) Data
- FDOT Standard Indexes
- Project Traffic Forecasting Handbook
- 2013 Quality/Level of Service (LOS) Handbook
- Sarasota/Manatee County Comprehensive Plan
- SMC 2035 FSUTMS Cost Feasible Model
- Sarasota/Manatee County Adopted Long Range Transportation Plan (LRTP)
- Other PD&E studies, master plans, approved Development of Regional Impacts (DRIs) within the area

Field Data (Traffic Counts):

In accordance with Manual on Uniform Traffic Studies (MUTS) and the Project Traffic Handbook (PTH), field traffic count data shall be collected at a minimum number of locations as listed below.

3 Day Classification Counts:

- Fruitville Road east of Coburn Road

24 Hour Bi-Directional Volume Counts:

- Honore Avenue – N/S of Fruitville Road
- Fruitville Road west of Honore Avenue
- Paramount Drive – S of Fruitville Road
- Fruitville Road west of Cattlemen Road
- Cattlemen Road – N/S of Fruitville Road
- Fruitville Road west of I-75 SB off ramp
- EB Fruitville Road to SB on ramp to I-75
- SB off ramp from I-75 to WB/EB Fruitville Road
- EB Fruitville Road to NB loop to I-75
- Fruitville Road under I-75 Bridges
- Fruitville Road west of Coburn Road
- Coburn Road – N/S of Fruitville Road
- WB Fruitville Road to NB I-75 on ramp
- WB Fruitville Road to SB I-75 on ramp

- WB Fruitville Road to SB loop to I-75

8 Hour Turning Movement Counts:

- Honore Avenue at Fruitville Road
- Paramount Drive at Fruitville Road
- Cattlemen Road at Fruitville Road
- I-75 SB off ramp/I-75 SB on ramp at Fruitville Road
- I-75 NB off ramp/I-75 NB on Ramp at Fruitville Road
- Coburn Road (un-signalized intersection) at Fruitville Road
- Coburn Road (signalized intersection) at Fruitville Road

10.0 TRAFFIC FACTORS

The traffic factor tables from the 2014 FDOT Project Traffic Forecasting Handbook provide a summary of peak to daily factors or Standard K factors and acceptable ranges for direction distribution factors or D factors. Peak hour traffic volumes for the analysis years 2020, and 2040 will be obtained from the Peak Season Weekday Average Daily Traffic (PSWADT). The PSWADT forecasts generated by the updated SMC travel demand model will be multiplied by three factors to obtain Directional Design Hour Volume (DDHV). The first factor is a Model Output Conversion Factor (MOCF) which is applied to PSWADT to obtain Annual Average Daily Traffic (AADT).

The AADT volumes will then be converted to DDHV by applying the Standard K factor and directional distribution factor (D). The Standard K factor is the proportion of AADT occurring during the peak hour of the design year, depending upon the area type and facility type. The directional distribution factor, D, is the proportion of traffic in the peak hour traveling in the peak direction. The recommended traffic factors were calculated as part of the Existing Traffic and Design Traffic Factors Memorandum (which will be included as an attachment to the IMR) and are tabulated below:

Traffic Factors

Roadway	K-Factor	D - Factor	T24	DHT (T-Peak)	PHF
Fruitville Road (SR 780)	9.0%	58.0%	6.0%	3.0%	0.95
I-75	9.0%	55.0%	8.0%	4.0%	0.95
Side Streets	9.0%	Based on counts	Based on counts	Based on counts	0.95

Notes: 1. For side streets, D factor and truck percentages will be based on TMCs for each location rounded to nearest whole number.
2. MOCF of 0.9 will be used for I-75, SR 780, and all side streets.

The T_{24} factor is the adjusted, annual 24-hour percentage of truck traffic. T_{24}-factor was obtained from the classification counts performed as part of the count program and from FDOT permanent count stations. These were compared to the historical factors that were obtained from FDOT permanent count stations to assess reasonableness of the data. The Design Hour Truck (DHT) factor is the percentage of truck traffic during the peak hour and can be estimated as half of the T_{24} factor. The Peak Hour Factor (PHF) is applied to convert hourly flow to peak 15-minute flow rate for capacity analysis.

11.0 CONSISTENCY WITH MASTER PLANS, LRTP AND DRI APPLICATIONS

This IMR will maintain consistency with the I-75 Master Plan, Sarasota County's Comprehensive Plan and any approved DRIs within the area of influence.

This IMR will consider all programmed and planned roadway improvements in the area. These capacity improvements would be consistent with those specified in the regional transportation plans including the following:

- FDOT 5 Year Adopted Work Program
- FDOT SIS plans
- FDOT State Transportation Improvement Program (STIP)
- Sarasota County Comprehensive Plan
- Committed improvements from local and private sources
- Sarasota County access management plans.
- Sarasota Manatee MPO 2035 LRTP
- Sarasota Manatee MPO FY2014/2015-2018/2019 Transportation Improvement Program (TIP)
- Unified Planning Work Program (UPWP) (if applicable)

12.0 OPERATIONAL ANALYSIS PROCEDURES

A detailed operational analysis will be performed for all analysis years for the Alternatives identified in Section 4.0 of this MLOU. The operational analysis will take into account all the relevant FDOT design standards and determination of the Level of Service (LOS) by using the latest version (2010) of Highway Capacity Software (HCS) based on the 2010 Highway Capacity Manual (HCM). The HCS analysis will be performed for the mainline, ramps and weaving segments for existing year (2014), and future years 2020 and 2040. Micro-simulation modeling using VISSIM 6.0 will be conducted for existing year (2014) and design year (2040) traffic conditions. Due to the complexity of the signal timing and operational analysis of the proposed Build Alternative [i.e., Diverging Diamond Interchange (DDI)], VISSIM will be used instead of Synchro to document control delay. The microsimulation model will be calibrated to the existing year entry and exit link volumes and turning movement volumes observed in the field. The model will be validated with travel time runs collected for existing conditions.

Origin-Destination (OD) pairs are crucial given the geometry in this section. The major OD movements involving vehicles traveling between the area west of Cattlemen Road and entering or exiting I-75 will be collected using Bluetooth technology along Fruitville Road and I-75 mainline sections of the study area. The OD pairs will be used to create routes and code vehicles through the VISSIM model from external to external. This will allow the vehicles to make lane changing decisions well in advance of the next routing decision so that they are more accurately aligned in the lane they need to be in for the next movement. Existing OD patterns will be used in determining future OD patterns. Entry and exit link volumes will be calibrated to a GEH Statistic of less than five and travel times will be calibrated within 15% of the field-measured data. Turning movement volumes will be calibrated to a GEH Statistic of less than five to ensure

OD data and routes are properly coded into the model. The percent difference between the field-measured values and modeled values will also be compared. The simulation model will be modified accordingly to reflect future conditions.

A two-hour AM and PM peak period analysis will be conducted using 15 minute flow rates with microsimulation for design year 2040. The number of microsimulation runs required will be determined based on the statistical test provided in the FHWA Toolbox Volume III. The microsimulation will be performed consistent with guidelines provided in the FHWA Toolbox Volume III and Oregon DOT Protocol for VISSIM Simulation. Speed profiles will be prepared from speed data collected in the field. The VISSIM model will reflect realistic lane change decisions based on the tentative location of guide signs.

MOEs used to evaluate and compare the alternatives will be as follows:

- Signalized intersections – Control Delay (VISSIM)
- Arterial Segments – Travel Speed (VISSIM)
- Ramps Merge/Diverge – LOS, Density (HCS 2010)
- Freeway Segments – LOS, Density, Travel Speed (HCS 2010)
- Interchange – Queue lengths and back up queue on ramps (VISSIM)

The following components within the area of influence will be included in the operational analysis:

- I-75 mainline through movements
- Ramp merge and diverge areas
- Queuing analysis for ramps at cross-streets and on mainline
- Mainline weaving sections
- Queuing analysis along arterial (Fruitville Road) at ramp termini intersections
- Intersections
    - Cattlemen Road at Fruitville Road
    - I-75 SB off ramp/I-75 SB on ramp at Fruitville Road
    - I-75 NB off ramp/I-75 NB on Ramp at Fruitville Road
    - Coburn Road at Fruitville Road

13.0 SAFETY ANALYSIS

Detailed crash data within the study area will be analyzed and documented for the five year period from 2008 – 2012. The analysis will document crash rates, crash patterns, crash types, and their contributing causes for existing conditions and will provide safety impact (positive or negative) of the proposed improvements for the design year.

14.0 ENVIRONMENTAL CONSIDERATIONS

Any potential National Environmental Policy Act (NEPA) impacts associated with the proposed alternatives will be assessed relative to the approved Type 2 Categorical Exclusion (CE) and documented as part of the Design Change Reevaluation. A summary of the reevaluation impacts will be included in the IMR.

15.0 CONCEPTUAL FUNDING PLAN/CONSTRUCTION SCHEDULE

Design is currently funded. The expected completion date of the IMR is February 2015. No future phases are funded in the FDOT Adopted Work Program. The Strategic Intermodal System Cost Feasible Plan shows funding for preliminary engineering in 2015; funding for Right of Way and Construction is not programmed at this time.

16.0 ANTICIPATED EXCEPTIONS

Any exceptions determined during the analysis phase would be processed per Federal and FDOT requirements. Currently, there are no anticipated exceptions.

17.0 CONCEPTUAL SIGNING PLAN FOR RECOMMENDED ALTERNATIVE(S)

A conceptual signing plan shall be prepared for the recommended alternative(s). The conceptual signing plan will provide major guide sign placement and messages. The conceptual signing plan will be prepared in accordance with all applicable FDOT, FHWA and MUTCD guidelines.

18.0 CONSIDERATION OF OTHER INTERCHANGE PROPOSALS

Any new proposed and/or planned interchanges along I-75 in the vicinity of the project will be assumed in future year analysis. Bee Ridge Road (SR 758) Interchange is proposed to add lanes to existing off-ramps and through lanes. University Parkway Interchange is proposed to transition from diamond to diverging diamond configuration. The analysis of future conditions for this IMR will include the proposed modifications to those interchanges.

19.0 QUALIFYING PROVISIONS

The FDOT LOS criteria used in this analysis will be in accordance with *Procedure No. 525-000-006, Level of Service Standards and Highway Capacity Analysis for the State Highway System* (for urbanized areas) as summarized below:

- I-75: Mainline and Ramps: LOS D
- Fruitville Road: LOS D
- Study Intersections: LOS D

The operational analysis will compare defined Measures of Effectiveness (MOEs) for the analysis of the Alternatives to quantify potential betterment or non-significant degradation of the Alternative improvements compared with operational conditions of the previously approved SIMR alternative.

The I-75 at Fruitville Road interchange will be evaluated based on the following provisions:

- **Ramp Queues on I-75 Mainline**

The proposed design concepts will be evaluated for overcapacity conditions on the I-75 mainline. Overcapacity will be identified whenever simulation shows that the traffic back-up queue on a proposed ramp extends onto the I-75 mainline beyond auxiliary lane storage capacity. Ramp queuing is not anticipated to affect I-75 mainline operations for any of the Build Alternatives.

- **Potential for an individual element (intersections or roadways) to adversely impact the performance of any other element on the facility**

The individual elements of the proposed interchange alternatives will be evaluated for their system impacts. The back-up queue on any approach will be checked to assess impacts to the other intersections in the system.

- **FHWA 8 Policy Points**

The FHWA 8 Policy Points will be addressed by the IMR.

Appendix B: EXISTING TRAFFIC VOLUMES AND DESIGN TRAFFIC FACTORS MEMORANDUM

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Tampa, FL 33618
Tel 813. 962.8689

URS Corporation
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Tel 813.286.1711

MEMORANDUM

Date: 07/31/2014 (Revised)

SUBJECT: **I-75 and Fruitville Road (SR 780) Interchange, Sarasota County (FPID: 420613 2 32 01)**
Existing Traffic Volumes and Design Traffic Factors Memorandum

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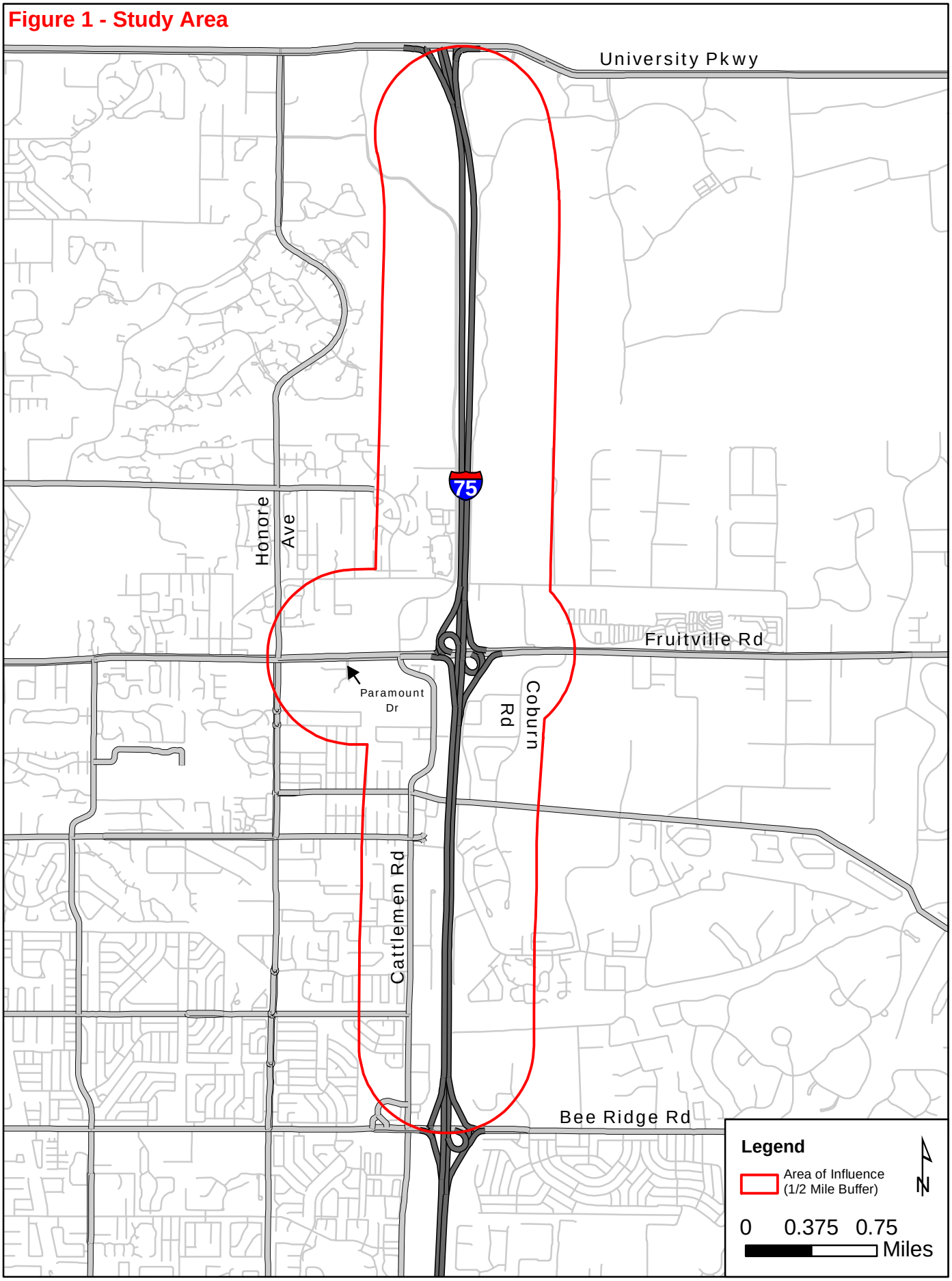
The Florida Department of Transportation (FDOT) is evaluating modifications to the Interstate 75 (I-75)/ Fruitville Road (SR 780) interchange located in Sarasota County, Florida. The purpose of this memorandum is to summarize the existing traffic volumes and describe the development of design traffic factors for I-75 mainline, and Fruitville Road (SR 780) arterial segments to be used in the traffic analysis for this project. The general study area for the project is graphically shown on **Figure 1**.

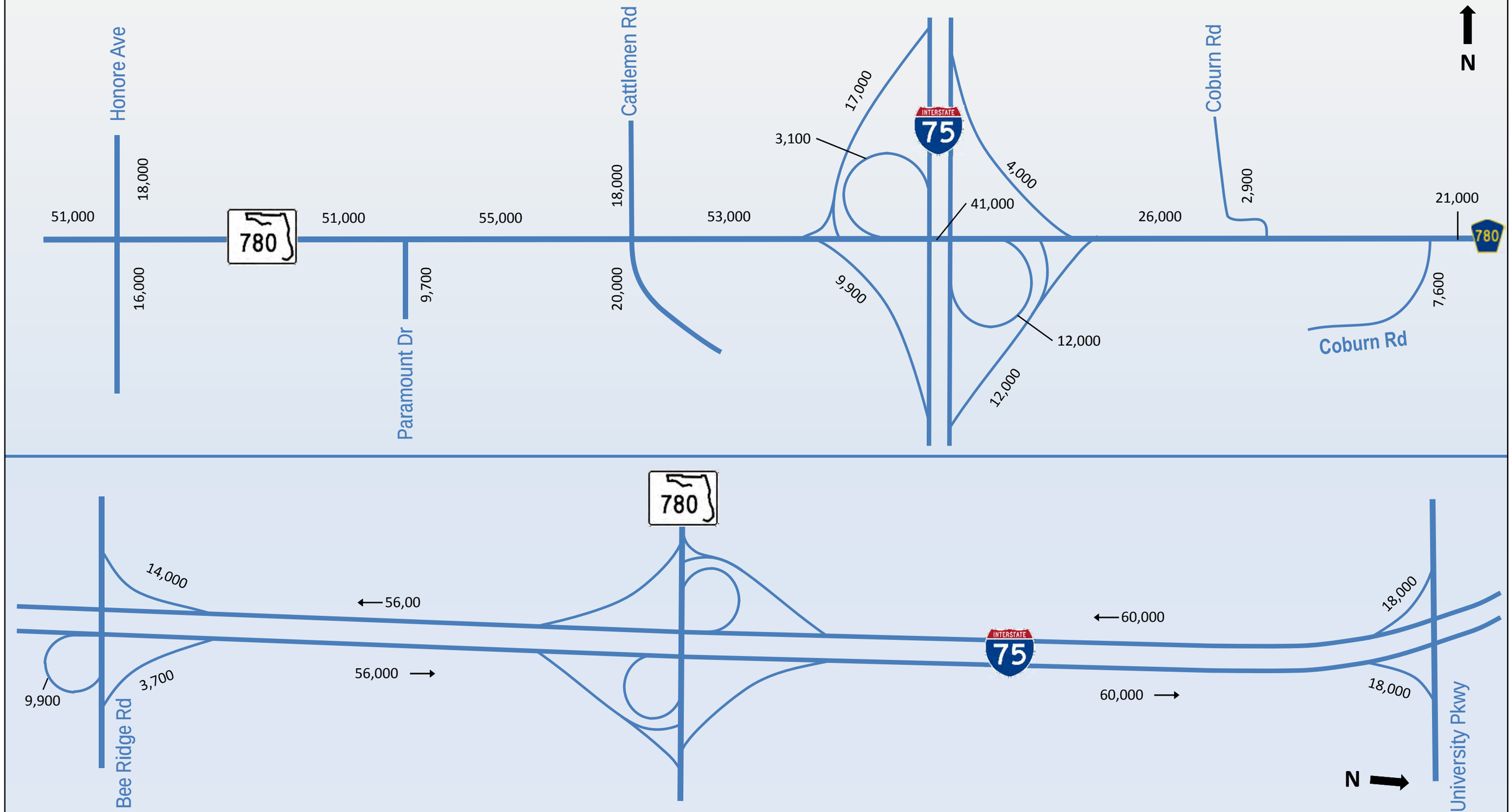
A draft version of this memorandum was submitted to FDOT on June 30, 2014 and review comments were received on July 21, 2014. We have evaluated the review comments and prepared responses pertaining to revisions. These responses have been incorporated in to this memorandum. A copy of the review comments and responses is provided in **Appendix D.**

1.0 EXISTING TRAFFIC VOLUMES

Traffic counts for this study include FDOT 2013 traffic counts as well as traffic counts conducted by ICON during May 2014. These traffic counts include 72-hour classification counts, 24-hour bi-directional counts, and 8-hour turning movement counts (TMCs). All counts were conducted on Tuesday, Wednesday, or Thursday only to represent a typical weekday traffic condition. The existing year 2014 traffic volumes consists of the seasonally adjusted annual average daily traffic (AADT) and the existing year 2014 AM and PM peak hour traffic volumes. The existing year 2014 AADTs were established by applying the seasonal adjustment factor (SF) and the axle adjustment factor (AF), as appropriate, to the recently conducted traffic counts. **Figure 2** shows the adjusted Existing Year 2014 Annual Average Daily Traffic (AADT). Table showing the adjustments to raw counts to develop AADTs is provided in **Appendix A** along with raw counts.

Figure 1 - Study Area





I-75 (SR 93) at SR 780 (Fruitville Rd)
Interchange Modification Report

Existing Conditions (2014)

Figure 2 – Annual Average Daily Traffic (AADT)

The existing year 2014 AM and PM peak hour traffic volumes were obtained from the recently conducted 8-hour turning movement counts. Based on the count data, it was determined that in the study area, the AM peak hour occurred between 7:15 AM – 8:15 AM and the PM peak hour occurred between 5:00 PM – 6:00 PM. The peak hour traffic volumes were balanced between intersections where traffic differences are not justifiable. **Figures 3 and 4** respectively show the Existing Year 2014 AM and PM peak hour balanced traffic volumes. Based on the existing traffic counts, the peak directions of travel along Fruitville Road (SR 780) and I-75 are as follows:

- I-75 north of Fruitville Road (SR 780): AM peak southbound, PM peak northbound
- I-75 south of Fruitville Road (SR 780): AM peak northbound, PM peak southbound
- Fruitville Road (SR 780) west of I-75: AM peak westbound, PM peak eastbound
- Fruitville Road (SR 780) east of I-75: AM peak eastbound, PM peak westbound

In general the peak direction of travel was away from the interchange in the AM peak and towards the interchange in the PM peak periods. All traffic count data, including 72-hour vehicle classification counts, 24-hour bi-directional volume machine counts and 8-hour turning movement counts have been provided in **Appendix A**. The FDOT adjustment factors and calculations are also included in **Appendix A**.

2.0 DESIGN TRAFFIC FACTORS

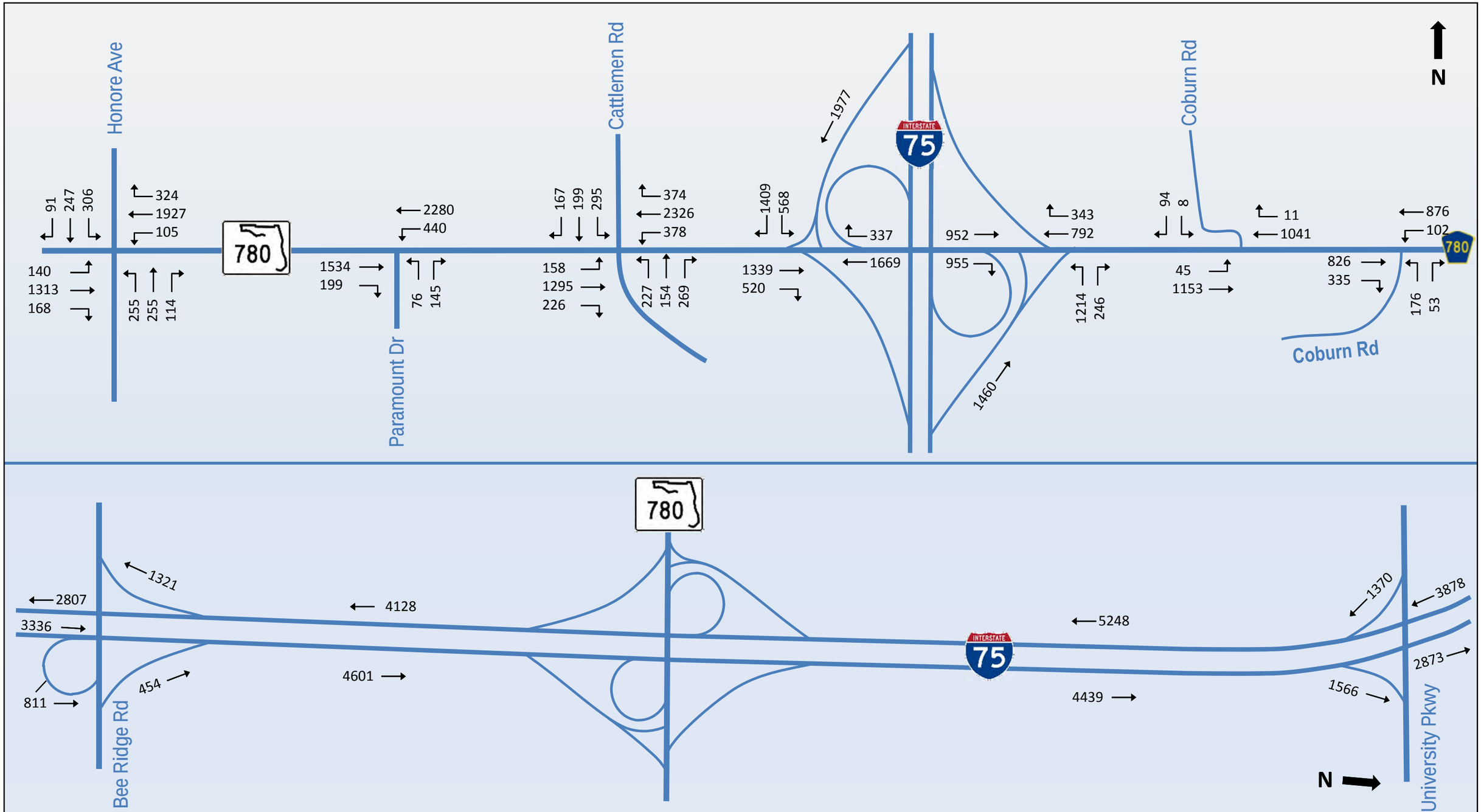
This section describes the development of design traffic factors to be used in traffic forecasting and traffic analysis for existing and future conditions. These factors include the K-, D-, and T-factors and are defined below:

K - Factor: Represents the percentage of daily traffic volume occurring during the peak hour;

D - Factor: Represents the proportion of traffic traveling in the peak direction during the peak hour, and shows the directional distribution of peak hour traffic;

T- Factor: Represents the percentage of daily truck traffic; and

Design Hour Trucks (DHT or T-Peak): Represents the percentage of trucks during peak hour.

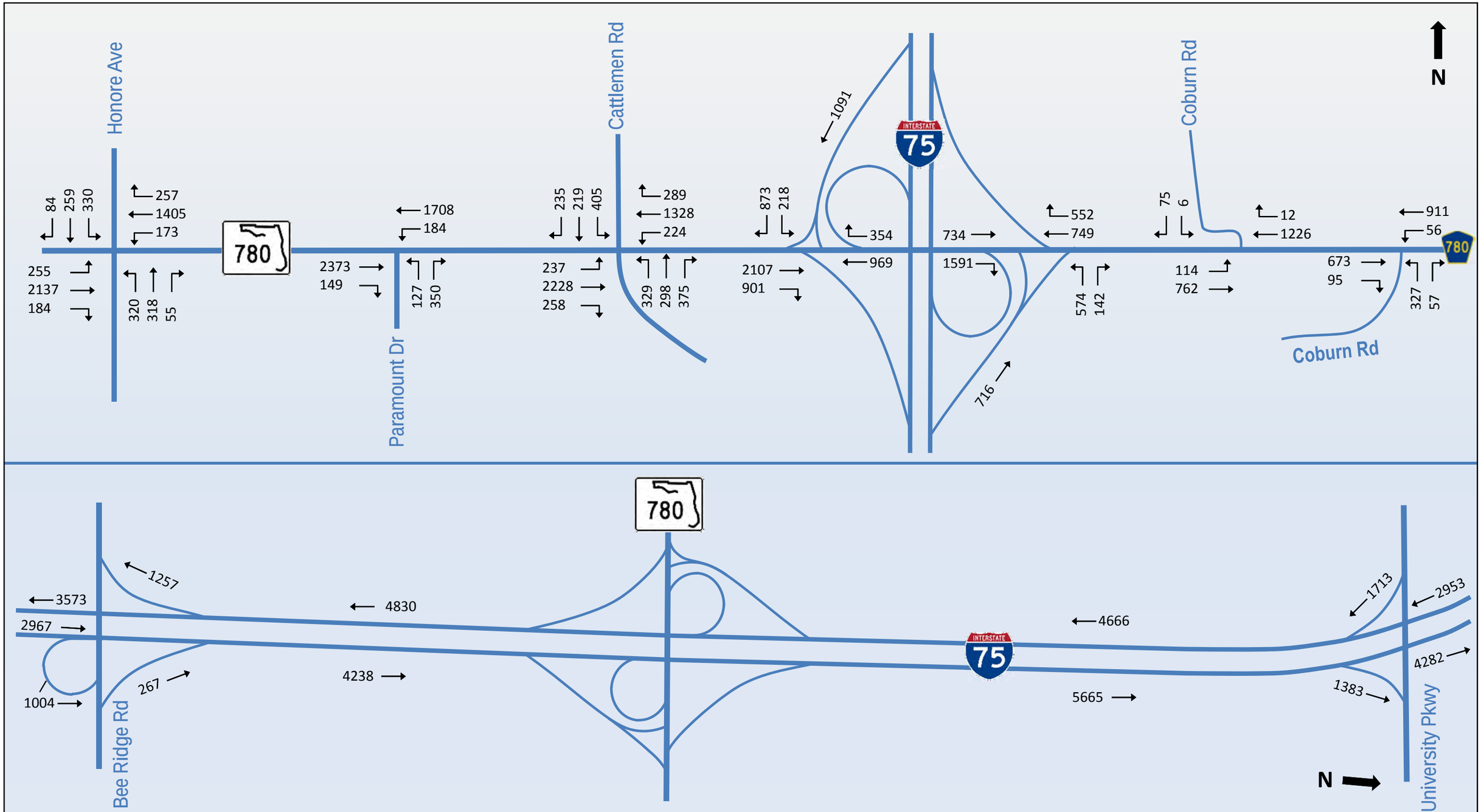


I-75 (SR 93) at SR 780 (Fruitville Rd)

Interchange Modification Report

Existing Conditions (2014)

Figure 3 – AM Peak Hour Balanced Volumes



I-75 (SR 93) at SR 780 (Fruitville Rd)

Interchange Modification Report

Existing Conditions (2014)

Figure 4 – PM Peak Hour Balanced Volumes

The traffic factor tables from the FDOT *Project Traffic Forecasting Handbook, 2014* provide a summary of Standard K factors and acceptable ranges for D factors. These factors were established based on the traffic count data, historical traffic factors at the FDOT count stations in the study area and FDOT policies and guidelines outlined in the FDOT Project Traffic Forecasting Handbook, 2014. Traffic factors from previously approved Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road, dated September 2008 in the study area were also considered. Traffic factor calculations are provided in **Appendix B**.

Based on this evaluation, the recommended traffic factors for this study are described as follows:

K-factor: 9.0 percent for entire study area (Fruitville Road, I-75 mainline, ramps, and side streets) based on the standard K factor for the "other urbanized areas" as described in Chapter 2 of the Project Traffic Forecasting Handbook, 2014.

D-factor:

For Fruitville Road (SR 780), the average D factor from the traffic counts conducted is 58.4%, from FDOT Florida Traffic Online (station 170021) is 52.6%, and from the Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road, dated September 2008 is 55.0%. Therefore, a D-factor of 58.0% is recommended for Fruitville Road (SR 780).

For I-75, The D factor from the traffic count conducted is 53.8%, from FDOT Florida Traffic Online 2013 the D factor for past five year historic counts is 55.6%, from the Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road, dated September 2008 is 55.0%.Therefore, by averaging and rounding a D factor of 55.0% is recommended for I-75 in the study area.

For Side-streets, The D-factor obtained from the approach counts and turning movement counts (AM peak and PM peak) will be used for future traffic projections. These calculated D-factors along the side-streets are provided in **Appendix B**. All the recommended D-factors for Fruitville Road and I-75 to be used for traffic forecasting are within the acceptable range of D-values

provided in Chapter 2 of the *Project Traffic Forecasting Handbook, 2014*. During the development of future directional design hour volumes (DDHVs), the D factors will be maintained as close as possible to the recommended values with some deviations resulting from balancing and reasonability checks within the acceptable ranges. Additional information from Project Traffic Forecasting Handbook, 2014 and other studies is provided in **Appendix C.**

T-factor:

For Fruitville Road (SR 780), the average Tdaily factor from the traffic counts conducted is 6.6%, from FDOT Florida Traffic Online (station 170021) is 3.9%, and from the Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road, dated September 2008 is 6.8%. Therefore, the recommended Tdaily factor for Fruitville Road (SR 780) is 6.0%. The Design Hour Truck (DHT) or Tpeak for future analysis will be assumed to be half of Tdaily factor therefore, recommended DHT along Fruitville Road (SR 780) is 3.0%.

For I-75, the average Tdaily factor from the traffic counts conducted is 7.8%, from FDOT Florida Traffic Online 2013 the Tdaily factor for past five year historic counts is 8.5%, and from the Final Traffic Technical Memorandum of I-75 FDOT District One PD&E Study from South of SR 681 to Moccasin Wallow Road, dated September 2008 is 12.8%. Therefore, the recommended Tdaily factor for I-75 is 8.0%. The Design Hour Truck (DHT) or Tpeak for future analysis will be assumed to be half of Tdaily factor therefore, recommended DHT along I-75 is 4.0%.

Based on FDOT Florida Traffic Online 2013, Tdaily on all the ramps at Fruitville Road (SR 780) is 7.1%. Therefore, by rounding, A Tdaily of 7% and a DHT of 4% will be used for the existing and the future ramp merge/diverge analysis.

For Side-streets, Truck factors obtained from the existing turning movement counts (AM peak and PM peak) for each approach at intersections will be used for existing and future intersection analysis. These truck factors have been tabulated and are included in **Appendix B**.

Peak Hour Factor (PHF):

For the existing analysis of intersections, an overall intersection peak hour factor obtained from the turning movement counts will be used. These have been included in **Appendix B**. For future conditions analysis a PHF of 0.95 is recommended for all intersections. For the existing and future analysis of the freeway segments and the ramp merge/diverge junctions, PHF of 0.95 is recommended to be used.

3.0 SUMMARY

The recommended traffic factors for this study are summarized in Table 1 below:

Table 1
Recommended Traffic Factors

Roadway	K-Factor	D - Factor	T-Daily	DHT (T-Peak)
Fruitville Road (SR 780)	9.0%	58.0%	6.0%	3.0%
I-75	9.0%	55.0%	8.0%	4.0%
Sidestreets	9.0%	Based on counts	Based on counts	Based on counts

Notes: 1. For sidestreets, D factor and truck percentages will be based on TMCs for each location rounded to nearest whole number.
2. DHT is calculated as one-half of the T-Daily.

The recommended Peak Hour Factors (PHFs) are as follows:

Existing conditions: based on counts for intersections and 0.95 for ramps and mainline

Future Conditions: 0.95 for intersections, ramps, and mainline.

APPENDICES

APPENDIX A

TRAFFIC COUNTS
ADJSUTMENT FACTORS

RAW TRAFFIC DATA

24 Hour Bi-Directional Counts
8 Hour Turning Movement Counts
72 Hour Vehicle Classifications

Financial Project ID: 420613-2-32-01
SR 93 (I-75) at SR 780 (Fruitville Road)
Sarasota County, Florida

Prepared for:

State of Florida
Department of Transportation
District One

Prepared by:

ICON Consultant Group, Inc.

Data Collected in May, 2014

24-HOUR BI-DIRECTIONAL COUNTS

COUNTY: 17
STATION: 0047
DESCRIPTION: SR 93/I 75, NORTH OF SR 780/FRUITVILLE ROAD
START DATE: 10/24/2013
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	88	84	87	52	311	120	122	84	81	407	718
0100	49	49	32	50	180	66	78	70	64	278	458
0200	40	60	46	45	191	54	58	64	47	223	414
0300	62	43	71	72	248	73	78	80	73	304	552
0400	65	69	118	140	392	71	98	129	143	441	833
0500	185	225	288	312	1010	157	189	250	361	957	1967
0600	409	489	601	733	2232	412	575	841	950	2778	5010
0700	839	1061	1153	1264	4317	988	1307	1329	1401	5025	9342
0800	1157	1175	1162	1032	4526	1282	1248	1286	1106	4922	9448
0900	900	923	861	910	3594	998	962	923	951	3834	7428
1000	890	871	875	861	3497	821	840	838	903	3402	6899
1100	846	908	883	902	3539	871	947	975	915	3708	7247
1200	892	913	920	938	3663	887	897	985	997	3766	7429
1300	879	926	891	978	3674	893	958	1019	960	3830	7504
1400	1022	1022	1018	1016	4078	944	1039	1037	1020	4040	8118
1500	1136	1208	1287	1294	4925	1005	975	1091	1105	4176	9101
1600	1335	1398	1371	1451	5555	1032	1170	1231	1172	4605	10160
1700	1619	1480	1473	1279	5851	1262	1289	1148	1120	4819	10670
1800	1307	1234	883	863	4287	902	975	920	822	3619	7906
1900	868	709	672	577	2826	657	614	540	566	2377	5203
2000	499	501	416	418	1834	516	534	475	466	1991	3825
2100	375	380	355	299	1409	452	407	394	329	1582	2991
2200	235	259	214	185	893	296	241	255	269	1061	1954
2300	202	168	144	89	603	278	330	430	339	1377	1980
24-HOUR TOTALS:					63635					63522	127157

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	745	4758	715	5319	730	10009
P.M.	1645	6023	1630	4954	1645	10894
DAILY	1645	6023	715	5319	1645	10894

TRUCK PERCENTAGE 5.66 6.39 6.03

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
N	294	50442	9296	55	1091	449	39	727	838	149	31	18	206	0	0	3603	63635
S	296	49016	10150	85	1298	268	41	895	1072	130	37	20	214	0	0	4060	63522

GENERATED BY SPS 5.0.44P

COUNTY: 17
STATION: 0046
DESCRIPTION: SR 93/I 75, SOUTH OF SR 780/FRUITVILLE ROAD
START DATE: 10/22/2013
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	0	0	62	53	115	0	0	0	0	0	115
0100	51	42	35	39	167	48	73	65	46	232	399
0200	40	39	40	44	163	55	44	58	59	216	379
0300	35	59	60	61	215	70	48	69	63	250	465
0400	62	80	130	108	380	85	116	108	131	440	820
0500	189	219	301	396	1105	129	161	205	272	767	1872
0600	393	520	734	825	2472	322	454	651	708	2135	4607
0700	811	1055	1151	1272	4289	782	966	1131	1184	4063	8352
0800	1162	1274	1313	1085	4834	983	1059	1064	947	4053	8887
0900	829	882	818	834	3363	770	818	800	832	3220	6583
1000	716	743	793	758	3010	717	860	731	765	3073	6083
1100	704	784	720	760	2968	827	810	823	822	3282	6250
1200	734	671	707	757	2869	796	803	867	797	3263	6132
1300	739	736	788	750	3013	879	790	770	861	3300	6313
1400	731	772	820	757	3080	873	816	874	961	3524	6604
1500	850	918	885	936	3589	913	957	977	1041	3888	7477
1600	942	920	963	948	3773	1049	1069	1132	1069	4319	8092
1700	1058	1257	1062	871	4248	1206	1314	1143	1099	4762	9010
1800	830	791	602	603	2826	937	864	670	711	3182	6008
1900	480	451	425	344	1700	614	576	458	494	2142	3842
2000	334	352	241	290	1217	438	414	395	365	1612	2829
2100	256	286	236	170	948	342	399	335	337	1413	2361
2200	181	181	133	118	613	271	233	204	180	888	1501
2300	141	100	85	71	397	195	148	168	118	629	1026
24-HOUR TOTALS:					51354					54653	106007

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	745	5021	730	4357	745	9311
P.M.	1645	4325	1700	4762	1645	9057
DAILY	745	5021	1700	4762	745	9311

TRUCK PERCENTAGE 7.45 7.08 7.26

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
N	266	39333	7927	37	1052	268	33	770	1238	149	48	24	209	0	0	3828	51354
S	281	42127	8373	58	1172	219	42	910	1090	132	39	21	189	0	0	3872	54653

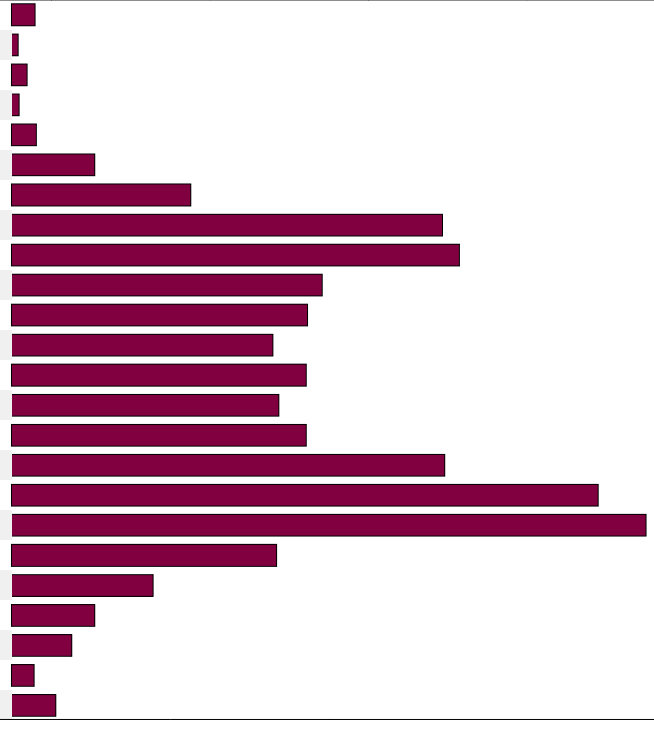
GENERATED BY SPS 5.0.44P

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_on ramp_WB-NB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		11	6	4	0	21
01:00		2	0	4	0	6
02:00		9	3	1	1	14
03:00		0	4	2	1	7
04:00		7	5	5	5	22
05:00		12	21	18	22	73
06:00		23	27	48	59	157
07:00		68	98	108	103	377
08:00		127	95	100	70	392
09:00		62	67	64	79	272
10:00		58	65	64	72	259
11:00		60	68	50	51	229
12:00 PM		67	55	54	82	258
01:00		58	43	63	70	234
02:00		48	65	66	79	258
03:00		90	93	117	79	379
04:00		132	119	141	121	513
05:00		196	145	128	86	555
06:00		74	68	47	43	232
07:00		46	27	21	30	124
08:00		19	14	19	21	73
09:00		26	10	10	7	53
10:00		5	5	6	4	20
11:00		17	9	6	7	39
Day Total						4567
Grand Total						4567



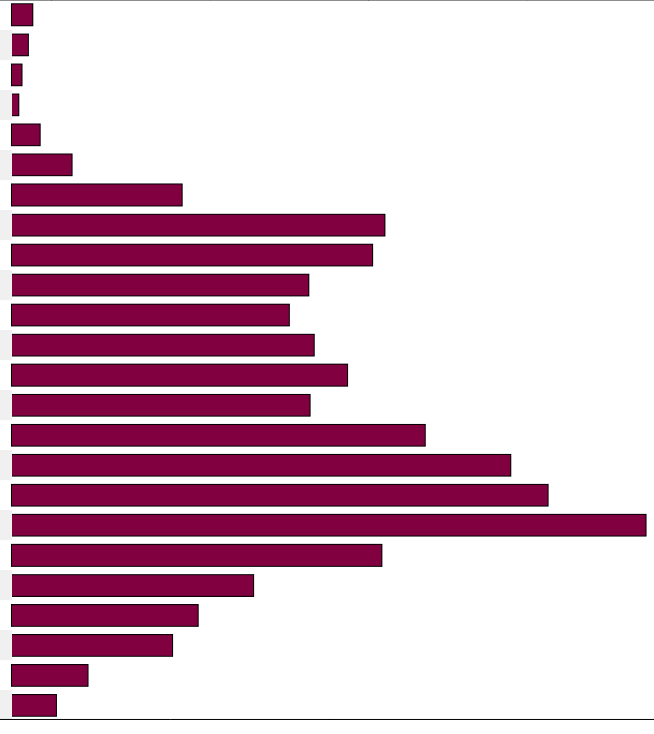
ADT ADT 4,553 AADT 4,553

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_loop ramp_EB-NB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		9	15	12	12	48
01:00		13	12	6	7	38
02:00		11	4	7	2	24
03:00		6	4	4	3	17
04:00		8	14	21	21	64
05:00		21	29	43	42	135
06:00		60	81	111	126	378
07:00		167	205	202	253	827
08:00		208	205	229	157	799
09:00		163	131	194	170	658
10:00		160	152	153	150	615
11:00		151	184	148	187	670
12:00 PM		172	201	191	180	744
01:00		166	181	158	156	661
02:00		200	238	210	268	916
03:00		291	290	255	269	1105
04:00		280	285	290	332	1187
05:00		348	354	382	320	1404
06:00		265	220	172	163	820
07:00		154	137	121	124	536
08:00		110	114	107	83	414
09:00		101	92	98	66	357
10:00		46	52	40	32	170
11:00		37	19	23	21	100
Day Total						12687
Grand Total						12687



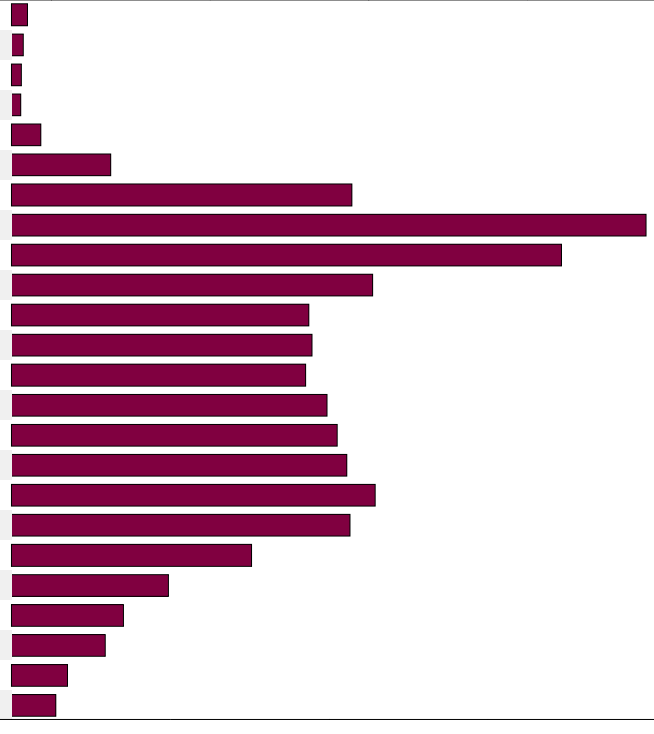
ADT ADT 12,630 AADT 12,630

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_off ramp_NB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		5	7	15	11	38
01:00		11	7	6	4	28
02:00		6	5	6	6	23
03:00		5	3	6	8	22
04:00		10	8	24	26	68
05:00		31	34	63	99	227
06:00		80	146	244	308	778
07:00		277	378	400	394	1449
08:00		328	363	282	283	1256
09:00		225	210	204	186	825
10:00		166	165	179	169	679
11:00		172	168	179	168	687
12:00 PM		146	157	180	189	672
01:00		177	194	175	175	721
02:00		151	190	190	213	744
03:00		149	205	211	201	766
04:00		199	201	199	232	831
05:00		201	212	189	171	773
06:00		157	127	140	125	549
07:00		98	91	82	88	359
08:00		70	69	75	42	256
09:00		53	46	70	46	215
10:00		38	39	33	19	129
11:00		31	32	22	17	102
Day Total						12197
Grand Total						12197



ADT ADT 12,110 AADT 12,110

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_on ramp_EB-SB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		13	14	12	13	52
01:00		8	7	5	9	29
02:00		8	4	4	7	23
03:00		8	1	7	3	19
04:00		6	11	18	11	46
05:00		16	12	20	46	94
06:00		46	61	89	122	318
07:00		116	112	147	161	536
08:00		141	149	151	132	573
09:00		141	122	110	116	489
10:00		112	123	124	121	480
11:00		99	141	126	142	508
12:00 PM		128	142	129	123	522
01:00		141	156	132	128	557
02:00		162	140	159	174	635
03:00		160	216	212	201	789
04:00		231	224	233	279	967
05:00		245	277	269	219	1010
06:00		177	158	141	139	615
07:00		113	99	92	93	397
08:00		89	88	75	78	330
09:00		80	71	71	35	257
10:00		59	49	32	43	183
11:00		27	32	18	15	92
Day Total						9521
Grand Total						9521

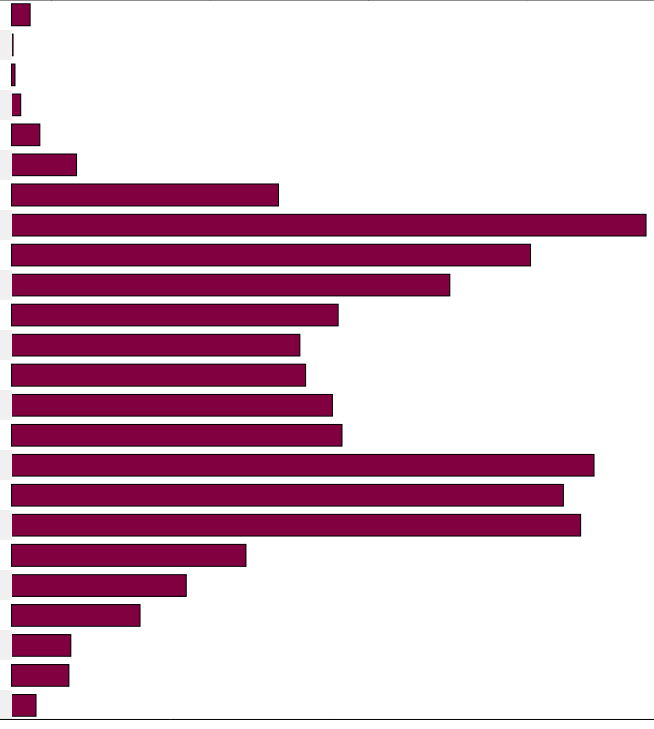
ADT ADT 9,393 AADT 9,393

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_loop ramp_WB-SB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		6	2	1	1	10
01:00		0	0	0	1	1
02:00		2	0	0	0	2
03:00		0	2	1	2	5
04:00		1	1	7	6	15
05:00		3	10	8	13	34
06:00		13	23	48	55	139
07:00		71	86	88	85	330
08:00		66	77	67	60	270
09:00		69	58	56	45	228
10:00		49	48	43	30	170
11:00		31	50	34	35	150
12:00 PM		41	41	37	34	153
01:00		47	37	42	41	167
02:00		33	41	53	45	172
03:00		55	75	92	81	303
04:00		64	63	83	77	287
05:00		110	71	60	55	296
06:00		27	37	25	33	122
07:00		26	26	16	23	91
08:00		18	16	17	16	67
09:00		11	12	4	4	31
10:00		10	10	7	3	30
11:00		6	2	3	2	13
Day Total						3086
Grand Total						3086



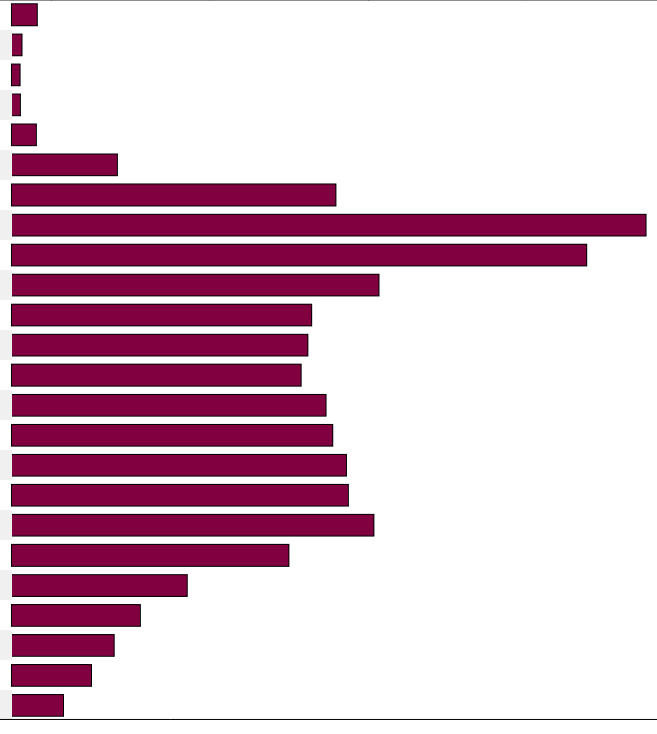
ADT ADT 3,074 AADT 3,074

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

I-75_off ramp_SB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		30	18	14	22	84
01:00		7	12	10	6	35
02:00		8	2	11	8	29
03:00		5	15	4	6	30
04:00		9	18	16	38	81
05:00		36	62	111	132	341
06:00		110	199	315	418	1042
07:00		384	560	536	556	2036
08:00		503	444	507	392	1846
09:00		320	306	287	267	1180
10:00		238	238	248	240	964
11:00		231	239	261	220	951
12:00 PM		239	217	238	236	930
01:00		282	246	225	257	1010
02:00		212	264	282	273	1031
03:00		238	273	282	282	1075
04:00		275	281	266	259	1081
05:00		272	301	306	284	1163
06:00		241	253	195	202	891
07:00		167	165	130	103	565
08:00		110	115	97	92	414
09:00		105	80	80	65	330
10:00		68	62	68	60	258
11:00		51	39	37	41	168
Day Total						17535
Grand Total						17535



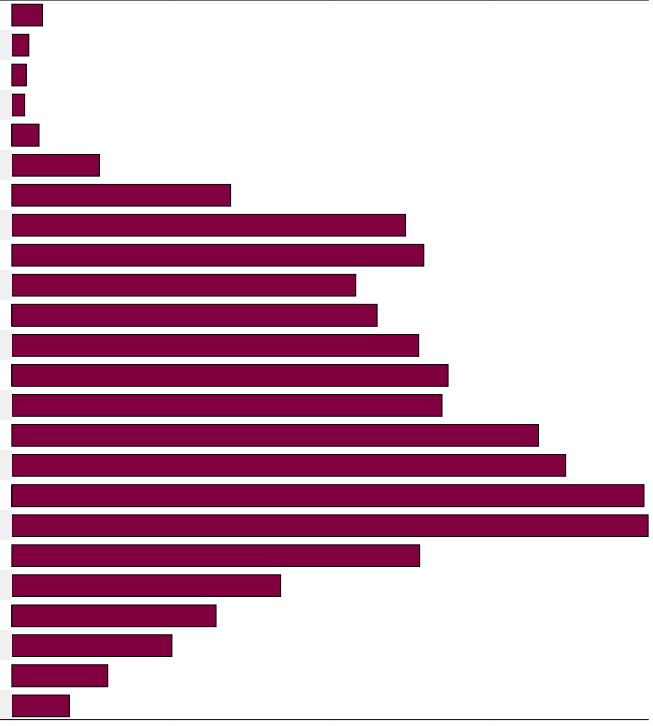
ADT ADT 17,650 AADT 17,650

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_W_of_Honore_EB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		37	21	31	23	112
01:00		15	16	15	16	62
02:00		7	17	13	16	53
03:00		17	11	6	13	47
04:00		13	20	28	38	99
05:00		53	56	98	109	316
06:00		128	165	240	255	788
07:00		273	331	436	377	1417
08:00		451	367	339	325	1482
09:00		339	281	317	301	1238
10:00		332	320	306	356	1314
11:00		377	335	369	383	1464
12:00 PM		383	383	407	396	1569
01:00		362	400	390	395	1547
02:00		455	394	447	599	1895
03:00		526	443	492	531	1992
04:00		554	541	574	604	2273
05:00		565	629	541	553	2288
06:00		460	384	319	304	1467
07:00		283	273	184	228	968
08:00		176	203	175	181	735
09:00		173	164	129	111	577
10:00		116	83	85	62	346
11:00		60	67	43	38	208
Day Total						24257
Grand Total						24257



ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_W_of_Honore_WB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		39	25	13	13	90
01:00		14	13	8	8	43
02:00		21	14	7	9	51
03:00		10	10	16	12	48
04:00		22	17	19	25	83
05:00		58	59	72	70	259
06:00		112	164	288	406	970
07:00		426	575	535	494	2030
08:00		439	585	578	441	2043
09:00		405	327	410	380	1522
10:00		313	337	298	351	1299
11:00		329	347	355	362	1393
12:00 PM		362	334	383	345	1424
01:00		379	334	357	357	1427
02:00		380	420	388	379	1567
03:00		367	396	438	342	1543
04:00		361	401	394	415	1571
05:00		473	439	418	358	1688
06:00		351	321	262	268	1202
07:00		276	207	201	156	840
08:00		179	129	129	156	593
09:00		130	104	112	114	460
10:00		104	99	56	48	307
11:00		70	35	38	40	183
Day Total						22636
Grand Total						22636

ADT ADT 3,720 AADT 3,720

COUNTY: 17
STATION: 0021
DESCRIPTION: SR 780/FRUITVILLE RD, W OF SR 93/I 75
START DATE: 10/22/2013
START TIME: 0400

	DIRECTION: E					DIRECTION: W					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	20	20	21	33	94	40	16	20	18	94	188
0100	16	13	10	12	51	16	11	11	12	50	101
0200	10	15	10	13	48	3	10	11	5	29	77
0300	11	10	11	18	50	5	12	4	6	27	77
0400	20	19	31	49	119	13	16	19	21	69	188
0500	58	63	103	128	352	46	60	88	88	282	634
0600	150	184	290	262	886	107	174	247	417	945	1831
0700	261	389	453	496	1599	424	505	521	461	1911	3510
0800	423	418	400	352	1593	536	585	526	572	2219	3812
0900	314	357	350	268	1289	397	392	421	374	1584	2873
1000	333	307	321	321	1282	360	362	317	365	1404	2686
1100	339	374	366	367	1446	344	329	396	441	1510	2956
1200	363	405	379	427	1574	391	377	387	427	1582	3156
1300	342	400	380	381	1503	424	377	338	383	1522	3025
1400	444	406	411	501	1762	366	392	464	354	1576	3338
1500	473	594	465	538	2070	398	409	465	430	1702	3772
1600	525	547	579	522	2173	396	437	365	436	1634	3807
1700	680	607	566	551	2404	496	580	426	406	1908	4312
1800	400	396	350	305	1451	423	345	360	302	1430	2881
1900	319	263	239	222	1043	270	260	230	200	960	2003
2000	256	199	186	169	810	144	143	154	137	578	1388
2100	200	162	122	125	609	109	127	105	96	437	1046
2200	128	102	74	60	364	100	72	72	46	290	654
2300	68	46	28	32	174	70	45	35	22	172	346
24-HOUR TOTALS:					24746					23915	48661

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	730	1790	800	2219	730	3893
P.M.	1700	2404	1645	1938	1645	4313
DAILY	1700	2404	800	2219	1645	4313

TRUCK PERCENTAGE 3.71 4.23 3.97

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
E	122	19401	4304	40	489	68	3	248	62	2	0	0	7	0	0	919	24746
W	160	18631	4113	48	503	94	18	252	67	8	0	0	21	0	0	1011	23915

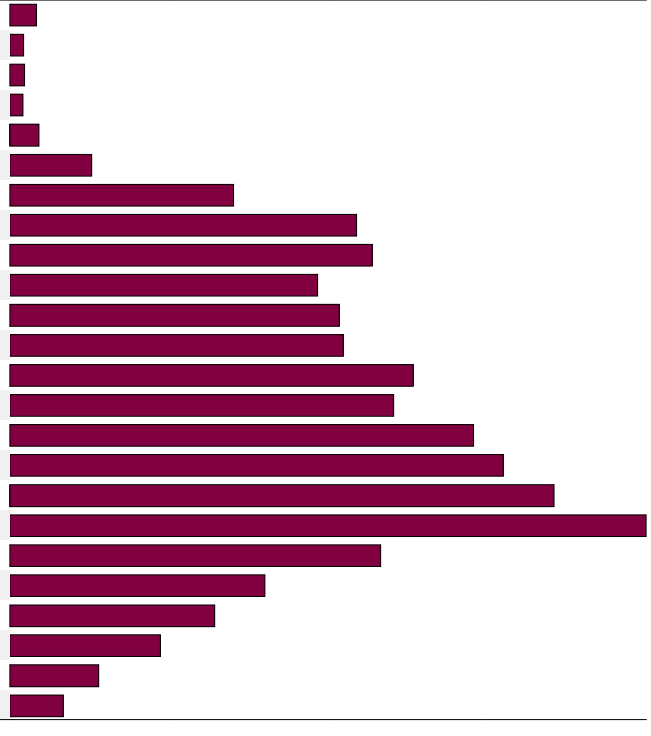
GENERATED BY SPS 5.0.44P

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_W_of_Cattlemen_EB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		48	30	32	22	132
01:00		21	18	13	16	68
02:00		11	18	18	25	72
03:00		20	23	8	14	65
04:00		19	32	39	53	143
05:00		65	76	134	123	398
06:00		203	229	317	337	1086
07:00		312	406	491	474	1683
08:00		471	478	415	395	1759
09:00		338	435	381	340	1494
10:00		421	353	402	424	1600
11:00		422	373	412	412	1619
12:00 PM		440	517	504	496	1957
01:00		460	452	483	467	1862
02:00		495	484	559	711	2249
03:00		604	588	607	595	2394
04:00		631	594	724	692	2641
05:00		823	844	683	736	3086
06:00		540	437	435	389	1801
07:00		340	370	238	290	1238
08:00		243	272	229	250	994
09:00		227	209	161	134	731
10:00		145	107	105	75	432
11:00		84	75	59	42	260
Day Total						29764
Grand Total						29764



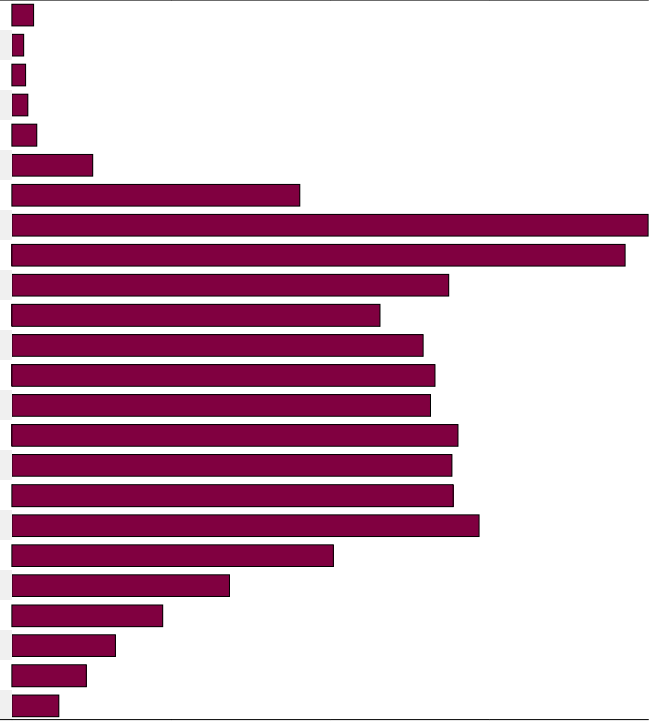
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_W_of_Cattlemen_WB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		41	18	18	11	88
01:00		14	18	10	7	49
02:00		27	14	6	10	57
03:00		12	13	19	21	65
04:00		23	17	27	35	102
05:00		67	72	80	107	326
06:00		136	195	380	445	1156
07:00		554	684	679	636	2553
08:00		606	736	586	533	2461
09:00		459	431	430	434	1754
10:00		388	356	354	380	1478
11:00		376	426	456	393	1651
12:00 PM		482	425	385	407	1699
01:00		404	376	429	472	1681
02:00		432	488	467	404	1791
03:00		437	431	493	406	1767
04:00		425	431	477	439	1772
05:00		519	510	420	427	1876
06:00		365	362	289	275	1291
07:00		255	238	196	186	875
08:00		189	129	145	144	607
09:00		117	105	97	98	417
10:00		107	87	61	45	300
11:00		69	42	49	30	190
Day Total						26006
Grand Total						26006



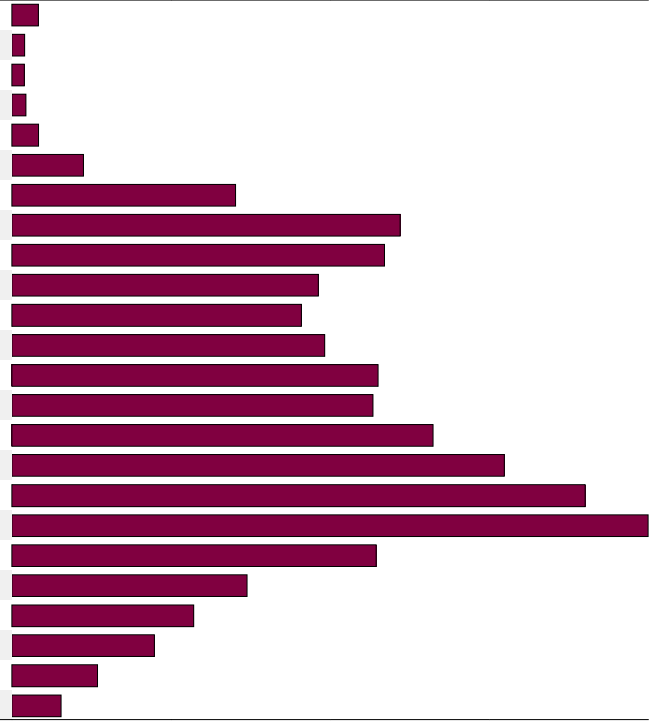
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Cattlemen_EB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		35	32	30	25	122
01:00		18	22	9	10	59
02:00		5	17	16	20	58
03:00		21	17	11	16	65
04:00		15	28	35	45	123
05:00		59	62	97	107	325
06:00		186	184	308	334	1012
07:00		320	417	489	529	1755
08:00		462	450	420	352	1684
09:00		328	357	346	355	1386
10:00		338	273	354	344	1309
11:00		338	370	353	353	1414
12:00 PM		378	423	399	456	1656
01:00		396	398	430	408	1632
02:00		435	446	469	554	1904
03:00		584	506	563	572	2225
04:00		596	612	706	676	2590
05:00		752	772	693	657	2874
06:00		524	401	390	332	1647
07:00		327	295	234	207	1063
08:00		224	195	205	199	823
09:00		194	182	141	128	645
10:00		136	101	93	59	389
11:00		65	63	58	38	224
Day Total						26984
Grand Total						26984



ADT	ADT 26,984	AADT 26,984

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Cattlemen_WB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		43	31	21	10	105
01:00		20	18	12	12	62
02:00		26	13	5	12	56
03:00		14	7	19	30	70
04:00		29	27	40	67	163
05:00		73	90	106	136	405
06:00		176	281	457	567	1481
07:00		619	741	781	699	2840
08:00		666	712	629	507	2514
09:00		467	405	436	407	1715
10:00		378	350	365	370	1463
11:00		426	376	423	405	1630
12:00 PM		437	413	355	321	1526
01:00		358	335	356	459	1508
02:00		441	502	457	417	1817
03:00		394	470	438	396	1698
04:00		423	399	401	442	1665
05:00		433	470	393	409	1705
06:00		342	355	297	314	1308
07:00		232	252	185	199	868
08:00		209	151	140	149	649
09:00		118	129	95	99	441
10:00		91	81	90	71	333
11:00		68	56	47	39	210
Day Total						26232
Grand Total						26232

ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville Rd_at_I-75_EB & WB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	14-May-14 Wed	Westbound	Eastbound	Combined Total
12:00 AM		80	93	173
01:00		39	63	102
02:00		45	39	84
03:00		45	58	103
04:00		91	107	198
05:00		240	366	606
06:00		844	977	1821
07:00		1933	1758	3691
08:00		1672	1496	3168
09:00		1212	1273	2485
10:00		1029	1164	2193
11:00		1094	1175	2269
12:00 PM		1158	1451	2609
01:00		1049	1467	2516
02:00		1111	1555	2666
03:00		1314	1930	3244
04:00		1292	2065	3357
05:00		1358	2241	3599
06:00		887	1505	2392
07:00		583	893	1476
08:00		551	786	1337
09:00		325	579	904
10:00		172	388	560
11:00		132	206	338
Total		18256	23635	41891
Percent		43.6%	56.4%	
Grand Total		18256	23635	
Percentage		43.6%	56.4%	

ADT ADT 41,451 AADT 41,451

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
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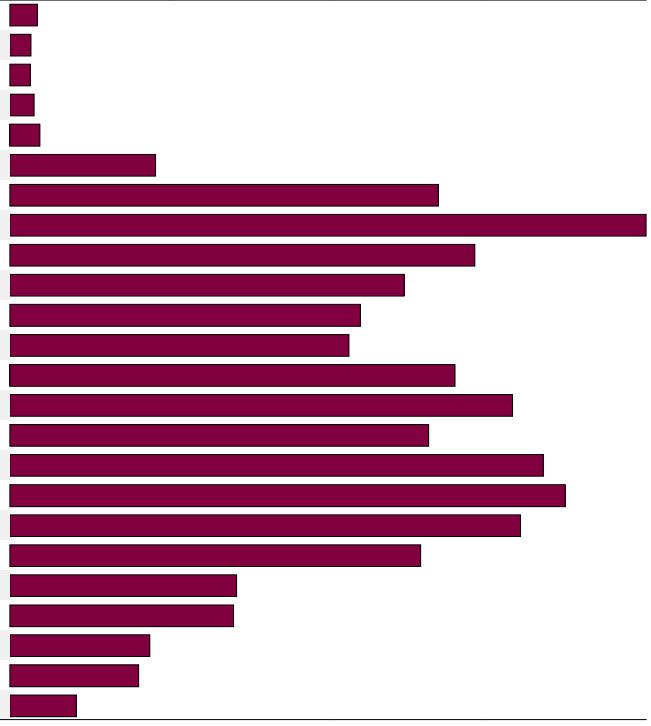
(813) 962-8689

Fruitville_W_of_Coburn_EB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		12	11	19	10	52
01:00		10	9	15	6	40
02:00		4	14	8	13	39
03:00		8	11	7	20	46
04:00		11	7	10	29	57
05:00		28	50	81	115	274
06:00		86	160	242	316	804
07:00		241	308	313	331	1193
08:00		241	219	177	235	872
09:00		207	223	134	176	740
10:00		119	180	182	177	658
11:00		165	152	161	158	636
12:00 PM		192	218	204	221	835
01:00		222	244	258	219	943
02:00		195	164	200	227	786
03:00		291	169	256	285	1001
04:00		242	271	263	266	1042
05:00		262	264	201	231	958
06:00		188	209	178	196	771
07:00		121	111	99	95	426
08:00		87	119	95	119	420
09:00		72	89	45	57	263
10:00		72	62	55	53	242
11:00		30	44	30	21	125
Day Total						13223
Grand Total						13223
ADT		ADT 26,984		AADT 26,984		



ICON Consultant Group, Inc.

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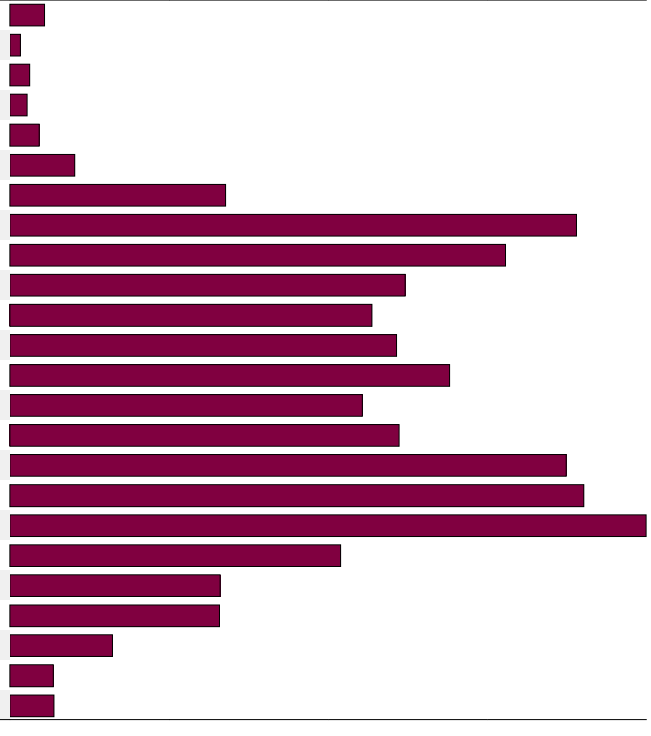
Tampa, FL 33618
(813) 962-8689

Fruitville_W_of_Coburn_WB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		35	20	12	3	70
01:00		4	8	5	5	22
02:00		19	12	6	3	40
03:00		5	15	4	11	35
04:00		18	16	10	15	59
05:00		18	37	45	29	129
06:00		25	80	121	202	428
07:00		296	251	304	272	1123
08:00		277	225	263	218	983
09:00		175	170	225	214	784
10:00		157	218	156	187	718
11:00		202	196	181	188	767
12:00 PM		246	235	163	228	872
01:00		183	147	181	188	699
02:00		207	187	201	177	772
03:00		273	245	339	246	1103
04:00		341	242	320	235	1138
05:00		450	320	263	228	1261
06:00		184	188	132	152	656
07:00		130	95	88	104	417
08:00		77	124	98	117	416
09:00		94	69	14	27	204
10:00		27	19	28	13	87
11:00		37	23	13	15	88
Day Total						12871
Grand Total						12871



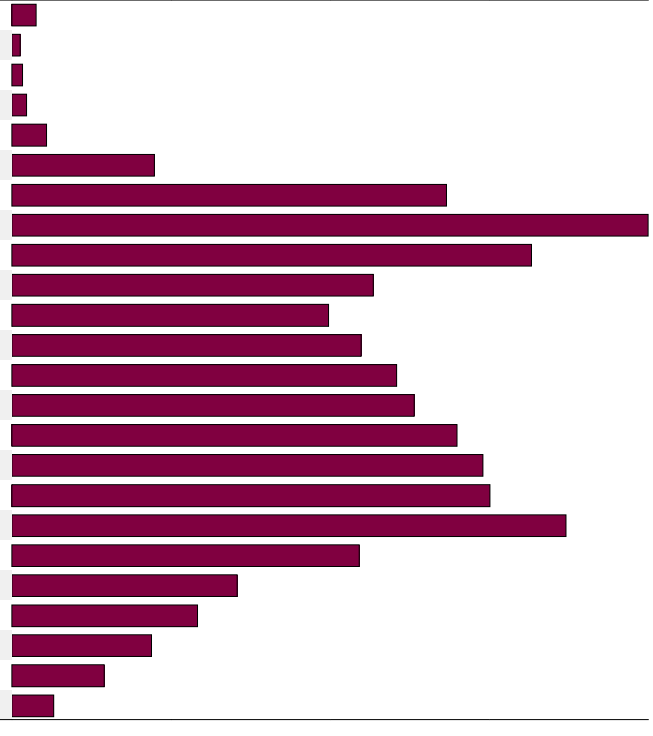
ADT ADT 26,984 AADT 26,984

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Coburn_EB
Date Start: 13-May-14
Date End: 15-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		13	13	8	5	39
01:00		7	5	0	2	14
02:00		4	1	5	8	18
03:00		5	7	6	6	24
04:00		3	6	27	20	56
05:00		25	42	58	102	227
06:00		98	121	203	268	690
07:00		192	230	263	325	1010
08:00		231	211	200	183	825
09:00		134	150	154	136	574
10:00		120	133	114	136	503
11:00		130	130	140	155	555
12:00 PM		130	159	158	164	611
01:00		157	163	151	168	639
02:00		154	170	193	190	707
03:00		194	176	170	208	748
04:00		166	178	194	221	759
05:00		224	233	203	220	880
06:00		174	127	138	113	552
07:00		98	114	73	73	358
08:00		79	82	76	58	295
09:00		65	50	63	44	222
10:00		42	29	47	29	147
11:00		17	20	20	10	67
Day Total						10520



ICON Consultant Group, Inc.
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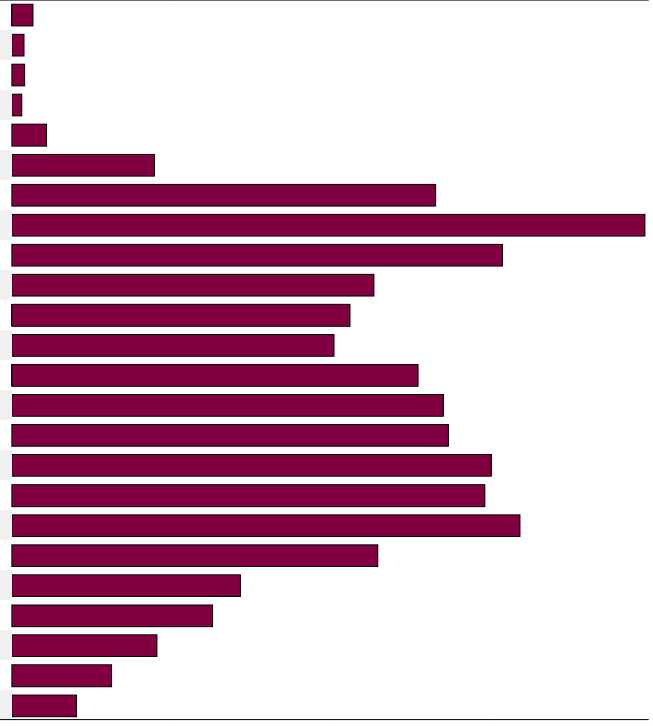
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Coburn_EB
Date Start: 13-May-14
Date End: 15-May-14

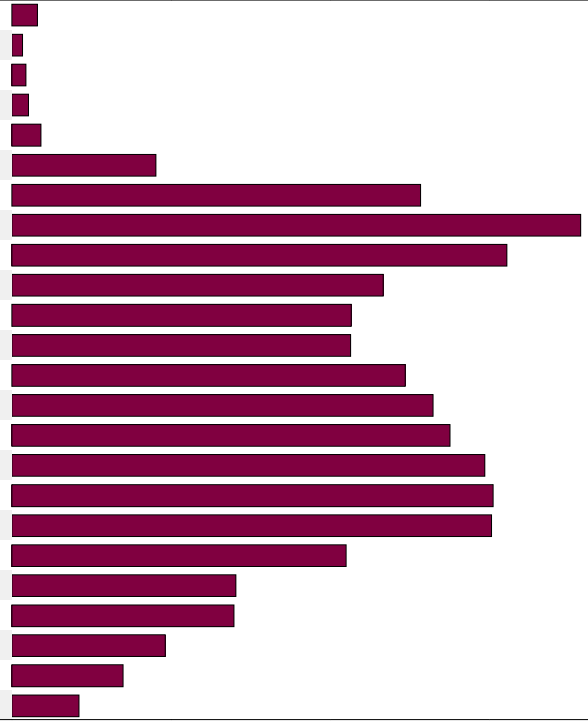
Start Time	Wed 14-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		9	5	9	11	34
01:00		5	4	5	6	20
02:00		4	7	7	3	21
03:00		4	1	4	7	16
04:00		6	6	23	21	56
05:00		20	35	51	121	227
06:00		82	125	206	260	673
07:00		200	236	239	330	1005
08:00		228	205	177	169	779
09:00		161	127	156	131	575
10:00		135	137	141	124	537
11:00		110	127	140	135	512
12:00 PM		156	156	166	167	645
01:00		168	176	166	175	685
02:00		146	143	172	232	693
03:00		200	196	159	206	761
04:00		162	193	204	192	751
05:00		210	187	178	232	807
06:00		161	185	128	107	581
07:00		96	99	87	81	363
08:00		96	76	75	72	319
09:00		49	70	68	44	231
10:00		46	50	38	25	159
11:00		31	37	20	15	103
Day Total						10553



ICON Consultant Group, Inc.
10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Coburn_EB
Date Start: 13-May-14
Date End: 15-May-14

Start Time	Thu 15-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		12	14	8	7	41
01:00		5	6	6	1	18
02:00		6	5	7	5	23
03:00		12	5	2	8	27
04:00		3	5	19	20	47
05:00		32	38	52	107	229
06:00		70	123	201	255	649
07:00		156	225	213	309	903
08:00		244	175	179	188	786
09:00		148	169	127	146	590
10:00		134	156	110	139	539
11:00		128	118	145	147	538
12:00 PM		120	152	179	174	625
01:00		173	158	161	177	669
02:00		170	154	165	207	696
03:00		190	215	169	177	751
04:00		188	163	217	196	764
05:00		179	210	184	189	762
06:00		146	135	114	136	531
07:00		96	93	88	79	356
08:00		75	109	86	83	353
09:00		73	56	65	50	244
10:00		51	40	50	36	177
11:00		29	28	24	26	107
Day Total						10425
Grand Total						31498



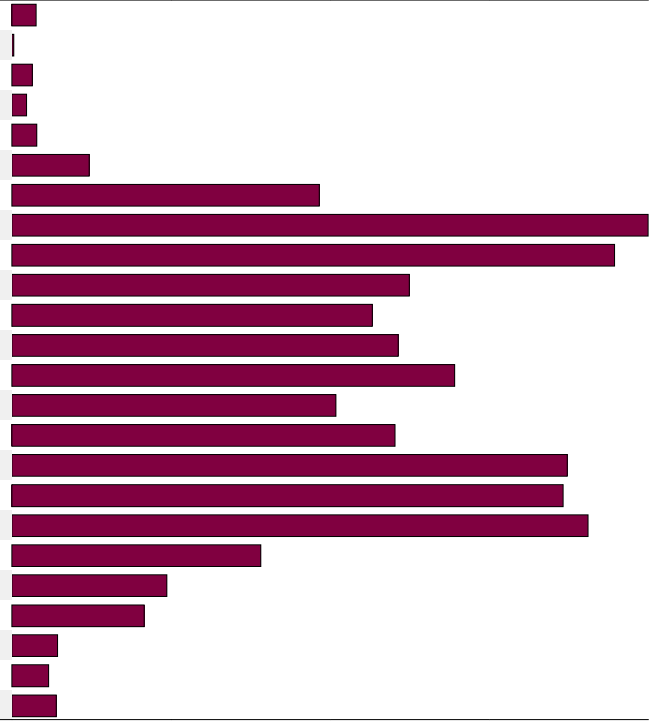
ADT	ADT 26,984	AADT 26,984

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Coburn_WB
Date Start: 13-May-14
Date End: 15-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		28	7	4	2	41
01:00		1	2	0	1	4
02:00		19	4	8	4	35
03:00		3	4	9	9	25
04:00		8	6	17	11	42
05:00		23	22	40	45	130
06:00		54	106	157	198	515
07:00		254	274	278	259	1065
08:00		269	261	266	213	1009
09:00		149	179	158	180	666
10:00		158	146	156	144	604
11:00		145	173	177	152	647
12:00 PM		200	197	178	167	742
01:00		131	133	138	141	543
02:00		141	172	181	148	642
03:00		218	210	317	185	930
04:00		257	218	213	235	923
05:00		306	259	219	181	965
06:00		119	113	97	88	417
07:00		87	70	47	56	260
08:00		63	35	87	37	222
09:00		24	24	17	12	77
10:00		21	14	18	9	62
11:00		41	9	13	12	75
Day Total						10641

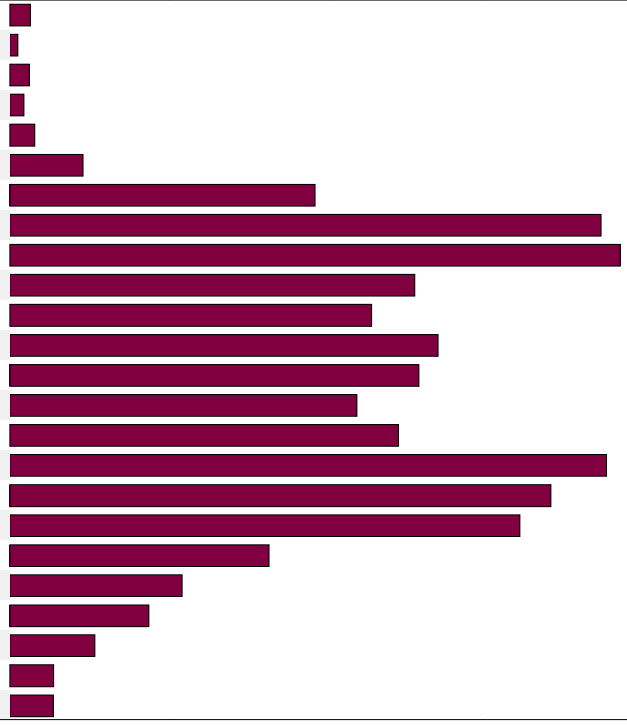


ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Fruitville_E_of_Coburn_WB
Date Start: 13-May-14
Date End: 15-May-14

Start Time	Wed 14-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		22	7	5	1	35
01:00		1	6	4	3	14
02:00		16	9	4	4	33
03:00		7	5	4	8	24
04:00		4	13	13	12	42
05:00		21	24	35	43	123
06:00		60	104	143	204	511
07:00		241	259	266	224	990
08:00		284	285	273	180	1022
09:00		184	165	170	159	678
10:00		157	152	148	149	606
11:00		164	170	169	214	717
12:00 PM		183	172	162	168	685
01:00		132	159	142	148	581
02:00		160	141	202	148	651
03:00		224	254	317	204	999
04:00		273	188	249	196	906
05:00		283	186	216	169	854
06:00		141	127	83	83	434
07:00		71	67	78	73	289
08:00		63	65	59	46	233
09:00		52	41	21	29	143
10:00		26	11	18	19	74
11:00		40	10	19	4	73
Day Total						10717



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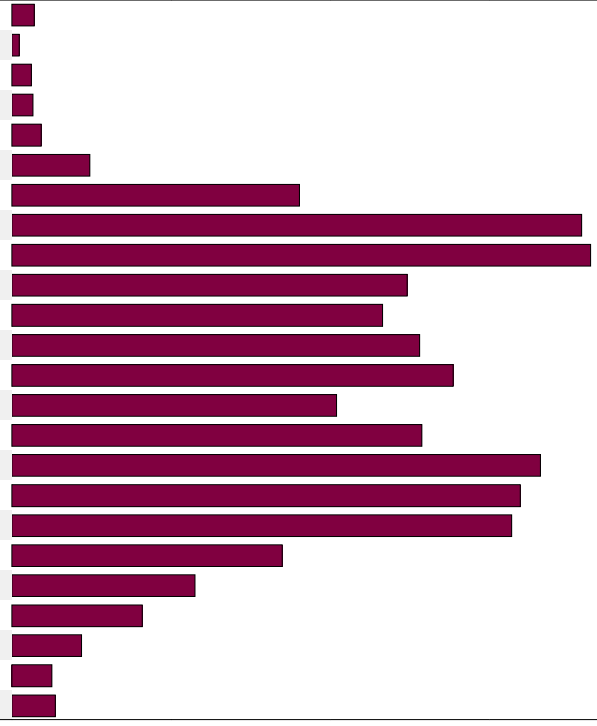
Fruitville_E_of_Coburn_WB
Date Start: 13-May-14
Date End: 15-May-14

Start Time	Thu 15-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		26	2	5	5	38
01:00		4	2	5	2	13
02:00		18	8	3	4	33
03:00		7	4	13	12	36
04:00		8	10	15	17	50
05:00		22	26	38	45	131
06:00		57	105	136	184	482
07:00		223	267	247	217	954
08:00		261	259	221	228	969
09:00		163	165	155	179	662
10:00		155	166	146	154	621
11:00		155	183	177	168	683
12:00 PM		211	184	188	156	739
01:00		132	137	141	134	544
02:00		162	202	162	161	687
03:00		209	212	290	174	885
04:00		226	170	251	204	851
05:00		259	242	167	169	837
06:00		140	117	105	91	453
07:00		85	82	74	66	307
08:00		75	54	50	40	219
09:00		37	20	36	24	117
10:00		21	18	16	13	68
11:00		47	13	7	6	73
Day Total						10452
Grand Total						31810



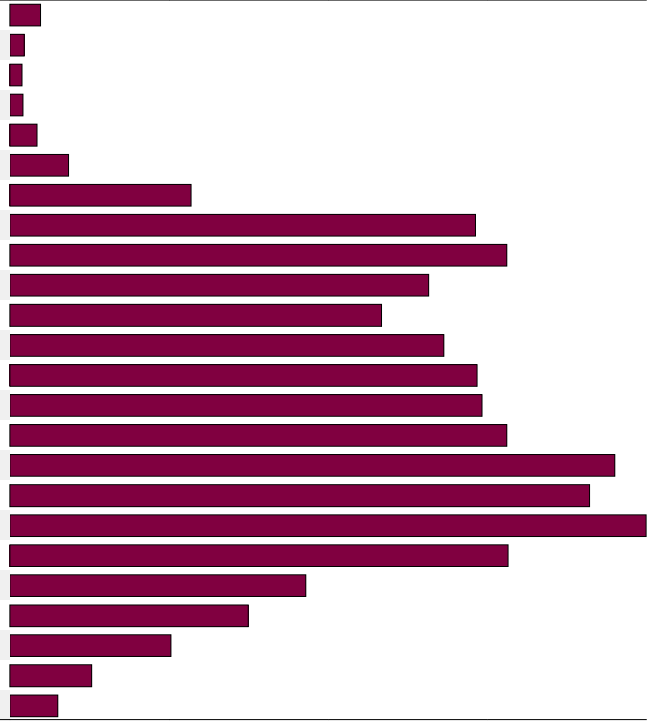
ADT	ADT 26,984	AADT 26,984	

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Honore_N_of_Fruitville_NB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		19	6	9	8	42
01:00		7	5	3	5	20
02:00		6	7	2	2	17
03:00		2	5	6	5	18
04:00		10	5	10	12	37
05:00		11	22	22	25	80
06:00		25	35	72	113	245
07:00		97	145	199	188	629
08:00		159	172	185	155	671
09:00		167	123	122	154	566
10:00		128	123	138	113	502
11:00		148	147	153	138	586
12:00 PM		170	146	138	177	631
01:00		146	155	170	167	638
02:00		165	144	179	183	671
03:00		197	185	220	215	817
04:00		177	175	211	220	783
05:00		213	215	216	215	859
06:00		175	184	143	171	673
07:00		114	104	105	77	400
08:00		117	71	60	74	322
09:00		66	71	49	32	218
10:00		38	26	30	17	111
11:00		23	11	17	14	65
Day Total						9601
Grand Total						9601



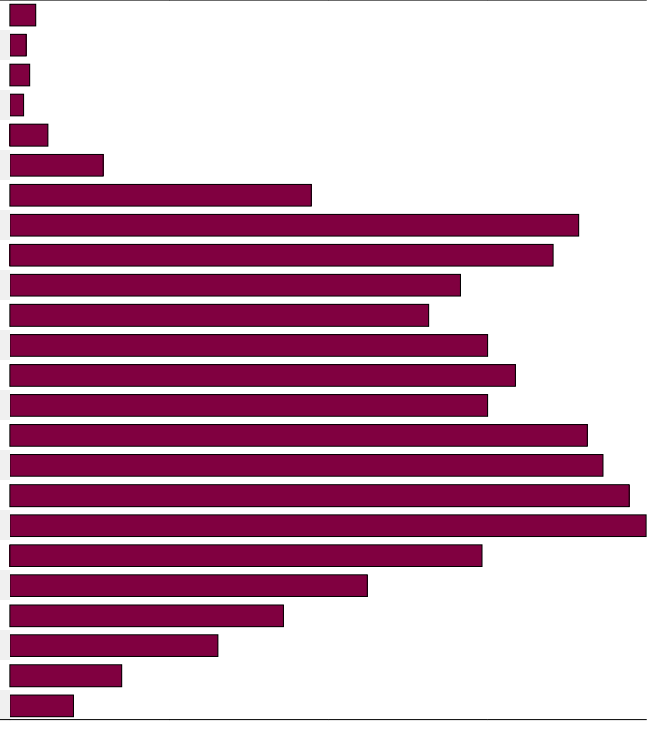
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Honore_N_of_Fruitville_SB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		9	10	6	5	30
01:00		13	2	2	2	19
02:00		9	4	7	3	23
03:00		5	4	3	4	16
04:00		8	7	11	18	44
05:00		12	14	38	43	107
06:00		66	72	96	111	345
07:00		115	137	189	209	650
08:00		185	173	139	124	621
09:00		128	129	126	132	515
10:00		112	99	132	136	479
11:00		115	131	151	149	546
12:00 PM		159	151	131	137	578
01:00		170	122	135	119	546
02:00		155	166	190	149	660
03:00		195	173	158	152	678
04:00		162	166	187	193	708
05:00		201	196	177	153	727
06:00		171	122	119	128	540
07:00		127	105	105	72	409
08:00		86	79	76	72	313
09:00		76	48	60	54	238
10:00		45	33	28	22	128
11:00		23	18	16	16	73
Day Total						8993
Grand Total						8993



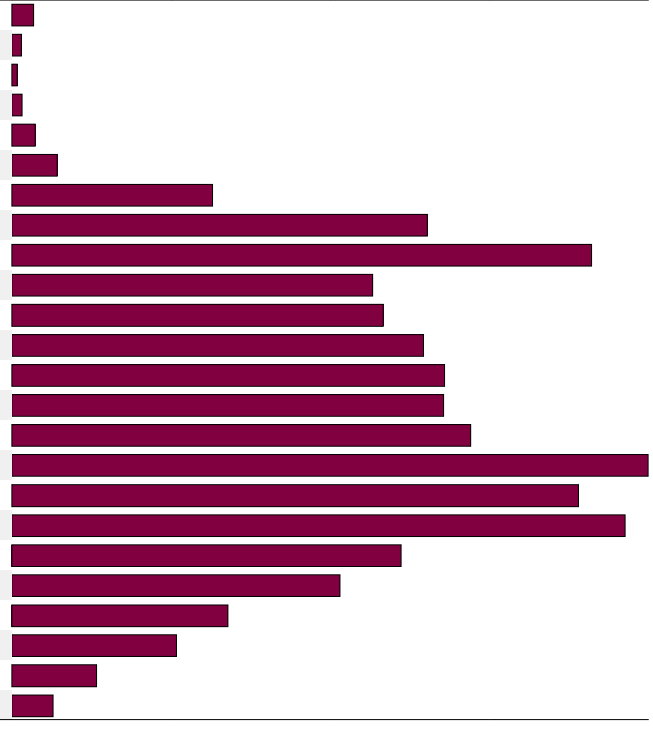
ADT	ADT 3,720	AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Honore_S_of_Fruitville_NB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		11	8	4	4	27
01:00		6	0	1	5	12
02:00		1	3	2	1	7
03:00		2	3	6	2	13
04:00		7	5	10	7	29
05:00		12	14	12	18	56
06:00		26	46	81	93	246
07:00		100	117	146	146	509
08:00		150	229	184	147	710
09:00		118	110	92	122	442
10:00		118	116	113	108	455
11:00		136	104	141	123	504
12:00 PM		122	129	136	143	530
01:00		137	135	141	116	529
02:00		137	117	145	163	562
03:00		178	221	205	175	779
04:00		157	159	179	199	694
05:00		188	195	194	174	751
06:00		109	132	128	108	477
07:00		108	107	95	92	402
08:00		86	63	52	64	265
09:00		65	64	30	43	202
10:00		39	30	19	16	104
11:00		18	13	8	12	51
Day Total						8356
Grand Total						8356



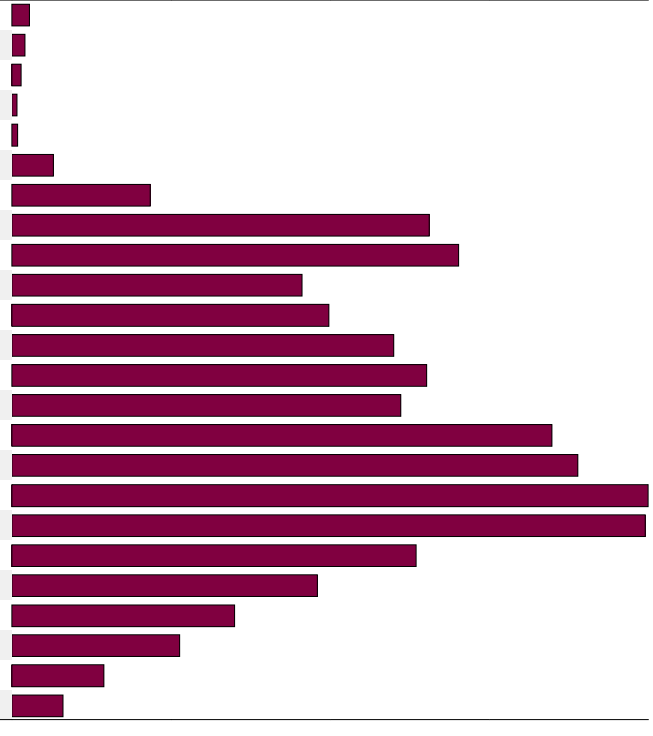
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Honore_S_of_Fruitville_SB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		7	3	7	3	20
01:00		7	3	3	2	15
02:00		4	2	3	2	11
03:00		0	1	1	4	6
04:00		1	2	1	3	7
05:00		11	5	10	21	47
06:00		23	31	39	63	156
07:00		70	97	134	169	470
08:00		179	128	111	85	503
09:00		91	73	65	98	327
10:00		80	97	71	109	357
11:00		100	106	113	111	430
12:00 PM		117	128	110	112	467
01:00		124	107	116	91	438
02:00		134	130	165	179	608
03:00		188	141	146	162	637
04:00		178	174	191	173	716
05:00		206	184	163	160	713
06:00		142	109	100	104	455
07:00		98	89	91	66	344
08:00		75	59	58	59	251
09:00		61	47	39	42	189
10:00		37	27	20	20	104
11:00		22	15	10	11	58
Day Total						7329
Grand Total						7329



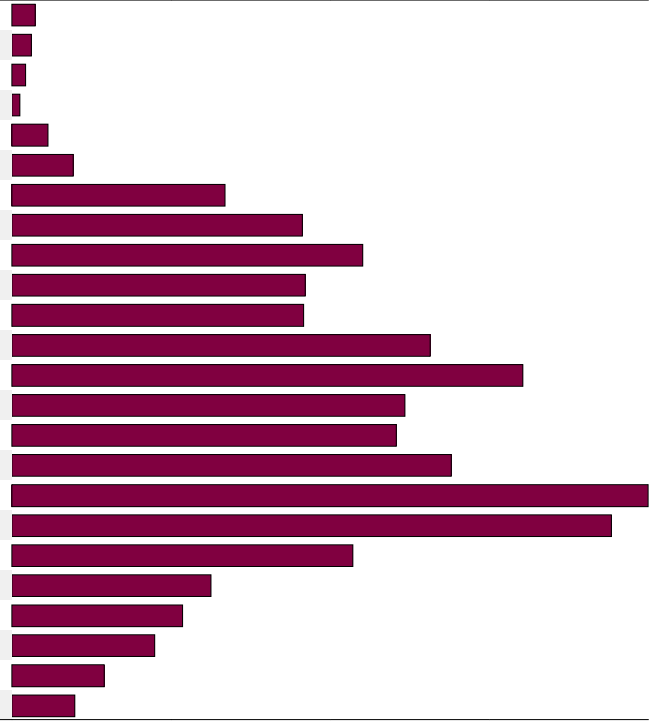
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Paramount_S_of_Fruitville_NB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		4	2	7	4	17
01:00		4	4	3	3	14
02:00		4	3	2	1	10
03:00		3	1	2	0	6
04:00		7	3	6	10	26
05:00		4	15	12	13	44
06:00		28	35	40	49	152
07:00		49	53	59	46	207
08:00		71	74	59	46	250
09:00		58	43	62	46	209
10:00		56	58	41	53	208
11:00		60	58	84	96	298
12:00 PM		100	95	97	72	364
01:00		73	83	56	68	280
02:00		78	60	67	69	274
03:00		76	84	64	89	313
04:00		95	119	99	140	453
05:00		108	141	95	83	427
06:00		65	65	57	56	243
07:00		41	37	34	30	142
08:00		24	32	36	30	122
09:00		18	24	34	26	102
10:00		19	12	14	21	66
11:00		9	15	12	9	45
Day Total						4272
Grand Total						4272



ADT	ADT 3,720	AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Paramount_S_of_Fruitville_SB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		0	5	3	5	13
01:00		6	3	5	4	18
02:00		5	4	4	7	20
03:00		4	2	2	5	13
04:00		11	10	18	15	54
05:00		16	22	36	33	107
06:00		52	78	99	132	361
07:00		147	150	192	179	668
08:00		194	138	107	90	529
09:00		67	76	69	75	287
10:00		72	61	71	71	275
11:00		58	91	97	107	353
12:00 PM		90	100	91	93	374
01:00		104	99	100	90	393
02:00		81	73	74	102	330
03:00		80	89	79	75	323
04:00		95	67	93	88	343
05:00		82	78	74	82	316
06:00		69	55	71	46	241
07:00		55	44	28	49	176
08:00		32	35	26	29	122
09:00		26	19	24	35	104
10:00		21	20	15	14	70
11:00		18	11	9	15	53
Day Total						5543
Grand Total						5543

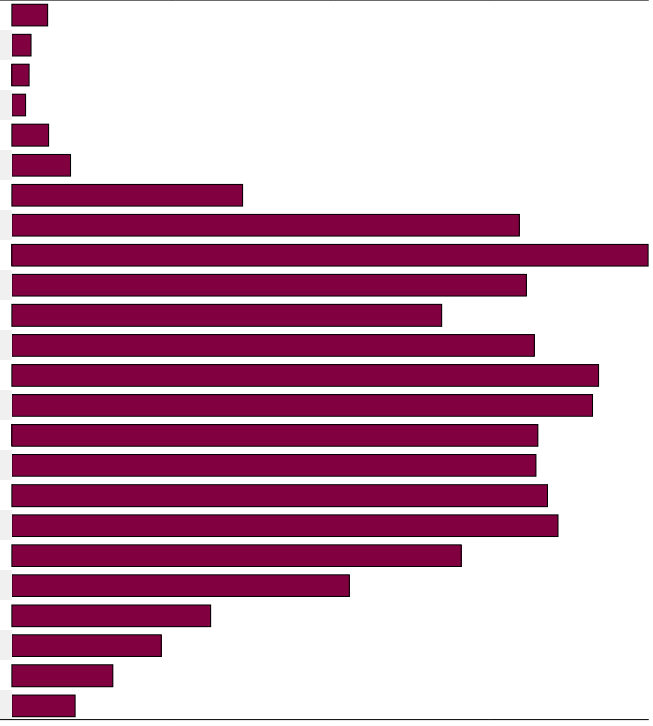
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Cattlemen_N_of_Fruitville_NB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		14	18	5	4	41
01:00		7	4	3	8	22
02:00		8	8	1	3	20
03:00		4	4	4	4	16
04:00		6	7	14	15	42
05:00		8	10	22	27	67
06:00		42	45	69	106	262
07:00		98	127	150	201	576
08:00		180	180	192	170	722
09:00		150	148	118	168	584
10:00		116	116	147	109	488
11:00		126	162	137	168	593
12:00 PM		181	177	148	160	666
01:00		164	160	165	170	659
02:00		142	176	141	138	597
03:00		148	156	146	145	595
04:00		137	159	176	136	608
05:00		174	169	131	146	620
06:00		142	134	115	119	510
07:00		113	87	92	91	383
08:00		69	54	53	50	226
09:00		37	56	32	45	170
10:00		30	24	34	27	115
11:00		24	16	18	14	72
Day Total						8654
Grand Total						8654



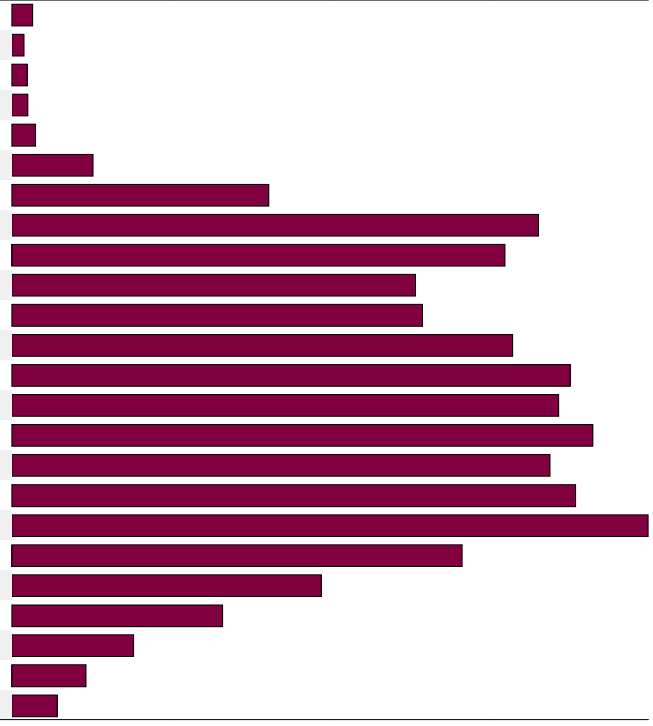
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Cattlemen_N_of_Fruitville_SB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		7	10	4	6	27
01:00		4	9	0	3	16
02:00		9	5	1	5	20
03:00		4	5	7	5	21
04:00		4	6	12	9	31
05:00		11	20	34	40	105
06:00		50	58	104	119	331
07:00		144	156	184	194	678
08:00		169	175	169	122	635
09:00		122	142	130	126	520
10:00		104	128	150	147	529
11:00		134	166	167	178	645
12:00 PM		181	151	192	195	719
01:00		189	189	168	158	704
02:00		199	203	155	191	748
03:00		181	168	163	181	693
04:00		169	187	202	168	726
05:00		221	208	229	161	819
06:00		165	140	136	139	580
07:00		125	128	71	75	399
08:00		76	80	58	58	272
09:00		58	44	34	21	157
10:00		40	22	24	10	96
11:00		18	12	13	16	59
Day Total						9530
Grand Total						9530



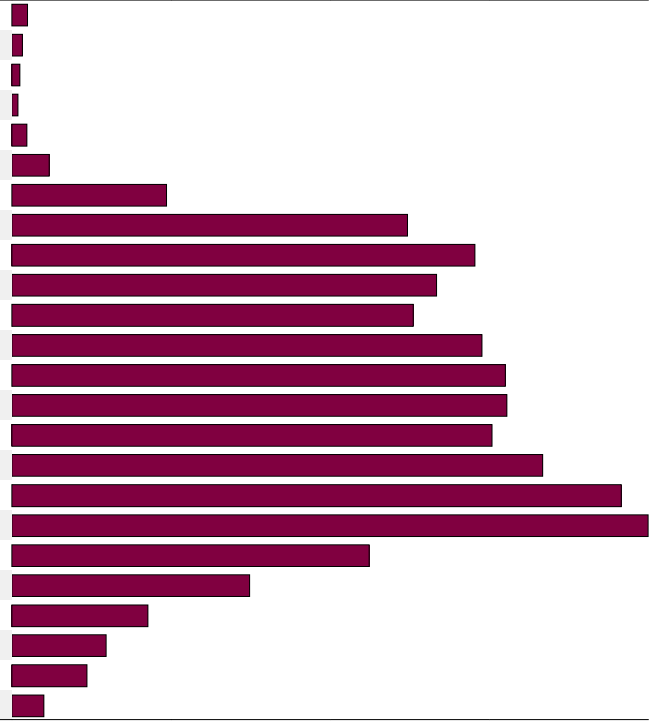
ADT	ADT 9,530	AADT 9,530

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Cattlemen_S_of_Fruitville_NB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		10	4	5	6	25
01:00		6	4	1	6	17
02:00		2	4	3	4	13
03:00		2	2	4	2	10
04:00		1	5	5	13	24
05:00		14	12	13	20	59
06:00		24	38	76	105	243
07:00		121	157	166	176	620
08:00		196	174	190	166	726
09:00		183	139	170	174	666
10:00		170	158	148	153	629
11:00		163	201	184	189	737
12:00 PM		216	192	200	166	774
01:00		186	196	208	186	776
02:00		194	172	189	198	753
03:00		212	203	241	176	832
04:00		222	224	273	236	955
05:00		293	247	228	229	997
06:00		179	147	120	114	560
07:00		118	90	90	75	373
08:00		56	54	58	46	214
09:00		54	28	36	30	148
10:00		37	39	24	18	118
11:00		14	15	14	8	51
Day Total						10320
Grand Total						10320



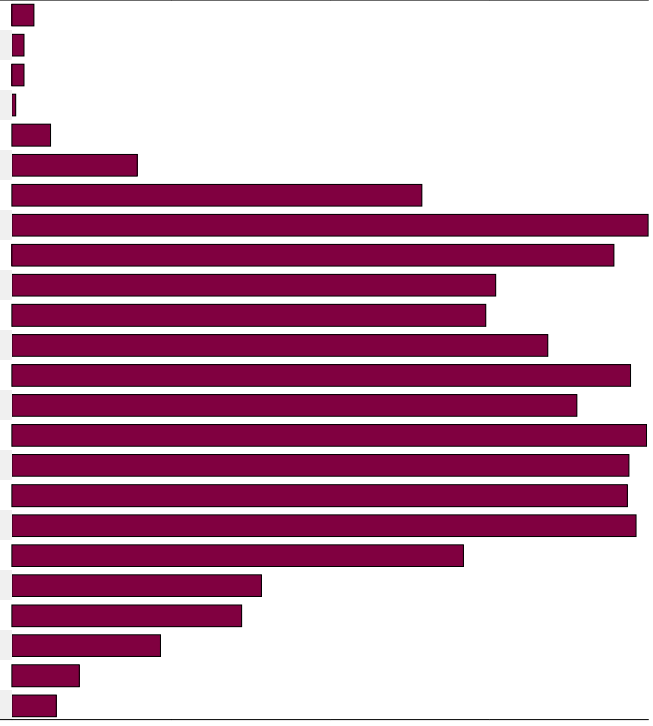
ADT	ADT 10,320	AADT 10,320

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Cattlemen_S_of_Fruitville_SB
Date Start: 13-May-14
Date End: 13-May-14

Start Time	Tue 13-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		12	7	4	4	27
01:00		3	6	1	5	15
02:00		6	2	4	3	15
03:00		0	2	0	3	5
04:00		6	7	14	20	47
05:00		23	28	43	58	152
06:00		58	82	156	200	496
07:00		140	182	209	238	769
08:00		208	167	216	137	728
09:00		153	162	138	132	585
10:00		134	142	140	157	573
11:00		158	160	170	160	648
12:00 PM		182	174	200	192	748
01:00		186	176	169	152	683
02:00		180	218	156	213	767
03:00		190	200	184	172	746
04:00		188	201	156	199	744
05:00		188	205	187	175	755
06:00		160	146	110	130	546
07:00		90	90	52	70	302
08:00		60	77	73	68	278
09:00		58	49	39	34	180
10:00		27	26	11	18	82
11:00		15	19	12	8	54
Day Total						9945
Grand Total						9945



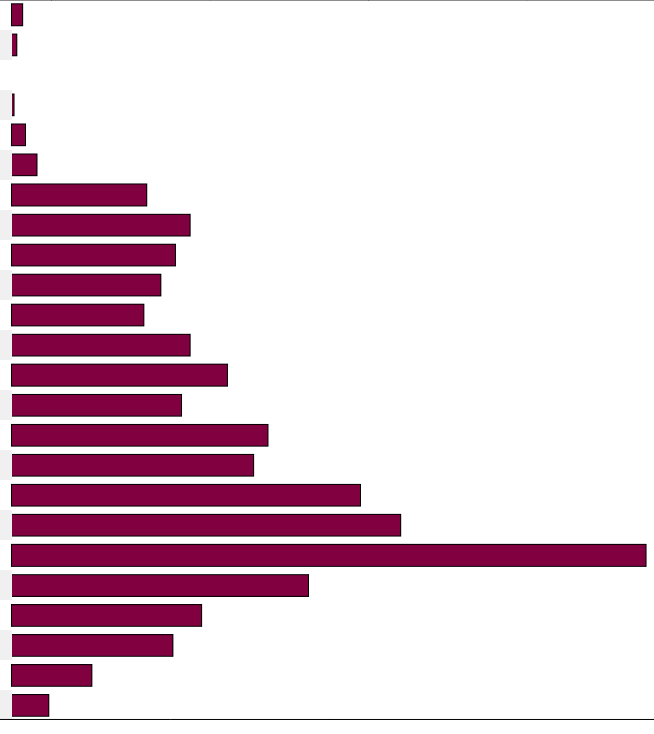
ADT ADT 9,945 AADT 9,945

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Coburn Rd_stop_NB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter Hour----------> 1st	2nd	3rd	4th	Hour Total
12:00 AM		0	2	1	1	4
01:00		0	1	0	1	2
02:00		0	0	0	0	0
03:00		0	0	1	0	1
04:00		1	3	1	0	5
05:00		2	1	2	4	9
06:00		8	7	15	17	47
07:00		16	15	21	10	62
08:00		24	11	10	12	57
09:00		16	14	11	11	52
10:00		14	11	14	7	46
11:00		14	16	23	9	62
12:00 PM		18	16	17	24	75
01:00		8	18	19	14	59
02:00		28	13	27	21	89
03:00		20	26	17	21	84
04:00		25	30	27	39	121
05:00		36	33	30	36	135
06:00		36	40	57	87	220
07:00		43	34	14	12	103
08:00		14	19	19	14	66
09:00		20	13	12	11	56
10:00		6	9	5	8	28
11:00		4	3	3	3	13
Day Total						1396
Grand Total						1396



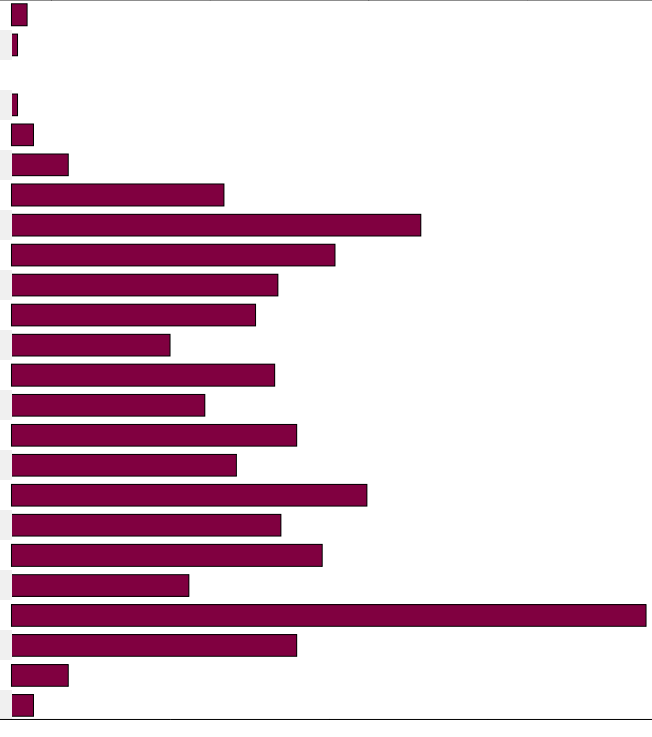
ADT ADT 1,385 AADT 1,385

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Coburn Rd_stop_SB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		1	1	2	1	5
01:00		1	0	0	1	2
02:00		0	0	0	0	0
03:00		1	0	1	0	2
04:00		1	3	3	0	7
05:00		3	4	7	4	18
06:00		9	8	22	28	67
07:00		40	29	36	24	129
08:00		40	17	20	25	102
09:00		23	16	29	16	84
10:00		27	18	19	13	77
11:00		10	17	16	7	50
12:00 PM		17	19	23	24	83
01:00		13	15	22	11	61
02:00		20	24	28	18	90
03:00		17	21	14	19	71
04:00		22	23	36	31	112
05:00		25	22	25	13	85
06:00		26	20	28	24	98
07:00		16	19	12	9	56
08:00		12	65	70	53	200
09:00		46	23	12	9	90
10:00		7	4	4	3	18
11:00		2	3	1	1	7
Day Total						1514
Grand Total						1514



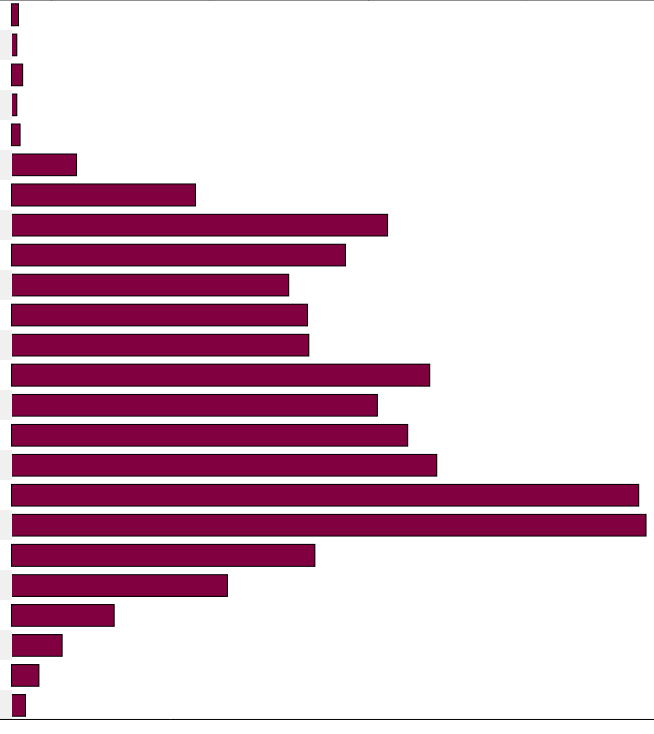
ADT ADT 1,504 AADT 1,504

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Coburn Rd_sig_NB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		0	2	2	1	5
01:00		0	1	0	3	4
02:00		0	2	4	2	8
03:00		0	0	1	3	4
04:00		0	1	1	4	6
05:00		10	8	10	17	45
06:00		23	16	38	50	127
07:00		39	79	75	66	259
08:00		44	71	73	42	230
09:00		44	61	38	48	191
10:00		43	58	55	48	204
11:00		51	54	52	48	205
12:00 PM		78	80	71	59	288
01:00		72	66	54	60	252
02:00		66	55	74	78	273
03:00		73	55	77	88	293
04:00		116	100	111	105	432
05:00		162	110	92	73	437
06:00		59	55	54	41	209
07:00		42	30	32	45	149
08:00		28	20	13	10	71
09:00		13	10	6	6	35
10:00		8	5	4	2	19
11:00		1	3	2	4	10
Day Total						3756
Grand Total						3756



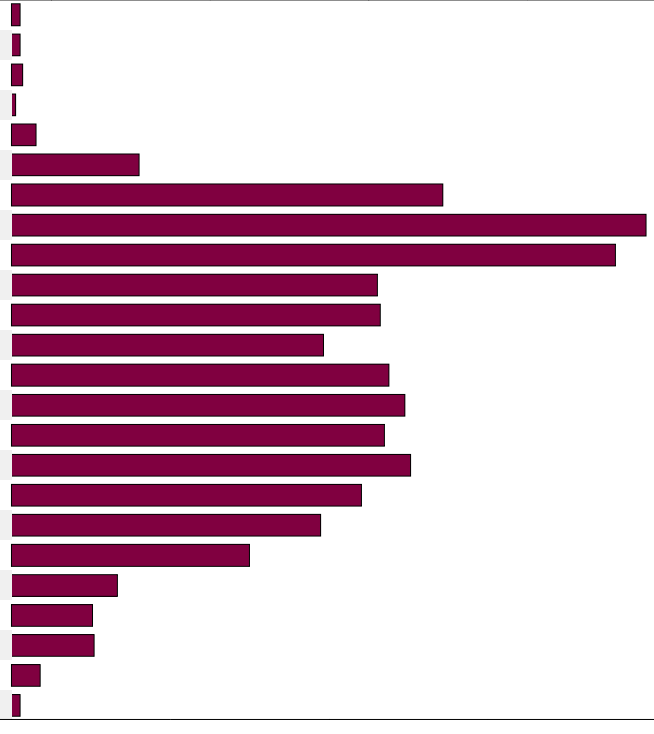
ADT ADT 3,720 AADT 3,720

ICON Consultant Group, Inc

10006 N Dale Mabry Hwy, Suite 201
Tampa, FL 33618
(813) 962-8689

Coburn Rd_sig_SB
Date Start: 14-May-14
Date End: 14-May-14

Start Time	Wed 14-May-14	<----------Quarter 1st	2nd	Hour----------> 3rd	4th	Hour Total
12:00 AM		0	0	4	2	6
01:00		1	0	5	0	6
02:00		0	1	5	2	8
03:00		1	0	0	2	3
04:00		0	3	4	10	17
05:00		8	15	27	38	88
06:00		34	64	71	128	297
07:00		86	98	121	132	437
08:00		137	111	80	88	416
09:00		73	51	62	66	252
10:00		72	58	67	57	254
11:00		65	48	43	59	215
12:00 PM		57	69	58	76	260
01:00		71	76	76	48	271
02:00		59	68	65	65	257
03:00		60	65	71	79	275
04:00		86	58	55	42	241
05:00		53	54	55	51	213
06:00		50	57	32	25	164
07:00		20	17	26	10	73
08:00		18	16	10	12	56
09:00		24	22	7	4	57
10:00		5	7	4	4	20
11:00		2	1	2	1	6
Day Total						3892
Grand Total						3892



ADT ADT 3,857 AADT 3,857

County: 17
Station: 7091
Description: SR93/I-75 NB, OFF-RAMP TO UNIVERSITY PKWY X21
Start Date: 06/19/2013
Start Time: 2000

Direction: NB

Time	1st	2nd	3rd	4th	Total
12:00 AM	22	15	13	12	62
1:00 AM	13	11	6	5	35
2:00 AM	19	8	15	8	50
3:00 AM	9	17	16	22	64
4:00 AM	13	17	20	24	74
5:00 AM	45	45	78	71	239
6:00 AM	77	107	150	219	553
7:00 AM	258	336	405	478	1477
8:00 AM	347	472	404	401	1624
9:00 AM	305	274	252	290	1121
10:00 AM	242	234	233	225	934
11:00 AM	212	277	255	262	1006
12:00 PM	265	296	265	278	1104
1:00 PM	293	269	256	286	1104
2:00 PM	291	254	257	261	1063
3:00 PM	306	322	319	283	1230
4:00 PM	308	322	346	341	1317
5:00 PM	356	399	356	272	1383
6:00 PM	257	251	231	192	931
7:00 PM	200	156	145	158	659
8:00 PM	124	128	120	100	472
9:00 PM	100	102	84	73	359
10:00 PM	73	73	63	39	248
11:00 PM	44	32	35	27	138
			24-Hour Totals:		17247

Peak Volume Information

	Hour	Volume
A.M.	730	1702
P.M.	1645	1452
Daily	730	1702

County: 17
Station: 7092
Description: SR93/I-75 SB, ON-RAMP FROM UNIVERSITY PKWY X21
Start Date: 06/19/2013
Start Time: 2000

Direction: NB

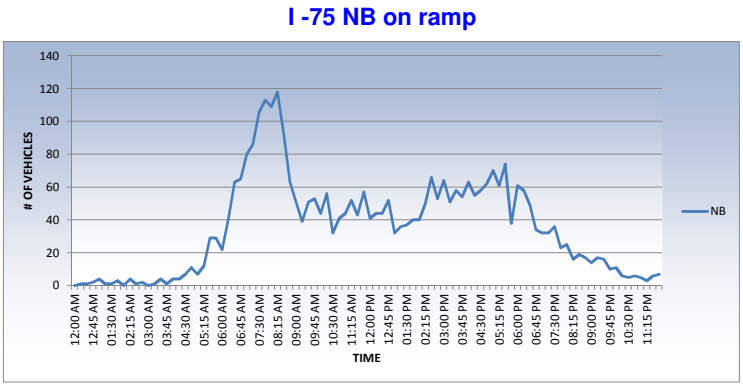
Time	1st	2nd	3rd	4th	Total
12:00 AM	28	20	17	17	82
1:00 AM	14	20	8	18	60
2:00 AM	10	8	12	9	39
3:00 AM	16	18	12	11	57
4:00 AM	18	13	17	18	66
5:00 AM	27	27	41	52	147
6:00 AM	58	86	149	201	494
7:00 AM	204	260	381	389	1234
8:00 AM	340	351	350	313	1354
9:00 AM	252	262	270	240	1024
10:00 AM	222	239	202	227	890
11:00 AM	246	255	256	281	1038
12:00 PM	268	298	287	286	1139
1:00 PM	316	269	312	289	1186
2:00 PM	301	309	295	284	1189
3:00 PM	306	308	319	332	1265
4:00 PM	333	352	383	414	1482
5:00 PM	459	486	427	341	1713
6:00 PM	338	254	249	214	1055
7:00 PM	180	201	123	145	649
8:00 PM	147	130	117	119	513
9:00 PM	139	125	98	94	456
10:00 PM	94	77	74	54	299
11:00 PM	31	56	51	26	164
			24-Hour Totals:		17595

Peak Volume Information

	Hour	Volume
A.M.	730	1702
P.M.	1645	1452
Daily	730	1702

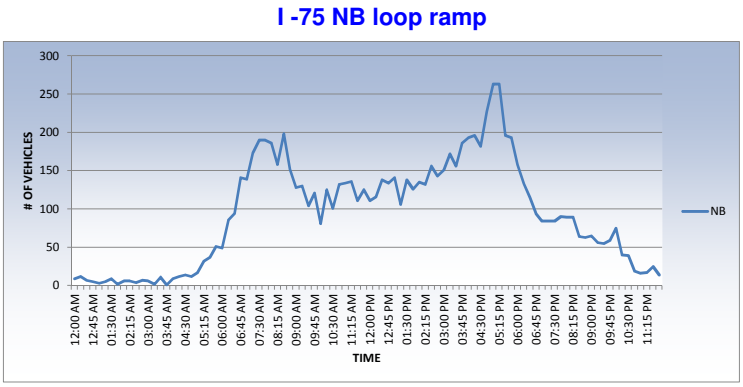
Volume
Station ID: 171714111100
I -75 NB on ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	0
12:15 AM	1
12:30 AM	1
12:45 AM	2
01:00 AM	4
01:15 AM	1
01:30 AM	1
01:45 AM	3
02:00 AM	0
02:15 AM	4
02:30 AM	1
02:45 AM	2
03:00 AM	0
03:15 AM	1
03:30 AM	4
03:45 AM	1
04:00 AM	4
04:15 AM	4
04:30 AM	7
04:45 AM	11
05:00 AM	7
05:15 AM	12
05:30 AM	29
05:45 AM	29
06:00 AM	22
06:15 AM	41
06:30 AM	63
06:45 AM	65
07:00 AM	80
07:15 AM	86
07:30 AM	106
07:45 AM	113
08:00 AM	109
08:15 AM	118
08:30 AM	92
08:45 AM	63
09:00 AM	51
09:15 AM	39
09:30 AM	51
09:45 AM	53
10:00 AM	44
10:15 AM	56
10:30 AM	32
10:45 AM	41
11:00 AM	44
11:15 AM	52
11:30 AM	43
11:45 AM	57
12:00 PM	41
12:15 PM	44
12:30 PM	44
12:45 PM	52
01:00 PM	32
01:15 PM	36
01:30 PM	37
01:45 PM	40
02:00 PM	40
02:15 PM	50
02:30 PM	66
02:45 PM	53
03:00 PM	64
03:15 PM	51
03:30 PM	58
03:45 PM	54
04:00 PM	63
04:15 PM	55
04:30 PM	58
04:45 PM	62
05:00 PM	70
05:15 PM	61
05:30 PM	74
05:45 PM	38
06:00 PM	61
06:15 PM	58
06:30 PM	49
06:45 PM	34
07:00 PM	32
07:15 PM	32
07:30 PM	36
07:45 PM	23
08:00 PM	25
08:15 PM	16
08:30 PM	19
08:45 PM	17
09:00 PM	14
09:15 PM	17
09:30 PM	16
09:45 PM	10
10:00 PM	11
10:15 PM	6
10:30 PM	5
10:45 PM	6
11:00 PM	5
11:15 PM	3
11:30 PM	6
11:45 PM	7
Total	3401



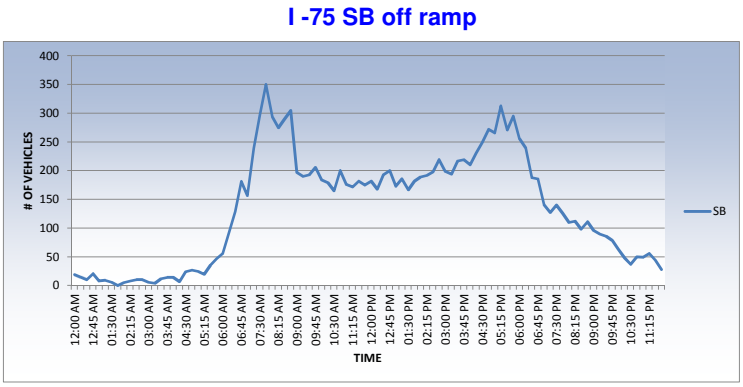
Volume
Station ID: 171713111100
I -75 NB loop ramp
Start Date: 9/10/2013

Time	NB
12:00 AM	9
12:15 AM	12
12:30 AM	7
12:45 AM	5
01:00 AM	3
01:15 AM	5
01:30 AM	9
01:45 AM	2
02:00 AM	6
02:15 AM	6
02:30 AM	4
02:45 AM	7
03:00 AM	6
03:15 AM	2
03:30 AM	11
03:45 AM	1
04:00 AM	9
04:15 AM	12
04:30 AM	14
04:45 AM	12
05:00 AM	17
05:15 AM	32
05:30 AM	37
05:45 AM	51
06:00 AM	49
06:15 AM	86
06:30 AM	94
06:45 AM	141
07:00 AM	139
07:15 AM	173
07:30 AM	190
07:45 AM	190
08:00 AM	186
08:15 AM	158
08:30 AM	198
08:45 AM	152
09:00 AM	128
09:15 AM	130
09:30 AM	104
09:45 AM	121
10:00 AM	81
10:15 AM	125
10:30 AM	101
10:45 AM	132
11:00 AM	134
11:15 AM	136
11:30 AM	111
11:45 AM	125
12:00 PM	111
12:15 PM	116
12:30 PM	138
12:45 PM	134
01:00 PM	141
01:15 PM	106
01:30 PM	138
01:45 PM	126
02:00 PM	135
02:15 PM	132
02:30 PM	156
02:45 PM	143
03:00 PM	151
03:15 PM	172
03:30 PM	156
03:45 PM	186
04:00 PM	193
04:15 PM	196
04:30 PM	182
04:45 PM	227
05:00 PM	263
05:15 PM	263
05:30 PM	196
05:45 PM	193
06:00 PM	158
06:15 PM	133
06:30 PM	115
06:45 PM	94
07:00 PM	84
07:15 PM	84
07:30 PM	84
07:45 PM	90
08:00 PM	89
08:15 PM	89
08:30 PM	64
08:45 PM	63
09:00 PM	65
09:15 PM	56
09:30 PM	55
09:45 PM	59
10:00 PM	75
10:15 PM	40
10:30 PM	39
10:45 PM	19
11:00 PM	16
11:15 PM	17
11:30 PM	25
11:45 PM	14
Total	9044



Volume
Station ID: 171709511100
I -75 SB off ramp
Start Date: 9/10/2013

Time	SB
12:00 AM	19
12:15 AM	15
12:30 AM	10
12:45 AM	21
01:00 AM	8
01:15 AM	9
01:30 AM	6
01:45 AM	0
02:00 AM	5
02:15 AM	8
02:30 AM	10
02:45 AM	10
03:00 AM	6
03:15 AM	4
03:30 AM	12
03:45 AM	14
04:00 AM	14
04:15 AM	7
04:30 AM	24
04:45 AM	27
05:00 AM	25
05:15 AM	20
05:30 AM	36
05:45 AM	47
06:00 AM	56
06:15 AM	93
06:30 AM	129
06:45 AM	181
07:00 AM	157
07:15 AM	239
07:30 AM	297
07:45 AM	350
08:00 AM	294
08:15 AM	275
08:30 AM	290
08:45 AM	305
09:00 AM	197
09:15 AM	190
09:30 AM	193
09:45 AM	206
10:00 AM	184
10:15 AM	179
10:30 AM	165
10:45 AM	200
11:00 AM	176
11:15 AM	172
11:30 AM	182
11:45 AM	175
12:00 PM	182
12:15 PM	168
12:30 PM	193
12:45 PM	200
01:00 PM	173
01:15 PM	186
01:30 PM	167
01:45 PM	182
02:00 PM	189
02:15 PM	192
02:30 PM	198
02:45 PM	219
03:00 PM	199
03:15 PM	194
03:30 PM	217
03:45 PM	219
04:00 PM	210
04:15 PM	231
04:30 PM	249
04:45 PM	272
05:00 PM	266
05:15 PM	313
05:30 PM	271
05:45 PM	295
06:00 PM	256
06:15 PM	239
06:30 PM	188
06:45 PM	186
07:00 PM	141
07:15 PM	127
07:30 PM	140
07:45 PM	126
08:00 PM	110
08:15 PM	112
08:30 PM	98
08:45 PM	111
09:00 PM	96
09:15 PM	90
09:30 PM	86
09:45 PM	79
10:00 PM	63
10:15 PM	48
10:30 PM	37
10:45 PM	50
11:00 PM	49
11:15 PM	56
11:30 PM	44
11:45 PM	28
Total	12987



8-HOUR INTERSECTION

TURNING MOVEMENT COUNTS

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, Fl. 33618
(813) 962 8689

SR 780 (Fruitville Rd) at Honore Ave
Section: 17040 MP: 4.203
Weather: Clear
County: Sarasota

File Name : Honore
Site Code : 00000000
Start Date : 5/14/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	Honore Ave Northbound					Honore Ave Southbound					SR 780 (Fruitville Rd) Eastbound						SR 780 (Fruitville Rd) Westbound						
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	Int. Total
06:15 AM	15	28	17	0	60	45	14	0	7	66	2	138	11	0	0	151	5	142	18	3	0	168	445
06:30 AM	26	22	19	0	67	57	19	2	6	84	10	193	15	0	2	220	9	216	13	11	0	249	620
06:45 AM	31	35	14	0	80	59	34	10	12	115	15	230	14	0	4	263	5	350	32	13	1	401	859
Total	72	85	50	0	207	161	67	12	25	265	27	561	40	0	6	634	19	708	63	27	1	818	1924
07:00 AM	33	39	17	0	89	64	39	8	17	128	15	256	17	1	6	295	8	387	35	10	0	440	952
07:15 AM	41	49	25	1	116	65	43	9	15	132	20	273	20	1	2	316	15	516	52	13	0	596	1160
07:30 AM	72	66	26	0	164	69	53	14	11	147	38	389	32	3	2	464	28	496	53	25	0	602	1377
07:45 AM	67	74	26	0	167	91	88	19	4	202	31	307	48	3	7	396	31	365	55	19	0	470	1235
Total	213	228	94	1	536	289	223	50	47	609	104	1225	117	8	17	1471	82	1764	195	67	0	2108	4724
08:00 AM	75	66	25	1	167	71	63	12	8	154	35	339	61	0	5	440	30	430	49	20	1	530	1291
08:15 AM	95	76	38	3	212	74	64	17	15	170	30	259	44	1	5	339	20	458	47	24	0	549	1270
08:30 AM	85	101	39	0	225	63	51	14	17	145	25	308	22	0	0	355	19	511	37	18	1	586	1311
08:45 AM	55	74	17	0	146	46	40	5	14	105	45	301	18	0	6	370	10	438	46	16	0	510	1131
Total	310	317	119	4	750	254	218	48	54	574	135	1207	145	1	16	1504	79	1837	179	78	2	2175	5003
09:00 AM	59	47	17	0	123	53	50	16	8	127	27	219	19	0	6	271	15	293	22	14	0	344	865
09:15 AM	60	62	28	0	150	63	29	4	16	112	30	285	23	0	6	344	11	287	21	14	1	334	940
09:30 AM	57	57	10	1	125	52	45	10	12	119	30	240	19	1	6	296	20	348	30	15	0	413	953
09:45 AM	51	65	17	0	133	57	42	6	9	114	24	238	18	0	2	282	14	280	39	26	1	360	889
Total	227	231	72	1	531	225	166	36	45	472	111	982	79	1	20	1193	60	1208	112	69	2	1451	3647
10:00 AM	39	53	15	0	107	51	33	11	14	109	43	262	22	0	3	330	16	297	21	12	1	347	893
*** BREAK ***																							
Total	39	53	15	0	107	51	33	11	14	109	43	262	22	0	3	330	16	297	21	12	1	347	893
*** BREAK ***																							
Grand Total	861	914	350	6	2131	980	707	157	185	2029	420	4237	403	10	62	5132	256	5814	570	253	6	6899	16191
Apprch %	40.4	42.9	16.4	0.3		48.3	34.8	7.7	9.1		8.2	82.6	7.9	0.2	1.2		3.7	84.3	8.3	3.7	0.1		
Total %	5.3	5.6	2.2	0	13.2	6.1	4.4	1	1.1	12.5	2.6	26.2	2.5	0.1	0.4	31.7	1.6	35.9	3.5	1.6	0	42.6	
Vehicles	851	898	341	6	2096	926	694	154	181	1955	405	4144	394	10	62	5015	245	5655	536	241	6	6683	15749
% Vehicles	98.8	98.2	97.4	100	98.4	94.5	98.2	98.1	97.8	96.4	96.4	97.8	97.8	100	100	97.7	95.7	97.3	94	95.3	100	96.9	97.3
Heavy Vehicles	10	16	9	0	35	54	13	3	4	74	15	93	9	0	0	117	11	159	34	12	0	216	442
% Heavy Vehicles	1.2	1.8	2.6	0	1.6	5.5	1.8	1.9	2.2	3.6	3.6	2.2	2.2	0	0	2.3	4.3	2.7	6	4.7	0	3.1	2.7

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, Fl. 33618
(813) 962 8689

SR 780 (Fruitville Rd) at Honore Ave
Section: 17040 MP: 4.203
Weather: Clear
County: Sarasota

File Name : Honore
Site Code : 00000000
Start Date : 5/14/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	Honore Ave Northbound					Honore Ave Southbound					SR 780 (Fruitville Rd) Eastbound						SR 780 (Fruitville Rd) Westbound						
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	Int. Total
*** BREAK ***																							
02:45 PM	48	96	20	0	164	60	89	14	18	181	47	435	40	2	5	529	22	287	28	21	0	358	1232
Total	48	96	20	0	164	60	89	14	18	181	47	435	40	2	5	529	22	287	28	21	0	358	1232
03:00 PM	94	116	16	0	226	95	79	24	7	205	52	365	32	0	13	462	34	236	20	16	1	307	1200
03:15 PM	79	122	29	0	230	77	65	16	11	169	53	398	45	0	7	503	36	331	47	17	0	431	1333
03:30 PM	87	96	38	0	221	87	70	12	9	178	44	306	29	0	2	381	31	312	36	24	1	404	1184
03:45 PM	72	83	23	0	178	81	70	18	11	180	51	372	38	0	4	465	23	305	37	21	3	389	1212
Total	332	417	106	0	855	340	284	70	38	732	200	1441	144	0	26	1811	124	1184	140	78	5	1531	4929
04:00 PM	59	72	11	0	142	67	73	17	8	165	38	362	40	0	4	444	30	307	38	26	4	405	1156
04:15 PM	76	98	12	0	186	74	70	13	6	163	55	411	35	0	4	505	28	264	23	15	1	331	1185
04:30 PM	76	106	18	0	200	81	76	11	8	176	58	437	36	0	3	534	30	292	29	21	1	373	1283
04:45 PM	77	113	25	0	215	88	82	12	18	200	62	461	37	0	2	562	34	319	33	26	1	413	1390
Total	288	389	66	0	743	310	301	53	40	704	213	1671	148	0	13	2045	122	1182	123	88	7	1522	5014
05:00 PM	89	79	20	0	188	92	60	13	9	174	60	521	52	0	2	635	37	276	31	28	1	373	1370
05:15 PM	67	89	8	0	164	73	63	10	8	154	63	444	43	0	2	552	28	307	26	16	0	377	1247
05:30 PM	84	77	14	0	175	84	81	13	4	182	56	426	51	0	5	538	67	337	47	38	2	491	1386
05:45 PM	80	73	13	0	166	81	55	14	13	163	62	443	38	0	5	548	38	314	47	24	0	423	1300
Total	320	318	55	0	693	330	259	50	34	673	241	1834	184	0	14	2273	170	1234	151	106	3	1664	5303
06:00 PM	37	93	27	0	157	40	39	9	19	107	50	360	51	0	4	465	28	305	46	17	1	397	1126
06:15 PM	60	51	14	0	125	56	47	10	11	124	39	265	37	0	2	343	24	227	24	17	0	292	884
06:30 PM	56	66	19	0	141	57	46	10	10	123	34	223	31	0	3	291	20	182	19	14	0	235	790
*** BREAK ***																							
Total	153	210	60	0	423	153	132	29	40	354	123	848	119	0	9	1099	72	714	89	48	1	924	2800
Grand Total	1141	1430	307	0	2878	1193	1065	216	170	2644	824	6229	635	2	67	7757	510	4601	531	341	16	5999	19278
Apprch %	39.6	49.7	10.7	0		45.1	40.3	8.2	6.4		10.6	80.3	8.2	0	0.9		8.5	76.7	8.9	5.7	0.3		
Total %	5.9	7.4	1.6	0	14.9	6.2	5.5	1.1	0.9	13.7	4.3	32.3	3.3	0	0.3	40.2	2.6	23.9	2.8	1.8	0.1	31.1	
Vehicles	1135	1420	304	0	2859	1172	1047	212	169	2600	813	6170	633	2	67	7685	504	4530	509	332	16	5891	19035
% Vehicles	99.5	99.3	99	0	99.3	98.2	98.3	98.1	99.4	98.3	98.7	99.1	99.7	100	100	99.1	98.8	98.5	95.9	97.4	100	98.2	98.7
Heavy Vehicles	6	10	3	0	19	21	18	4	1	44	11	59	2	0	0	72	6	71	22	9	0	108	243
% Heavy Vehicles	0.5	0.7	1	0	0.7	1.8	1.7	1.9	0.6	1.7	1.3	0.9	0.3	0	0	0.9	1.2	1.5	4.1	2.6	0	1.8	1.3

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SR 780 (Fruitville Rd) at Honore Ave
Section: 17040 MP: 4.203
Weather: Clear
County: Sarasota

File Name : Honore
Site Code : 00000000
Start Date : 5/14/2014
Page No : 2

	Honore Ave Northbound					Honore Ave Southbound					SR 780 (Fruitville Rd) Eastbound						SR 780 (Fruitville Rd) Westbound						
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	LT	TH	RT	RTOR	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:15 AM																							
07:15 AM	41	49	25	**1**	116	65	43	9	**15**	132	20	273	20	1	2	316	15	**516**	52	13	0	596	1160
07:30 AM	72	66	**26**	0	164	69	53	14	11	147	**38**	**389**	32	**3**	2	**464**	28	496	53	**25**	0	**602**	**1377**
07:45 AM	67	**74**	26	0	**167**	**91**	**88**	**19**	4	**202**	31	307	48	3	**7**	396	**31**	365	**55**	19	0	470	1235
08:00 AM	**75**	66	25	1	167	71	63	12	8	154	35	339	**61**	0	5	440	30	430	49	20	**1**	530	1291
Total Volume	255	255	102	2	614	296	247	54	38	635	124	1308	161	7	16	1616	104	1807	209	77	1	2198	5063
% App. Total	41.5	41.5	16.6	0.3		46.6	38.9	8.5	6		7.7	80.9	10	0.4	1		4.7	82.2	9.5	3.5	0		
PHF	.850	.861	.981	.500	.919	.813	.702	.711	.633	.786	.816	.841	.660	.583	.571	.871	.839	.875	.950	.770	.250	.913	.919

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM					07:15 AM						07:15 AM						
+0 mins.	41	49	25	**1**	116	65	43	9	**15**	132	20	273	20	1	2	316	15	**516**	52	13	0	596	
+15 mins.	72	66	**26**	0	164	69	53	14	11	147	**38**	**389**	32	**3**	2	**464**	28	496	53	**25**	0	**602**	
+30 mins.	67	**74**	26	0	**167**	**91**	**88**	**19**	4	**202**	31	307	48	3	**7**	396	**31**	365	**55**	19	0	470	
+45 mins.	**75**	66	25	1	167	71	63	12	8	154	35	339	**61**	0	5	440	30	430	49	20	**1**	530	
Total Volume	255	255	102	2	614	296	247	54	38	635	124	1308	161	7	16	1616	104	1807	209	77	1	2198	
% App. Total	41.5	41.5	16.6	0.3		46.6	38.9	8.5	6		7.7	80.9	10	0.4	1		4.7	82.2	9.5	3.5	0		
PHF	.850	.861	.981	.500	.919	.813	.702	.711	.633	.786	.816	.841	.660	.583	.571	.871	.839	.875	.950	.770	.250	.913	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 05:00 PM																							
05:00 PM	**89**	79	**20**	0	**188**	**92**	60	13	9	174	60	**521**	**52**	0	2	**635**	37	276	31	28	1	373	1370
05:15 PM	67	**89**	8	0	164	73	63	10	8	154	**63**	444	43	0	2	552	28	307	26	16	0	377	1247
05:30 PM	84	77	14	0	175	84	**81**	13	4	**182**	56	426	51	0	**5**	538	**67**	**337**	**47**	**38**	**2**	**491**	**1386**
05:45 PM	80	73	13	0	166	81	55	**14**	**13**	163	62	443	38	0	5	548	38	314	47	24	0	423	1300
Total Volume	320	318	55	0	693	330	259	50	34	673	241	1834	184	0	14	2273	170	1234	151	106	3	1664	5303
% App. Total	46.2	45.9	7.9	0		49	38.5	7.4	5.1		10.6	80.7	8.1	0	0.6		10.2	74.2	9.1	6.4	0.2		
PHF	.899	.893	.688	.000	.922	.897	.799	.893	.654	.924	.956	.880	.885	.000	.700	.895	.634	.915	.803	.697	.375	.847	.957

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					05:00 PM					05:00 PM						05:00 PM						
+0 mins.	**89**	79	**20**	0	**188**	**92**	60	13	9	174	60	**521**	**52**	0	2	**635**	37	276	31	28	1	373	
+15 mins.	67	**89**	8	0	164	73	63	10	8	154	**63**	444	43	0	2	552	28	307	26	16	0	377	
+30 mins.	84	77	14	0	175	84	**81**	13	4	**182**	56	426	51	0	**5**	538	**67**	**337**	**47**	**38**	**2**	**491**	
+45 mins.	80	73	13	0	166	81	55	**14**	**13**	163	62	443	38	0	5	548	38	314	47	24	0	423	
Total Volume	320	318	55	0	693	330	259	50	34	673	241	1834	184	0	14	2273	170	1234	151	106	3	1664	
% App. Total	46.2	45.9	7.9	0		49	38.5	7.4	5.1		10.6	80.7	8.1	0	0.6		10.2	74.2	9.1	6.4	0.2		
PHF	.899	.893	.688	.000	.922	.897	.799	.893	.654	.924	.956	.880	.885	.000	.700	.895	.634	.915	.803	.697	.375	.847	

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SR 780 (Fruitville Rd) at Paramount Dr
Section: 17040 MP: X
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/20/2014

Groups Printed- Vehicles - Heavy Vehicles

	Paramount Drive Northbound					NA Southbound				Fruitville Road Eastbound						Fruitville Road Westbound					
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
06:15 AM	10	0	8	9	27	0	0	0	0	0	0	132	22	1	155	0	29	184	0	213	395
06:30 AM	10	0	8	18	36	0	0	0	0	1	0	227	38	2	268	2	35	287	0	324	628
06:45 AM	15	0	6	20	41	0	0	0	0	0	0	233	33	0	266	1	56	383	0	440	747
Total	35	0	22	47	104	0	0	0	0	1	0	592	93	3	689	3	120	854	0	977	1770
07:00 AM	18	0	6	29	53	0	0	0	0	1	0	189	29	0	219	1	88	391	0	480	752
07:15 AM	15	0	5	29	49	0	0	0	0	1	0	269	44	0	314	1	102	551	0	654	1017
07:30 AM	27	0	13	22	62	0	0	0	0	2	0	385	39	1	427	0	95	461	0	556	1045
07:45 AM	17	0	13	29	59	0	0	0	0	1	0	333	54	0	388	0	110	454	0	564	1011
Total	77	0	37	109	223	0	0	0	0	5	0	1176	166	1	1348	2	395	1857	0	2254	3825
08:00 AM	17	0	10	24	51	0	0	0	0	2	0	427	51	10	490	7	101	464	0	572	1113
08:15 AM	35	0	18	26	79	0	0	0	0	2	0	313	58	5	378	6	110	443	0	559	1016
08:30 AM	22	0	9	35	66	0	0	0	0	1	0	295	31	4	331	1	107	417	0	525	922
08:45 AM	19	0	8	29	56	0	0	0	0	3	0	347	28	3	381	4	56	444	0	504	941
Total	93	0	45	114	252	0	0	0	0	8	0	1382	168	22	1580	18	374	1768	0	2160	3992
09:00 AM	22	0	4	21	47	0	0	0	0	4	0	299	30	3	336	8	43	383	0	434	817
09:15 AM	20	0	11	33	64	0	0	0	0	7	0	336	21	1	365	5	49	389	0	443	872
09:30 AM	18	0	5	30	53	0	0	0	0	2	0	341	29	1	373	5	35	420	0	460	886
09:45 AM	22	0	5	28	55	0	0	0	0	1	0	276	22	4	303	3	47	371	0	421	779
Total	82	0	25	112	219	0	0	0	0	14	0	1252	102	9	1377	21	174	1563	0	1758	3354
10:00 AM	18	0	5	22	45	0	0	0	0	4	0	296	27	3	330	3	46	288	0	337	712
*** BREAK ***																					
Total	18	0	5	22	45	0	0	0	0	4	0	296	27	3	330	3	46	288	0	337	712
*** BREAK ***																					
Grand Total	305	0	134	404	843	0	0	0	0	32	0	4698	556	38	5324	47	1109	6330	0	7486	13653
Apprch %	36.2	0	15.9	47.9		0	0	0		0.6	0	88.2	10.4	0.7		0.6	14.8	84.6	0		
Total %	2.2	0	1	3	6.2	0	0	0	0	0.2	0	34.4	4.1	0.3	39	0.3	8.1	46.4	0	54.8	
Vehicles	304	0	131	400	835	0	0	0	0	32	0	4636	554	37	5259	47	1102	6272	0	7421	13515
% Vehicles	99.7	0	97.8	99	99.1	0	0	0	0	100	0	98.7	99.6	97.4	98.8	100	99.4	99.1	0	99.1	99
Heavy Vehicles	1	0	3	4	8	0	0	0	0	0	0	62	2	1	65	0	7	58	0	65	138
% Heavy Vehicles	0.3	0	2.2	1	0.9	0	0	0	0	0	0	1.3	0.4	2.6	1.2	0	0.6	0.9	0	0.9	1

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SR 780 (Fruitville Rd) at Paramount Dr
Section: 17040 MP: X
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/20/2014

Groups Printed- Vehicles - Heavy Vehicles

	Paramount Drive Northbound					NA Southbound				Fruitville Road Eastbound						Fruitville Road Westbound					
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
*** BREAK ***																					
02:45 PM	20	0	28	26	74	0	0	0	0	12	0	542	28	4	586	5	47	450	0	502	1162
Total	20	0	28	26	74	0	0	0	0	12	0	542	28	4	586	5	47	450	0	502	1162
03:00 PM	16	0	41	21	78	0	0	0	0	17	0	623	36	2	678	6	42	452	0	500	1256
03:15 PM	17	0	17	29	63	0	0	0	0	9	0	597	36	6	648	7	50	422	0	479	1190
03:30 PM	31	0	44	26	101	0	0	0	0	8	0	581	33	5	627	5	48	444	0	497	1225
03:45 PM	15	0	26	23	64	0	0	0	0	7	0	558	32	3	600	6	38	418	0	462	1126
Total	79	0	128	99	306	0	0	0	0	41	0	2359	137	16	2553	24	178	1736	0	1938	4797
04:00 PM	26	0	42	29	97	0	0	0	0	5	0	667	28	1	701	4	28	428	0	460	1258
04:15 PM	37	0	34	22	93	0	0	0	0	9	0	598	41	4	652	9	54	485	0	548	1293
04:30 PM	20	0	67	47	134	0	0	0	0	4	0	635	27	5	671	3	37	425	0	465	1270
04:45 PM	23	0	44	29	96	0	0	0	0	10	0	574	26	7	617	5	62	395	0	462	1175
Total	106	0	187	127	420	0	0	0	0	28	0	2474	122	17	2641	21	181	1733	0	1935	4996
05:00 PM	49	0	71	47	167	0	0	0	0	9	0	753	35	5	802	3	36	472	0	511	1480
05:15 PM	33	0	46	27	106	0	0	0	0	7	0	724	34	4	769	3	48	519	0	570	1445
05:30 PM	40	0	58	33	131	0	0	0	0	11	0	564	24	0	599	7	47	460	0	514	1244
05:45 PM	20	0	39	29	88	0	0	0	0	7	0	588	39	8	642	2	38	439	0	479	1209
Total	142	0	214	136	492	0	0	0	0	34	0	2629	132	17	2812	15	169	1890	0	2074	5378
06:00 PM	24	0	35	42	101	0	0	0	0	17	0	438	35	0	490	1	19	372	0	392	983
06:15 PM	20	0	17	23	60	0	0	0	0	13	0	428	18	4	463	1	38	372	0	411	934
06:30 PM	18	0	14	21	53	0	0	0	0	12	0	385	19	3	419	1	34	334	0	369	841
*** BREAK ***																					
Total	62	0	66	86	214	0	0	0	0	42	0	1251	72	7	1372	3	91	1078	0	1172	2758
Grand Total	409	0	623	474	1506	0	0	0	0	157	0	9255	491	61	9964	68	666	6887	0	7621	19091
Apprch %	27.2	0	41.4	31.5		0	0	0		1.6	0	92.9	4.9	0.6		0.9	8.7	90.4	0		
Total %	2.1	0	3.3	2.5	7.9	0	0	0	0	0.8	0	48.5	2.6	0.3	52.2	0.4	3.5	36.1	0	39.9	
Vehicles	403	0	617	469	1489	0	0	0	0	157	0	9099	480	58	9794	68	656	6719	0	7443	18726
% Vehicles	98.5	0	99	98.9	98.9	0	0	0	0	100	0	98.3	97.8	95.1	98.3	100	98.5	97.6	0	97.7	98.1
Heavy Vehicles	6	0	6	5	17	0	0	0	0	0	0	156	11	3	170	0	10	168	0	178	365
% Heavy Vehicles	1.5	0	1	1.1	1.1	0	0	0	0	0	0	1.7	2.2	4.9	1.7	0	1.5	2.4	0	2.3	1.9

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SR 780 (Fruitville Rd) at Paramount Dr
Section: 17040 MP: X
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/20/2014

	Paramount Drive Northbound					NA Southbound				Fruitville Road Eastbound						Fruitville Road Westbound					
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	15	0	5	**29**	49	0	0	0	0	1	0	269	44	0	314	1	102	**551**	0	**654**	1017
07:30 AM	**27**	0	**13**	22	**62**	0	0	0	0	**2**	0	385	39	1	427	0	95	461	0	556	1045
07:45 AM	17	0	13	29	59	0	0	0	0	1	0	333	**54**	0	388	0	**110**	454	0	564	1011
08:00 AM	17	0	10	24	51	0	0	0	0	2	0	**427**	51	**10**	**490**	**7**	101	464	0	572	**1113**
Total Volume	76	0	41	104	221	0	0	0	0	6	0	1414	188	11	1619	8	408	1930	0	2346	4186
% App. Total	34.4	0	18.6	47.1		0	0	0		0.4	0	87.3	11.6	0.7		0.3	17.4	82.3	0		
PHF	.704	.000	.788	.897	.891	.000	.000	.000	.000	.750	.000	.828	.870	.275	.826	.286	.927	.876	.000	.897	.940

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM				07:15 AM						07:15 AM					
+0 mins.	15	0	5	**29**	49	0	0	0	0	1	0	269	44	0	314	1	102	**551**	0	**654**	
+15 mins.	**27**	0	**13**	22	**62**	0	0	0	0	**2**	0	385	39	1	427	0	95	461	0	556	
+30 mins.	17	0	13	29	59	0	0	0	0	1	0	333	**54**	0	388	0	**110**	454	0	564	
+45 mins.	17	0	10	24	51	0	0	0	0	2	0	**427**	51	**10**	**490**	**7**	101	464	0	572	
Total Volume	76	0	41	104	221	0	0	0	0	6	0	1414	188	11	1619	8	408	1930	0	2346	
% App. Total	34.4	0	18.6	47.1		0	0	0		0.4	0	87.3	11.6	0.7		0.3	17.4	82.3	0		
PHF	.704	.000	.788	.897	.891	.000	.000	.000	.000	.750	.000	.828	.870	.275	.826	.286	.927	.876	.000	.897	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	**49**		**71**	**47**	**167**							**753**			**802**						**1480**
05:15 PM	33	0	46	27	106	0	0	0	0	7	0	724	34	4	769	3	**48**	**519**	0	**570**	1445
05:30 PM	40	0	58	33	131	0	0	0	0	**11**	0	564	24	0	599	**7**	47	460	0	514	1244
05:45 PM	20	0	39	29	88	0	0	0	0	7	0	588	**39**	**8**	642	2	38	439	0	479	1209
Total Volume	142	0	214	136	492	0	0	0	0	34	0	2629	132	17	2812	15	169	1890	0	2074	5378
% App. Total	28.9	0	43.5	27.6		0	0	0		1.2	0	93.5	4.7	0.6		0.7	8.1	91.1	0		
PHF	.724	.000	.754	.723	.737	.000	.000	.000	.000	.773	.000	.873	.846	.531	.877	.536	.880	.910	.000	.910	.908

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					05:00 PM				05:00 PM						05:00 PM					
+0 mins.	**49**	0	**71**	**47**	**167**	0	0	0	0	9	0	**753**	35	5	**802**	3	36	472	0	511	
+15 mins.	33	0	46	27	106	0	0	0	0	7	0	724	34	4	769	3	**48**	**519**	0	**570**	
+30 mins.	40	0	58	33	131	0	0	0	0	**11**	0	564	24	0	599	**7**	47	460	0	514	
+45 mins.	20	0	39	29	88	0	0	0	0	7	0	588	**39**	**8**	642	2	38	439	0	479	
Total Volume	142	0	214	136	492	0	0	0	0	34	0	2629	132	17	2812	15	169	1890	0	2074	
% App. Total	28.9	0	43.5	27.6		0	0	0		1.2	0	93.5	4.7	0.6		0.7	8.1	91.1	0		
PHF	.724	.000	.754	.723	.737	.000	.000	.000	.000	.773	.000	.873	.846	.531	.877	.536	.880	.910	.000	.910	

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(813) 962 8689

SR 780 (Fruitville Rd) at Cattlemen Rd
Section: 17040 MP: 4.896
Weather: Clear
County: Sarasota

File Name : TMC final
Site Code :
Start Date : 5/13/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	Cattlemen Road Northbound					N Cattlemen Road Southbound						Fruitville Road Eastbound						Fruitville Road Westbound					
Start Time	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	Int. Total
06:15 AM	9	7	1	14	31	0	22	9	2	14	47	0	14	138	13	11	176	0	43	183	21	5	252	506
06:30 AM	28	8	8	21	65	0	45	22	8	20	95	0	25	216	29	23	293	0	64	304	34	11	413	866
06:45 AM	49	22	13	27	111	0	59	31	10	19	119	0	23	224	34	21	302	0	113	393	38	16	560	1092
Total	86	37	22	62	207	0	126	62	20	53	261	0	62	578	76	55	771	0	220	880	93	32	1225	2464
07:00 AM	49	21	11	28	109	0	54	32	10	34	130	0	24	216	20	26	286	0	74	497	37	19	627	1152
07:15 AM	58	26	38	13	135	0	60	34	24	35	153	1	26	305	31	20	383	0	83	567	36	34	720	1391
07:30 AM	60	45	38	31	174	0	70	57	24	22	173	0	40	329	32	17	418	0	80	612	44	40	776	1541
07:45 AM	51	28	26	57	162	0	90	65	23	16	194	1	49	316	51	20	437	0	100	512	59	26	697	1490
Total	218	120	113	129	580	0	274	188	81	107	650	2	139	1166	134	83	1524	0	337	2188	176	119	2820	5574
08:00 AM	78	54	24	32	188	1	65	43	20	23	152	0	41	318	30	25	414	0	95	484	67	28	674	1428
08:15 AM	77	38	19	24	158	0	78	37	30	26	171	2	47	308	24	36	417	0	59	626	75	32	792	1538
08:30 AM	91	55	36	26	208	0	71	53	18	20	162	3	43	278	33	37	394	0	91	482	78	25	676	1440
08:45 AM	51	43	29	35	158	0	41	37	6	32	116	2	49	248	24	25	348	2	39	428	45	42	556	1178
Total	297	190	108	117	712	1	255	170	74	101	601	7	180	1152	111	123	1573	2	284	2020	265	127	2698	5584
09:00 AM	93	48	15	23	179	0	53	37	13	27	130	2	51	250	42	10	355	0	51	330	45	27	453	1117
09:15 AM	54	41	12	19	126	0	43	41	12	31	127	0	73	290	53	11	427	1	54	342	45	18	460	1140
09:30 AM	88	38	20	25	171	0	56	38	17	30	141	1	49	271	43	17	381	0	48	339	41	26	454	1147
09:45 AM	60	40	22	20	142	0	43	43	19	23	128	0	57	282	33	15	387	3	44	299	56	15	417	1074
Total	295	167	69	87	618	0	195	159	61	111	526	3	230	1093	171	53	1550	4	197	1310	187	86	1784	4478
10:00 AM	61	38	13	22	134	0	39	16	14	32	101	2	52	230	48	21	353	0	40	289	32	21	382	970
*** BREAK ***																								
Total	61	38	13	22	134	0	39	16	14	32	101	2	52	230	48	21	353	0	40	289	32	21	382	970
*** BREAK ***																								
Grand Total	957	552	325	417	2251	1	889	595	250	404	2139	14	663	4219	540	335	5771	6	1078	6687	753	385	8909	19070
Apprch %	42.5	24.5	14.4	18.5		0	41.6	27.8	11.7	18.9		0.2	11.5	73.1	9.4	5.8		0.1	12.1	75.1	8.5	4.3		
Total %	5	2.9	1.7	2.2	11.8	0	4.7	3.1	1.3	2.1	11.2	0.1	3.5	22.1	2.8	1.8	30.3	0	5.7	35.1	3.9	2	46.7	
Vehicles	925	542	304	383	2154	1	862	588	240	397	2088	14	656	4065	518	324	5577	6	1028	6456	729	374	8593	18412
% Vehicles	96.7	98.2	93.5	91.8	95.7	100	97	98.8	96	98.3	97.6	100	98.9	96.3	95.9	96.7	96.6	100	95.4	96.5	96.8	97.1	96.5	96.5
Heavy Vehicles	32	10	21	34	97	0	27	7	10	7	51	0	7	154	22	11	194	0	50	231	24	11	316	658
% Heavy Vehicles	3.3	1.8	6.5	8.2	4.3	0	3	1.2	4	1.7	2.4	0	1.1	3.7	4.1	3.3	3.4	0	4.6	3.5	3.2	2.9	3.5	3.5

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(813) 962 8689

SR 780 (Fruitville Rd) at Cattlemen Rd
Section: 17040 MP: 4.896
Weather: Clear
County: Sarasota

File Name : TMC final
Site Code :
Start Date : 5/13/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	Cattlemen Road Northbound					N Cattlemen Road Southbound						Fruitville Road Eastbound						Fruitville Road Westbound						
Start Time	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	Int. Total
*** BREAK ***																								
02:45 PM	77	40	24	18	159	0	55	45	20	36	156	0	73	407	49	17	546	0	56	271	41	13	381	1242
Total	77	40	24	18	159	0	55	45	20	36	156	0	73	407	49	17	546	0	56	271	41	13	381	1242
03:00 PM	85	45	27	20	177	0	61	51	22	40	174	1	82	451	54	19	607	0	63	301	46	14	424	1382
03:15 PM	68	65	34	22	189	1	53	50	33	18	155	1	62	374	46	24	507	1	66	316	59	22	464	1315
03:30 PM	136	90	43	49	318	0	70	54	25	32	181	1	79	460	39	23	602	2	63	344	63	12	484	1585
03:45 PM	68	45	21	31	165	0	77	46	15	46	184	0	80	487	67	12	646	0	54	300	76	13	443	1438
Total	357	245	125	122	849	1	261	201	95	136	694	3	303	1772	206	78	2362	3	246	1261	244	61	1815	5720
04:00 PM	108	81	38	37	264	0	74	52	20	33	179	0	71	460	46	9	586	1	72	304	81	16	474	1503
04:15 PM	75	60	48	28	211	0	77	58	21	42	198	1	55	490	49	26	621	1	58	271	57	18	405	1435
04:30 PM	88	85	49	50	272	0	87	53	30	40	210	0	73	530	46	22	671	2	49	348	64	14	477	1630
04:45 PM	82	70	49	36	237	0	71	57	14	31	173	1	82	495	32	16	626	1	90	305	62	13	471	1507
Total	353	296	184	151	984	0	309	220	85	146	760	2	281	1975	173	73	2504	5	269	1228	264	61	1827	6075
05:00 PM	99	75	42	71	287	0	113	59	15	59	246	2	46	560	55	17	680	0	65	358	67	14	504	1717
05:15 PM	78	87	52	63	280	0	88	50	30	40	208	2	78	568	61	12	721	0	73	396	86	15	570	1779
05:30 PM	79	76	41	38	234	0	128	71	19	47	265	0	56	561	40	30	687	1	49	296	55	16	417	1603
05:45 PM	73	60	38	30	201	0	76	39	19	27	161	1	89	572	31	12	705	0	59	311	47	12	429	1496
Total	329	298	173	202	1002	0	405	219	83	173	880	5	269	2261	187	71	2793	1	246	1361	255	57	1920	6595
06:00 PM	71	72	35	36	214	0	80	47	15	26	168	0	68	440	30	19	557	0	57	284	52	6	399	1338
06:15 PM	62	46	11	30	149	0	60	53	16	27	156	1	46	362	33	12	454	0	39	255	48	10	352	1111
06:30 PM	55	41	8	16	120	0	48	36	14	31	129	1	50	405	24	3	483	0	28	219	33	10	290	1022
Grand Total	1304	1038	560	575	3477	1	1218	821	328	575	2943	12	1090	7622	702	273	9699	9	941	4879	937	218	6984	23103
Apprch %	37.5	29.9	16.1	16.5		0	41.4	27.9	11.1	19.5		0.1	11.2	78.6	7.2	2.8		0.1	13.5	69.9	13.4	3.1		
Total %	5.6	4.5	2.4	2.5	15	0	5.3	3.6	1.4	2.5	12.7	0.1	4.7	33	3	1.2	42	0	4.1	21.1	4.1	0.9	30.2	
Vehicles	1282	1031	547	567	3427	1	1190	812	326	570	2899	12	1084	7489	678	269	9532	9	887	4755	919	217	6787	22645
% Vehicles	98.3	99.3	97.7	98.6	98.6	100	97.7	98.9	99.4	99.1	98.5	100	99.4	98.3	96.6	98.5	98.3	100	94.3	97.5	98.1	99.5	97.2	98
Heavy Vehicles	22	7	13	8	50	0	28	9	2	5	44	0	6	133	24	4	167	0	54	124	18	1	197	458
% Heavy Vehicles	1.7	0.7	2.3	1.4	1.4	0	2.3	1.1	0.6	0.9	1.5	0	0.6	1.7	3.4	1.5	1.7	0	5.7	2.5	1.9	0.5	2.8	2

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SR 780 (Fruitville Rd) at Cattlemen Rd
Section: 17040 MP: 4.896
Weather: Clear
County: Sarasota

File Name : TMC final
Site Code :
Start Date : 5/13/2014

	Cattlemen Road Northbound					N Cattlemen Road Southbound						Fruitville Road Eastbound						Fruitville Road Westbound						
Start Time	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:15 AM																								
07:15 AM	58	26	**38**	13	135	0	60	34	**24**	**35**	153	**1**	26	305	31	20	383	0	83	567	36	34	720	1391
07:30 AM	60	45	38	31	174	0	70	57	24	22	173	0	40	**329**	32	17	418	0	80	**612**	44	**40**	**776**	**1541**
07:45 AM	51	28	26	**57**	162	0	**90**	**65**	23	16	**194**	1	**49**	316	**51**	20	**437**	0	**100**	512	59	26	697	1490
08:00 AM	**78**	**54**	24	32	**188**	**1**	65	43	20	23	152	0	41	318	30	**25**	414	0	95	484	**67**	28	674	1428
Total Volume	247	153	126	133	659	1	285	199	91	96	672	2	156	1268	144	82	1652	0	358	2175	206	128	2867	5850
% App. Total	37.5	23.2	19.1	20.2		0.1	42.4	29.6	13.5	14.3		0.1	9.4	76.8	8.7	5		0	12.5	75.9	7.2	4.5		
PHF	.792	.708	.829	.583	.876	.250	.792	.765	.948	.686	.866	.500	.796	.964	.706	.820	.945	.000	.895	.888	.769	.800	.924	.949

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM						07:15 AM						07:15 AM					
+0 mins.	58	26	**38**	13	135	0	60	34	**24**	**35**	153	**1**	26	305	31	20	383	0	83	567	36	34	720
+15 mins.	60	45	38	31	174	0	70	57	24	22	173	0	40	**329**	32	17	418	0	80	**612**	44	**40**	**776**
+30 mins.	51	28	26	**57**	162	0	**90**	**65**	23	16	**194**	1	**49**	316	**51**	20	**437**	0	**100**	512	59	26	697
+45 mins.	**78**	**54**	24	32	**188**	**1**	65	43	20	23	152	0	41	318	30	**25**	414	0	95	484	**67**	28	674
Total Volume	247	153	126	133	659	1	285	199	91	96	672	2	156	1268	144	82	1652	0	358	2175	206	128	2867
% App. Total	37.5	23.2	19.1	20.2		0.1	42.4	29.6	13.5	14.3		0.1	9.4	76.8	8.7	5		0	12.5	75.9	7.2	4.5	
PHF	.792	.708	.829	.583	.876	.250	.792	.765	.948	.686	.866	.500	.796	.964	.706	.820	.945	.000	.895	.888	.769	.800	.924

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 05:00 PM																								
05:00 PM	**99**	75	42	**71**	**287**	0	113	59	15	**59**	246	**2**	46	560	55	17	680	0	65	358	67	14	504	1717
05:15 PM	78	**87**	**52**	63	280	0	88	50	**30**	40	208	2	78	568	**61**	12	**721**	0	**73**	**396**	**86**	15	**570**	**1779**
05:30 PM	79	76	41	38	234	0	**128**	**71**	19	47	**265**	0	56	561	40	**30**	687	**1**	49	296	55	**16**	417	1603
05:45 PM	73	60	38	30	201	0	76	39	19	27	161	1	**89**	**572**	31	12	705	0	59	311	47	12	429	1496
Total Volume	329	298	173	202	1002	0	405	219	83	173	880	5	269	2261	187	71	2793	1	246	1361	255	57	1920	6595
% App. Total	32.8	29.7	17.3	20.2		0	46	24.9	9.4	19.7		0.2	9.6	81	6.7	2.5		0.1	12.8	70.9	13.3	3		
PHF	.831	.856	.832	.711	.873	.000	.791	.771	.692	.733	.830	.625	.756	.988	.766	.592	.968	.250	.842	.859	.741	.891	.842	.927

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					05:00 PM						05:00 PM						05:00 PM					
+0 mins.	**99**	75	42	**71**	**287**	0	113	59	15	**59**	246	**2**	46	560	55	17	680	0	65	358	67	14	504
+15 mins.	78	**87**	**52**	63	280	0	88	50	**30**	40	208	2	78	568	**61**	12	**721**	0	**73**	**396**	**86**	15	**570**
+30 mins.	79	76	41	38	234	0	**128**	**71**	19	47	**265**	0	56	561	40	**30**	687	**1**	49	296	55	**16**	417
+45 mins.	73	60	38	30	201	0	76	39	19	27	161	1	**89**	**572**	31	12	705	0	59	311	47	12	429
Total Volume	329	298	173	202	1002	0	405	219	83	173	880	5	269	2261	187	71	2793	1	246	1361	255	57	1920
% App. Total	32.8	29.7	17.3	20.2		0	46	24.9	9.4	19.7		0.2	9.6	81	6.7	2.5		0.1	12.8	70.9	13.3	3	
PHF	.831	.856	.832	.711	.873	.000	.791	.771	.692	.733	.830	.625	.756	.988	.766	.592	.968	.250	.842	.859	.741	.891	.842

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I-75 SB Ramp at Fruitville Rd
Section: 17040 MP: 5.130
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/15/2014

Groups Printed- Vehicles - Heavy Vehicles

	N/A Northbound				I-75 Off Ramp Southbound					Fruitville Road Eastbound				Fruitville Road Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	Int. Total
06:15 AM	0	0	0	0	73	0	51	76	200	0	141	65	206	0	138	13	151	557
06:30 AM	0	0	0	0	105	0	63	122	290	0	212	80	292	0	208	62	270	852
06:45 AM	0	0	0	0	184	0	121	118	423	0	202	92	294	0	300	56	356	1073
Total	0	0	0	0	362	0	235	316	913	0	555	237	792	0	646	131	777	2482
07:00 AM	0	0	0	0	110	0	140	83	333	0	221	121	342	0	348	51	399	1074
07:15 AM	0	0	0	0	131	0	348	44	523	0	318	127	445	0	407	81	488	1456
07:30 AM	0	0	0	0	139	0	387	0	526	0	392	155	547	0	434	80	514	1587
07:45 AM	0	0	0	0	166	0	400	0	566	0	480	168	648	0	368	87	455	1669
Total	0	0	0	0	546	0	1275	127	1948	0	1411	571	1982	0	1557	299	1856	5786
08:00 AM	0	0	0	0	132	0	330	0	462	0	349	170	519	0	370	57	427	1408
08:15 AM	0	0	0	0	81	0	323	0	404	0	384	126	510	0	394	75	469	1383
08:30 AM	0	0	0	0	111	0	392	0	503	0	341	144	485	0	313	60	373	1361
08:45 AM	0	0	0	0	96	0	267	0	363	0	293	117	410	0	356	63	419	1192
Total	0	0	0	0	420	0	1312	0	1732	0	1367	557	1924	0	1433	255	1688	5344
09:00 AM	0	0	0	0	65	0	259	0	324	0	258	120	378	0	234	38	272	974
09:15 AM	0	0	0	0	85	0	190	0	275	0	258	120	378	0	228	42	270	923
09:30 AM	0	0	0	0	62	0	225	0	287	0	200	105	305	0	264	25	289	881
09:45 AM	0	0	0	0	51	0	192	0	243	0	279	119	398	0	231	59	290	931
Total	0	0	0	0	263	0	866	0	1129	0	995	464	1459	0	957	164	1121	3709
10:00 AM	0	0	0	0	60	0	77	110	247	0	239	113	352	0	221	37	258	857
*** BREAK ***																		
Total	0	0	0	0	60	0	77	110	247	0	239	113	352	0	221	37	258	857
*** BREAK ***																		
Grand Total	0	0	0	0	1651	0	3765	553	5969	0	4567	1942	6509	0	4814	886	5700	18178
Apprch %	0	0	0		27.7	0	63.1	9.3		0	70.2	29.8		0	84.5	15.5		
Total %	0	0	0	0	9.1	0	20.7	3	32.8	0	25.1	10.7	35.8	0	26.5	4.9	31.4	
Vehicles	0	0	0	0	1571	0	3626	532	5729	0	4425	1807	6232	0	4588	825	5413	17374
% Vehicles	0	0	0	0	95.2	0	96.3	96.2	96	0	96.9	93	95.7	0	95.3	93.1	95	95.6
Heavy Vehicles	0	0	0	0	80	0	139	21	240	0	142	135	277	0	226	61	287	804
% Heavy Vehicles	0	0	0	0	4.8	0	3.7	3.8	4	0	3.1	7	4.3	0	4.7	6.9	5	4.4

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I-75 SB Ramp at Fruitville Rd
Section: 17040 MP: 5.130
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/15/2014

Groups Printed- Vehicles - Heavy Vehicles

	N/A Northbound				I-75 Off Ramp Southbound					Fruitville Road Eastbound				Fruitville Road Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	Int. Total
*** BREAK ***																		
02:45 PM	0	0	0	0	48	0	75	94	217	0	469	189	658	0	203	63	266	1141
Total	0	0	0	0	48	0	75	94	217	0	469	189	658	0	203	63	266	1141
03:00 PM	0	0	0	0	64	0	48	94	206	0	489	176	665	0	215	56	271	1142
03:15 PM	0	0	0	0	99	0	133	96	328	0	410	152	562	0	300	67	367	1257
03:30 PM	0	0	0	0	68	0	174	0	242	0	433	233	666	0	318	80	398	1306
03:45 PM	0	0	0	0	81	0	196	0	277	0	424	182	606	0	241	44	285	1168
Total	0	0	0	0	312	0	551	190	1053	0	1756	743	2499	0	1074	247	1321	4873
04:00 PM	0	0	0	0	76	0	184	0	260	0	451	199	650	0	319	78	397	1307
04:15 PM	0	0	0	0	61	0	215	0	276	0	470	245	715	0	211	67	278	1269
04:30 PM	0	0	0	0	87	0	171	0	258	0	506	280	786	0	256	117	373	1417
04:45 PM	0	0	0	0	62	0	240	0	302	0	502	214	716	0	260	75	335	1353
Total	0	0	0	0	286	0	810	0	1096	0	1929	938	2867	0	1046	337	1383	5346
05:00 PM	0	0	0	0	54	0	220	0	274	0	621	260	881	0	247	126	373	1528
05:15 PM	0	0	0	0	58	0	222	0	280	0	554	257	811	0	280	86	366	1457
05:30 PM	0	0	0	0	60	0	251	0	311	0	486	249	735	0	218	64	282	1328
05:45 PM	0	0	0	0	46	0	180	0	226	0	446	211	657	0	224	53	277	1160
Total	0	0	0	0	218	0	873	0	1091	0	2107	977	3084	0	969	329	1298	5473
06:00 PM	0	0	0	0	45	0	193	0	238	0	355	163	518	0	179	40	219	975
06:15 PM	0	0	0	0	31	0	182	0	213	0	341	196	537	0	162	39	201	951
06:30 PM	0	0	0	0	49	0	57	104	210	0	259	128	387	0	204	34	238	835
*** BREAK ***																		
Total	0	0	0	0	125	0	432	104	661	0	955	487	1442	0	545	113	658	2761
Grand Total	0	0	0	0	989	0	2741	388	4118	0	7216	3334	10550	0	3837	1089	4926	19594
Apprch %	0	0	0		24	0	66.6	9.4		0	68.4	31.6		0	77.9	22.1		
Total %	0	0	0	0	5	0	14	2	21	0	36.8	17	53.8	0	19.6	5.6	25.1	
Vehicles	0	0	0	0	908	0	2677	383	3968	0	7089	3273	10362	0	3696	1057	4753	19083
% Vehicles	0	0	0	0	91.8	0	97.7	98.7	96.4	0	98.2	98.2	98.2	0	96.3	97.1	96.5	97.4
Heavy Vehicles	0	0	0	0	81	0	64	5	150	0	127	61	188	0	141	32	173	511
% Heavy Vehicles	0	0	0	0	8.2	0	2.3	1.3	3.6	0	1.8	1.8	1.8	0	3.7	2.9	3.5	2.6

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
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(813) 962 8689

I-75 SB Ramp at Fruitville Rd
Section: 17040 MP: 5.130
Weather: Clear
County: Sarasota

File Name : TMC Final
Site Code :
Start Date : 5/15/2014

	N/A Northbound				I-75 Off Ramp Southbound					Fruitville Road Eastbound				Fruitville Road Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	RTOR	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	LT	TH	RT (I-75 SB On Ramp)	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	0	0	0	131	0	348	**44**	523	0	318	127	445	0	407	81	488	1456
07:30 AM	0	0	0	0	139	0	387	0	526	0	392	155	547	0	**434**	80	**514**	1587
07:45 AM	0	0	0	0	**166**	0	**400**	0	**566**	0	**480**	168	**648**	0	368	**87**	455	**1669**
08:00 AM	0	0	0	0	132	0	330	0	462	0	349	**170**	519	0	370	57	427	1408
Total Volume	0	0	0	0	568	0	1465	44	2077	0	1539	620	2159	0	1579	305	1884	6120
% App. Total	0	0	0		27.3	0	70.5	2.1		0	71.3	28.7		0	83.8	16.2		
PHF	.000	.000	.000	.000	.855	.000	.916	.250	.917	.000	.802	.912	.833	.000	.910	.876	.916	.917

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM					07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	131	0	348	**44**	523	0	318	127	445	0	407	81	488	
+15 mins.	0	0	0	0	139	0	387	0	526	0	392	155	547	0	**434**	80	**514**	
+30 mins.	0	0	0	0	**166**	0	**400**	0	**566**	0	**480**	168	**648**	0	368	**87**	455	
+45 mins.	0	0	0	0	132	0	330	0	462	0	349	**170**	519	0	370	57	427	
Total Volume	0	0	0	0	568	0	1465	44	2077	0	1539	620	2159	0	1579	305	1884	
% App. Total	0	0	0		27.3	0	70.5	2.1		0	71.3	28.7		0	83.8	16.2		
PHF	.000	.000	.000	.000	.855	.000	.916	.250	.917	.000	.802	.912	.833	.000	.910	.876	.916	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 05:00 PM																		
05:00 PM	0	0	0	0	54	0	220	0	274	0	**621**	**260**	**881**	0	247	**126**	**373**	**1528**
05:15 PM	0	0	0	0	58	0	222	0	280	0	554	257	811	0	**280**	86	366	1457
05:30 PM	0	0	0	0	**60**	0	**251**	0	**311**	0	486	249	735	0	218	64	282	1328
05:45 PM	0	0	0	0	46	0	180	0	226	0	446	211	657	0	224	53	277	1160
Total Volume	0	0	0	0	218	0	873	0	1091	0	2107	977	3084	0	969	329	1298	5473
% App. Total	0	0	0		20	0	80	0		0	68.3	31.7		0	74.7	25.3		
PHF	.000	.000	.000	.000	.908	.000	.870	.000	.877	.000	.848	.939	.875	.000	.865	.653	.870	.895

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM					05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	54	0	220	0	274	0	**621**	**260**	**881**	0	247	**126**	**373**	
+15 mins.	0	0	0	0	58	0	222	0	280	0	554	257	811	0	**280**	86	366	
+30 mins.	0	0	0	0	**60**	0	**251**	0	**311**	0	486	249	735	0	218	64	282	
+45 mins.	0	0	0	0	46	0	180	0	226	0	446	211	657	0	224	53	277	
Total Volume	0	0	0	0	218	0	873	0	1091	0	2107	977	3084	0	969	329	1298	
% App. Total	0	0	0		20	0	80	0		0	68.3	31.7		0	74.7	25.3		
PHF	.000	.000	.000	.000	.908	.000	.870	.000	.877	.000	.848	.939	.875	.000	.865	.653	.870	

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SR 780 (Fruitville Rd) at I-75 NB Ramp
Section: 17040 MP: 5.364
Weather: Clear
County: Sarasota

File Name : I-75 NB Ramp
Site Code : 00000000
Start Date : 5/13/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	I-75 NB Off Ramp Northbound				N/A Southbound				SR 780 (Fruitville Rd) Eastbound					SR 780 (Fruitville Rd) Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	App. Total	LT	TH	RT	U-Turns	App. Total	LT	TH	RT	App. Total	Int. Total
06:15 AM	76	0	39	115	0	0	0	0	0	117	64	0	181	0	84	22	106	402
06:30 AM	151	0	71	222	0	0	0	0	0	204	109	1	314	0	143	48	191	727
06:45 AM	220	0	80	300	0	0	0	0	0	239	142	0	381	0	172	44	216	897
Total	447	0	190	637	0	0	0	0	0	560	315	1	876	0	399	114	513	2026
07:00 AM	212	0	64	276	0	0	0	0	0	192	150	0	342	0	219	54	273	891
07:15 AM	328	0	73	401	0	0	0	0	0	235	234	0	469	0	183	94	277	1147
07:30 AM	374	0	58	432	0	0	0	0	0	207	224	0	431	0	198	65	263	1126
07:45 AM	293	0	67	360	0	0	0	0	0	300	262	0	562	0	220	67	287	1209
Total	1207	0	262	1469	0	0	0	0	0	934	870	0	1804	0	820	280	1100	4373
08:00 AM	319	0	48	367	0	0	0	0	0	180	205	0	385	0	191	90	281	1033
08:15 AM	272	0	40	312	0	0	0	0	0	221	239	0	460	0	197	84	281	1053
08:30 AM	264	0	36	300	0	0	0	0	0	164	204	0	368	0	188	78	266	934
08:45 AM	196	0	51	247	0	0	0	0	0	165	166	0	331	0	182	65	247	825
Total	1051	0	175	1226	0	0	0	0	0	730	814	0	1544	0	758	317	1075	3845
09:00 AM	186	0	32	218	0	0	0	0	0	126	197	0	323	0	127	45	172	713
09:15 AM	156	0	29	185	0	0	0	0	0	144	168	0	312	0	162	44	206	703
09:30 AM	161	0	33	194	0	0	0	0	0	130	183	0	313	0	127	44	171	678
09:45 AM	116	0	31	147	0	0	0	0	0	145	180	1	326	0	155	36	191	664
Total	619	0	125	744	0	0	0	0	0	545	728	1	1274	0	571	169	740	2758
10:00 AM	76	0	12	88	0	0	0	0	0	128	148	0	276	0	131	49	180	544
*** BREAK ***																		
Total	76	0	12	88	0	0	0	0	0	128	148	0	276	0	131	49	180	544
*** BREAK ***																		
Grand Total	3400	0	764	4164	0	0	0	0	0	2897	2875	2	5774	0	2679	929	3608	13546
Apprch %	81.7	0	18.3		0	0	0		0	50.2	49.8	0		0	74.3	25.7		
Total %	25.1	0	5.6	30.7	0	0	0	0	0	21.4	21.2	0	42.6	0	19.8	6.9	26.6	
Vehicles	3333	0	741	4074	0	0	0	0	0	2808	2822	2	5632	0	2560	851	3411	13117
% Vehicles	98	0	97	97.8	0	0	0	0	0	96.9	98.2	100	97.5	0	95.6	91.6	94.5	96.8
Heavy Vehicles	67	0	23	90	0	0	0	0	0	89	53	0	142	0	119	78	197	429
% Heavy Vehicles	2	0	3	2.2	0	0	0	0	0	3.1	1.8	0	2.5	0	4.4	8.4	5.5	3.2

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SR 780 (Fruitville Rd) at I-75 NB Ramp
Section: 17040 MP: 5.364
Weather: Clear
County: Sarasota

File Name : I-75 NB Ramp
Site Code : 00000000
Start Date : 5/13/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	I-75 NB Off Ramp Northbound				N/A Southbound				SR 780 (Fruitville Rd) Eastbound					SR 780 (Fruitville Rd) Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	App. Total	LT	TH	RT	U-Turns	App. Total	LT	TH	RT	App. Total	Int. Total
*** BREAK ***																		
02:45 PM	150	0	46	196	0	0	0	0	0	190	351	0	541	0	142	61	203	940
Total	150	0	46	196	0	0	0	0	0	190	351	0	541	0	142	61	203	940
03:00 PM	98	0	57	155	0	0	0	0	0	185	411	0	596	0	196	87	283	1034
03:15 PM	152	0	38	190	0	0	0	0	0	173	289	0	462	0	187	75	262	914
03:30 PM	228	0	33	261	0	0	0	0	0	165	365	0	530	0	244	88	332	1123
03:45 PM	138	0	48	186	0	0	0	0	0	199	314	0	513	0	178	75	253	952
Total	616	0	176	792	0	0	0	0	0	722	1379	0	2101	0	805	325	1130	4023
04:00 PM	131	0	44	175	0	0	0	0	0	172	385	1	558	0	204	105	309	1042
04:15 PM	158	0	42	200	0	0	0	0	0	175	364	0	539	0	165	92	257	996
04:30 PM	129	0	43	172	0	0	0	0	0	184	341	0	525	0	214	124	338	1035
04:45 PM	203	0	35	238	0	0	0	0	0	209	377	0	586	0	183	106	289	1113
Total	621	0	164	785	0	0	0	0	0	740	1467	1	2208	0	766	427	1193	4186
05:00 PM	135	0	27	162	0	0	0	0	0	181	494	0	675	0	239	182	421	1258
05:15 PM	174	0	38	212	0	0	0	0	0	209	484	0	693	0	206	140	346	1251
05:30 PM	149	0	30	179	0	0	0	0	0	189	494	0	683	0	179	124	303	1165
05:45 PM	116	0	26	142	0	0	0	0	0	219	392	1	612	0	125	106	231	985
Total	574	0	121	695	0	0	0	0	0	798	1864	1	2663	0	749	552	1301	4659
06:00 PM	109	0	22	131	0	0	0	0	0	164	326	0	490	0	101	64	165	786
06:15 PM	130	0	24	154	0	0	0	0	0	129	253	0	382	0	93	44	137	673
06:30 PM	99	0	16	115	0	0	0	0	0	105	183	0	288	0	61	46	107	510
*** BREAK ***																		
Total	338	0	62	400	0	0	0	0	0	398	762	0	1160	0	255	154	409	1969
Grand Total	2299	0	569	2868	0	0	0	0	0	2848	5823	2	8673	0	2717	1519	4236	15777
Apprch %	80.2	0	19.8		0	0	0		0	32.8	67.1	0		0	64.1	35.9		
Total %	14.6	0	3.6	18.2	0	0	0	0	0	18.1	36.9	0	55	0	17.2	9.6	26.8	
Vehicles	2251	0	548	2799	0	0	0	0	0	2786	5774	2	8562	0	2671	1488	4159	15520
% Vehicles	97.9	0	96.3	97.6	0	0	0	0	0	97.8	99.2	100	98.7	0	98.3	98	98.2	98.4
Heavy Vehicles	48	0	21	69	0	0	0	0	0	62	49	0	111	0	46	31	77	257
% Heavy Vehicles	2.1	0	3.7	2.4	0	0	0	0	0	2.2	0.8	0	1.3	0	1.7	2	1.8	1.6

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SR 780 (Fruitville Rd) at I-75 NB Ramp
Section: 17040 MP: 5.364
Weather: Clear
County: Sarasota

File Name : I-75 NB Ramp
Site Code : 00000000
Start Date : 5/13/2014
Page No : 2

	I-75 NB Off Ramp Northbound				N/A Southbound				SR 780 (Fruitville Rd) Eastbound					SR 780 (Fruitville Rd) Westbound				
Start Time	LT	TH	RT	App. Total	LT	TH	RT	App. Total	LT	TH	RT	U-Turns	App. Total	LT	TH	RT	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	328	0	**73**	401	0	0	0	0	0	235	234	0	469	0	183	**94**	277	1147
07:30 AM	**374**	0	58	**432**	0	0	0	0	0	207	224	0	431	0	198	65	263	1126
07:45 AM	293	0	67	360	0	0	0	0	0	**300**	**262**	0	**562**	0	**220**	67	**287**	**1209**
08:00 AM	319	0	48	367	0	0	0	0	0	180	205	0	385	0	191	90	281	1033
Total Volume	1314	0	246	1560	0	0	0	0	0	922	925	0	1847	0	792	316	1108	4515
% App. Total	84.2	0	15.8		0	0	0		0	49.9	50.1	0		0	71.5	28.5		
PHF	.878	.000	.842	.903	.000	.000	.000	.000	.000	.768	.883	.000	.822	.000	.900	.840	.965	.934

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM				
+0 mins.	328	0	**73**	401	0	0	0	0	0	235	234	0	469	0	183	**94**	277	
+15 mins.	**374**	0	58	**432**	0	0	0	0	0	207	224	0	431	0	198	65	263	
+30 mins.	293	0	67	360	0	0	0	0	0	**300**	**262**	0	**562**	0	**220**	67	**287**	
+45 mins.	319	0	48	367	0	0	0	0	0	180	205	0	385	0	191	90	281	
Total Volume	1314	0	246	1560	0	0	0	0	0	922	925	0	1847	0	792	316	1108	
% App. Total	84.2	0	15.8		0	0	0		0	49.9	50.1	0		0	71.5	28.5		
PHF	.878	.000	.842	.903	.000	.000	.000	.000	.000	.768	.883	.000	.822	.000	.900	.840	.965	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	135	0	27	162	0	0	0	0	0	181	**494**	0	675	0	**239**	**182**	**421**	**1258**
05:15 PM	**174**	0	**38**	**212**	0	0	0	0	0	209	484	0	**693**	0	206	140	346	1251
05:30 PM	149	0	30	179	0	0	0	0	0	189	494	0	683	0	179	124	303	1165
05:45 PM	116	0	26	142	0	0	0	0	0	**219**	392	**1**	612	0	125	106	231	985
Total Volume	574	0	121	695	0	0	0	0	0	798	1864	1	2663	0	749	552	1301	4659
% App. Total	82.6	0	17.4		0	0	0		0	30	70	0		0	57.6	42.4		
PHF	.825	.000	.796	.820	.000	.000	.000	.000	.000	.911	.943	.250	.961	.000	.783	.758	.773	.926

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM					05:00 PM				
+0 mins.	135	0	27	162	0	0	0	0	0	181	**494**	0	675	0	**239**	**182**	**421**	
+15 mins.	**174**	0	**38**	**212**	0	0	0	0	0	209	484	0	**693**	0	206	140	346	
+30 mins.	149	0	30	179	0	0	0	0	0	189	494	0	683	0	179	124	303	
+45 mins.	116	0	26	142	0	0	0	0	0	**219**	392	**1**	612	0	125	106	231	
Total Volume	574	0	121	695	0	0	0	0	0	798	1864	1	2663	0	749	552	1301	
% App. Total	82.6	0	17.4		0	0	0		0	30	70	0		0	57.6	42.4		
PHF	.825	.000	.796	.820	.000	.000	.000	.000	.000	.911	.943	.250	.961	.000	.783	.758	.773	

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Coburn Rd at SR 780 (Fruitville Rd)
Section: 17040 MP: 5.663
Weather: Clear
County: Sarasota

File Name : TMC Final (DM)
Site Code :
Start Date : 5/8/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	N/A Northbound					Coburn Rd Southbound					Fruitville Rd Eastbound					Fruitville Rd Westbound					
Start Time	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	28	28	1	10	238	0	249	0	0	307	4	311	588
07:15 AM	0	0	0	0	0	0	2	0	25	27	1	15	308	0	324	0	0	263	2	265	616
07:30 AM	0	0	0	0	0	0	4	0	18	22	15	11	275	0	301	0	0	319	2	321	644
07:45 AM	0	0	0	0	0	0	3	0	31	34	50	10	307	0	367	0	0	295	2	297	698
Total	0	0	0	0	0	0	9	0	102	111	67	46	1128	0	1241	0	0	1184	10	1194	2546
08:00 AM	0	0	0	0	0	0	8	0	32	40	90	14	234	0	338	0	0	292	6	298	676
08:15 AM	0	0	0	0	0	0	1	0	31	32	14	7	236	0	257	0	0	338	4	342	631
08:30 AM	0	0	0	0	0	0	2	0	14	16	6	13	209	0	228	0	0	322	5	327	571
08:45 AM	0	0	0	0	0	0	1	0	13	14	15	6	203	0	224	0	0	206	7	213	451
Total	0	0	0	0	0	0	12	0	90	102	125	40	882	0	1047	0	0	1158	22	1180	2329
09:00 AM	0	0	0	0	0	0	0	0	10	10	11	8	228	0	247	0	0	167	3	170	427
09:15 AM	0	0	0	0	0	0	2	0	11	13	10	13	181	0	204	0	0	195	2	197	414
09:30 AM	0	0	0	0	0	0	1	0	15	16	6	6	146	0	158	0	0	193	2	195	369
09:45 AM	0	0	0	0	0	0	0	0	13	13	2	6	173	0	181	1	0	183	2	186	380
Total	0	0	0	0	0	0	3	0	49	52	29	33	728	0	790	1	0	738	9	748	1590
10:00 AM	0	0	0	0	0	0	0	0	11	11	1	11	148	0	160	1	0	153	2	156	327
10:15 AM	0	0	0	0	0	0	1	0	10	11	2	3	156	0	161	0	0	195	1	196	368
10:30 AM	0	0	0	0	0	0	2	0	16	18	6	4	166	0	176	1	0	182	1	184	378
10:45 AM	0	0	0	0	0	0	1	0	18	19	6	14	143	0	163	0	0	193	3	196	378
Total	0	0	0	0	0	0	4	0	55	59	15	32	613	0	660	2	0	723	7	732	1451
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	28	0	296	324	236	151	3351	0	3738	3	0	3803	48	3854	7916
Apprch %	0	0	0	0		0	8.6	0	91.4		6.3	4	89.6	0		0.1	0	98.7	1.2		
Total %	0	0	0	0	0	0	0.4	0	3.7	4.1	3	1.9	42.3	0	47.2	0	0	48	0.6	48.7	
Vehicles	0	0	0	0	0	0	28	0	291	319	236	149	3221	0	3606	3	0	3619	47	3669	7594
% Vehicles	0	0	0	0	0	0	100	0	98.3	98.5	100	98.7	96.1	0	96.5	100	0	95.2	97.9	95.2	95.9
Heavy Vehicles	0	0	0	0	0	0	0	0	5	5	0	2	130	0	132	0	0	184	1	185	322
% Heavy Vehicles	0	0	0	0	0	0	0	0	1.7	1.5	0	1.3	3.9	0	3.5	0	0	4.8	2.1	4.8	4.1

ICON Consultant Group, Inc.

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Tampa, Fl. 33618
(813) 962 8689

Coburn Rd at SR 780 (Fruitville Rd)
Section: 17040 MP: 5.663
Weather: Clear
County: Sarasota

File Name : TMC Final (DM)
Site Code :
Start Date : 5/8/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	N/A Northbound					Coburn Rd Southbound					Fruitville Rd Eastbound					Fruitville Rd Westbound					
Start Time	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
*** BREAK ***																					
03:00 PM	0	0	0	0	0	0	1	0	13	14	5	12	239	0	256	0	0	254	8	262	532
03:15 PM	0	0	0	0	0	0	2	0	12	14	3	20	207	0	230	0	0	230	7	237	481
03:30 PM	0	0	0	0	0	0	2	0	12	14	3	17	220	0	240	1	0	336	4	341	595
03:45 PM	0	0	0	0	0	0	1	0	13	14	6	25	239	0	270	0	0	226	6	232	516
Total	0	0	0	0	0	0	6	0	50	56	17	74	905	0	996	1	0	1046	25	1072	2124
04:00 PM	0	0	0	0	0	0	2	0	20	22	4	18	198	0	220	0	0	367	3	370	612
04:15 PM	0	0	0	0	0	0	0	0	15	15	7	15	242	0	264	0	0	277	4	281	560
04:30 PM	0	0	0	0	0	0	1	0	15	16	3	20	203	0	226	0	0	338	0	338	580
04:45 PM	0	0	0	0	0	0	1	0	14	15	5	16	211	0	232	0	0	391	3	394	641
Total	0	0	0	0	0	0	4	0	64	68	19	69	854	0	942	0	0	1373	10	1383	2393
05:00 PM	0	0	0	0	0	0	0	0	13	13	7	11	217	0	235	0	0	444	5	449	697
05:15 PM	0	0	0	0	0	0	1	0	21	22	8	29	202	0	239	0	0	356	4	360	621
05:30 PM	0	0	0	0	0	0	3	0	24	27	5	25	200	0	230	0	0	243	3	246	503
05:45 PM	0	0	0	0	0	0	2	0	17	19	4	25	189	0	218	0	0	212	0	212	449
Total	0	0	0	0	0	0	6	0	75	81	24	90	808	0	922	0	0	1255	12	1267	2270
06:00 PM	0	0	0	0	0	0	0	0	13	13	4	17	180	0	201	0	0	169	5	174	388
06:15 PM	0	0	0	0	0	0	2	0	12	14	2	14	176	0	192	0	0	155	3	158	364
06:30 PM	0	0	0	0	0	0	4	0	16	20	1	12	119	0	132	0	0	141	2	143	295
06:45 PM	0	0	0	0	0	0	0	0	9	9	2	13	126	0	141	0	0	114	2	116	266
Total	0	0	0	0	0	0	6	0	50	56	9	56	601	0	666	0	0	579	12	591	1313
Grand Total	0	0	0	0	0	0	22	0	239	261	69	289	3168	0	3526	1	0	4253	59	4313	8100
Apprch %	0	0	0	0		0	8.4	0	91.6		2	8.2	89.8	0		0	0	98.6	1.4		
Total %	0	0	0	0	0	0	0.3	0	3	3.2	0.9	3.6	39.1	0	43.5	0	0	52.5	0.7	53.2	
Vehicles	0	0	0	0	0	0	22	0	237	259	69	282	3076	0	3427	1	0	4187	58	4246	7932
% Vehicles	0	0	0	0	0	0	100	0	99.2	99.2	100	97.6	97.1	0	97.2	100	0	98.4	98.3	98.4	97.9
Heavy Vehicles	0	0	0	0	0	0	0	0	2	2	0	7	92	0	99	0	0	66	1	67	168
% Heavy Vehicles	0	0	0	0	0	0	0	0	0.8	0.8	0	2.4	2.9	0	2.8	0	0	1.6	1.7	1.6	2.1

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Coburn Rd at SR 780 (Fruitville Rd)
Section: 17040 MP: 5.663
Weather: Clear
County: Sarasota

File Name : TMC Final (Updated) (DM)
Site Code :
Start Date : 5/8/2014
Page No : 2

	N/A Northbound				Coburn Rd Southbound				Fruitville Rd Eastbound					Fruitville Rd Westbound					
Start Time	LT	TH	RT	App. Total	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	0	0	0	0	0	0	22	22	1	**13**	334	0	348	0	0	292	1	293	663
07:30 AM	0	0	0	0	3	0	**26**	**29**	0	10	344	0	354	0	0	296	3	299	682
07:45 AM	0	0	0	0	1	0	26	27	0	11	**391**	0	**402**	0	0	264	**4**	268	**697**
08:00 AM	0	0	0	0	**4**	0	20	24	**2**	8	278	0	288	0	0	**311**	3	**314**	626
Total Volume	0	0	0	0	8	0	94	102	3	42	1347	0	1392	0	0	1163	11	1174	2668
% App. Total	0	0	0		7.8	0	92.2		0.2	3	96.8	0		0	0	99.1	0.9		
PHF	.000	.000	.000	.000	.500	.000	.904	.879	.375	.808	.861	.000	.866	.000	.000	.935	.688	.935	.957

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM					07:15 AM					
+0 mins.	0	0	0	0	0	0	22	22	1	**13**	334	0	348	0	0	292	1	293	
+15 mins.	0	0	0	0	3	0	**26**	**29**	0	10	344	0	354	0	0	296	3	299	
+30 mins.	0	0	0	0	1	0	26	27	0	11	**391**	0	**402**	0	0	264	**4**	268	
+45 mins.	0	0	0	0	**4**	0	20	24	**2**	8	278	0	288	0	0	**311**	3	**314**	
Total Volume	0	0	0	0	8	0	94	102	3	42	1347	0	1392	0	0	1163	11	1174	
% App. Total	0	0	0		7.8	0	92.2		0.2	3	96.8	0		0	0	99.1	0.9		
PHF	.000	.000	.000	.000	.500	.000	.904	.879	.375	.808	.861	.000	.866	.000	.000	.935	.688	.935	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	0	0	0	1	0	21	22	**8**	**29**	**202**	0	**239**	0	0	**356**	4	**360**	**621**
05:15 PM	0	0	0	0	**3**	0	**24**	**27**	5	25	200	0	230	0	0	243	3	246	503
05:30 PM	0	0	0	0	2	0	17	19	4	25	189	0	218	0	0	212	0	212	449
05:45 PM	0	0	0	0	0	0	13	13	4	17	180	0	201	0	0	169	**5**	174	388
Total Volume	0	0	0	0	6	0	75	81	21	96	771	0	888	0	0	980	12	992	1961
% App. Total	0	0	0		7.4	0	92.6		2.4	10.8	86.8	0		0	0	98.8	1.2		
PHF	.000	.000	.000	.000	.500	.000	.781	.750	.656	.828	.954	.000	.929	.000	.000	.688	.600	.689	.789

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM					05:00 PM					
+0 mins.	0	0	0	0	1	0	21	22	**8**	**29**	**202**	0	**239**	0	0	**356**	4	**360**	
+15 mins.	0	0	0	0	**3**	0	**24**	**27**	5	25	200	0	230	0	0	243	3	246	
+30 mins.	0	0	0	0	2	0	17	19	4	25	189	0	218	0	0	212	0	212	
+45 mins.	0	0	0	0	0	0	13	13	4	17	180	0	201	0	0	169	**5**	174	
Total Volume	0	0	0	0	6	0	75	81	21	96	771	0	888	0	0	980	12	992	
% App. Total	0	0	0		7.4	0	92.6		2.4	10.8	86.8	0		0	0	98.8	1.2		
PHF	.000	.000	.000	.000	.500	.000	.781	.750	.656	.828	.954	.000	.929	.000	.000	.688	.600	.689	

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Coburn Rd at SR 780 (Fruitville Rd)
Section: 17040 MP: NA
Weather: Clear
County: Sarasota

File Name : TMC Final (DH)
Site Code :
Start Date : 5/8/2014
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

	Coburn Rd Northbound						N/A Southbound						Fruitville Rd Eastbound						Fruitville Rd Westbound						
Start Time	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	Int. Total
07:00 AM	0	37	0	6	1	44	0	0	0	0	0	0	0	0	163	72	3	238	0	18	212	0	0	230	512
07:15 AM	0	35	0	8	4	47	0	0	0	0	0	0	0	0	228	76	6	310	0	21	217	0	0	238	595
07:30 AM	0	59	0	14	5	78	0	0	0	0	0	0	1	0	216	79	4	300	0	23	255	0	0	278	656
07:45 AM	0	41	0	18	5	64	0	0	0	0	0	0	3	0	255	89	5	352	0	34	223	0	0	257	673
Total	0	172	0	46	15	233	0	0	0	0	0	0	4	0	862	316	18	1200	0	96	907	0	0	1003	2436
08:00 AM	0	29	0	11	5	45	0	0	0	0	0	0	3	0	169	70	6	248	0	21	253	0	0	274	567
08:15 AM	0	52	0	14	1	67	0	0	0	0	0	0	0	0	198	68	4	270	0	36	236	0	0	272	609
08:30 AM	0	79	0	15	12	106	0	0	0	0	0	0	0	0	185	34	6	225	0	22	199	0	0	221	552
08:45 AM	0	37	0	9	9	55	0	0	0	0	0	0	1	0	140	65	2	208	0	16	159	0	0	175	438
Total	0	197	0	49	27	273	0	0	0	0	0	0	4	0	692	237	18	951	0	95	847	0	0	942	2166
09:00 AM	0	30	0	11	5	46	0	0	0	0	0	0	1	0	162	48	3	214	0	13	155	0	0	168	428
09:15 AM	0	40	0	8	9	57	0	0	0	0	0	0	0	0	150	33	6	189	0	12	141	0	0	153	399
09:30 AM	0	35	0	2	1	38	0	0	0	0	0	0	0	0	101	34	8	143	0	13	143	0	0	156	337
09:45 AM	0	31	0	5	12	48	0	0	0	0	0	0	1	0	132	40	3	176	0	8	133	0	0	141	365
Total	0	136	0	26	27	189	0	0	0	0	0	0	2	0	545	155	20	722	0	46	572	0	0	618	1529
10:00 AM	0	35	0	10	5	50	0	0	0	0	0	0	0	0	104	35	4	143	0	13	110	0	0	123	316
10:15 AM	0	36	0	10	3	49	0	0	0	0	0	0	2	0	108	41	6	157	0	19	149	0	0	168	374
10:30 AM	0	38	0	11	7	56	0	0	0	0	0	0	0	0	104	45	6	155	0	19	151	0	0	170	381
10:45 AM	0	38	0	11	10	59	0	0	0	0	0	0	0	0	98	47	5	150	0	18	153	0	0	171	380
Total	0	147	0	42	25	214	0	0	0	0	0	0	2	0	414	168	21	605	0	69	563	0	0	632	1451
*** BREAK ***																									
Grand Total	0	652	0	163	94	909	0	0	0	0	0	0	12	0	2513	876	77	3478	0	306	2889	0	0	3195	7582
Apprch %	0	71.7	0	17.9	10.3		0	0	0	0	0		0.3	0	72.3	25.2	2.2		0	9.6	90.4	0	0		
Total %	0	8.6	0	2.1	1.2	12	0	0	0	0	0	0	0.2	0	33.1	11.6	1	45.9	0	4	38.1	0	0	42.1	
Vehicles	0	594	0	142	75	811	0	0	0	0	0	0	12	0	2347	824	71	3254	0	272	2664	0	0	2936	7001
% Vehicles	0	91.1	0	87.1	79.8	89.2	0	0	0	0	0	0	100	0	93.4	94.1	92.2	93.6	0	88.9	92.2	0	0	91.9	92.3
Heavy Vehicles	0	58	0	21	19	98	0	0	0	0	0	0	0	0	166	52	6	224	0	34	225	0	0	259	581
% Heavy Vehicles	0	8.9	0	12.9	20.2	10.8	0	0	0	0	0	0	0	0	6.6	5.9	7.8	6.4	0	11.1	7.8	0	0	8.1	7.7

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File Name : TMC Final (DH)
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Groups Printed- Vehicles - Heavy Vehicles

	Coburn Rd Northbound						N/A Southbound						Fruitville Rd Eastbound						Fruitville Rd Westbound						
Start Time	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	Int. Total
*** BREAK ***																									
03:00 PM	0	58	0	9	7	74	0	0	0	0	0	0	0	0	215	43	2	260	0	20	218	0	0	238	572
03:15 PM	0	35	0	11	4	50	0	0	0	0	0	0	0	0	180	49	7	236	0	11	194	0	0	205	491
03:30 PM	0	61	0	15	5	81	0	0	0	0	0	0	0	0	172	46	3	221	0	32	248	0	0	280	582
03:45 PM	0	45	0	7	8	60	0	0	0	0	0	0	0	0	169	58	5	232	0	17	174	0	0	191	483
Total	0	199	0	42	24	265	0	0	0	0	0	0	0	0	736	196	17	949	0	80	834	0	0	914	2128
04:00 PM	0	85	0	8	2	95	0	0	0	0	0	0	1	0	155	31	5	192	0	17	260	0	0	277	564
04:15 PM	0	65	0	10	5	80	0	0	0	0	0	0	0	0	193	38	0	231	0	18	205	0	0	223	534
04:30 PM	0	71	0	10	5	86	0	0	0	0	0	0	0	0	189	39	0	228	0	19	202	0	0	221	535
04:45 PM	0	75	0	9	4	88	0	0	0	0	0	0	0	0	184	40	0	224	0	19	197	0	0	216	528
Total	0	296	0	37	16	349	0	0	0	0	0	0	1	0	721	148	5	875	0	73	864	0	0	937	2161
05:00 PM	16	141	0	17	0	174	0	0	0	0	0	0	0	0	181	26	9	216	0	21	303	0	0	324	714
05:15 PM	0	89	0	9	5	103	0	0	0	0	0	0	0	0	192	30	0	222	0	14	234	0	0	248	573
05:30 PM	0	66	0	10	5	81	0	0	0	0	0	0	0	0	179	23	2	204	0	11	178	0	0	189	474
05:45 PM	0	31	0	4	7	42	0	0	0	0	0	0	0	0	167	28	0	195	0	10	163	0	0	173	410
Total	16	327	0	40	17	400	0	0	0	0	0	0	0	0	719	107	11	837	0	56	878	0	0	934	2171
06:00 PM	0	50	0	11	6	67	0	0	0	0	0	0	1	0	138	20	5	164	0	5	120	0	0	125	356
06:15 PM	0	34	0	4	7	45	0	0	0	0	0	0	0	0	146	23	1	170	0	4	113	0	0	117	332
06:30 PM	0	29	0	5	6	40	0	0	0	0	0	0	0	0	99	15	5	119	0	9	113	0	0	122	281
06:45 PM	0	22	0	4	5	31	0	0	0	0	0	0	0	0	101	16	0	117	0	4	88	0	0	92	240
Total	0	135	0	24	24	183	0	0	0	0	0	0	1	0	484	74	11	570	0	22	434	0	0	456	1209
Grand Total	16	957	0	143	81	1197	0	0	0	0	0	0	2	0	2660	525	44	3231	0	231	3010	0	0	3241	7669
Apprch %	1.3	79.9	0	11.9	6.8		0	0	0	0	0		0.1	0	82.3	16.2	1.4		0	7.1	92.9	0	0		
Total %	0.2	12.5	0	1.9	1.1	15.6	0	0	0	0	0	0	0	0	34.7	6.8	0.6	42.1	0	3	39.2	0	0	42.3	
Vehicles	16	941	0	133	80	1170	0	0	0	0	0	0	2	0	2525	474	40	3041	0	210	2942	0	0	3152	7363
% Vehicles	100	98.3	0	93	98.8	97.7	0	0	0	0	0	0	100	0	94.9	90.3	90.9	94.1	0	90.9	97.7	0	0	97.3	96
Heavy Vehicles	0	16	0	10	1	27	0	0	0	0	0	0	0	0	135	51	4	190	0	21	68	0	0	89	306
% Heavy Vehicles	0	1.7	0	7	1.2	2.3	0	0	0	0	0	0	0	0	5.1	9.7	9.1	5.9	0	9.1	2.3	0	0	2.7	4

ICON Consultant Group, Inc.

10006 N. Dale Mabry Hwy, Suite 201
Tampa, Fl. 33618
(813) 962 8689

Coburn Rd at SR 780 (Fruitville Rd)
Section: 17040 MP: NA
Weather: Clear
County: Sarasota

File Name : TMC Final (Updated) (DH)
Site Code :
Start Date : 5/8/2014

	Coburn Rd Northbound					N/A Southbound				Fruitville Rd Eastbound						Fruitville Rd Westbound				
Start Time	LT	TH	RT	RTOR	App. Total	LT	TH	RT	App. Total	U-Turn	LT	TH	RT	RTOR	App. Total	LT	TH	RT	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 07:15 AM																				
07:15 AM	**48**	0	10	2	60	0	0	0	0	0	0	250	67	1	318	19	231	0	250	628
07:30 AM	46	0	8	5	59	0	0	0	0	0	0	251	91	5	347	25	247	0	272	678
07:45 AM	47	0	**13**	**6**	**66**	0	0	0	0	0	0	**265**	**96**	**9**	**370**	21	223	0	244	**680**
08:00 AM	45	0	6	3	54	0	0	0	0	0	0	210	83	3	296	**37**	**263**	0	**300**	650
Total Volume	186	0	37	16	239	0	0	0	0	0	0	976	337	18	1331	102	964	0	1066	2636
% App. Total	77.8	0	15.5	6.7		0	0	0		0	0	73.3	25.3	1.4		9.6	90.4	0		
PHF	.969	.000	.712	.667	.905	.000	.000	.000	.000	.000	.000	.921	.878	.500	.899	.689	.916	.000	.888	.969

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM				07:15 AM						07:15 AM				
+0 mins.	**48**	0	10	2	60	0	0	0	0	0	0	250	67	1	318	19	231	0	250	
+15 mins.	46	0	8	5	59	0	0	0	0	0	0	251	91	5	347	25	247	0	272	
+30 mins.	47	0	**13**	**6**	**66**	0	0	0	0	0	0	**265**	**96**	**9**	**370**	21	223	0	244	
+45 mins.	45	0	6	3	54	0	0	0	0	0	0	210	83	3	296	**37**	**263**	0	**300**	
Total Volume	186	0	37	16	239	0	0	0	0	0	0	976	337	18	1331	102	964	0	1066	
% App. Total	77.8	0	15.5	6.7		0	0	0		0	0	73.3	25.3	1.4		9.6	90.4	0		
PHF	.969	.000	.712	.667	.905	.000	.000	.000	.000	.000	.000	.921	.878	.500	.899	.689	.916	.000	.888	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	**141**	0	**17**	0	**158**	0	0	0	0	0	0	181	26	**9**	216	**21**	**303**	0	**324**	**698**
05:15 PM	89	0	9	5	103	0	0	0	0	0	0	**192**	**30**	0	**222**	14	234	0	248	573
05:30 PM	66	0	10	5	81	0	0	0	0	0	0	179	23	2	204	11	178	0	189	474
05:45 PM	31	0	4	**7**	42	0	0	0	0	0	0	167	28	0	195	10	163	0	173	410
Total Volume	327	0	40	17	384	0	0	0	0	0	0	719	107	11	837	56	878	0	934	2155
% App. Total	85.2	0	10.4	4.4		0	0	0		0	0	85.9	12.8	1.3		6	94	0		
PHF	.580	.000	.588	.607	.608	.000	.000	.000	.000	.000	.000	.936	.892	.306	.943	.667	.724	.000	.721	.772

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					05:00 PM				05:00 PM						05:00 PM				
+0 mins.	**141**	0	**17**	0	**158**	0	0	0	0	0	0	181	26	**9**	216	**21**	**303**	0	**324**	
+15 mins.	89	0	9	5	103	0	0	0	0	0	0	**192**	**30**	0	**222**	14	234	0	248	
+30 mins.	66	0	10	5	81	0	0	0	0	0	0	179	23	2	204	11	178	0	189	
+45 mins.	31	0	4	**7**	42	0	0	0	0	0	0	167	28	0	195	10	163	0	173	
Total Volume	327	0	40	17	384	0	0	0	0	0	0	719	107	11	837	56	878	0	934	
% App. Total	85.2	0	10.4	4.4		0	0	0		0	0	85.9	12.8	1.3		6	94	0		
PHF	.580	.000	.588	.607	.608	.000	.000	.000	.000	.000	.000	.936	.892	.306	.943	.667	.724	.000	.721	

CLASSIFICATION COUNTS

Station ID: 170003122100
3-I -75 approximately ¼ mile north of SB
off-NB on Ramp Terminals of Bee Ridge Rd

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB LN1	185	10139	2519	40	645	266	66	435	546	13	39	22	0	0	0	14915
9/10/2013	Tuesday	NB LN2	189	13180	3031	34	637	325	35	704	512	35	22	10	46	0	0	18760
9/10/2013	Tuesday	NB LN3	51	11718	2395	8	372	7	0	184	3	4	0	0	1	0	0	14743
	Tuesday	NB	425	35037	7945	82	1654	598	101	1323	1061	52	61	32	47	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	NB LN1	183	10133	2463	50	625	250	88	439	551	9	41	18	0	0	0	14850
9/11/2013	Wednesday	NB LN2	195	13091	3109	35	621	288	50	674	487	24	24	10	52	0	0	18660
9/11/2013	Wednesday	NB LN3	40	11869	2349	14	340	10	0	173	3	6	0	0	0	4	0	14808
	Wednesday	NB	418	35093	7921	99	1586	548	138	1286	1041	39	65	28	52	4	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	NB LN1	132	10148	2512	42	522	164	19	224	337	5	18	11	0	0	0	14134
9/12/2013	Thursday	NB LN2	151	12887	3114	51	333	176	12	406	353	19	13	9	42	0	0	17566
9/12/2013	Thursday	NB LN3	32	12185	3259	2	290	5	0	130	5	0	0	0	0	0	0	15908
	Thursday	NB	315	35220	8885	95	1145	345	31	760	695	24	31	20	42	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	NB	425	35037	7945	82	1654	598	101	1323	1061	52	61	32	47	0	0	48418
9/11/2013	Wednesday	NB	418	35093	7921	99	1586	548	138	1286	1041	39	65	28	52	4	0	48318
9/12/2013	Thursday	NB	315	35220	8885	95	1145	345	31	760	695	24	31	20	42	0	0	47608
		NB	1158	105350	24751	276	4385	1491	270	3369	2797	115	157	80	141	4	0	

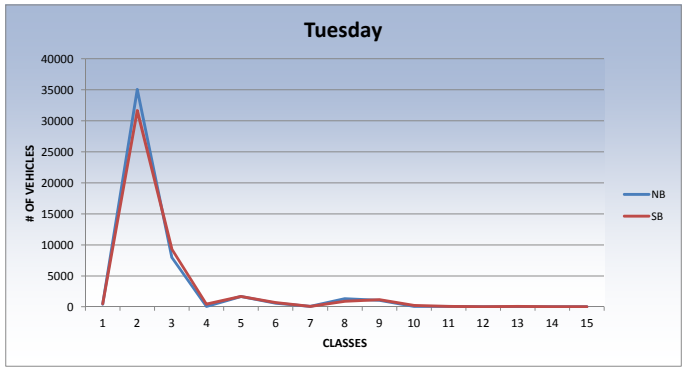
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB LN1	204	12887	2878	235	648	367	47	485	673	13	36	22	1	0	0	18496
9/10/2013	Tuesday	SB LN2	243	9647	3027	219	663	317	47	327	501	207	17	8	63	0	0	15286
9/10/2013	Tuesday	SB LN3	36	9099	3416	4	367	2	0	94	1	0	1	0	0	0	0	13020
	Tuesday	SB	483	31633	9321	458	1678	686	94	906	1175	220	54	30	64	0	0	

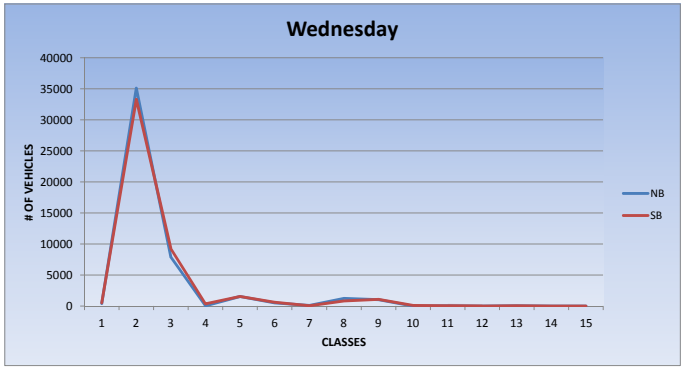
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/11/2013	Wednesday	SB LN1	197	13005	2927	209	639	359	33	436	719	10	39	20	2	0	0	18595
9/11/2013	Wednesday	SB LN2	325	10651	2378	174	552	280	55	353	404	137	17	7	50	0	0	15383
9/11/2013	Wednesday	SB LN3	32	9628	3932	10	399	8	0	81	6	0	0	0	0	0	0	14096
	Wednesday	SB	554	33284	9237	393	1590	647	88	870	1129	147	56	27	52	0	0	

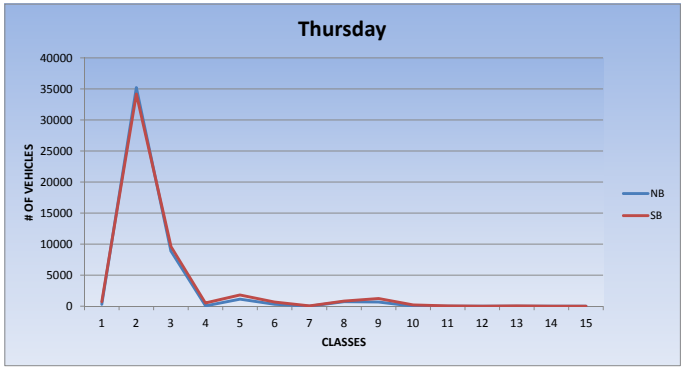
Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/12/2013	Thursday	SB LN1	325	14159	2968	268	644	298	6	363	595	22	26	24	4	0	0	19702
9/12/2013	Thursday	SB LN2	370	10271	2701	259	700	411	61	415	655	198	30	12	49	0	0	16132
9/12/2013	Thursday	SB LN3	32	9736	3974	6	508	4	0	76	3	0	0	0	0	0	0	14339
	Thursday	SB	727	34166	9643	533	1852	713	67	854	1253	220	56	36	53	0	0	

Date	Day	Dir	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
9/10/2013	Tuesday	SB	483	31633	9321	458	1678	686	94	906	1175	220	54	30	64	0	0	46802
9/11/2013	Wednesday	SB	554	33284	9237	393	1590	647	88	870	1129	147	56	27	52	0	0	48074
9/12/2013	Thursday	SB	727	34166	9643	533	1852	713	67	854	1253	220	56	36	53	0	0	50173
		SB	1764	99083	28201	1384	5120	2046	249	2630	3557	587	166	93	169	0	0	

Station ID: 170003122100
3-I -75 approximately ¼ mile north of SB
off-NB on Ramp Terminals of Bee Ridge Rd







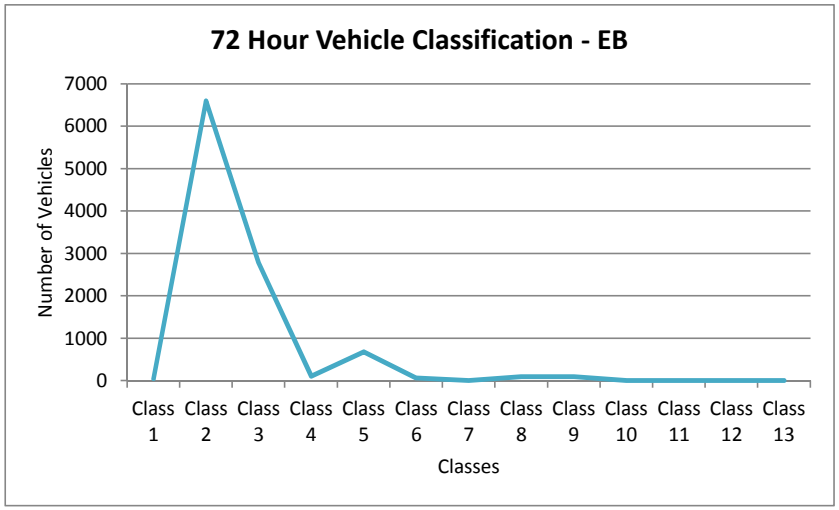
72 Hour Vehicle Classification - Fruitville Road east of Cuburn (signal) Rd

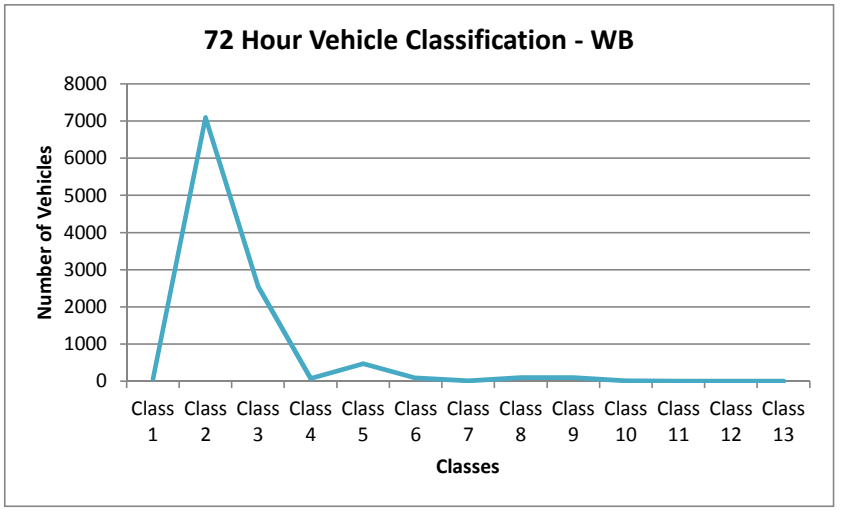
Eastbound

		Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	All Classes
5/13/2014	Tuesday	72	6590	2807	108	685	70	3	89	95	0	1	0	0	10520
5/14/2014	Wednesday	43	6657	2788	112	673	56	3	104	110	6	1	0	0	10553
5/15/2014	Thursday	29	6560	2780	110	691	68	3	93	84	3	1	1	2	10425
	Average	48	6602	2792	110	683	65	3	95	96	3	1	0	1	10499
	T	10.1%													

Westbound

		Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	All Classes
5/13/2014	Tuesday	99	7042	2610	77	500	94	6	101	105	4	1	0	2	10641
5/14/2014	Wednesday	65	7213	2574	93	476	82	1	105	99	8	0	1	0	10717
5/15/2014	Thursday	60	7025	2518	76	459	82	17	92	98	21	4	0	0	10452
	Average	75	7093	2567	82	478	86	8	99	101	11	2	0	1	10603
	T	8.2%													





ADJUSTMENT FACTORS

2013 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1700 SARASOTA COUNTYWIDE

MOCF: 0.90

WEEK	DATES	SF	PSCF
1	01/01/2013 - 01/05/2013	1.00	1.11
2	01/06/2013 - 01/12/2013	0.98	1.09
3	01/13/2013 - 01/19/2013	0.96	1.07
4	01/20/2013 - 01/26/2013	0.95	1.06
* 5	01/27/2013 - 02/02/2013	0.93	1.03
* 6	02/03/2013 - 02/09/2013	0.92	1.02
* 7	02/10/2013 - 02/16/2013	0.90	1.00
* 8	02/17/2013 - 02/23/2013	0.89	0.99
* 9	02/24/2013 - 03/02/2013	0.88	0.98
*10	03/03/2013 - 03/09/2013	0.88	0.98
*11	03/10/2013 - 03/16/2013	0.87	0.97
*12	03/17/2013 - 03/23/2013	0.86	0.96
*13	03/24/2013 - 03/30/2013	0.88	0.98
*14	03/31/2013 - 04/06/2013	0.89	0.99
*15	04/07/2013 - 04/13/2013	0.91	1.01
*16	04/14/2013 - 04/20/2013	0.93	1.03
*17	04/21/2013 - 04/27/2013	0.94	1.04
18	04/28/2013 - 05/04/2013	0.96	1.07
19	05/05/2013 - 05/11/2013	0.98	1.09
20	05/12/2013 - 05/18/2013	1.00	1.11
21	05/19/2013 - 05/25/2013	1.02	1.13
22	05/26/2013 - 06/01/2013	1.03	1.14
23	06/02/2013 - 06/08/2013	1.05	1.17
24	06/09/2013 - 06/15/2013	1.06	1.18
25	06/16/2013 - 06/22/2013	1.08	1.20
26	06/23/2013 - 06/29/2013	1.08	1.20
27	06/30/2013 - 07/06/2013	1.09	1.21
28	07/07/2013 - 07/13/2013	1.10	1.22
29	07/14/2013 - 07/20/2013	1.10	1.22
30	07/21/2013 - 07/27/2013	1.11	1.23
31	07/28/2013 - 08/03/2013	1.11	1.23
32	08/04/2013 - 08/10/2013	1.11	1.23
33	08/11/2013 - 08/17/2013	1.11	1.23
34	08/18/2013 - 08/24/2013	1.12	1.24
35	08/25/2013 - 08/31/2013	1.12	1.24
36	09/01/2013 - 09/07/2013	1.13	1.26
37	09/08/2013 - 09/14/2013	1.14	1.27
38	09/15/2013 - 09/21/2013	1.15	1.28
39	09/22/2013 - 09/28/2013	1.12	1.24
40	09/29/2013 - 10/05/2013	1.10	1.22
41	10/06/2013 - 10/12/2013	1.08	1.20
42	10/13/2013 - 10/19/2013	1.06	1.18
43	10/20/2013 - 10/26/2013	1.05	1.17
44	10/27/2013 - 11/02/2013	1.05	1.17
45	11/03/2013 - 11/09/2013	1.04	1.16
46	11/10/2013 - 11/16/2013	1.03	1.14
47	11/17/2013 - 11/23/2013	1.03	1.14
48	11/24/2013 - 11/30/2013	1.02	1.13
49	12/01/2013 - 12/07/2013	1.01	1.12
50	12/08/2013 - 12/14/2013	1.01	1.12
51	12/15/2013 - 12/21/2013	1.00	1.11
52	12/22/2013 - 12/28/2013	0.98	1.09
53	12/29/2013 - 12/31/2013	0.96	1.07

* PEAK SEASON

2013 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1775 SARASOTA I75

MOCF: 0.92

WEEK	DATES	SF	PSCF
1	01/01/2013 - 01/05/2013	0.97	1.05
2	01/06/2013 - 01/12/2013	0.99	1.08
3	01/13/2013 - 01/19/2013	1.02	1.11
4	01/20/2013 - 01/26/2013	1.00	1.09
* 5	01/27/2013 - 02/02/2013	0.98	1.07
* 6	02/03/2013 - 02/09/2013	0.96	1.04
* 7	02/10/2013 - 02/16/2013	0.94	1.02
* 8	02/17/2013 - 02/23/2013	0.92	1.00
* 9	02/24/2013 - 03/02/2013	0.90	0.98
*10	03/03/2013 - 03/09/2013	0.89	0.97
*11	03/10/2013 - 03/16/2013	0.87	0.95
*12	03/17/2013 - 03/23/2013	0.86	0.93
*13	03/24/2013 - 03/30/2013	0.88	0.96
*14	03/31/2013 - 04/06/2013	0.91	0.99
*15	04/07/2013 - 04/13/2013	0.94	1.02
*16	04/14/2013 - 04/20/2013	0.97	1.05
*17	04/21/2013 - 04/27/2013	0.98	1.07
18	04/28/2013 - 05/04/2013	0.99	1.08
19	05/05/2013 - 05/11/2013	1.01	1.10
20	05/12/2013 - 05/18/2013	1.02	1.11
21	05/19/2013 - 05/25/2013	1.03	1.12
22	05/26/2013 - 06/01/2013	1.04	1.13
23	06/02/2013 - 06/08/2013	1.04	1.13
24	06/09/2013 - 06/15/2013	1.05	1.14
25	06/16/2013 - 06/22/2013	1.06	1.15
26	06/23/2013 - 06/29/2013	1.06	1.15
27	06/30/2013 - 07/06/2013	1.07	1.16
28	07/07/2013 - 07/13/2013	1.07	1.16
29	07/14/2013 - 07/20/2013	1.07	1.16
30	07/21/2013 - 07/27/2013	1.07	1.16
31	07/28/2013 - 08/03/2013	1.07	1.16
32	08/04/2013 - 08/10/2013	1.07	1.16
33	08/11/2013 - 08/17/2013	1.07	1.16
34	08/18/2013 - 08/24/2013	1.08	1.17
35	08/25/2013 - 08/31/2013	1.09	1.18
36	09/01/2013 - 09/07/2013	1.10	1.20
37	09/08/2013 - 09/14/2013	1.12	1.22
38	09/15/2013 - 09/21/2013	1.13	1.23
39	09/22/2013 - 09/28/2013	1.11	1.21
40	09/29/2013 - 10/05/2013	1.08	1.17
41	10/06/2013 - 10/12/2013	1.06	1.15
42	10/13/2013 - 10/19/2013	1.04	1.13
43	10/20/2013 - 10/26/2013	1.03	1.12
44	10/27/2013 - 11/02/2013	1.02	1.11
45	11/03/2013 - 11/09/2013	1.01	1.10
46	11/10/2013 - 11/16/2013	1.00	1.09
47	11/17/2013 - 11/23/2013	0.99	1.08
48	11/24/2013 - 11/30/2013	0.98	1.07
49	12/01/2013 - 12/07/2013	0.98	1.07
50	12/08/2013 - 12/14/2013	0.97	1.05
51	12/15/2013 - 12/21/2013	0.97	1.05
52	12/22/2013 - 12/28/2013	0.99	1.08
53	12/29/2013 - 12/31/2013	1.02	1.11

* PEAK SEASON

2013 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1706 SR758/BEE RIDGE ROAD	1708 SR780/FRUITVILLE RD	1709 SR789,US41-MANATEE C/L	1710 US301,US41-U PKWY
1	01/01/2013 - 01/05/2013	0.99	0.99	0.99	0.99
2	01/06/2013 - 01/12/2013	0.99	0.99	0.99	0.99
3	01/13/2013 - 01/19/2013	0.99	0.99	0.99	0.99
4	01/20/2013 - 01/26/2013	0.99	0.99	0.99	0.99
5	01/27/2013 - 02/02/2013	0.99	0.99	0.99	0.99
6	02/03/2013 - 02/09/2013	0.99	0.99	0.99	0.99
7	02/10/2013 - 02/16/2013	0.99	0.99	0.99	0.99
8	02/17/2013 - 02/23/2013	0.99	0.99	0.99	0.99
9	02/24/2013 - 03/02/2013	0.99	0.99	0.99	0.99
10	03/03/2013 - 03/09/2013	0.99	0.99	0.99	0.99
11	03/10/2013 - 03/16/2013	0.99	0.99	0.99	0.99
12	03/17/2013 - 03/23/2013	0.99	0.99	0.99	0.99
13	03/24/2013 - 03/30/2013	0.99	0.99	0.99	0.99
14	03/31/2013 - 04/06/2013	0.99	0.99	0.99	0.99
15	04/07/2013 - 04/13/2013	0.99	0.99	0.99	0.99
16	04/14/2013 - 04/20/2013	0.99	0.99	0.99	0.99
17	04/21/2013 - 04/27/2013	0.99	0.99	0.99	0.99
18	04/28/2013 - 05/04/2013	0.99	0.99	0.99	0.99
19	05/05/2013 - 05/11/2013	0.99	0.99	0.99	0.99
20	05/12/2013 - 05/18/2013	0.99	0.99	0.99	0.99
21	05/19/2013 - 05/25/2013	0.99	0.99	0.99	0.99
22	05/26/2013 - 06/01/2013	0.99	0.99	0.99	0.99
23	06/02/2013 - 06/08/2013	0.99	0.99	0.99	0.99
24	06/09/2013 - 06/15/2013	0.99	0.99	0.99	0.99
25	06/16/2013 - 06/22/2013	0.99	0.99	0.99	0.99
26	06/23/2013 - 06/29/2013	0.99	0.99	0.99	0.99
27	06/30/2013 - 07/06/2013	0.99	0.99	0.99	0.99
28	07/07/2013 - 07/13/2013	0.99	0.99	0.99	0.99
29	07/14/2013 - 07/20/2013	0.99	0.99	0.99	0.99
30	07/21/2013 - 07/27/2013	0.99	0.99	0.99	0.99
31	07/28/2013 - 08/03/2013	0.99	0.99	0.99	0.99
32	08/04/2013 - 08/10/2013	0.99	0.99	0.99	0.99
33	08/11/2013 - 08/17/2013	0.99	0.99	0.99	0.99
34	08/18/2013 - 08/24/2013	0.99	0.99	0.99	0.99
35	08/25/2013 - 08/31/2013	0.99	0.99	0.99	0.99
36	09/01/2013 - 09/07/2013	0.99	0.99	0.99	0.99
37	09/08/2013 - 09/14/2013	0.99	0.99	0.99	0.99
38	09/15/2013 - 09/21/2013	0.99	0.99	0.99	0.99
39	09/22/2013 - 09/28/2013	0.99	0.99	0.99	0.99
40	09/29/2013 - 10/05/2013	0.99	0.99	0.99	0.99
41	10/06/2013 - 10/12/2013	0.99	0.99	0.99	0.99
42	10/13/2013 - 10/19/2013	0.99	0.99	0.99	0.99
43	10/20/2013 - 10/26/2013	0.99	0.99	0.99	0.99
44	10/27/2013 - 11/02/2013	0.99	0.99	0.99	0.99
45	11/03/2013 - 11/09/2013	0.99	0.99	0.99	0.99
46	11/10/2013 - 11/16/2013	0.99	0.99	0.99	0.99
47	11/17/2013 - 11/23/2013	0.99	0.99	0.99	0.99
48	11/24/2013 - 11/30/2013	0.99	0.99	0.99	0.99
49	12/01/2013 - 12/07/2013	0.99	0.99	0.99	0.99
50	12/08/2013 - 12/14/2013	0.99	0.99	0.99	0.99
51	12/15/2013 - 12/21/2013	0.99	0.99	0.99	0.99
52	12/22/2013 - 12/28/2013	0.99	0.99	0.99	0.99
53	12/29/2013 - 12/31/2013	0.99	0.99	0.99	0.99

2013 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 17 - SARASOTA

WEEK	DATES	1746 I75,SR681-MANATEE CO	1770 I-75 RAMPS, SUMPTER - FRU
1	01/01/2013 - 01/05/2013	0.93	0.98
2	01/06/2013 - 01/12/2013	0.93	0.98
3	01/13/2013 - 01/19/2013	0.93	0.98
4	01/20/2013 - 01/26/2013	0.93	0.98
5	01/27/2013 - 02/02/2013	0.93	0.98
6	02/03/2013 - 02/09/2013	0.93	0.98
7	02/10/2013 - 02/16/2013	0.93	0.98
8	02/17/2013 - 02/23/2013	0.93	0.98
9	02/24/2013 - 03/02/2013	0.94	0.98
10	03/03/2013 - 03/09/2013	0.94	0.98
11	03/10/2013 - 03/16/2013	0.94	0.98
12	03/17/2013 - 03/23/2013	0.94	0.98
13	03/24/2013 - 03/30/2013	0.94	0.98
14	03/31/2013 - 04/06/2013	0.93	0.98
15	04/07/2013 - 04/13/2013	0.93	0.98
16	04/14/2013 - 04/20/2013	0.93	0.98
17	04/21/2013 - 04/27/2013	0.93	0.98
18	04/28/2013 - 05/04/2013	0.93	0.98
19	05/05/2013 - 05/11/2013	0.93	0.98
20	05/12/2013 - 05/18/2013	0.93	0.98
21	05/19/2013 - 05/25/2013	0.93	0.98
22	05/26/2013 - 06/01/2013	0.94	0.98
23	06/02/2013 - 06/08/2013	0.94	0.98
24	06/09/2013 - 06/15/2013	0.94	0.98
25	06/16/2013 - 06/22/2013	0.94	0.98
26	06/23/2013 - 06/29/2013	0.94	0.98
27	06/30/2013 - 07/06/2013	0.93	0.98
28	07/07/2013 - 07/13/2013	0.93	0.98
29	07/14/2013 - 07/20/2013	0.93	0.98
30	07/21/2013 - 07/27/2013	0.93	0.98
31	07/28/2013 - 08/03/2013	0.93	0.98
32	08/04/2013 - 08/10/2013	0.93	0.98
33	08/11/2013 - 08/17/2013	0.93	0.98
34	08/18/2013 - 08/24/2013	0.93	0.98
35	08/25/2013 - 08/31/2013	0.93	0.98
36	09/01/2013 - 09/07/2013	0.93	0.98
37	09/08/2013 - 09/14/2013	0.93	0.98
38	09/15/2013 - 09/21/2013	0.93	0.98
39	09/22/2013 - 09/28/2013	0.93	0.98
40	09/29/2013 - 10/05/2013	0.94	0.98
41	10/06/2013 - 10/12/2013	0.94	0.98
42	10/13/2013 - 10/19/2013	0.94	0.98
43	10/20/2013 - 10/26/2013	0.94	0.98
44	10/27/2013 - 11/02/2013	0.94	0.98
45	11/03/2013 - 11/09/2013	0.93	0.98
46	11/10/2013 - 11/16/2013	0.93	0.98
47	11/17/2013 - 11/23/2013	0.93	0.98
48	11/24/2013 - 11/30/2013	0.93	0.98
49	12/01/2013 - 12/07/2013	0.93	0.98
50	12/08/2013 - 12/14/2013	0.93	0.98
51	12/15/2013 - 12/21/2013	0.93	0.98
52	12/22/2013 - 12/28/2013	0.93	0.98
53	12/29/2013 - 12/31/2013	0.93	0.98

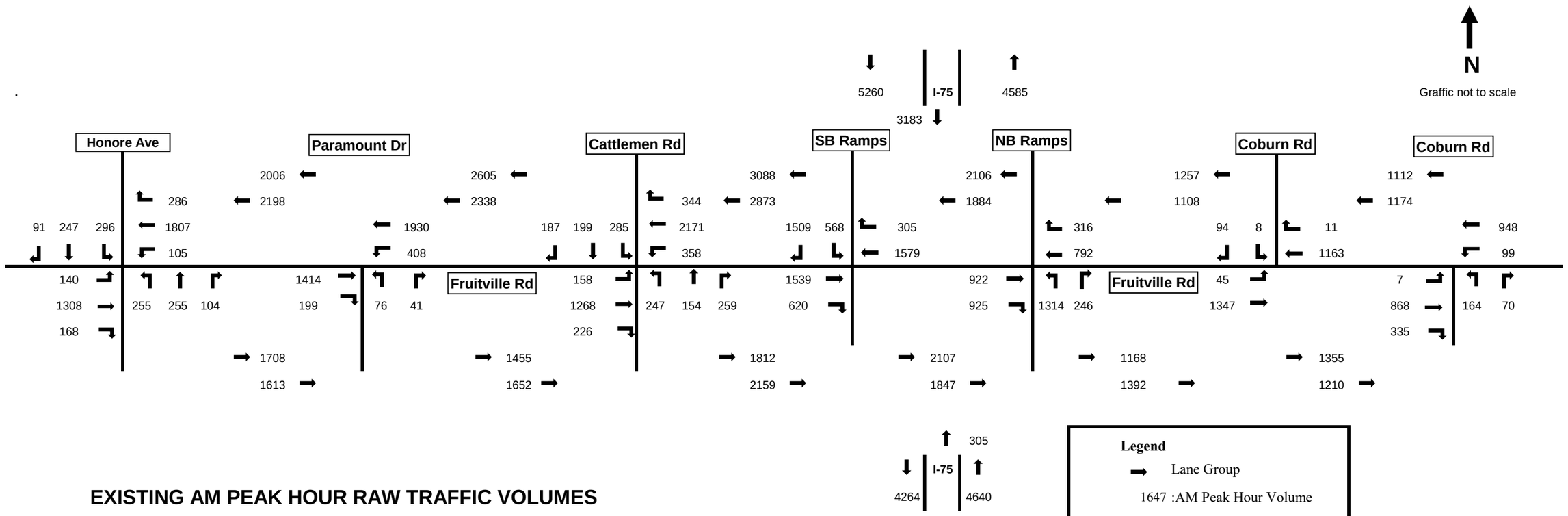
I-75 at SR 780 (Fruitville Rd) - Development of Adjusted AADTs

Count Location	Date of Count	Count Type	Raw ADT	Seasonal Factor	Axle Factor	AADT	Rounded AADT[3]
I-75							
North of SR 780[1]	10/24/2013	24-Hr Class	127157	1.03	1.00	130972	131,000
South of SR 780[1]	10/22/2013	24-Hr Class	106007	1.03	1.00	109187	109,000
I-75 Ramps							
NB Off Ramp to University Pkwy[1]	6/19/2013	24-Hr Volume	17247	1.06	0.98	17916	18,000
SB On Ramp from University Pkwy[1]	6/19/2013	24-Hr Volume	17595	1.06	0.98	18278	18,000
NB On Ramp from SR 780	5/14/2014	24-Hr Volume	4567	1.02	0.98	4565	4,600
NB Loop On Ramp from SR 780	5/14/2014	24-Hr Volume	12687	1.02	0.98	12682	13,000
NB Off Ramp to SR 780	5/14/2014	24-Hr Volume	12197	1.02	0.98	12192	12,000
SB On Ramp from SR 780	5/14/2014	24-Hr Volume	9521	1.02	0.98	9517	9,500
SB Loop On Ramp from SR 780	5/14/2014	24-Hr Volume	3086	1.02	0.98	3085	3,100
SB Off Ramp to SR 780	5/14/2014	24-Hr Volume	17535	1.02	0.98	17528	18,000
NB on Ramp from Bee Ridge Rd[2]	9/10/2013	24-Hr Volume	3401	1.12	0.98	3733	3,700
NB Loop On Ramp from Bee Ridge Rd[2]	9/10/2013	24-Hr Volume	9044	1.12	0.98	9927	9,900
SB Off Ramp to Bee Ridge Road[2]	9/10/2013	24-Hr Volume	12987	1.12	0.98	14255	14,000
SR 780 (Fruitville Rd)							
West of Honore Ave	5/13/2014	24-Hr Volume	46893	1.00	0.99	46424	46,000
East of Honore Ave[1]	10/22/2013	24-Hr Class	48661	1.05	1.00	51094	51,000
West of Cattlemen Rd	5/13/2014	24-Hr Volume	55770	1.00	0.99	55212	55,000
East of Cattlemen Rd	5/13/2014	24-Hr Volume	53216	1.00	0.99	52684	53,000
Between I-75 SB Ramps and I-75 NB Ramps	5/14/2014	24-Hr Volume	41891	1.00	0.99	41472	41,000
West of Coburn Rd	5/14/2014	24-Hr Volume	26094	1.00	0.99	25833	26,000
East of Coburn Rd	5/13/2014 - 5/15/2014	72-Hr Class	21270	1.00	1.00	21270	21,000
Side Streets							
Honore Ave north of SR 780	5/13/2014	24-Hr Volume	18594	1.00	0.99	18408	18,000
Honore Ave south of SR 780	5/13/2014	24-Hr Volume	15685	1.00	0.99	15528	16,000
Paramount Blvd south of SR 780	5/13/2014	24-Hr Volume	9815	1.00	0.99	9717	9,700
Cattlemen Rd north of SR 780	5/13/2014	24-Hr Volume	18184	1.00	0.99	18002	18,000
Cattlemen Rd south of SR 780	5/13/2014	24-Hr Volume	20265	1.00	0.99	20062	20,000
Coburn Rd north of SR 780	5/14/2014	24-Hr Volume	2910	1.00	0.99	2881	2,900
Coburn Rd south of SR 780	5/14/2014	24-Hr Volume	7648	1.00	0.99	7572	7,600

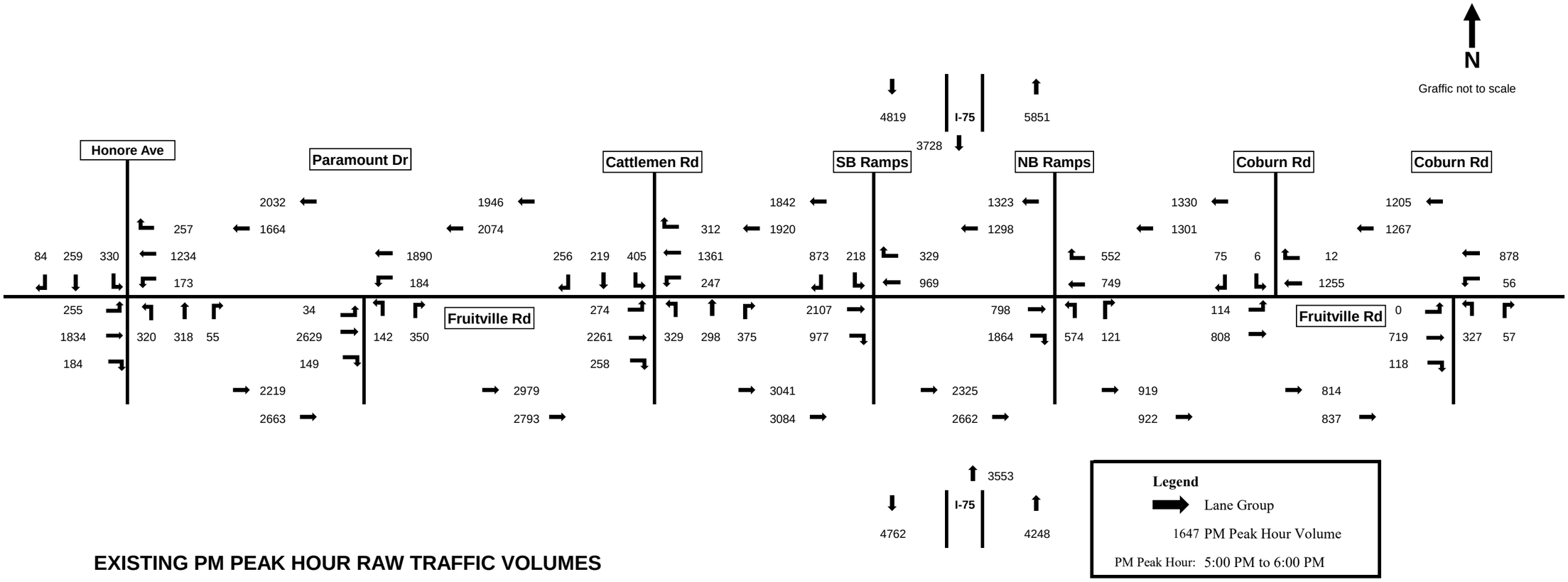
[1] Counts obtained from FDOT 2013 Florida Traffic Online website

[2] Counts obtained from FDOT Project FPID 201277-5-32-01: I-75 (SR 93) at Bee Ridge Road Interchange Final Traffic Forecast Memorandum

[3] Rounded per AASHTO Rounding Standards as shown in 2014 FDOT Project Traffic Forecasting Handbook, page 1-21



EXISTING AM PEAK HOUR RAW TRAFFIC VOLUMES



EXISTING PM PEAK HOUR RAW TRAFFIC VOLUMES

APPENDIX B

DESIGN TRAFFIC FACTORS CALCULATIONS

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2013 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0046 - SR 93/I 75, SOUTH OF SR 780/FRUITVILLE ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2013	113000 C	N 55500	S 57500	9.00	56.10	7.40
2012	105500 C	N 52000	S 53500	9.00	55.80	9.00
2011	104000 C	N 51500	S 52500	9.00	55.50	6.40
2010	105500 C	N 52500	S 53000	9.78	53.88	7.50
2009	103500 C	N 51500	S 52000	9.49	56.51	7.60
2008	104000 C	N 52000	S 52000	9.80	55.31	9.60
2007	108500 C	N 54500	S 54000	9.29	52.37	9.80
2006	114500 C	N 57000	S 57500	9.57	51.00	9.60
2005	107500 C	N 54000	S 53500	9.60	51.40	8.30
2004	99000 C	N 49500	S 49500	9.60	51.20	8.30
2003	100500 S	N 50500	S 50000	9.60	52.60	13.50
2002	95500 F	N 48000	S 47500	9.80	53.80	10.20
2001	89500 C	N 45000	S 44500	9.70	53.10	13.50
2000	82500 F	N 43000	S 39500	9.90	53.60	16.80
1999	76500 C	N 40000	S 36500	9.70	55.00	14.10
1998	79000 C	N 39000	S 40000	9.20	54.40	11.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2013 HISTORICAL AADT REPORT

COUNTY: 17 - SARASOTA

SITE: 0047 - SR 93/I 75, NORTH OF SR 780/FRUITVILLE ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2013	123500 C	N 61500	S 62000	9.00	56.10	7.40
2012	111000 C	N 56500	S 54500	9.00	55.80	8.90
2011	109500 C	N 54000	S 55500	9.00	55.50	9.60
2010	109000 C	N 54000	S 55000	9.78	53.88	10.20
2009	107500 C	N 53500	S 54000	9.49	56.51	10.20
2008	105500 C	N 52500	S 53000	9.80	55.31	11.20
2007	116500 C	N 58500	S 58000	9.29	52.37	9.40
2006	127500 C	N 64000	S 63500	9.57	51.00	9.40
2005	119000 C	N 58500	S 60500	9.60	51.40	12.30
2004	107500 C	N 52500	S 55000	9.60	51.20	10.20
2003	101000 F	N 49000	S 52000	9.60	52.60	10.20
2002	95500 C	N 46500	S 49000	9.80	53.80	10.20
2001	92500 C	N 48000	S 44500	9.70	53.10	13.50
2000	85500 F	N 44500	S 41000	9.90	53.60	14.50
1999	79500 C	N 41500	S 38000	9.90	57.40	14.70
1998	80000 C	N 40000	S 40000	10.20	55.90	12.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

I-75 and Fruitville Road Interchange
D-Factor from Counts

Roadway	AM Peak Time	AM Peak Two-way	AM Peak NB/EB	AM Peak SB/WB	AM Peak Direction	AM Peak D factor	PM Peak Time	PM Peak Two-way	PM Peak NB/EB	PM Peak SB/WB	PM Peak Direction	PM Peak D factor
Fruitville Road -West of Honore Ave	8:00	3525	1482	2043	WB	58.0%	17:00	3976	2288	1688	EB	57.5%
Fruitville Road - between Honore Ave and Paramount Dr	8:00	3812	1593	2219	WB	58.2%	17:00	4312	2404	1908	EB	55.8%
Fruitville Road - between Paramount Dr and Cattlemen Rd	7:00	4236	1683	2553	WB	60.3%	17:00	4962	3086	1876	EB	62.2%
Fruitville Road - between Cattlemen Rd and I-75	7:00	4595	1755	2840	WB	61.8%	17:00	4579	2874	1705	EB	62.8%
Fruitville Road - between I-75 ramps	7:00	3691	1758	1933	WB	52.4%	17:00	3599	2241	1358	EB	62.3%
Fruitville Road - between I-75 and Coburn Rd	7:00	2316	1193	1123	EB	51.5%	17:00	2219	958	1261	WB	56.8%
Fruitville Road - East of Coburn Rd	7:00	1995	1005	990	EB	50.4%	17:00	1661	807	854	WB	51.4%
Fruitville Road - Average						**56.1%**						**58.4%**
I-75 - North of Fruitville Rd	7:30	10009	4749	5260	SB	52.6%	16:45	10894	6023	4871	NB	55.3%
I-75 - South of Fruitville Rd	7:45	9311	5021	4290	NB	53.9%	16:45	9057	4325	4732	SB	52.2%
I-75 - Average						**53.2%**						**53.8%**
Honore Ave - North of Fruitville Rd	7:00	1279	629	650	SB	50.8%	17:00	1586	859	727	NB	54.2%
Honore Ave - South of Fruitville Rd	8:00	1213	710	503	NB	58.5%	17:00	1464	751	713	NB	51.3%
Paramount Dr - South of Fruitville Rd	7:00	918	250	668	SB	72.8%	17:00	743	427	316	NB	57.5%
Cattlemen Rd - North of Fruitville Rd	8:00	1357	722	635	NB	53.2%	17:00	1439	620	819	SB	56.9%
Cattlemen Rd - South of Fruitville Rd	7:00	1389	620	769	SB	55.4%	17:00	1752	997	755	NB	56.9%
Coburn Rd - North of Fruitville Rd	7:00	191	62	129	SB	67.5%	18:00	318	220	98	NB	69.2%
Coburn Rd - South of Fruitville Rd	7:00	696	259	437	SB	62.8%	17:00	650	437	213	NB	67.2%

5-year Historic D-Factor from FDOT

Location	FDOT-Station	2010	2010	2011	2012	2013	Average D-Factor
I-75 - North of Fruitville Rd	47	56.5%	53.9%	55.5%	55.8%	56.1%	**55.6%**
I-75 - South of Fruitville Rd	46	56.5%	53.9%	55.5%	55.8%	56.1%	**55.6%**

Recommended D-Factor for Fruitville Road **58.0%**
Recommended D-Factor for I-75 **55.0%**
Recommended D-Factor for Side Streets **Based on traffic counts for each side sreet rounded to nearest integer and subject to acceptable range of 51.0% to 67.0% per FDOT Project Traffic Forecasting Handbook**

I-75 and Fruitville Road Interchange

Truck Percentages

Roadway	T-Daily	T-Peak
Fruitville Road - West of I-75	4.0%	2.0%
Fruitville Road - East of I-75	9.2%	4.6%
Fruitville Road - Average	**6.6%**	**3.3%**
I-75 - North of Fruitville Rd	6.0%	3.0%
I-75 - South of Fruitville Rd (FTI)	7.3%	3.6%
I-75 - South of Fruitville Rd (72-hour count)	10.1%	5.0%
I-75 - Average	**7.8%**	**3.9%**
I-75 Ramps to / from Fruitville Road	**7.1%**	**3.6%**

5-year Historic T-Factor from FDOT

Location	FDOT-Station	2010	2010	2011	2012	2013	Average T-Daily	T-Peak
I-75 - North of Fruitville Rd	47	10.2%	10.2%	9.6%	8.9%	7.4%	**9.3%**	**4.6%**
I-75 - South of Fruitville Rd	46	7.6%	7.5%	6.4%	9.0%	7.4%	**7.6%**	**3.8%**

	T-Daily	T-Peak
Recommended T-Factor for Fruitville Road	**6.0%**	**3.0%**
Recommended T-Factor for I-75 mainline and Ramps	**8.0%**	**4.0%**

Note: Peak-hour truck percentage will be assumed to be half of daily truck percentage

AM-PEAK Trucks and Peak Hour Factors (PHF) for Intersections

Intersection with Fruitville Road		NBL	NBT	NBR	NB Approach	SBL	SBT	SBR	SB Approach	EBL	EBT	EBR	EB Approach	WBL	WBT	WBR	WB Appraoch	Intersection
Honore Ave	Trucks	1%	2%	3%	2%	6%	2%	2%	4%	4%	2%	2%	2%	4%	3%	6%	3%	**3%**
	PHF	0.85	0.86	0.98	0.92	0.81	0.70	0.71	0.79	0.82	0.84	0.66	0.87	0.84	0.88	0.95	0.91	**0.92**
Paramount Dr	Trucks	0%	-	2%	1%	-	-	-	-	-	1%	0%	1%	1%	1%	-	1%	**1%**
	PHF	0.70	-	0.79	0.89	-	-	-	-	-	0.83	0.87	0.83	0.93	0.88	-	0.90	**0.94**
Cattlemen Rd	Trucks	3%	2%	7%	4%	3%	1%	4%	2%	1%	4%	4%	3%	5%	4%	3%	4%	**4%**
	PHF	0.79	0.71	0.83	0.88	0.79	0.77	0.95	0.87	0.80	0.96	0.71	0.95	0.90	0.89	0.77	0.92	**0.95**
I-75 SB Ramp	Trucks	-	-	-	-	5%	-	4%	4%	-	3%	7%	4%	-	5%	7%	5%	**4%**
	PHF	-	-	-	-	0.86	-	0.92	0.92	-	0.80	0.91	0.83	-	0.91	0.88	0.92	**0.92**
I-75 NB Ramp	Trucks	2%	-	3%	2%	-	-	-	-	-	3%	2%	3%	-	4%	8%	6%	**3%**
	PHF	0.88	-	0.84	0.90	-	-	-	-	-	0.77	0.88	0.82	-	0.90	0.84	0.97	**0.93**
Coburn Rd N (Stop Control)	Trucks	-	-	-	-	0%	-	2%	2%	1%	4%	-	4%	-	5%	2%	5%	**4%**
	PHF	-	-	-	-	0.50	-	0.90	0.88	0.81	0.86	-	0.87	-	0.94	0.69	0.94	**0.96**
Coburn Rd S (Signalized)	Trucks	9%	-	13%	11%	-	-	-	-	-	7%	6%	6%	11%	8%	-	8%	**8%**
	PHF	0.97	-	0.71	0.91	-	-	-	-	-	0.92	0.88	0.90	0.69	0.92	-	0.89	**0.97**

Truck percentages are based on intersection turning movement counts rounded to nearest whole number.

PM-PEAK Trucks and Peak Hour Factors (PHF) for Intersections

Intersection with Fruitville Road		NBL	NBT	NBR	NB Approach	SBL	SBT	SBR	SB Approach	EBL	EBT	EBR	EB Approach	WBL	WBT	WBR	WB Appraoch	Intersection
Honore Ave	Trucks	1%	1%	1%	1%	2%	2%	2%	2%	1%	1%	0%	1%	1%	2%	4%	2%	**1%**
	PHF	0.90	0.89	0.69	0.92	0.90	0.80	0.89	0.92	0.96	0.88	0.89	0.90	0.63	0.92	0.80	0.85	**0.96**
Paramount Dr	Trucks	2%	-	1%	1%	-	-	-	-	-	2%	2%	2%	2%	2%	-	2%	**2%**
	PHF	0.72	-	0.75	0.74	-	-	-	-	-	0.87	0.85	0.88	0.88	0.91	-	0.91	**0.91**
Cattlemen Rd	Trucks	2%	1%	2%	1%	2%	1%	1%	2%	1%	2%	3%	2%	6%	3%	2%	3%	**2%**
	PHF	0.83	0.86	0.83	0.87	0.79	0.77	0.69	0.83	0.76	0.99	0.77	0.97	0.84	0.86	0.74	0.84	**0.93**
I-75 SB Ramp	Trucks	-	-	-	-	8%	-	2%	4%	-	2%	2%	2%	-	4%	3%	4%	**3%**
	PHF	-	-	-	-	0.91	-	0.87	0.88	-	0.85	0.94	0.88	-	0.87	0.65	0.87	**0.90**
I-75 NB Ramp	Trucks	2%	-	4%	2%	-	-	-	-	-	2%	1%	1%	-	2%	2%	2%	**2%**
	PHF	0.83	-	0.80	0.82	-	-	-	-	-	0.91	0.94	0.96	-	0.78	0.76	0.77	**0.93**
Coburn Rd N (Stop Control)	Trucks	-	-	-	-	0%	-	1%	1%	2%	3%	-	3%	-	2%	2%	2%	**2%**
	PHF	-	-	-	-	0.50	-	0.78	0.75	0.83	0.95	-	0.93	-	0.69	0.60	0.69	**0.79**
Coburn Rd S (Signalized)	Trucks	2%	-	7%	2%	-	-	-	-	-	5%	10%	6%	9%	2%	-	3%	**4%**
	PHF	0.58	-	0.59	0.61	-	-	-	-	-	0.94	0.89	0.94	0.67	0.72	-	0.72	**0.77**

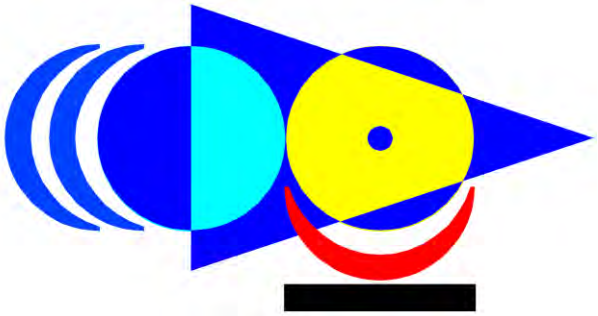
Truck percentages are based on intersection turning movement counts rounded to nearest whole number.

APPENDIX C

ADDITIONAL INFORMATION

2014

Project Traffic Forecasting Handbook



1.7 TRUTH IN DATA PRINCIPLE

In accordance with the principle of "Truth-in-Data" principle for making project traffic forecasts is to express the sources and uncertainties of the forecast. The goal of the principle is to provide the user with the information needed to make appropriate choices regarding the applicability of the forecast for particular purposes. For the designer of the project, this means being able to compensate for uncertainty of, for example, projections of total pavement loading by using a reliability design factor. For the producer of the traffic forecast, it means clearly stating the input assumptions and their sources, and providing the forecast in a form that the user can understand and use.

1.8 PRECISION OF DATA

To reflect the uncertainty of estimates and forecast volumes (AADT, DHV and DDHV) should be rounded according to the current AASHTO rounding standards (AASHTO Green Book - A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011).

Forecast Volume	Round to Nearest
0 to 999	10
1,000 to 9,999	100
>=10,000	1,000

2.6.2.1 STANDARD K FACTORS

FDOT has decided to replace the K_{30} factors with **Standard K** factors. This has occurred because it has been widely recognized that roadways in urbanized areas cannot be cost effectively designed based on the 30th highest hour demand volumes. Another issue that impacts the use of the K factors is the relationship between demand traffic volumes and measured traffic volumes.

Standard K factors have been established statewide by using the data measured at the continuous count sites. The Standard K factors are based on area type and facility type with consideration to typical peak periods of the day.

For example, on freeways throughout the seven largest urbanized areas in Florida, the peak analysis period is used. For other facilities, the use of a typical peak hour is generally used. Standard K Factors for design analyses are not directly applicable for the Turnpike, other toll roads, and managed lanes. The recommended Standard K factors are reflected in the following Figure 2.4.

FDOT Standard K Factors

Area *(Population) [Examples]*	Facility Type	Standard K Factors* (%AADT)	Representative Time Period
Large Urbanized Areas with Core Freeways *(1,000,000+) [Jacksonville, Miami]*	Freeways	8.0 - 9.0 ***	Typical weekday peak period or hour
	Arterials & Highways	9.0**	Typical weekday peak hour
Other Urbanized Areas *(50,000+) [Tallahassee, Ft. Myers]*	Freeways	9.0 **	Typical weekday peak hour
	Arterials & Highways	9.0 **	Typical weekday peak hour
Transitioning to Urbanized Areas *(Uncertain) [Fringe Development Areas]*	Freeways	9.0	Typical weekday peak hour
	Arterials & Highways	9.0	Typical weekday peak hour
Urban *(5,000-50,000) [Lake City, Key West]*	Freeways	10.5	100th highest hour of the year
	Arterials & Highways	9.0 **	Typical weekday peak hour
Rural *(<5,000) [Chipley, Everglades]*	Freeways	10.5	100th highest hour of the year
	Arterials	9.5 **	100th highest hour of the year
	Highways	9.5	100th highest hour of the year

*	Some smoothing of values at area boundaries/edges would be desirable.
**	Value is 7.5% in approved Multimodal Transportation Districts where automobile movements are deemphasized. Essentially, this lower value represents an extensive multi-hour peak period rather than a peak hour.
***	Value is 8.0% for FDOT-designated urbanized core freeways and may be either be 8.5% or 9.0% for non-core freeways. Values less than 9% essentially represent a multi-hour peak period rather than a peak hour.

Figure 2.4 FDOT Standard K Factors

2.6.3.3 Acceptable D Values

The directional distribution factor, D is based on the median (or average) for the 200th Highest Hour Traffic Count Report and referred to as D, derived from the permanent count stations. The D values are also available from FDOT's RCI and TCI databases. If traffic counts for the project site are not available, obtain 24-hour (urban) or 48-hour (rural) classification counts to determine hourly traffic volume distribution. This will allow the identification of the peak hour of the day and peak direction during the peak hour. If no counts are available, the intersecting roadways that are non-state maintained will use the same D factor as the project roadway on the state highway system.

To determine if a D value is acceptable for a project traffic forecasting projection, the following three steps are necessary:

Step 1. First determine if a D value is within an acceptable range of demand D values, using Figure 2.9.

Road Type	Low	D	High	Standard Deviation
Rural Freeway	52.3	54.8	57.3	1.73
Rural Arterial	51.1	58.1	79.6	6.29
Urban Freeway	50.4	55.8	61.2	4.11
Urban Arterial	50.8	57.9	67.1	4.60

Figure 2.9 Recommended D-Factors (D) for Traffic Forecasting

Step 2. The user should use the 200th Highest Hour Traffic Count Report for establishing D for unconstrained sites.

Step 3. If the site is "constrained," **Demand D** should be used. Demand D is estimated based on the 200th Highest Hour Traffic Count Report using traffic data for unconstrained sites with similar roadway characteristics. Select the appropriate D value by analyzing the traffic characteristics and comparing them with unconstrained traffic counts locations. Constrained facilities are determined during the Long Range Transportation Plan update by the MPO in conjunction with District Modeling Staff.

I-75 FDOT District One PD&E Study

from South of SR 681 to Moccasin Wallow Road

Financial Project Number: 201032 1 22 01

Traffic Technical Memorandum Existing Conditions Analysis

October, 2006

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462

2.3 EXISTING TRAFFIC CHARACTERISTICS

Existing traffic characteristics for the study area were estimated based on the traffic count data and the information from the 2004 and 2005 FDOT traffic data CD. Traffic characteristics estimated include the daily and peak hour percentage of heavy vehicles (trucks), peak hour-to-daily volume ratio (expressed as the percentage of the daily volume occurring during the peak hour), and the directional distribution (expressed as the percentage of the peak hour traffic traveling in the peak direction).

Table 2-1 summarizes the daily truck percentages for each segment of I-75 and the cross streets in the study area. This data is based on the average of the truck percentages for the years 2004 and 2005. The daily truck percentages ranged between 8 percent and 17 percent for I-75 and between 6 percent and 14 percent for the cross streets in the study area. The truck percentages for the peak hour are assumed to be half of the daily percentages. For the intersection peak hour traffic, the truck percentages were calculated from the turning movement counts for each approach of the intersection. These calculations are presented in Appendix A.

TABLE 2-1
EXISTING DAILY TRUCK PERCENTAGES

Location	Daily Truck Percent
I-75	
Between Moccasin Wallow Road and I-275	17.00
Between I-275 and US 301	10.60
Between US 301 and SR 64	11.40
Between SR 64 and SR 70	12.50
Between SR 70 and University Parkway	12.80
Between University Parkway and Fruitville Road	10.50
Between Fruitville Road and Bee Ridge Road	8.70
Between Bee Ridge Road and Clark Road	11.80
Between Clark Road and SR 681	13.70
Average for I-75	**12.11**
Cross Streets	
I-275	9.30
US 301	9.10
SR 64	9.80
SR 70	14.00
University Parkway	5.60
Fruitville Road	6.80
Bee Ridge Road	6.80
Clark Road	8.70
SR 681	8.20

Note: Truck percentages are the average of the 2004 and 2005 data. For cross streets, the truck percentages are based on the count location west of I-75.

TABLE 2-2
EXISTING TRAFFIC CHARACTERISTICS FOR I-75

Mainline Segments			AM Peak Hour					PM Peak Hour				
From	To	ADT	NB	SB	Two-Way	Peak-to-Daily Ratio	Peak Direction Distribution	NB	SB	Two-Way	Peak-to-Daily Ratio	Peak Direction Distribution
			Volume			(Percent)		Volume			(Percent)	
SR 681 (Venice By Pass)	SR 72 (Clark Road)	72,890	3,656	2,553	6,209	8.52	0.59	2,832	3,339	6,171	8.47	0.54
Bee Ridge Road	SR 780 (Fruitville Road)	124,440	5,112	5,735	10,847	8.72	0.53	5,696	5,081	10,777	8.66	0.53
SR 780 (Fruitville Road)	University Parkway	134,378	5,098	5,826	10,924	8.13	0.53	6,272	4,920	11,192	8.33	0.56
University Parkway	SR 70	117,040	3,456	5,166	8,622	7.37	0.60	5,449	3,992	9,441	8.07	0.58
SR 70	SR 64	107,971	3,579	4,584	8,163	7.56	0.56	4,741	3,505	8,246	7.64	0.57
SR 64	US 301	102,824	3,231	4,037	7,268	7.07	0.56	4,279	3,309	7,588	7.38	0.56
US 301	I-275	94,532	3,043	2,791	5,834	6.17	0.52	3,601	3,193	6,794	7.19	0.53
I-275	Moccasin Wallow Road	62,950	1,605	2,713	4,318	6.86	0.63	2,592	1,837	4,429	7.04	0.59
Average						**7.55**	**0.56**				**7.85**	**0.56**

Source: FDOT Traffic Information CD, 2004, 2005.

TABLE 2-3
EXISTING TRAFFIC CHARACTERISTICS FOR CROSS STREETS

Roadway	ADT	AM Peak Hour					PM Peak Hour				
		EB	WB	Two-Way	Peak-to-Daily Ratio	Peak Direction Distribution	EB	WB	Two-Way	Peak-to-Daily Ratio	Peak Direction Distribution
		Volume			(Percent)		Volume			(Percent)	
Clark Road	43,543	1,553	2,185	3,738	8.58	0.58	2,099	1,554	3,653	8.39	0.57
Bee Ridge Road	38,789	981	2,231	3,212	8.28	0.69	1,508	1,647	3,155	8.13	0.52
Fruitville Road	56,245	1,888	3,057	4,945	8.79	0.62	2,936	1,976	4,912	8.73	0.60
University Parkway	51,194	2,322	2,007	4,329	8.46	0.54	2,102	2,141	4,243	8.29	0.50
SR 70	55,500	1,939	1,926	3,865	6.96	0.50	2,364	2,159	4,523	8.15	0.52
SR 64	42,787	1,779	2,026	3,805	8.89	0.53	1,833	1,793	3,626	8.47	0.51
US 301	33,111	1,058	1,385	2,443	7.38	0.57	1,581	1,248	2,829	8.54	0.56

Source: FDOT Traffic Information CD, 2004, 2005; URS Corporation, 2006.
Note: The count location for side streets is west of I-75.

TABLE 3-2b
HISTORIC D_{30} FACTORS

Road	Location	2004	2005	Average
I-75				
Southwest of Moccasin Wallow Road		51.15	55.22	53.2
0.7 Miles North of Erie Road, within I-275 Ramps		0	55.22	55.1
North of SR 43/US 301		51.15	55.22	53.2
Northwest of SR 64		51.15	55.22	53.2
North of SR 70		51.15	55.22	53.2
South of SR 70		51.15	55.22	53.2
North of SR 780/Fruitville Road		51.15	51.38	51.3
South of SR 780/Fruitville Road		51.15	51.38	51.3
0.7 Miles North of SR 72 at Proctor Road OP, Sarasota Co.		51.15	51.38	51.3
South of SR 72/Clark Road		51.15	51.38	51.3
South of SR 681/Venice Bypass		51.15	51.38	51.3
Cross Streets				
I-275	East of SR 45/US 41 and E of Frog Creek	51.15	55.22	53.2
US 301	Southwest of SR 93/I-75	53.88	54.38	54.1
	West of 18th Street and East of SR 93/I-75	53.88	54.38	54.1
SR 64	West of SR 93/I-75	55.98	53.41	54.7
	East of SR 93/I-75	55.98	53.41	54.7
SR 70	West of SR 93/I-75	55.98	53.41	54.7
	East of SR 93/I-75	55.98	53.41	54.7
University Parkway	From US 301 to I-75 SC242 NHS	52.71	53.13	52.9
SR 780/ Fruitville Road	West of SR 93/I-75	52.71	53.13	52.9
SR 758/ Bee Ridge Road	East of Center Gate/Woodmont Drive	52.71	53.13	52.9
SR 72/Clark Road	West of Proctor Road	52.71	53.13	52.9
	East of Sawyer Road, Sarasota Co.	52.71	53.13	52.9
Venice Bypass	Southwest of SR 93/I-75	51.15	51.38	51.3
I-75 D_{30} Recommended for Forecast Years		**55/45**		
Cross Streets D_{30} Recommended for Forecast Years		**55/45**		

APPENDIX D

REVIEW COMMENTS AND RESPONSES

Review Comments for I-75 and Fruitville Road (SR 780) Interchange Existing Traffic Volumes and Design Traffic Factors Memorandum (June 2014)

Comment 1: Please provide the Peak Season Factor Category Report for Sarasota I-75 in Appendix A.

Response: The Peak Season Factor Category Report for Sarasota I-75 has been added to Appendix A.

Comment 2: General Existing Peak Hour Traffic Development: The methodology used to develop the existing peak hour volumes indicates that a seasonal factor was applied to all existing counts. Seasonal factors are typically applied to daily traffic volumes to calculate AADT. The application of seasonal factors to peak hour volumes is typically not necessary assuming that traffic counts were conducted during typical traffic conditions.

Response: The reference to application of Seasonal Factor for peak hour traffic volumes has been removed. In addition, the seasonal factor was 1.0 during the week in which the counts were conducted. Therefore no changes were made to the peak hour traffic volume information as a result of this comment.

Comment 3: Figure 2: Please make the following revisions to the referenced figure:
1. Provide directional AADTs along the I-75 Mainline.

Response: Directional AADTs have been provided along the I-75 Mainline in Figure 2.

2. Please ensure that the AADTs along the I-75 Mainline are balanced north and south of the interchange.

Response: AADTs along the I-75 Mainline have been balanced.

3. Include the entire study area on the figure (i.e. add the adjacent interchange ramps to the figure).

Response: Adjacent interchange ramps have been added to Figure 2. Please note that the study area was agreed to include only the south side ramps University Parkway and north side ramps at Bee Ridge Road.

4. Revise graphical representation of the slip ramps (non-loop on and off ramps) to better represent the interchange. The current configuration is visually confusing.

Response: The graphic has been revised for clarity and better representation of interchange configuration.

Please also revise Figures 3 and 4 for consistency.

Response: Figures 3 and 4 have also been revised.

Comment 4: Figures 3 and 4: Please provide total ramp volumes on the figure.

Response: Total ramp volumes have been added in Figures 3 and 4.

Comment 5: Figure 3: The I-75 northbound mainline volume is not balanced. Please revise.

Response: The I-75 northbound mainline volume has been balanced.

Comment 6: It is recommended that the side-street D factors and DHT factors are rounded for ease of calculation and software input.

The recommended Side street D and DHT factors have been rounded to nearest whole number as requested. Afoot note has been added to Table 1 and for calculations shown in appendices to reflect this assumption.

Comment 7: Based on a review of the D-Factors for side streets included in Appendix B, it is noted that the D factors for Honore Avenue and Cattlemen Road are similar. As such, it is suggested that a uniform D factor be used for the above side streets. Similarly, it is suggested that a uniform D factor be used for Paramount Drive and Coburn Road. Please revise Table 1 to include the recommended D factors for the side streets.

Response: Please note that that using separate D-factors for each side street closely reflects the existing traffic directional distribution and will make the balancing of DDHVs between adjacent intersections easier. Therefore we propose to use the separate D-factors for each side street based on the traffic counts rather than combining and averaging them with other side streets. No changes were made to Table 1 as a result.

Appendix C: HCS FREEWAY AND RAMP REPORTS

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*AM Existing*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4439*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1589*	pc/h/ln
S	*71.2*	mph
D = v_p / S	*22.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*PM Existing*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5665*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2027*	pc/h/ln
S	*63.3*	mph
D = v_p / S	*32.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*AM Existing*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4601*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.00*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*3.2*	mph
FFS	*72.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1647*	pc/h/ln
S	*67.7*	mph
D = v_p / S	*24.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*PM Existing*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4238*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.00*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*3.2*	mph
FFS	*72.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1517*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*22.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*AM Existing*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5248*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1878*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*28.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*PM Existing*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4666*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1670*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*23.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*AM Existing*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4128*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1477*	pc/h/ln
S	*72.5*	mph
D = v_p / S	*20.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/21/2015*
Analysis Time Period	*PM Existing*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2014*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4830*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1729*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*25.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5315*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1427*	pc/h/ln
S	*73.0*	mph
D = v_p / S	*19.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6795*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1824*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*27.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5265*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1413*	pc/h/ln
S	*73.1*	mph
D = v_p / S	*19.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5865*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1574*	pc/h/ln
S	*71.4*	mph
D = v_p / S	*22.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6795*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1824*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*27.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5315*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1427*	pc/h/ln
S	*73.0*	mph
D = v_p / S	*19.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5865*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1574*	pc/h/ln
S	*71.4*	mph
D = v_p / S	*22.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2020*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5265*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1413*	pc/h/ln
S	*73.1*	mph
D = v_p / S	*19.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6850*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1839*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*27.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7590*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2037*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*32.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 NB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7650*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2053*	pc/h/ln
S	*62.7*	mph
D = v_p / S	*32.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*DH*	Highway/Direction of Travel	*I-75 NB*
Agency or Company	*ICON*	From/To	*South of SR 780*
Date Performed	*8/18/2015*	Jurisdiction	*Sarasota County*
Analysis Time Period	*PM*	Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1750*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*25.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7590*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2037*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*32.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*North of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6850*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1839*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*27.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1750*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*25.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*DH*
Agency or Company	*ICON*
Date Performed	*8/18/2015*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-75 SB*
From/To	*South of SR 780*
Jurisdiction	*Sarasota County*
Analysis Year	*2040*

Project Description *I-75 at SR 780 (Fruitville Rd) Interchange*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7650*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT		veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*0.83*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*2.8*	mph
FFS	*72.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2053*	pc/h/ln
S	*62.7*	mph
D = v_p / S	*32.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB On-ramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	800	☑ No	☐ Off
L_{up} =	1800 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	955 veh/h	Freeway Volume, V_F	4096	V_D =	veh/h
		Ramp Volume, V_R	343		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4096	0.95	Level	4	0	0.980	1.00	4398
Ramp	343	0.95	Level	4	0	0.980	1.00	368
UpStream	955	0.95	Level	4	0	0.980	1.00	1025
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.600 using Equation (Exhibit 13-6)

V_{12} = 2638 pc/h

V_3 or V_{av34} 1760 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2638 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4766	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3006	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 23.7 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.336 (Exibit 13-11)

S_R= 60.6 mph (Exhibit 13-11)

S_0= 65.5 mph (Exhibit 13-11)

S = 62.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB On-ramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	800	☑ No	☐ Off
L_{up} =	1800 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1591 veh/h	Freeway Volume, V_F	5113	V_D =	veh/h
		Ramp Volume, V_R	552		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5113	0.95	Level	4	0	0.980	1.00	5490
Ramp	552	0.95	Level	4	0	0.980	1.00	593
UpStream	1591	0.95	Level	4	0	0.980	1.00	1708
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.600 using Equation (Exhibit 13-6)

V_{12} = 3293 pc/h

V_3 or V_{av34} 2197 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 3293 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6083	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3886	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 30.5 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.447 (Exibit 13-11)

S_R= 57.5 mph (Exhibit 13-11)

S_0= 63.9 mph (Exhibit 13-11)

S = 59.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Offramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	1170	☑ No	☐ Off
L_{up} =	1800 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1460 veh/h	Freeway Volume, V_F	3141	V_D =	veh/h
		Ramp Volume, V_R	955		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3141	0.95	Level	4	0	0.980	1.00	3372
Ramp	955	0.95	Grade	4	0	0.980	1.00	1025
UpStream	1460	0.95	Level	4	0	0.980	1.00	1568
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1150.24 (Equation 13-6 or 13-7)

P_{FM} = 0.610 using Equation (Exhibit 13-6)

V_{12} = 2058 pc/h

V_3 or V_{av34} 1314 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2058 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4397	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3083	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 21.7 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.313 (Exibit 13-11)

S_R= 61.2 mph (Exhibit 13-11)

S_0= 67.1 mph (Exhibit 13-11)

S = 62.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1170	L_{down} = 1800 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 343 veh/h
	Freeway Volume, V_F: 3141	
	Ramp Volume, V_R: 955	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3141	0.95	Level	4	0	0.980	1.00	3372
Ramp	955	0.95	Grade	4	0	0.980	1.00	1025
UpStream								
DownStream	343	0.95	Level	4	0	0.980	1.00	368

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1567.36 (Equation 13-6 or 13-7)

P_{FM} = 0.610 using Equation (Exhibit 13-6)

V_{12} = 2058 pc/h

V_3 or V_{av34} 1314 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2058 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4397	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3083	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 21.7 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.313 (Exibit 13-11)

S_R= 61.2 mph (Exhibit 13-11)

S_0= 67.1 mph (Exhibit 13-11)

S = 62.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Offramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	1170	☑ No	☐ Off
L_{up} =	1800 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	716 veh/h	Freeway Volume, V_F	3522	V_D =	veh/h
		Ramp Volume, V_R	1591		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3522	0.95	Level	4	0	0.980	1.00	3782
Ramp	1591	0.95	Grade	4	0	0.980	1.00	1708
UpStream	716	0.95	Level	4	0	0.980	1.00	769
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 860.94 (Equation 13-6 or 13-7)

P_{FM} = 0.610 using Equation (Exhibit 13-6)

V_{12} = 2308 pc/h

V_3 or V_{av34} 1474 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2308 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5490	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4016	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 28.7 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.467 (Exibit 13-11)

S_R= 56.9 mph (Exhibit 13-11)

S_0= 66.5 mph (Exhibit 13-11)

S = 59.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1170	L_{down} = 1800 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 552 veh/h
	Freeway Volume, V_F: 3522	
	Ramp Volume, V_R: 1591	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3522	0.95	Level	4	0	0.980	1.00	3782
Ramp	1591	0.95	Grade	4	0	0.980	1.00	1708
UpStream								
DownStream	552	0.95	Level	4	0	0.980	1.00	593

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.610 using Equation (Exhibit 13-6)

V_{12} = 2308 pc/h

V_3 or V_{av34} = 1474 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2308 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5490	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4016	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 28.7 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.467 (Exibit 13-11)

S_R = 56.9 mph (Exhibit 13-11)

S_0 = 66.5 mph (Exhibit 13-11)

S = 59.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} = pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Offramp at SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	1
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	230
Freeway Volume, V_F	4601
Ramp Volume, V_R	1460
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	40.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 1865 ft
V_D = 955 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4601	0.95	Level	4	0	0.980	1.00	4940
Ramp	1460	0.95	Level	4	0	0.980	1.00	1568
UpStream								
DownStream	955	0.95	Grade	4	0	0.980	1.00	1025

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$
L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$
D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R= mph (Exhibit 13-11)
S_0= mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$
L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.564 using Equation (Exhibit 13-7)
V_{12} = 3471 pc/h
V_3 or V_{av34} 1469 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	4940	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3372	Exhibit 13-8	7200	No
V_R	1568	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3471	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$
D_R = 32.0 (pc/mi/ln)
LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.504 (Exhibit 13-12)
S_R= 55.9 mph (Exhibit 13-12)
S_0= 75.0 mph (Exhibit 13-12)
S = 60.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Offramp at SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A:	L_{down} = 1865 ft
V_u = veh/h	Deceleration Lane Length L_D: 230	V_D = 1591 veh/h
	Freeway Volume, V_F: 4238	
	Ramp Volume, V_R: 716	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4238	0.95	Level	4	0	0.980	1.00	4550
Ramp	716	0.95	Level	4	0	0.980	1.00	769
UpStream								
DownStream	1591	0.95	Grade	4	0	0.980	1.00	1708

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.611 using Equation (Exhibit 13-7)

V_{12} = 3079 pc/h

V_3 or V_{av34} 1471 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	4550	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3781	Exhibit 13-8	7200	No
V_R	769	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3079	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 28.7 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.432 (Exhibit 13-12)

S_R= 57.9 mph (Exhibit 13-12)

S_0= 75.0 mph (Exhibit 13-12)

S = 62.5 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	800	☑ No	☐ Off
L_{up} =	1950 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	337 veh/h	Freeway Volume, V_F	3608	V_D =	veh/h
		Ramp Volume, V_R	520		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3608	0.95	Level	4	0	0.980	1.00	3874
Ramp	520	0.95	Level	4	0	0.980	1.00	558
UpStream	337	0.95	Level	4	0	0.980	1.00	362
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 993.45 (Equation 13-6 or 13-7)

P_{FM} = 0.600 using Equation (Exhibit 13-6)

V_{12} = 2324 pc/h

V_3 or V_{av34} 1550 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2324 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4432	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2882	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 22.7 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.327 (Exibit 13-11)

S_R= 60.9 mph (Exhibit 13-11)

S_0= 66.2 mph (Exhibit 13-11)

S = 62.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	800	☑ No	☐ Off
L_{up} =	1950 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	354 veh/h	Freeway Volume, V_F	3929	V_D =	veh/h
		Ramp Volume, V_R	901		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3929	0.95	Level	4	0	0.980	1.00	4219
Ramp	901	0.95	Level	4	0	0.980	1.00	967
UpStream	354	0.95	Level	4	0	0.980	1.00	380
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.600 using Equation (Exhibit 13-6)

V_{12} = 2531 pc/h

V_3 or V_{av34} 1688 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2531 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5186	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3498	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 27.3 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.386 (Exibit 13-11)

S_R = 59.2 mph (Exhibit 13-11)

S_0 = 65.7 mph (Exhibit 13-11)

S = 61.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Loop w Offramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	1491	☑ No	☐ Off
L_{up} =	1490 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1977 veh/h	Freeway Volume, V_F	3271	V_D =	veh/h
		Ramp Volume, V_R	337		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3271	0.95	Level	4	0	0.980	1.00	3512
Ramp	337	0.95	Grade	4	0	0.980	1.00	362
UpStream	1977	0.95	Level	4	0	0.980	1.00	2123
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1180.84 (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2175 pc/h

V_3 or V_{av34} 1337 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2175 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	3874	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2537	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 15.7 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.251 (Exibit 13-11)

S_R= 63.0 mph (Exhibit 13-11)

S_0= 67.0 mph (Exhibit 13-11)

S = 64.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Loop w Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☑ Yes	☑ On
☑ No	☐ Off	Acceleration Lane Length, L_A	1491	☐ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D		L_{down} =	1490 ft
V_u =	veh/h	Freeway Volume, V_F	3271	V_D =	520 veh/h
		Ramp Volume, V_R	337		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3271	0.95	Level	4	0	0.980	1.00	3512
Ramp	337	0.95	Grade	4	0	0.980	1.00	362
UpStream								
DownStream	520	0.95	Level	4	0	0.980	1.00	558

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2175 pc/h

V_3 or V_{av34} = 1337 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2175 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	3874	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2537	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 15.7 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.251 (Exibit 13-11)

S_R = 63.0 mph (Exhibit 13-11)

S_0 = 67.0 mph (Exhibit 13-11)

S = 64.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Loop w Offramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = 1490 ft	Acceleration Lane Length, L_A: 1491	L_{down} = ft
V_u = 1091 veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 3575	
	Ramp Volume, V_R: 354	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3575	0.95	Level	4	0	0.980	1.00	3838
Ramp	354	0.95	Grade	4	0	0.980	1.00	380
UpStream	1091	0.95	Level	4	0	0.980	1.00	1171
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1254.46 (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2377 pc/h

V_3 or V_{av34} 1461 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2377 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4218	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2757	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 17.5 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.263 (Exibit 13-11)

S_R= 62.6 mph (Exhibit 13-11)

S_0= 66.5 mph (Exhibit 13-11)

S = 63.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Loop w Onramp from SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A: 1491	L_{down} = 1490 ft
V_u = veh/h	Deceleration Lane Length L_D:	V_D = 901 veh/h
	Freeway Volume, V_F: 3575	
	Ramp Volume, V_R: 354	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3575	0.95	Level	4	0	0.980	1.00	3838
Ramp	354	0.95	Grade	4	0	0.980	1.00	380
UpStream								
DownStream	901	0.95	Level	4	0	0.980	1.00	967

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 2377 pc/h

V_3 or V_{av34} = 1461 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2377 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4218	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2757	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 17.5 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.263 (Exibit 13-11)

S_R = 62.6 mph (Exhibit 13-11)

S_0 = 66.5 mph (Exhibit 13-11)

S = 63.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} = pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Offramp at SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	1
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	230
Freeway Volume, V_F	5248
Ramp Volume, V_R	1977
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	40.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 1828 ft
V_D = 337 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5248	0.95	Level	4	0	0.980	1.00	5635
Ramp	1977	0.95	Level	4	0	0.980	1.00	2123
UpStream								
DownStream	337	0.95	Grade	4	0	0.980	1.00	362

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R= mph (Exhibit 13-11)
S_0= mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.521 using Equation (Exhibit 13-7)
V_{12} = 3954 pc/h
V_3 or V_{av34} 1681 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5635	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3512	Exhibit 13-8	7200	No
V_R	2123	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3954	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 36.2 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.554 (Exhibit 13-12)
S_R= 54.5 mph (Exhibit 13-12)
S_0= 74.1 mph (Exhibit 13-12)
S = 59.2 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Offramp at SR 780
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Freeway Number of Lanes, N	3
Ramp Number of Lanes, N	1
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	230
Freeway Volume, V_F	4666
Ramp Volume, V_R	1091
Freeway Free-Flow Speed, S_{FF}	70.0
Ramp Free-Flow Speed, S_{FR}	40.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 1828 ft
V_D = 354 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4666	0.95	Level	4	0	0.980	1.00	5010
Ramp	1091	0.95	Level	4	0	0.980	1.00	1171
UpStream								
DownStream	354	0.95	Grade	4	0	0.980	1.00	380

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$
L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$
D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R= mph (Exhibit 13-11)
S_0= mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$
L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.581 using Equation (Exhibit 13-7)
V_{12} = 3401 pc/h
V_3 or V_{av34} 1609 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5010	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3839	Exhibit 13-8	7200	No
V_R	1171	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3401	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$
D_R = 31.4 (pc/mi/ln)
LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.468 (Exhibit 13-12)
S_R= 56.9 mph (Exhibit 13-12)
S_0= 74.4 mph (Exhibit 13-12)
S = 61.5 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Offramp Bee Ridge
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Freeway Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Ramp Number of Lanes, N: 1	☑ No ☐ Off
L_{up} = 1725 ft	Acceleration Lane Length, L_A: 1345	L_{down} = ft
V_u = 990 veh/h	Deceleration Lane Length L_D:	V_D = veh/h
	Freeway Volume, V_F: 3336	
	Ramp Volume, V_R: 811	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3336	0.95	Level	4	0	0.980	1.00	3582
Ramp	811	0.95	Grade	4	0	0.980	1.00	871
UpStream	990	0.95	Level	4	0	0.980	1.00	1063
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 716.72 (Equation 13-6 or 13-7)

P_{FM} = 0.615 using Equation (Exhibit 13-6)

V_{12} = 2204 pc/h

V_3 or V_{av34} 1378 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2204 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4453	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3075	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 20.6 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.325 (Exibit 13-11)

S_R = 60.9 mph (Exhibit 13-11)

S_0 = 66.8 mph (Exhibit 13-11)

S = 62.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Onramp from Bee Ridge
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☑ Yes	☑ On
☑ No	☐ Off	Acceleration Lane Length, L_A	1345	☐ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D		L_{down} =	2020 ft
V_u =	veh/h	Freeway Volume, V_F	3336	V_D =	454 veh/h
		Ramp Volume, V_R	811		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3336	0.95	Level	4	0	0.980	1.00	3582
Ramp	811	0.95	Grade	4	0	0.980	1.00	871
UpStream								
DownStream	454	0.95	Level	4	0	0.980	1.00	487

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.615 using Equation (Exhibit 13-6)

V_{12} = 2204 pc/h

V_3 or V_{av34} 1378 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2204 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4453	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3075	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 20.6 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.325 (Exibit 13-11)

S_R= 60.9 mph (Exhibit 13-11)

S_0= 66.8 mph (Exhibit 13-11)

S = 62.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Offramp Bee Ridge
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	1345	☑ No	☐ Off
L_{up} =	1725 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	555 veh/h	Freeway Volume, V_F	2967	V_D =	veh/h
		Ramp Volume, V_R	1004		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	2967	0.95	Level	4	0	0.980	1.00	3186
Ramp	1004	0.95	Grade	4	0	0.980	1.00	1078
UpStream	555	0.95	Level	4	0	0.980	1.00	596
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 676.28 (Equation 13-6 or 13-7)

P_{FM} = 0.615 using Equation (Exhibit 13-6)

V_{12} = 1960 pc/h

V_3 or V_{av34} 1226 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 1960 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4264	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3038	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 20.2 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.322 (Exibit 13-11)

S_R= 61.0 mph (Exhibit 13-11)

S_0= 67.4 mph (Exhibit 13-11)

S = 62.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Loop w Onramp from Bee Ridge
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☑ Yes	☑ On
☑ No	☐ Off	Acceleration Lane Length, L_A	1345	☐ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D		L_{down} =	2020 ft
V_u =	veh/h	Freeway Volume, V_F	2967	V_D =	267 veh/h
		Ramp Volume, V_R	1004		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	2967	0.95	Level	4	0	0.980	1.00	3186
Ramp	1004	0.95	Grade	4	0	0.980	1.00	1078
UpStream								
DownStream	267	0.95	Level	4	0	0.980	1.00	287

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.615 using Equation (Exhibit 13-6)

V_{12} = 1960 pc/h

V_3 or V_{av34} 1226 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 1960 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4264	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3038	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 20.2 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.322 (Exibit 13-11)

S_R= 61.0 mph (Exhibit 13-11)

S_0= 67.4 mph (Exhibit 13-11)

S = 62.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB On-ramp from Bee Ridge Rd
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	500	☑ No	☐ Off
L_{up} =	2000 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	811 veh/h	Freeway Volume, V_F	4147	V_D =	veh/h
		Ramp Volume, V_R	454		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4147	0.95	Level	4	0	0.980	1.00	4453
Ramp	454	0.95	Level	4	0	0.980	1.00	487
UpStream	811	0.95	Level	4	0	0.980	1.00	871
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.591 using Equation (Exhibit 13-6)

V_{12} = 2634 pc/h

V_3 or V_{av34} 1819 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2634 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4940	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3121	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 26.5 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.369 (Exibit 13-11)

S_R= 59.7 mph (Exhibit 13-11)

S_0= 65.3 mph (Exhibit 13-11)

S = 61.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB On-ramp from Bee Ridge Rd
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☐ Off	Acceleration Lane Length, L_A	500	☑ No	☐ Off
L_{up} =	2000 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1004 veh/h	Freeway Volume, V_F	3971	V_D =	veh/h
		Ramp Volume, V_R	267		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3971	0.95	Level	4	0	0.980	1.00	4264
Ramp	267	0.95	Level	4	0	0.980	1.00	287
UpStream	1004	0.95	Level	4	0	0.980	1.00	1078
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.591 using Equation (Exhibit 13-6)

V_{12} = 2522 pc/h

V_3 or V_{av34} 1742 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes, V_{12a} = 2522 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	4551	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	2809	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 24.1 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.346 (Exibit 13-11)

S_R = 60.3 mph (Exhibit 13-11)

S_0 = 65.5 mph (Exhibit 13-11)

S = 62.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Offramp at Bee Ridge Rd
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A	L_{down} = 3760 ft
V_u = veh/h	Deceleration Lane Length L_D: 270	V_D = 640 veh/h
	Freeway Volume, V_F: 4128	
	Ramp Volume, V_R: 1321	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4128	0.95	Level	4	0	0.980	1.00	4432
Ramp	1321	0.95	Level	4	0	0.980	1.00	1418
UpStream								
DownStream	640	0.95	Grade	4	0	0.980	1.00	687

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.584 using Equation (Exhibit 13-7)

V_{12} = 3178 pc/h

V_3 or V_{av34} 1254 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	4432	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3014	Exhibit 13-8	7200	No
V_R	1418	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3178	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 29.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.491 (Exhibit 13-12)

S_R= 56.3 mph (Exhibit 13-12)

S_0= 75.8 mph (Exhibit 13-12)

S = 60.7 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Offramp at Bee Ridge Rd
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A	L_{down} = 3760 ft
V_u = veh/h	Deceleration Lane Length L_D: 270	V_D = 935 veh/h
	Freeway Volume, V_F: 4830	
	Ramp Volume, V_R: 1257	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4830	0.95	Level	4	0	0.980	1.00	5186
Ramp	1257	0.95	Level	4	0	0.980	1.00	1350
UpStream								
DownStream	935	0.95	Level	4	0	0.980	1.00	1004

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.568 using Equation (Exhibit 13-7)

V_{12} = 3530 pc/h

V_3 or V_{av34} 1656 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	5186	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3836	Exhibit 13-8	7200	No
V_R	1350	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3530	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 32.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.485 (Exhibit 13-12)

S_R= 56.4 mph (Exhibit 13-12)

S_0= 74.2 mph (Exhibit 13-12)

S = 61.1 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Offramp at University Pkwy
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Ramp Number of Lanes, N	1	☑ Yes	☑ On
☑ No	☐ Off	Acceleration Lane Length, L_A		☐ No	☐ Off
L_{up} =	ft	Deceleration Lane Length L_D	230	L_{down} =	3830 ft
V_u =	veh/h	Freeway Volume, V_F	4439	V_D =	820 veh/h
		Ramp Volume, V_R	1566		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4439	0.95	Level	4	0	0.980	1.00	4766
Ramp	1566	0.95	Level	4	0	0.980	1.00	1681
UpStream								
DownStream	820	0.95	Grade	4	0	0.980	1.00	880

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.564 using Equation (Exhibit 13-7)

V_{12} = 3419 pc/h

V_3 or V_{av34} 1347 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	4766	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	3085	Exhibit 13-8	7200	No
V_R	1681	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3419	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 31.6 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

D_s = 0.514 (Exhibit 13-12)

S_R= 55.6 mph (Exhibit 13-12)

S_0= 75.4 mph (Exhibit 13-12)

S = 60.1 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 NB
Agency or Company	ICON	Junction	NB Offramp at University Pkwy
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd) Interchange

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Freeway Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Ramp Number of Lanes, N: 1	☐ No ☐ Off
L_{up} = ft	Acceleration Lane Length, L_A:	L_{down} = 3830 ft
V_u = veh/h	Deceleration Lane Length L_D: 230	V_D = 1355 veh/h
	Freeway Volume, V_F: 5665	
	Ramp Volume, V_R: 1383	
	Freeway Free-Flow Speed, S_{FF}: 70.0	
	Ramp Free-Flow Speed, S_{FR}: 40.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5665	0.95	Level	4	0	0.980	1.00	6082
Ramp	1383	0.95	Level	4	0	0.980	1.00	1485
UpStream								
DownStream	1355	0.95	Grade	4	0	0.980	1.00	1455

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.540 using Equation (Exhibit 13-7)

V_{12} = 3966 pc/h

V_3 or V_{av34} 2116 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6082	Exhibit 13-8	7200	No
$V_{FO} = V_F - V_R$	4597	Exhibit 13-8	7200	No
V_R	1485	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	3966	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 36.3 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

D_s = 0.497 (Exhibit 13-12)

S_R= 56.1 mph (Exhibit 13-12)

S_0= 72.4 mph (Exhibit 13-12)

S = 60.9 mph (Exhibit 13-13)

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Onramp from University Pkwy
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	AM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	710	☑ No	☐ Off
L_{up} =	3750 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1565 veh/h	Freeway Volume, V_F	3878	V_D =	veh/h
		Ramp Volume, V_R	1370		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3878	0.95	Level	4	0	0.980	1.00	4164
Ramp	1370	0.95	Level	4	0	0.980	1.00	1471
UpStream	1565	0.95	Level	4	0	0.980	1.00	1680
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1210.93 (Equation 13-6 or 13-7)

P_{FM} = 0.597 using Equation (Exhibit 13-6)

V_{12} = 2487 pc/h

V_3 or V_{av34} 1677 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2487 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5635	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3958	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 31.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.468 (Exibit 13-11)

S_R= 56.9 mph (Exhibit 13-11)

S_0= 65.8 mph (Exhibit 13-11)

S = 59.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	DH	Freeway/Dir of Travel	I-75 SB
Agency or Company	ICON	Junction	SB Onramp from University Pkwy
Date Performed	7/15/2014	Jurisdiction	Sarasota County
Analysis Time Period	PM Existing	Analysis Year	2014

Project Description I-75 at SR 780 (Fruitville Rd)

Inputs

Upstream Adj Ramp		Freeway Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Ramp Number of Lanes, N	1	☐ Yes	☐ On
☐ No	☑ Off	Acceleration Lane Length, L_A	710	☑ No	☐ Off
L_{up} =	3750 ft	Deceleration Lane Length L_D		L_{down} =	ft
V_u =	1145 veh/h	Freeway Volume, V_F	2953	V_D =	veh/h
		Ramp Volume, V_R	1713		
		Freeway Free-Flow Speed, S_{FF}	70.0		
		Ramp Free-Flow Speed, S_{FR}	40.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	2953	0.95	Level	4	0	0.980	1.00	3171
Ramp	1713	0.95	Level	4	0	0.980	1.00	1839
UpStream	1145	0.95	Level	4	0	0.980	1.00	1229
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1077.18 (Equation 13-6 or 13-7)

P_{FM} = 0.597 using Equation (Exhibit 13-6)

V_{12} = 1894 pc/h

V_3 or V_{av34} 1277 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 1894 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5010	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3733	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 29.3 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.427 (Exibit 13-11)

S_R= 58.0 mph (Exhibit 13-11)

S_0= 67.2 mph (Exhibit 13-11)

S = 60.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

Appendix D: VISSIM CALIBRATION MEMORANDUM

MEMORANDUM

Date: **02/02/2015**
SUBJECT: **I-75 and Fruitville Road (SR 780) Interchange, Sarasota County (FPID: 420613 2 32 01)**
VISSIM Model Development and Calibration

The Florida Department of Transportation (FDOT) is evaluating modifications to the Interstate 75 (I-75)/ Fruitville Road (SR 780) interchange located in Sarasota County, Florida. The purpose of this memorandum is to document the methods used in the development of the VISSIM microsimulation models for the I-75 and Fruitville Road (SR 780) interchange and to provide documentation of the model calibration to actual conditions.

Model Development

The 2014 existing year VISSIM models were developed using VISSIM 7.00-05, a microsimulation program that models traffic using an advanced car following method based on the psycho-physical driver perception model developed by Wiedemann. VISSIM was chosen over a Node-based program like CORSIM because of the closely spaced intersections associated with one of the selected alternatives (Diverging Diamond Interchange). The model includes all signalized intersections along SR 780 from Honore Avenue to Coburn Road as well as the non-signalized intersection at Coburn Road. In addition to the I-75 on and off ramps at SR 780, the model also includes the southbound on-ramp and northbound off-ramp at University Parkway to the north and the southbound off-ramp and northbound on-ramps at SR 758 (Bee Ridge Road) to the south.

Data Collection

Traffic counts for this study include 2013 and 2014 vehicle classification counts, 24-hour bi-directional counts, and 8-hour turning movement counts (TMCs). All counts were conducted on Tuesday, Wednesday, or Thursday to represent a typical weekday traffic condition. Roadway geometry, signalized turn lane queue lengths, and interstate / arterial free flow speeds were also collected in the field. Bluetooth technology was used to measure vehicle travel times along I-75 and SR 780. Bluetooth was also used to collect Origin-Destination (OD) data for the major movements between the I-75 on and off-ramps and the adjacent signalized intersections on SR 780 in order to accurately quantify the number of vehicles on these routes.

Model Geometrics

The existing geometry was coded into the network using a scaled aerial to accurately portray the correct number of lanes throughout the model and lane configurations at intersections. Turn lane storage lengths were field verified. Geometric changes were made in the model to accommodate driving behaviors observed in the field at the following locations:

- Connector 10072 (WBR to SB Loop On-Ramp) was extended further east than the gore location to replicate field conditions where drivers were observed using the wide shoulder to bypass queued vehicles at the SB ramp traffic signal.

Traffic Demand and Routing

Existing year balanced traffic volumes were input in 15 minute intervals for the AM and PM peak periods which include a 30 minute warm up period, a peak hour, and a 45 minute cool down period to allow the oversaturated conditions to dissipate. Evaluation data was collected during the peak hour and the 45 minute cool down period. The peak hours are 7:15 – 8:15 AM and 5:00 – 6:00 PM and the peak hour turning movement volumes can be found in Appendix A. Heavy vehicle input was based on the truck percentages obtained during data collection and is summarized in Table 1. The *NorthAmericanDefault.inp* vehicle fleet distribution was used to better reflect the size and characteristics of vehicles driven in the United States rather than the VISSIM default vehicles which are more common in Europe.

For routing traffic through the network, VISSIM's static routing feature was used. An Origin-Destination (OD) matrix was created for both the AM and PM model using OD data collected in the field and turning movement percentages to route vehicles through the network from entry to exit points. This eliminates unrealistic vehicle routes and driving behavior caused by using multiple routing decisions in the network. An extra routing decision was added for the Cattlemen Road southbound left turn movement in order to better replicate observed lane utilization. Prior to adding the additional routing decision, most vehicles were using the outside left turn lane due to the lane change distances at the I-75 on-ramps, which does not occur in the field. The OD matrices for the AM and PM model can be found in Appendix A.

Speed Distributions, Decisions, and Reduced Speed Areas

Speed distributions were developed for the SR 780 arterial and the I-75 mainline segment based on spot speed data collected in the field and speed data collected by Bluetooth units, respectively. Spot speed data was also used to create speed distributions for the I-75 southbound off-ramp left and right turn movements. VISSIM screen shots of the speed distributions and the spot speed data can be found in Appendix A. Speed distributions were created for side street traffic using a linear distribution of ±5 MPH of the posted speed limit. The speed limits are summarized in Table 1. Speed decisions were used where vehicles transition to a roadway with a different speed limit. Reduced speed areas were placed where vehicles are forced to reduce their speed due to geometric constraints or for turning movements at intersections.

Table 1: Heavy Vehicle Percentage and Posted Speed Limits

Road	Posted Speed Limit (MPH)	Heavy Vehicle Percentage
I-75	70	4%
Fruitville Road	45	3%
Honore Avenue	35	3%
Paramount Drive	30 (Not Posted)	1%
Cattlemen Road	35	4%
Coburn Rd (SB Approach)	30	4%
Coburn Rd (NB Approach)	30	8%

Lane-Change Distance

The lane-change distance defines the distance at which vehicles attempt to change lanes in order to proceed on their route. A greater lane-change distance will require a vehicle to begin positioning for a downstream turning movement farther upstream. The lane-change distance was set to a default of 1,000 feet and increased to 2,640 feet for arterial turn lane connectors due to congestion. Interstate diverges were set at the distance to the first guide sign which was 6,600 feet. Connectors at the end of interstate merging areas were coded using the length of the merging area. The I-75 at SR 780 northbound loop on-ramp and southbound on-ramp required additional fine tuning because of the heavy volume of vehicles traveling eastbound during the PM peak hour and were given greater lane-change distances to match field conditions and lane utilization at Cattlemen Road.

Traffic Control

Existing signal timing and phasing information was collected from Sarasota County and input using the VISSIM Ring Barrier Controller module. The information can be found in Appendix D and includes, cycle lengths, splits, extensions, clearance intervals, and time of day plans as well as other information. Throughout the AM and PM peak periods, cycle lengths and splits change based on the provided time of day plans. Right turns on red were included at intersections where they are permitted.

Model Verification and Error Checking

Before beginning the calibration process, the model was checked for errors. Roadway geometry, traffic volumes and routes, speeds, signal timing data, and other inputs were reviewed along with a visual check of the animation. The VISSIM error file was also reviewed and critical errors were corrected.

The animation was reviewed to verify traffic signals were operating correctly, to visually inspect queue lengths, and to check general traffic operations throughout the model. Coding errors were corrected and adjustments were made to various model parameters to accurately reflect field conditions.

Calibration Parameters and Targets

The default network parameters adjusted as part of the calibration process included conflict areas, priority rules, lane-change distances, speed distributions, and driving behaviors. Lane-change distances were increased for heavy turn movements and interstate onramps to better replicate the local commuter familiarity with the interchange. A Freeway Weaving driving behavior was created and applied to links within merge and diverge areas along I-75. Urban Weaving driving behavior was created and applied to the I-75 southbound off-ramp, eastbound SR 780 between Honore Avenue and the SB Ramp terminal and westbound SR 780 adjacent to the SB Ramp terminal to model the congestion and frequent lane changes occurring in these areas. The Calibration Parameter Modifications are summarized in Appendix B.

Number of Simulation Runs and Confidence Interval

Multiple simulation runs of the same model are required because of the varying nature of results when using different random number seeds. To calculate the number of repetitions required, the standard deviation was estimated based on 11 initial simulation runs. Using the procedures from the FHWA Traffic Analysis Toolbox Volume III and the desired confidence level of 95%, the required number of simulation runs was calculated to be 8; therefore the 11 initial runs were found to be adequate. The calibration results summarized later in this memorandum are based on the average of 11 simulation runs. The detailed calculations are shown in Appendix C.

Calibration Targets and Measures of Effectiveness

Existing year balanced AM and PM peak hour traffic volumes and travel times were used to calibrate the model. The traffic volumes from the VISSIM model output were compared with balanced counts collected in the field. The travel times from the model output along SR 780 and I-75 were compared with Bluetooth measured travel times obtained during the data collection phase.

The existing conditions model can be considered calibrated to actual conditions when the measure of effectiveness fall within the target thresholds outlined in the FHWA Traffic Analysis Toolbox, Volume III and shown below in Table 2.

Table 2: Calibration Targets

MOE	Calibration Target
Hourly Flows	GEH Statistic < 5 for Model Entry/Exit Volumes*
Turning Movement Volumes	GEH Statistic < 5 for Intersection Turning Movements
Vehicle Travel Time	± 15% of Field Measured
Visual Audit	Queue Lengths and Traffic Operations to Analyst's Satisfaction

*The GEH statistic is computed as follows:

$$GEH = \sqrt{\frac{(E-V)^2}{(E+V)/2}}$$

E = average of multiple VISSIM model runs
V = balanced field count

Calibration Results

Once the model was developed, error checking was completed, and calibration parameters were adjusted, 11 model runs were performed and the averaged results were compared with balanced field collected data as part of the calibration process.

The first Measure of Effectiveness (MOE) used for calibration was peak hour flows at all model entry and exit locations. Tables 3 and 4 summarize the peak hour volume from the VISSIM model compared with the balanced existing year counts collected in the field. The model traffic volumes fell within the target GEH statistic of less than 5 at all locations in both the AM and PM model.

Table 3: Entry/Exit Volume Calibration Results – AM Model

VISSIM Entry / Exit Location	Data Collection Pt	Volume (VISSIM)	Volume (Field)	Difference	% Difference	GEH
Entry Univ SB Onramp	1	1394	1370	24	1.8%	0.6
Entry I-75 SB	2	3824	3878	54	1.4%	0.9
Entry Bee Rdg Loop Onramp	3	837	811	26	3.2%	0.9
Entry Bee Rdg Onramp	4	437	454	17	3.7%	0.8
Entry I-75 NB	5	3334	3336	2	0.1%	0.0
Entry Fruitville EB	6	1579	1621	42	2.6%	1.1
Entry Fruitville WB	7	964	978	14	1.4%	0.4
Entry Honore NB	8	606	624	18	2.9%	0.7
Entry Honore SB	9	649	644	5	0.8%	0.2
Entry Paramount NB	10	213	221	8	3.6%	0.5
Entry Cattlemen NB	11	621	650	29	4.5%	1.2
Entry Cattlemen SB	12	648	661	13	2.0%	0.5
Entry Coburn-stop	13	103	102	1	1.0%	0.1
Entry Coburn-signal	14	226	229	3	1.3%	0.2
Exit I-75 NB	15	2777	2873	96	3.3%	1.8
Exit Univ NB Offramp	16	1486	1566	80	5.1%	2.0
Exit I-75 SB	17	2751	2807	56	2.0%	1.1
Exit Bee Rdg Offramp	18	1284	1321	37	2.8%	1.0
Exit Fruitville EB	19	855	879	24	2.7%	0.8
Exit Fruitville WB	20	2181	2273	92	4.0%	1.9
Exit Honore NB	21	694	719	25	3.5%	0.9
Exit Honore SB	22	509	520	11	2.1%	0.5
Exit Cattlemen SB	41	783	803	20	2.5%	0.7
Exit Cattlemen NB	42	661	686	25	3.6%	1.0
Exit Paramount SB	43	620	639	19	3.0%	0.8
Exit Coburn-sig SB	44	416	437	21	4.8%	1.0
Exit Coburn-stop NB	45	57	56	1	1.8%	0.1

Table 4: Entry/Exit Volume Calibration Results – PM Model

VISSIM Entry / Exit Location	Data Collection Pt	Volume (VISSIM)	Volume (Field)	Difference	% Difference	GEH
Entry Univ SB Onramp	1	1728	1713	15	0.9%	0.4
Entry I-75 SB	2	2899	2953	54	1.8%	1.0
Entry Bee Rdg Loop Onramp	3	1038	1004	34	3.4%	1.1
Entry Bee Rdg Onramp	4	254	267	13	4.9%	0.8
Entry I-75 NB	5	2958	2967	9	0.3%	0.2
Entry Fruitville EB	6	2516	2576	60	2.3%	1.2
Entry Fruitville WB	7	950	967	17	1.8%	0.5
Entry Honore NB	8	680	693	13	1.9%	0.5
Entry Honore SB	9	680	673	7	1.0%	0.3
Entry Paramount NB	10	444	477	33	6.9%	1.5
Entry Cattlemen NB	11	981	1002	21	2.1%	0.7
Entry Cattlemen SB	12	843	859	16	1.9%	0.5
Entry Coburn-stop	13	81	81	0	0.0%	0.0
Entry Coburn-signal	14	376	384	8	2.1%	0.4
Exit I-75 NB	15	4204	4282	78	1.8%	1.2
Exit Univ NB Offramp	16	1357	1383	26	1.9%	0.7
Exit I-75 SB	17	3551	3573	22	0.6%	0.4
Exit Bee Rdg Offramp	18	1236	1257	21	1.7%	0.6
Exit Fruitville EB	19	715	730	15	2.1%	0.6
Exit Fruitville WB	20	1805	1809	4	0.2%	0.1
Exit Honore NB	21	821	830	9	1.1%	0.3
Exit Honore SB	22	629	616	13	2.1%	0.5
Exit Cattlemen SB	41	670	701	31	4.4%	1.2
Exit Cattlemen NB	42	810	824	14	1.7%	0.5
Exit Paramount SB	43	324	333	9	2.7%	0.5
Exit Coburn-sig SB	44	143	151	8	5.3%	0.7
Exit Coburn-stop NB	45	125	126	1	0.8%	0.1

The second MOE used for calibration was turning movement volumes at each signalized intersection. Tables 5 and 6 summarize turning movement volumes at each signalized intersection compared with balanced existing year counts collected in the field for the AM and PM peak hours. This second volume comparison was performed in order to confirm that the Origin-Destination data used to produce vehicle routes was properly replicating field conditions. The model traffic volumes fell within the target GEH number of less than 5 at all locations. This is an indication that vehicles are correctly routing through the network.

Table 5: Intersection Turning Movement Volume Calibration Results – AM Model

	Movement	Volume (VISSIM)	Volume (Field)	GEH
Honore Avenue	NB LT	240	255	1.0
	NB TH	251	255	0.3
	NB RT	114	114	0.0
	SB LT	314	306	0.5
	SB TH	248	247	0.1
	SB RT	91	91	0.0
	EB LT	134	140	0.5
	EB TH	1272	1313	1.1
	EB RT	162	168	0.5
	WB LT	99	105	0.6
	WB TH	1866	1927	1.4
	WB RT	310	324	0.8
Paramount Drive	NB LT	71	76	0.6
	NB RT	141	145	0.3
	EB TH	1496	1534	1.0
	EB RT	189	199	0.7
	WB LT	432	440	0.4
	WB TH	2218	2280	1.3
Cattlemen Road	NB LT	215	227	0.8
	NB TH	143	154	0.9
	NB RT	258	269	0.7
	SB LT	296	295	0.1
	SB TH	192	199	0.5
	SB RT	156	167	0.9
	EB LT	150	158	0.6
	EB TH	1261	1295	1.0
	EB RT	227	226	0.1
	WB LT	360	378	0.9
	WB TH	2294	2326	0.7
	WB RT	366	374	0.4
SB Offramp	SB LT	550	568	0.8
	SB RT	1364	1409	1.2
	EB TH	1287	1339	1.4
	WB TH	1650	1669	0.5
NB Offramp	NB LT	1208	1214	0.2
	EB TH	909	952	1.4
	WB TH	773	792	0.7
Coburn Road (Stop Sign)	SB LT	8	8	0.0
	SB RT	95	94	0.1
	EB LT	46	45	0.1
	EB TH	1115	1153	1.1
	WB TH	1020	1041	0.7
	WB RT	11	11	0.0
Coburn Road (Signal)	NB LT	170	176	0.5
	NB RT	53	53	0.0
	EB TH	802	826	0.8
	EB RT	316	335	1.1
	WB LT	101	102	0.1
	WB TH	861	876	0.5

Table 6: Intersection Turning Movement Volume Calibration Results – PM Model

	Movement	Volume (VISSIM)	Volume (Field)	GEH
Honore Avenue	NB LT	316	320	0.2
	NB TH	320	318	0.1
	NB RT	57	55	0.3
	SB LT	337	330	0.4
	SB TH	268	259	0.6
	SB RT	89	84	0.5
	EB LT	245	255	0.6
	EB TH	2056	2137	1.8
	EB RT	178	184	0.4
	WB LT	185	173	0.9
	WB TH	1400	1405	0.1
	WB RT	256	257	0.1
Paramount Drive	NB LT	119	127	0.7
	NB RT	318	350	1.8
	EB TH	2266	2373	2.2
	EB RT	138	149	0.9
	WB LT	186	184	0.1
	WB TH	1711	1708	0.1
Cattlemen Road	NB LT	308	329	1.2
	NB TH	291	298	0.4
	NB RT	365	375	0.5
	SB LT	394	405	0.6
	SB TH	216	219	0.2
	SB RT	224	235	0.7
	EB LT	222	237	1.0
	EB TH	2098	2228	2.8
	EB RT	234	258	1.5
	WB LT	220	224	0.3
	WB TH	1360	1328	0.9
	WB RT	292	289	0.2
SB Offramp	SB LT	209	218	0.6
	SB RT	861	873	0.4
	EB TH	1979	2107	2.8
	WB TH	971	969	0.1
NB Offramp	NB LT	579	574	0.2
	EB TH	704	734	1.1
	WB TH	740	749	0.3
Coburn Road (Stop Sign)	SB LT	13	6	2.3
	SB RT	76	75	0.1
	EB LT	112	114	0.2
	EB TH	741	762	0.8
	WB TH	1209	1226	0.5
	WB RT	13	12	0.3
Coburn Road (Signal)	NB LT	320	327	0.4
	NB RT	57	57	0.0
	EB TH	658	673	0.6
	EB RT	87	95	0.8
	WB LT	55	56	0.1
	WB TH	897	911	0.5

The third calibration target was travel times from the VISSIM model to be within 15% of Bluetooth field measured travel times along SR 780 and I-75. The Bluetooth data was collected over two weekdays and the hourly travel times were averaged to compare with the peak hour travel times in the models.

To account for the Bluetooth (BT) 300' detection radius, the field units were strategically placed along I-75 and SR 780 to avoid detecting vehicles on adjacent roadways (i.e. Cattlemen Road parallel to I-75). The travel time segments on SR 780 extend from east of Paramount Drive to east of Coburn Road to replicate traffic within the interchange area of influence. This methodology is consistent with the Methodology Letter of Understanding.

All model travel times fell within the 15% target for calibration. Table 7 summarizes the AM and PM peak hour travel times. Speed profiles for the AM and PM peak hours along I-75 northbound and southbound can be found in Appendix F.

Table 7: Travel Time Calibration Results for AM & PM

		Travel Time (sec.)				Travel Time (sec.)		
		Bluetooth	VISSIM	% Diff		Bluetooth	VISSIM	% Diff
EB Fruitville	**AM Peak 7:15 - 8:15**	132	131	0.8%	**PM Peak 5:00 - 6:00**	114	128	12.3%
WB Fruitville		170	169	0.9%		137	151	10.2%
NB I-75		89	90	1.1%		98	91	7.1%
SB I-75		89	90	1.1%		87	91	4.6%

The visual inspection of the model animation showed queue lengths and traffic operations similar to what was observed during field reviews at the interchange. In the AM model, the westbound traffic coming from the I-75 northbound and southbound off-ramps queues at the westbound Cattlemen Road signal. In the PM model, the eastbound traffic routing to I-75 correctly utilizes the right-most through lanes in preparation for entering the on-ramp and loop on-ramp. These observations were successfully replicated in the model and queue comparisons of field versus model conditions for the critical movements can be found in Appendix E. A queue storage analysis comparing available storage with the maximum queue lengths from the VISSIM model can also be found in Appendix E.

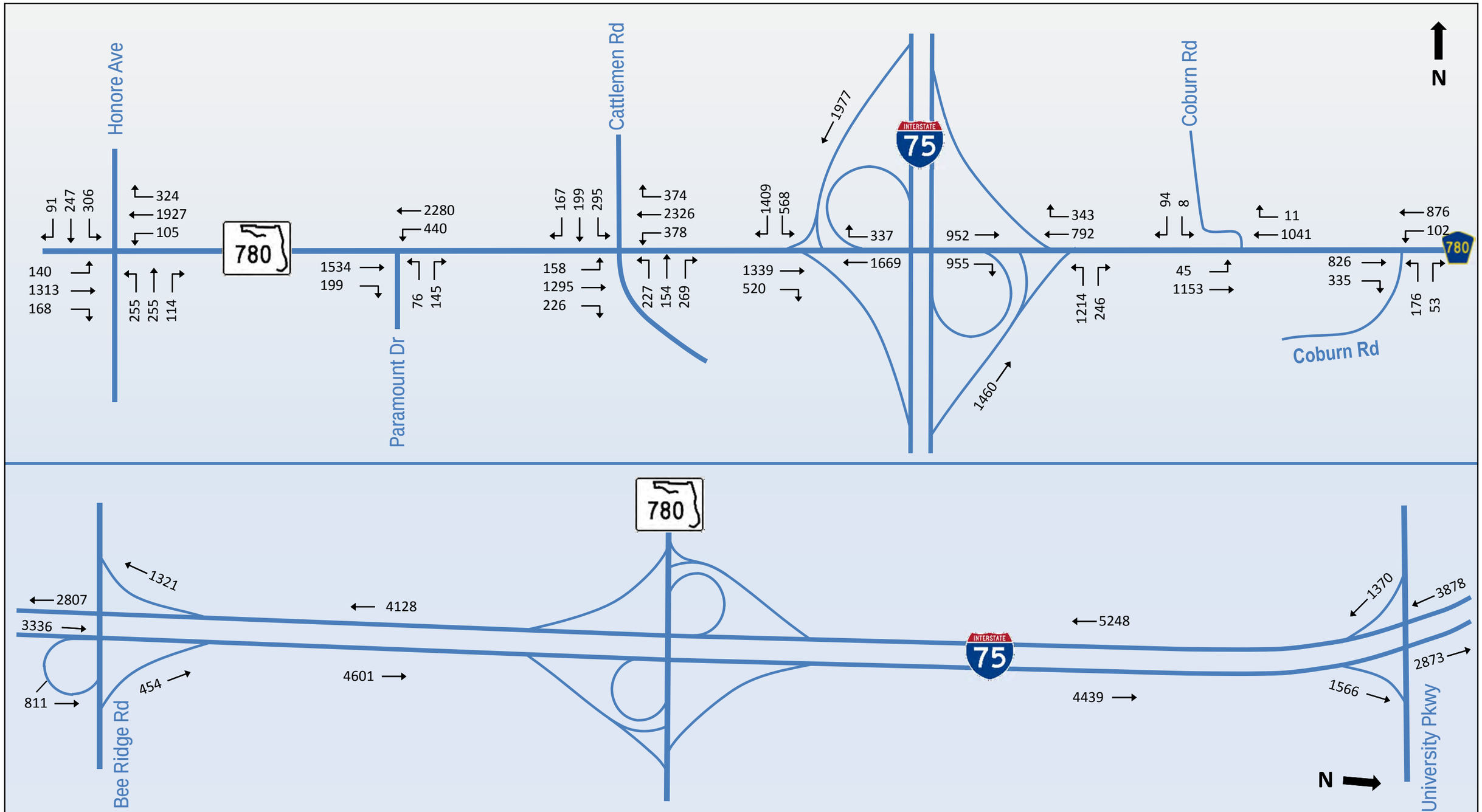
Conclusion

Based on the calibration targets and visual audit in comparison with field observations, the base model is adequately calibrated. This model will now be used for comparison of future alternatives as part of the Interchange Modification Report.

APPENDIX A

Peak Hour Turning Movement Volumes,

OD Matrices, and Speed Distributions

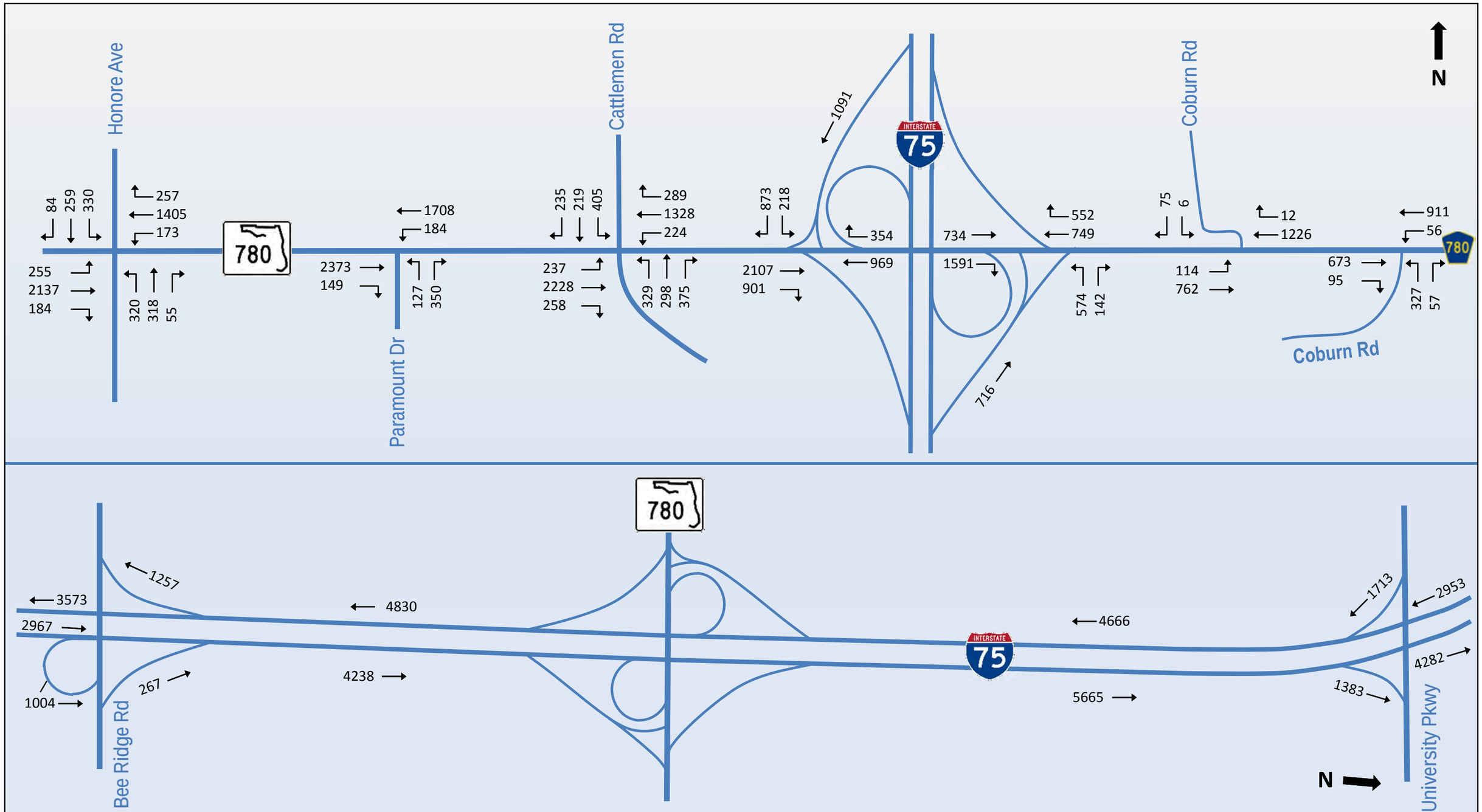


I-75 (SR 93) at SR 780 (Fruitville Rd)

Interchange Modification Report

Existing Conditions (2014)

AM Peak Hour Balanced Volumes



I-75 (SR 93) at SR 780 (Fruitville Rd)

Interchange Modification Report

Existing Conditions (2014)

PM Peak Hour Balanced Volumes

Appendix A - I-75 at SR 780 (Fruitville Road) Origin-Destination Matrix AM

Origin	Destination										
	Fruitville west of Honore	Honore Southbound	Honore Northbound	Paramount Southbound	Cattlemen Southbound	Cattlemen Northbound	I-75 Southbound	I-75 Northbound	Coburn-stop Northbound	Coburn-sig Southbound	Fruitville east of Coburn
Fruitville west of Honore		10%	9%	9%	10%	7%	16%	30%	0%	3%	6%
Honore Northbound	41%		41%	2%	2%	1%	4%	7%	0%	1%	1%
Honore Southbound	14%	38%		5%	6%	4%	9%	18%	0%	2%	4%
Paramount Northbound	28%	2%	5%		9%	6%	15%	27%	0%	2%	6%
Cattlemen Northbound	24%	1%	4%	6%		23%	9%	22%	0%	3%	8%
Cattlemen Southbound	17%	1%	3%	4%	30%		13%	17%	1%	4%	10%
I-75 Northbound	43%	3%	7%	10%	7%	12%			1%	5%	12%
I-75 Southbound	37%	2%	6%	8%	11%	7%			1%	8%	20%
Coburn-stop Southbound	19%	1%	3%	5%	5%	5%	27%	27%		2%	6%
Coburn-sig Northbound	16%	1%	3%	4%	3%	3%	23%	23%	1%		23%
Fruitville east of Coburn	18%	2%	3%	4%	4%	4%	26%	27%	1%	10%	

Appendix A - I-75 at SR 780 (Fruitville Road) Origin-Destination Matrix PM

Origin	Destination										
	Fruitville west of Honore	Honore Southbound	Honore Northbound	Paramount Southbound	Cattlemen Southbound	Cattlemen Northbound	I-75 Southbound	I-75 Northbound	Coburn-stop Northbound	Coburn-sig Southbound	Fruitville east of Coburn
Fruitville west of Honore		6%	10%	5%	7%	7%	17%	36%	2%	1%	9%
Honore Northbound	46%		46%	0%	1%	1%	2%	3%	0%	0%	1%
Honore Southbound	13%	38%		3%	4%	4%	10%	21%	1%	1%	5%
Paramount Northbound	20%	3%	4%		7%	6%	16%	34%	1%	1%	8%
Cattlemen Northbound	23%	3%	4%	3%		29%	14%	18%	1%	1%	4%
Cattlemen Southbound	19%	2%	3%	3%	25%		23%	18%	1%	1%	5%
I-75 Northbound	40%	5%	7%	6%	8%	14%			3%	2%	15%
I-75 Southbound	41%	5%	8%	6%	10%	10%			3%	2%	15%
Coburn-stop Southbound	13%	1%	3%	1%	4%	6%	25%	40%		1%	6%
Coburn-sig Northbound	12%	2%	2%	2%	3%	5%	23%	35%	1%		15%
Fruitville east of Coburn	13%	2%	2%	2%	4%	6%	25%	39%	1%	6%	

Appendix A - Speed Distributions

Figure 1: I-75 Mainline – Created Using Bluetooth Data

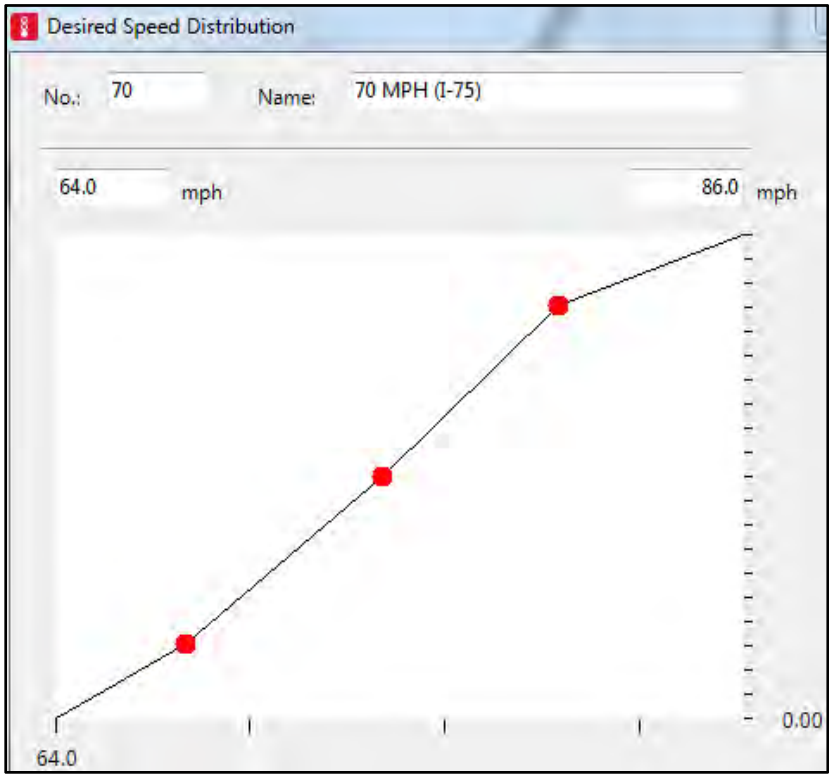


Figure 2: SR 780 Arterial – Created Using Field Collected Spot Speed Data

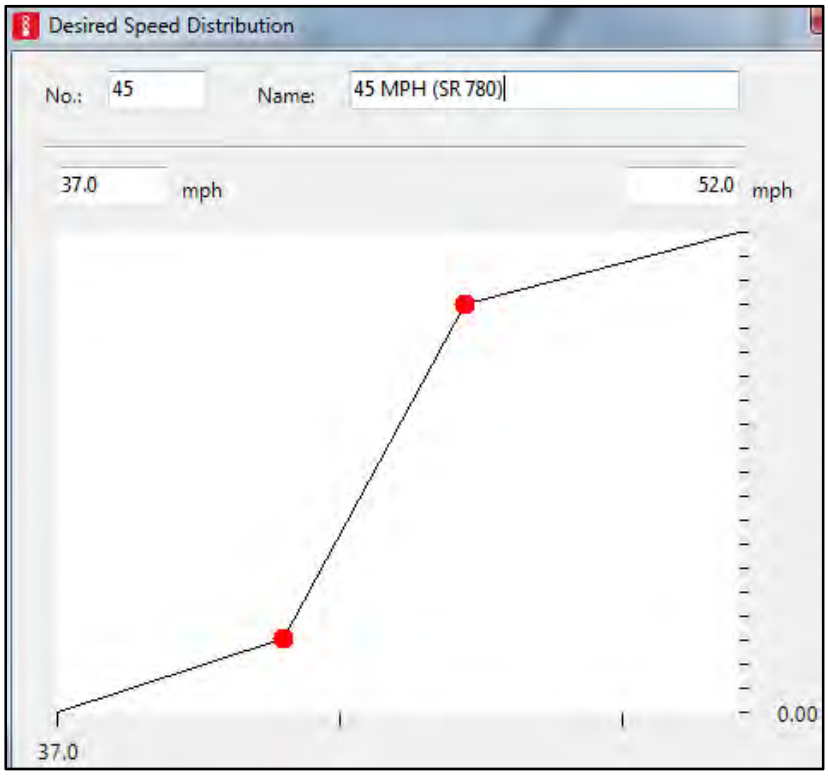


Figure 3: I-75 SB Offramp Right Turn to SR 780 – Created Using Field Collected Spot Speed Data

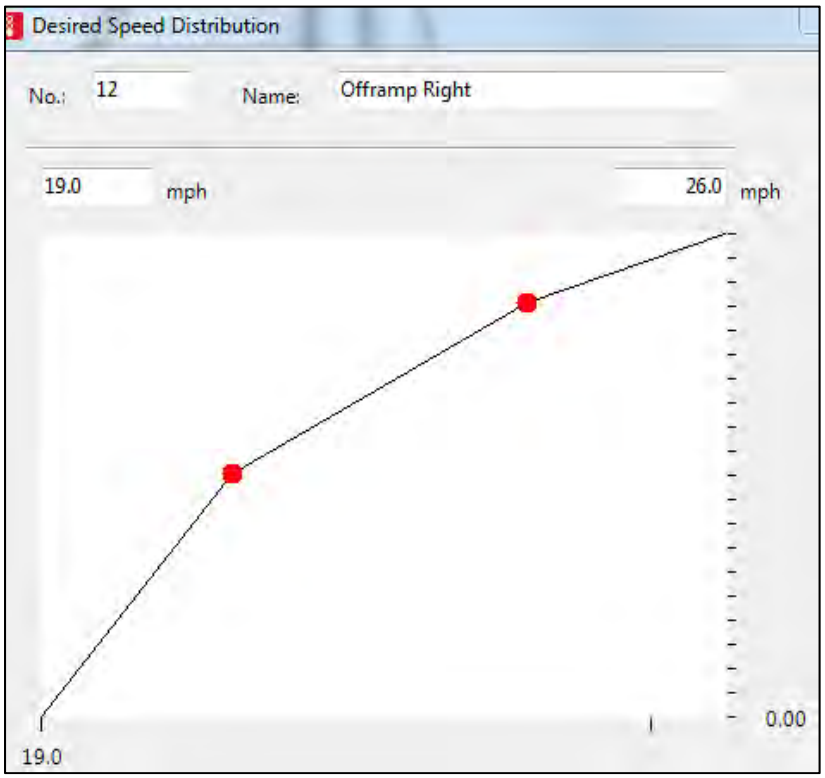
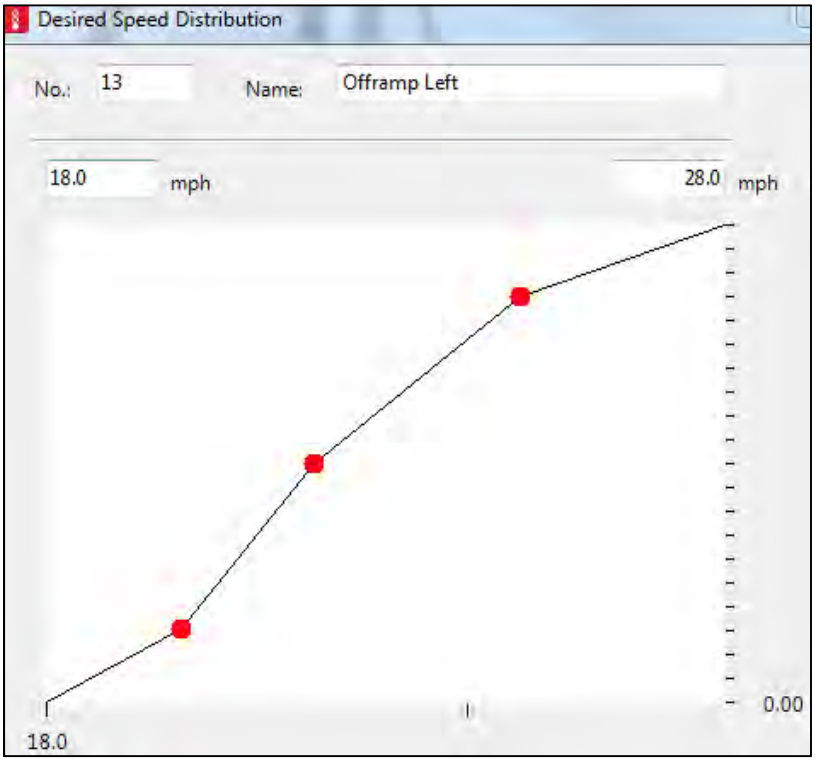


Figure 4: I-75 SB Offramp Left Turn to SR 780 – Created Using Field Collected Spot Speed Data



VEHICLE SPOT SPEED STUDY

LOCATION ID: SB Offramp	SECTION: MP:
LOCATION: Fruitville Rd. at I-75 (Fruitville Rd)	COUNT LOCATION (GPS):
POSTED SPEED (mph): N/A	COUNTY: Sarasota
DATE: 8/5/2014	PAVEMENT CONDITION:
OBSERVER: DPM	TIME FROM: 9:00 AM TIME TO: 10:00 AM
REMARKS:	

NUMBER OF VEHICLES LEFT TURN					SPEED	NUMBER OF VEHICLES RIGHT TURN				BOTH DIRECTIONS	
CUM. TOTAL	TOTAL	20	15	10	5	(mph)	5	10	15	20	TOTAL	CUM. TOTAL	TOTAL	CUM. TOTAL
64	0					41					0	62	0	126
64	0					40					0	62	0	126
64	0					39					0	62	0	126
64	0					38					0	62	0	126
64	0					37					0	62	0	126
64	0					36					0	62	0	126
64	0					35					0	62	0	126
64	0					34					0	62	0	126
64	0					33					0	62	0	126
64	1				1	32					0	62	1	126
63	1				1	31					0	62	1	125
62	0					30					0	62	0	124
62	1				1	29					0	62	1	124
61	1				1	28	1				1	62	2	123
60	1				1	27	1				1	61	2	121
59	2				1 1	26	1 1 1				3	60	5	119
57	4				1 1 1 1	25	1 1 1 1				4	57	8	114
53	9			1 1 1 1	1 1 1 1 1	24	1 1 1 1 1 1				6	53	15	106
44	9			1 1 1 1	1 1 1 1 1	23	1 1 1 1 1				5	47	14	91
35	5				1 1 1 1 1	22	1 1 1 1 1 1 1				7	42	12	77
30	11			1 1 1 1 1 1	1 1 1 1 1	21	1 1 1 1 1 1 1 1 1 1 1 1				13	35	24	65
19	11			1 1 1 1 1 1	1 1 1 1 1	20	1 1 1 1 1 1 1 1 1 1 1				12	22	23	41
8	3				1 1 1	19	1 1 1 1 1 1 1 1				8	10	11	18
5	2				1 1	18	1				1	2	3	7
3	2				1 1	17					0	1	2	4
1	1				1	16					0	1	1	2
0	0					15	1				1	1	1	1
0	0					14					0	0	0	0
0	0					13					0	0	0	0
0	0					12					0	0	0	0
0	0					11					0	0	0	0
0	0					10					0	0	0	0
0	0					9					0	0	0	0
0	0					8					0	0	0	0
0	0					7					0	0	0	0
0	0					6					0	0	0	0
0						5					0	0	0	0
						4					0	0	0	0
						3								
						2								
						1								
						0								
-	64	TOTAL								TOTAL	62	-	126	-

SPEED DATA SUMMARY	LEFT TURN	RIGHT TURN	-
95th PERCENTILE SPEED	28	26	-
85th PERCENTILE SPEED	25	24	-
50th PERCENTILE SPEED	22	21	-
15th PERCENTILE SPEED	20	19	-
5th PERCENTILE SPEED	18	19	-

ENGINEER: DH

DATE: 8/5/2014

ICON CONSULTANT GROUP INCORPORATED

VEHICLE SPOT SPEED STUDY

LOCATION ID: Fruitville Rd Arterial	SECTION: MP:
LOCATION: Fruitville Rd. at I-75 (Fruitville Rd)	COUNT LOCATION (GPS):
POSTED SPEED (mph): 45	COUNTY: Sarasota
DATE: 8/5/2014	PAVEMENT CONDITION:
OBSERVER: DPM	TIME FROM: 10:00 AM TIME TO: 11:00 AM
REMARKS:	

NUMBER OF VEHICLES EASTBOUND																								SPEED	NUMBER OF VEHICLES WESTBOUND																								BOTH DIRECTIONS	
CUM. TOTAL	TOTAL	20					15					10					5							(mph)					5					10					15					20					TOTAL	CUM. TOTAL	TOTAL	CUM. TOTAL
62	0																							61																								0	63	0	125
62	0																							60																								0	63	0	125
62	0																							59																								0	63	0	125
62	0																							58																								0	63	0	125
62	0																							57																								0	63	0	125
62	0																							56	1																								1	63	1	125
62	0																							55	1																								1	62	1	124
62	0																							54	1	1	1																						3	61	3	123
62	0																							53																								0	58	0	120
62	1																						1	52	1	1																						2	58	3	120
61	0																							51	1																								1	56	1	117
61	0																							50	1																								1	55	1	116
61	0																							49	1	1																								2	54	2	115
61	2																				1	1		48																										0	52	2	113
59	2																				1	1		47	1																										1	52	3	111
57	0																							46	1	1	1	1	1	1	1	1																		8	51	8	108
57	5																1	1	1	1	1			45	1	1	1	1	1	1																				6	43	11	100
52	0																							44	1	1	1	1	1																						5	37	5	89
52	7													1	1	1	1	1	1	1				43	1	1	1	1	1	1	1																				7	32	14	84
45	9									1	1	1	1	1	1	1	1	1	1	1				42	1	1	1	1	1	1	1	1																				8	25	17	70
36	3																		1	1	1			41	1	1																								2	17	5	53
33	6														1	1	1	1	1	1				40	1	1																								2	15	8	48
27	4																1	1	1	1				39	1	1																								2	13	6	40
23	7													1	1	1	1	1	1	1				38	1	1	1	1																						4	11	11	34
16	2																		1	1				37	1	1	1																								3	7	5	23
14	2																		1	1				36	1	1																								2	4	4	18
12	5																1	1	1	1	1			35	1																								1	2	6	14
7	5																1	1	1	1	1			34	1																								1	1	6	8
2	2																			1	1			33																								0	0	2	2
0	0																							32																								0	0	0	0
0	0																							31																								0	0	0	0
0	0																							30																								0	0	0	0
0	0																							29																								0	0	0	0
0	0																							28																								0	0	0	0
0	0																							27																								0	0	0	0
0	0																							26																								0	0	0	0
0																								25																								0	0	0	0
																								24																								0	0	0	0
																								23																											
																								22																											
																								21																											
																								20																											
-	62	TOTAL																																														TOTAL	63	-	125	-

SPEED DATA SUMMARY	EASTBOUND	WESTBOUND	BOTH DIRECTIONS
95th PERCENTILE SPEED	47	54	52
85th PERCENTILE SPEED	45	49	46
50th PERCENTILE SPEED	40	43	46
15th PERCENTILE SPEED	35	38	42
5th PERCENTILE SPEED	34	36	37

ENGINEER: DH

DATE: 8/5/2014

ICON CONSULTANT GROUP INCORPORATED

APPENDIX B

Calibration Parameter Modifications

Appendix B - Calibration Parameter Modifications

1. Edited Freeway Driving Behavior
    a. Cooperative Lane Change enabled and Maximum Speed Difference from 6.71 to 10 MPH
2. Created Freeway Weaving Driving Behavior
    a. CC1 Headway Time from 0.9 to 0.8 s
    b. Maximum Deceleration (trailing vehicle) from -9.84 to -13.10 ft/s^2
    c. Accepted Deceleration from -1.64 to -3.28 ft/s^2
    d. Min Headway from 1.64 to 1.55 ft
    e. Safety Distance Correction Factor from 0.6 to 0.3
    f. Maximum Deceleration for Cooperative Breaking from -9.84 to -13.1 ft/s^2
    g. Cooperative Lane Change enabled and Maximum Speed Difference from 6.71 to 10 MPH
3. Created Urban Weaving Driving Behavior
    a. Average standstill distance from 6.56 to 7.00
    b. Maximum Deceleration (own vehicle) from -13.12 to -15.0 ft/s^2
    c. Maximum Deceleration (trailing vehicle) from -9.84 to -12.0 ft/s^2
    d. Minimum headway (front/rear) from 1.64 to 1.5 ft
    e. Safety Distance Correction Factor from 0.6 to 0.2
    f. Maximum Deceleration for Cooperative Breaking from -9.84 to -15.0 ft/s^2
    g. Cooperative Lane Change enabled with Maximum Speed Difference at 6.71 MPH

APPENDIX C

Number of Simulation Runs Calculations

Appendix C - I-75 at Fruitville Rd (SR 780) - AM Model - Number of Simulation Runs Calculations

VISSIM Entry / Exit Location	Data Collection Pt	Volume (VISSIM)	Volume (Field)	Difference	% Difference	Standard Deviation (s)	Confidence Interval (CI)	Desired Range (CI/s)	t-statistic (95%)	Calculated N
Entry Univ SB Onramp	1	1394	1370	-24	-1.8%	26	70	2.7	2.223	2.8
Entry I-75 SB	2	3824	3878	54	1.4%	43	190	4.4	2.223	1.1
Entry Bee Rdg Loop Onramp	3	837	811	-26	-3.2%	15	80	5.3	2.223	0.7
Entry Bee Rdg Onramp	4	437	454	17	3.7%	15	70	4.7	2.223	1.0
Entry I-75 NB s FV	5	3334	3336	2	0.1%	51	170	3.3	2.223	1.8
Entry FV EB	6	1579	1621	42	2.6%	30	80	2.7	2.223	2.8
Entry FV WB	7	964	978	14	1.4%	49	100	2.0	2.223	4.8
Entry Hon NB	8	606	624	18	2.9%	23	60	2.6	2.223	3.0
Entry Hon SB	9	649	644	-5	-0.8%	14	60	4.3	2.223	1.1
Entry Para NB	10	213	221	8	3.6%	12	30	2.5	2.223	3.2
Entry Cat NB	11	621	650	29	4.5%	25	70	2.8	2.223	2.6
Entry Cat SB	12	648	661	13	2.0%	27	70	2.6	2.223	3.0
Entry Cob-stop	13	103	102	-1	-1.0%	7	20	2.9	2.223	2.5
Entry Cob-sig	14	226	229	3	1.3%	12	30	2.5	2.223	3.2
Exit I-75 NB	15	2777	2873	96	3.3%	58	140	2.4	2.223	3.4
Exit Univ NB Off	16	1486	1566	80	5.1%	35	80	2.3	2.223	3.8
Exit I-75 SB	17	2751	2807	56	2.0%	63	140	2.2	2.223	4.1
Exit Bee Rdg Off	18	1284	1321	37	2.8%	39	70	1.8	2.223	6.2
Exit FV EB	19	855	879	24	2.7%	39	90	2.3	2.223	3.8
Exit FV WB	20	2181	2273	92	4.0%	48	110	2.3	2.223	3.8
Exit Hon NB	21	694	719	25	3.5%	33	70	2.1	2.223	4.4
Exit Hon SB	22	509	520	11	2.1%	21	50	2.4	2.223	3.5
Exit Cat SB	41	782	803	21	2.6%	15	80	5.3	2.223	0.7
Exit Cat NB	42	661	686	25	3.6%	16	70	4.4	2.223	1.1
Exit Para SB	43	620	639	19	3.0%	14	60	4.3	2.223	1.1
Exit Cob-sig SB	44	416	437	21	4.8%	20	70	3.5	2.223	1.7
Exit Cob-stop NB	45	57	56	-1	-1.8%	6	10	1.7	2.223	7.2

Note: Volume (VISSIM) is an average of 11 initial runs.

Vehicle Volume	Confidence Interval
0 - 150	± 10%
151 - 500	± 7.5%
501 - 1000	± 5%
> 1000	± 2.5%

Appendix C - I-75 at Fruitville Rd (SR 780) - PM Model - Number of Simulation Runs Calculations

VISSIM Entry / Exit Location	Data Collection Pt	Volume (VISSIM)	Volume (Field)	Difference	% Difference	Standard Deviation (s)	Confidence Interval (CI)	Desired Range (CI/s)	t-statistic (95%)	Calculated N
Entry Univ SB Onramp	1	1728	1713	-15	-0.9%	24	90	3.8	2.223	1.5
Entry I-75 SB	2	2899	2953	54	1.8%	45	150	3.3	2.223	1.8
Entry Bee Rdg Loop Onramp	3	1038	1004	-34	-3.4%	19	50	2.6	2.223	2.9
Entry Bee Rdg Onramp	4	254	267	13	4.9%	18	40	2.2	2.223	4.1
Entry I-75 NB s FV	5	2958	2967	9	0.3%	57	150	2.6	2.223	2.9
Entry FV EB	6	2516	2576	60	2.3%	56	130	2.3	2.223	3.7
Entry FV WB	7	950	967	17	1.8%	51	100	2.0	2.223	5.2
Entry Hon NB	8	680	693	13	1.9%	27	70	2.6	2.223	3.0
Entry Hon SB	9	680	673	-7	-1.0%	19	70	3.7	2.223	1.5
Entry Para NB	10	444	477	33	6.9%	30	70	2.3	2.223	3.7
Entry Cat NB	11	981	1002	21	2.1%	23	50	2.2	2.223	4.2
Entry Cat SB	12	843	859	16	1.9%	35	90	2.6	2.223	3.0
Entry Cob-stop	13	81	81	0	0.0%	9	20	2.2	2.223	4.1
Entry Cob-sig	14	376	384	8	2.1%	20	60	3.0	2.223	2.2
Exit I-75 NB	15	4204	4282	78	1.8%	65	210	3.2	2.223	1.9
Exit Univ NB Off	16	1357	1383	26	1.9%	21	70	3.3	2.223	1.8
Exit I-75 SB	17	3551	3573	22	0.6%	49	180	3.7	2.223	1.5
Exit Bee Rdg Off	18	1236	1257	21	1.7%	35	60	1.7	2.223	6.8
Exit FV EB	19	715	730	15	2.1%	19	70	3.7	2.223	1.5
Exit FV WB	20	1805	1809	4	0.2%	39	90	2.3	2.223	3.8
Exit Hon NB	21	821	830	9	1.1%	35	80	2.3	2.223	3.8
Exit Hon SB	22	629	616	-13	-2.1%	25	60	2.4	2.223	3.5
Exit Cat SB	41	670	701	31	4.4%	17	70	4.1	2.223	1.2
Exit Cat NB	42	810	824	14	1.7%	32	80	2.5	2.223	3.2
Exit Para SB	43	324	333	9	2.7%	22	50	2.3	2.223	3.9
Exit Cob-sig SB	44	143	151	8	5.3%	11	20	1.8	2.223	6.0
Exit Cob-stop NB	45	125	126	1	0.8%	8	30	3.8	2.223	1.5

Note: Volume (VISSIM) is an average of 11 initial runs.

Vehicle Volume	Confidence Interval
0 - 150	± 10%
151 - 500	± 7.5%
501 - 1000	± 5%
> 1000	± 2.5%

APPENDIX D

Signal Timing Plans

CONTROLLER TIMING

Ring phase resides in	1	1	1	1	2	2	2	2
Direction of Traffic	WBL	EB	NBL	SB	EBL	WB	SBL	NB
Street Name	Fruitville	Fruitville	Honore	Honore	Fruitville	Fruitville	Honore	Honore
Phase	1	2	3	4	5	6	7	8
Min Green	7	20	7	7	7	20	7	7
Gap Extension	3.0	5.0	3.0	3.0	5.0	5.0	3.0	3.0
Maximum 1	17	55	25	28	25	55	22	30
Maximum 2	30	65	30	75	40	65	25	75
Yellow Clearance	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Red Clearance	1.5	1.5	1.0	1.5	1.5	1.5	1.0	1.5
Walk		7		7		7		7
Ped Clear		33		33		33		38
Flash Color	Red	Yellow	Red	Red	Red	Yellow	Red	Red
Dual Entry		ON		ON		ON		ON
Vehicle Recall		Min				Min		
Pedestrian Recall								
Lock Calls								
Rest in Walk		ON				ON		
Signal Display	Protected		Protected		Protected		Protected	
Veh L/S Position	1	2	3	4	5	6	7	8
Ped L/S Position		9		10		11		12

Overlap Programing

13			

MMU Programming

	CH 16	CH 15	CH 14	CH 13	CH 12	CH 11	CH 10	CH 9	CH 8	CH 7	CH 6	CH 5	CH 4	CH 3	CH 2
CH 1															
CH 2															
CH 3															
CH 4															
CH 5															
CH 6															
CH 7															
CH 8															
CH 9															
CH 10															
CH 11															
CH 12															
CH 13															
CH 14															
CH 15															

Minimum Flash Time: 8 4 2 1

24 Volt Latch Enable

CVM Latch Enable

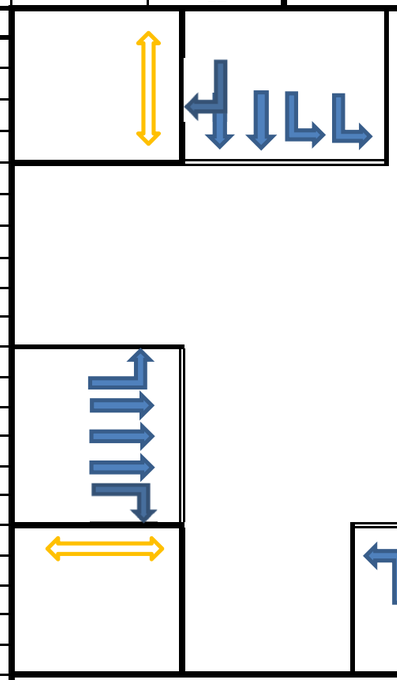
Minimum Yellow Change

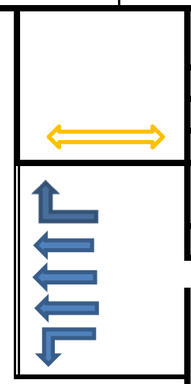
Disable Jumpers installed

8 7 6 5 4 3 2 1

16 15 14 13 12 11 10 9

Detector Channel	Direction / Position	Name / Label	Delay	EXT	Phase	Switch
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						





Intersection Information

Intersection ID#	1300
Cross streets	
Fruitville	
@	
Honore	

IP Communications Information

IP					
Mask					
Gtway					
TCP/IP Port #					

Notes: Run "Alternative Phase Times Table 1"

during all coordinated times.

Intersection Drawing Information

Phase Sequence -

Ring 1	1	2	Barrier	3	4					
Ring 2	6	5		7	8					

Phasing Diagram

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	North Arrow

Coord Modes		Action Table	Pattern Table					Split Information																	
								Split time per phase									Split Table Mode Settings per phase								
Force-off Mode	Offset Reference	Action Number	Pattern Number	Cycle Time	Offset Time	Split Number	Sequence Number	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Coord Phase	1	2	3	4	5	6	7	8
Fixed	EndGRN	1	1	140	58	1	2	18	78	19	25	23	73	21	23	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	2	2	140	57	2	2	20	52	20	48	25	47	17	51	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	3	3	140	42	3	2	18	78	19	25	23	73	21	23	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	4	4	135	6	4	2	22	55	21	37	25	52	17	41	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	5	5	160	103	5	2	26	78	24	32	38	66	24	32	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	6	6	160	83	6	2	26	84	24	26	38	72	24	26	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	7	7	150	94	7	2	31	64	28	27	40	55	26	29	6	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	8	8	150	39	8	1	21	46	57	26	25	42	55	28	2	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	9	9	150	119	9	1	16	18	61	55	20	14	89	27	2	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	10	10	150	39	10	1	23	35	59	33	27	31	56	36	2	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
Fixed	EndGRN	11	11	150	39	11	1	23	35	60	32	27	31	57	35	2	MIN	MAX	MIN	MIN	MAX	MAX	MIN	MIN
		12	12			12																			
		13	13			13																			
		14	14			14																			
		15	15			15																			
		16	16			16																			
		17	17			17																			
		18	18			18																			
		19	19			19																			
		20	20			20																			
		21	21			21																			
		22	22			22																			
		23	23			23																			
		24	24			24																			
		25	255																						
		26	1			1																			
		27	2			2																			
		28	3			3																			
		29	4			4																			
		30	5			5																			
		31	6			6																			
		32	7			7																			
		33	8			8																			
		34	9			9																			
		35	10			10																			
		36	11			11																			
		37	12			12																			
		38	13			13																			
		39	14			14																			
		40	15			15																			
		41	16			16																			
		42	17			17																			
		43	18			18																			
		44	19			19																			
		45	20			20																			
		46	21			21																			
		47	22			22																			
		48	23			23																			
		49	24			24																			
		50	48			32																			
		100	254																						

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Day Plan
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	On	On	On	On	On	Off	1
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	On	2
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	3

Day Plan 1	Monday through Friday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9	22	0	100
2	6	0	1	10			
3	7	20	3	11			
4	7	50	1	12			
5	9	0	6	13			
6	11	0	4	14			
7	15	0	5	15			
8	18	30	2	16			

Day Plan 2	Saturday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	7	30	2	10			
3	10	0	7	11			
4	19	0	2	12			
5	22	0	100	13			
6				14			
7				15			
8				16			

Day Plan 3	Sunday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	8	30	2	10			
3	10	30	7	11			
4	18	0	2	12			
5	21	0	100	13			
6				14			
7				15			
8				16			

CONTROLLER TIMING

Ring phase resides in	1	1	1	1	2	2	2	2
Direction of Traffic	WBL	EB				WB		NB
Street Name	Fruitville	Fruitville				Fruitville		Arthur Anderse
Phase	1	2	3	4	5	6	7	8
Min Green	7	20				20		7
Gap Extension	3.0	5.0				5.0		3.0
Maximum 1	10	45				45		25
Maximum 2	35	65				65		55
Yellow Clearance	4.5	4.5				4.5		4.0
Red Clearance	1.5	1.5				1.5		2.0
Walk		7				7		7
Ped Clear		21				21		37
Flash Color	No Flash	Yellow				Yellow		Red
Dual Entry								
Vehicle Recall		Min				Min		
Pedestrian Recall								
Lock Calls								
Rest in Walk		ON				ON		
Signal Display	5-Sec							
Veh L/S Position	1	2				6		8
Ped L/S Position		9						12

Overlap Programing

MMU Programming

	CH 16	CH 15	CH 14	CH 13	CH 12	CH 11	CH 10	CH 9	CH 8	CH 7	CH 6	CH 5	CH 4	CH 3	CH 2
CH 1															
CH 2															
CH 3															
CH 4															
CH 5															
CH 6															
CH 7															
CH 8															
CH 9															
CH 10															
CH 11															
CH 12															
CH 13															
CH 14															
CH 15															

Minimum Flash Time: 8 4 2 1

24 Volt Latch Enable

CVM Latch Enable

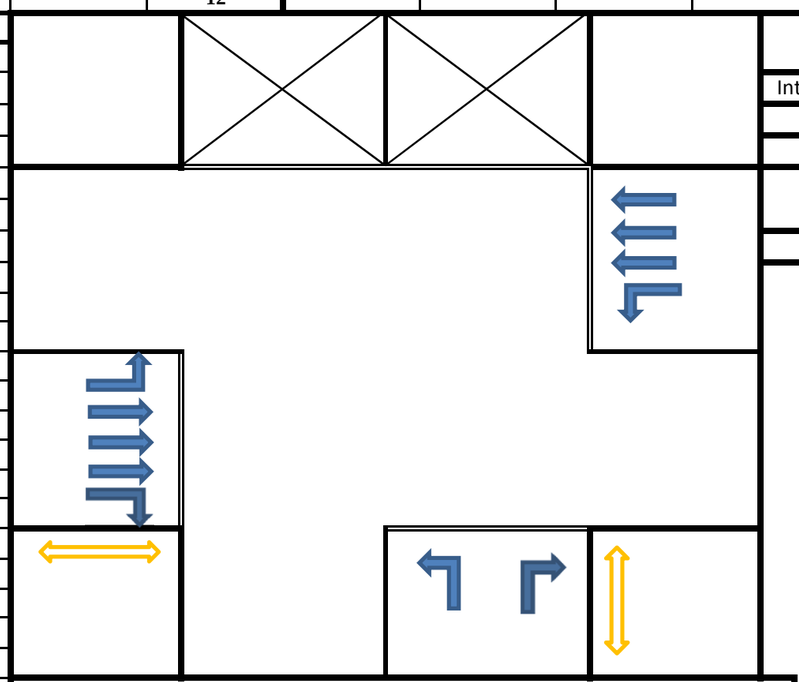
Minimum Yellow Change

Disable Jumpers installed

8 7 6 5 4 3 2 1

16 15 14 13 12 11 10 9

Detector Channel	Direction / Position	Name / Label	Delay	EXT	Phase	Switch
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						



Intersection Information

Intersection ID#	1302
Cross streets	
Fruitville	
@	
Arthur Andersen	

IP Communications Information

IP					
Mask					
Gtway					
TCP/IP Port #					

Notes: _____

Phase Sequence -

Ring 1	1	2	Barrier							
Ring 2		6			8					

Phasing Diagram

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	North Arrow

Intersection Drawing Information

Coord Modes		Action Table	Pattern Table					Split Information																	
								Split time per phase									Split Table Mode Settings per phase								
Force-off Mode	Offset Reference	Action Number	Pattern Number	Cycle Time	Offset Time	Split Number	Sequence Number	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Coord Phase	1	2	3	4	5	6	7	8
Fixed	EndGRN	1	1	140	8	1	1	34	59				93		47	2	NON	MAX				MAX		NON
Fixed	EndGRN	2	2	140	129	2	1	26	62				88		52	2	NON	MAX				MAX		NON
Fixed	EndGRN	3	3	140	132	3	1	34	59				93		47	2	NON	MAX				MAX		NON
Fixed	EndGRN	4	4	135	101	4	1	22	88				110		25	2	NON	MAX				MAX		NON
Fixed	EndGRN	5	5	160	24	5	1	26	109				135		25	2	NON	MAX				MAX		NON
Fixed	EndGRN	6	6	160	32	6	1	33	75				108		52	2	NON	MAX				MAX		NON
Fixed	EndGRN	7	7	150	140	7	1	25	100				125		25	2	NON	MAX				MAX		NON
Fixed	EndGRN	8	8	150	84	8	1	18	108				126		24	2	NON	MAX				MAX		NON
Fixed	EndGRN	9	9	150	105	9	1	19	109				128		22	2	NON	MAX				MAX		NON
Fixed	EndGRN	10	10	150	6	10	1	19	109				128		22	2	NON	MAX				MAX		NON
Fixed	EndGRN	11	11	150	9	11	1	18	108				126		24	2	NON	MAX				MAX		NON
		12	12			12																		
		13	13			13																		
		14	14			14																		
		15	15			15																		
		16	16			16																		
		17	17			17																		
		18	18			18																		
		19	19			19																		
		20	20			20																		
		21	21			21																		
		22	22			22																		
		23	23			23																		
		24	24			24																		
		25	255																					
		26	1			1																		
		27	2			2																		
		28	3			3																		
		29	4			4																		
		30	5			5																		
		31	6			6																		
		32	7			7																		
		33	8			8																		
		34	9			9																		
		35	10			10																		
		36	11			11																		
		37	12			12																		
		38	13			13																		
		39	14			14																		
		40	15			15																		
		41	16			16																		
		42	17			17																		
		43	18			18																		
		44	19			19																		
		45	20			20																		
		46	21			21																		
		47	22			22																		
		48	23			23																		
		49	24			24																		
		50	48			32																		
		100	254																					

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Day Plan
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	On	On	On	On	On	Off	1
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	On	2
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	3

Day Plan 1	Monday through Friday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9	22	0	100
2	6	0	1	10			
3	7	20	3	11			
4	7	50	1	12			
5	9	0	6	13			
6	11	0	4	14			
7	15	0	5	15			
8	18	30	2	16			

Day Plan 2	Saturday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	7	30	2	10			
3	10	0	7	11			
4	19	0	2	12			
5	22	0	100	13			
6				14			
7				15			
8				16			

Day Plan 3	Sunday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	8	30	2	10			
3	10	30	7	11			
4	18	0	2	12			
5	21	0	100	13			
6				14			
7				15			
8				16			

CONTROLLER TIMING

Ring phase resides in	1	1	1	1	2	2	2	2
Direction of Traffic	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Street Name	Fruitville	Fruitville	Cattlemen	Cattlemen	Fruitville	Fruitville	Cattlemen	Cattlemen
Phase	1	2	3	4	5	6	7	8
Min Green	7	20	7	7	7	20	7	7
Gap Extension	3.0	5.0	3.0	3.0	5.0	5.0	3.0	3.0
Maximum 1	20	75	25	20	20	75	25	20
Maximum 2	25	65	30	70	20	65	25	70
Yellow Clearance	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Red Clearance	1.5	1.5	1.0	2.0	1.5	1.5	1.0	2.0
Walk		7		7		7		7
Ped Clear		32		41		32		43
Flash Color	Red	Yellow	Red	Red	Red	Yellow	Red	Red
Dual Entry				ON				ON
Vehicle Recall		Min				Min		
Pedestrian Recall								
Lock Calls								
Rest in Walk		ON				ON		
Signal Display	Protected		Protected		Protected		Protected	
Veh L/S Position								
Ped L/S Position		13		14		15		16

Overlap Programing

9	10	11	12

MMU Programming

	CH 16	CH 15	CH 14	CH 13	CH 12	CH 11	CH 10	CH 9	CH 8	CH 7	CH 6	CH 5	CH 4	CH 3	CH 2
CH 1															
CH 2															
CH 3															
CH 4															
CH 5															
CH 6															
CH 7															
CH 8															
CH 9															
CH 10															
CH 11															
CH 12															
CH 13															
CH 14															
CH 15															

Minimum Flash Time

8 4 2 1

24 Volt Latch Enable

CVM Latch Enable

Minimum Yellow Change

Disable Jumpers installed

8 7 6 5 4 3 2 1

16 15 14 13 12 11 10 9

Detector Channel	Direction / Position	Name / Label	Delay	EXT	Phase	Switch
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
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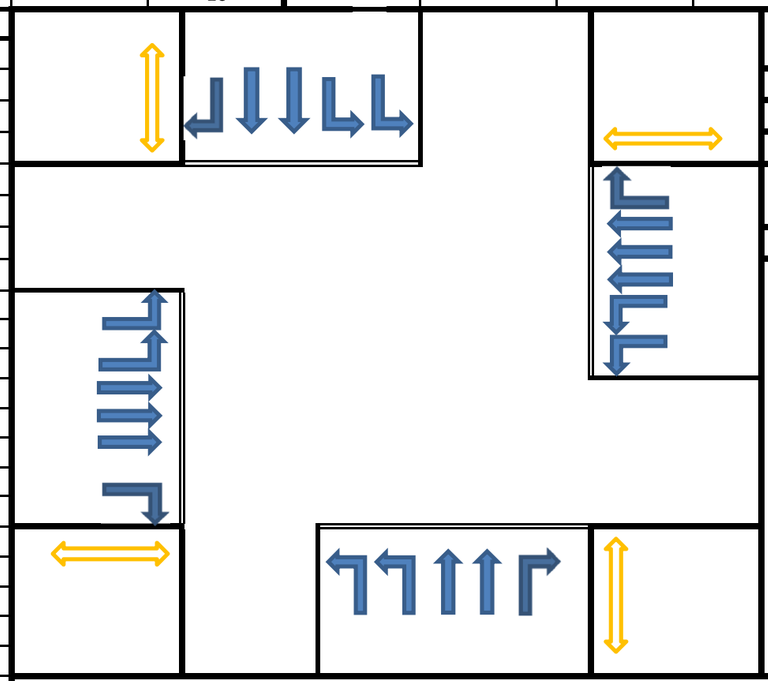
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						



Intersection Information

Intersection ID#	1304
Cross streets	
Fruitville	
@	
Cattlemen	

IP Communications Information

IP					
Mask					
Gtway					
TCP/IP Port #					

Notes: Run "Alternative Phase Times Table 1"

when running Actions 4, 5, and 6.

Intersection Drawing Information

Phase Sequence -

Ring 1	1	2	Barrier	3	4					
Ring 2	5	6		7	8					

Phasing Diagram

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	North Arrow

Coord Modes		Action Table	Pattern Table					Split Information																
								Split time per phase									Split Table Mode Settings per phase							
Force-off Mode	Offset Reference	Action Number	Pattern Number	Cycle Time	Offset Time	Split Number	Sequence Number	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Coord Phase	1	2	3	4	5	6	7	8
Fixed	EndGRN	1	1	140	124	1	1	29	66	28	17	29	66	28	17	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	2	2	140	21	2	1	24	64	23	29	19	69	19	33	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	3	3	140	108	3	1	29	70	24	17	29	70	24	17	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	4	4	135	85	4	1	19	52	29	35	20	51	29	35	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	5	5	160	27	5	1	25	85	29	21	25	85	29	21	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	6	6	160	11	6	1	27	77	24	32	18	86	24	32	2	NON	MAX	NON	NON	NON	MAX	NON	NON
Fixed	EndGRN	7	7	150	45	7	1	27	68	28	27	20	75	23	32	2	NON	MAX	NON	NON	NON	MAX	NON	NON
		8	8			8																		
		9	9			9																		
		10	10			10																		
		11	11			11																		
		12	12			12																		
		13	13			13																		
		14	14			14																		
		15	15			15																		
		16	16			16																		
		17	17			17																		
		18	18			18																		
		19	19			19																		
		20	20			20																		
		21	21			21																		
		22	22			22																		
		23	23			23																		
		24	24			24																		
		25	255																					
		26	1			1																		
		27	2			2																		
		28	3			3																		
		29	4			4																		
		30	5			5																		
		31	6			6																		
		32	7			7																		
		33	8			8																		
		34	9			9																		
		35	10			10																		
		36	11			11																		
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		42	17			17																		
		43	18			18																		
		44	19			19																		
		45	20			20																		
		46	21			21																		
		47	22			22																		
		48	23			23																		
		49	24			24																		
		50	48			32																		
		100	254																					

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Day Plan
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	On	On	On	On	On	Off	1
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	On	2
On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	3

Day Plan 1	Monday through Friday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9	22	0	100
2	6	0	1	10			
3	7	20	3	11			
4	7	50	1	12			
5	9	0	6	13			
6	11	0	4	14			
7	15	0	5	15			
8	18	30	2	16			

Day Plan 2	Saturday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	7	30	2	10			
3	10	0	7	11			
4	19	0	2	12			
5	22	0	100	13			
6				14			
7				15			
8				16			

Day Plan 3	Sunday						
Event	Time		Action	Event	Time		Action
1	0	0	100	9			
2	8	30	2	10			
3	10	30	7	11			
4	18	0	2	12			
5	21	0	100	13			
6				14			
7				15			
8				16			

Designed By:	RJ
Date:	08/2011
Checked By:	JOB
Date:	08/2011

SOP: *Special*

Location Details			
Section:	*17040*	Mile Post:	*5.14*
Major Street:	*Fruitville Rd (SR 780)*	Orientation:	*E-W*
Minor Street:	*I-75 SB Ramps*	Orientation:	*N-S*
Sig ID:	*939*	System ID:	*17000 A*

Controller Timings (seconds)

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	*EB/WB*	*SB*							
Turn Type									
Min Green	*20*	*7*							
Ext	*5.0*	*4.0*							
Yellow	*4.5*	*4.0*							
All Red	*4.5*	*3.0*							
Max I	*30*	*30*							
Max II	*65*	*95*							
Walk	*20*								
Flashing Don't Walk									
Detector Memory	*ON*	*OFF*							
Det. Cross Switch.									
Recall	*MIN*								
CNA	*ON*								
Coord Phase	*YES*								

Coordination Timings (seconds)

Pattern	C-O-S	Cycle Length	Splits								Offset A	Offset B
1	*1-1-1*	*140*	*78*	*62*							*125*	*125*
2	*1-2-2*	*140*	*86*	*54*							*0*	*0*
3	*1-3-3*	*140*	*78*	*62*							*109*	*109*
4	*2-1-1*	*135*	*85*	*50*							*102*	*102*
5	*3-1-1*	*160*	*105*	*55*							*45*	*45*
6	*3-2-2*	*160*	*105*	*55*							*34*	*34*
7	*6-1-1*	*150*	*96*	*54*							*72*	*72*
8	*8-1-1*	*150*	*93*	*57*							*21*	*21*
9	*8-2-2*	*150*	*106*	*44*							*124*	*124*
10	*8-3-3*	*150*	*102*	*48*							*10*	*10*
11	*8-4-4*	*150*	*62*	*88*							*0*	*0*

Offset Reference Point	
Offset A	*End of Main Street Green (phase 1)*
Offset B	*End of Main Street Walk (phase P1:CNA Offset)*

SOP Special

Ring - 1 | 1 | 2

Ring - 2

Notes:

1) Use Max II during coordination and Max I during FREE operation.

2) Use Fixed Force Offs.

Designed By: RJ
Date: 08/2011

Checked By: JRS
Date: 08/2011

Major Street: *Fruitville Rd (SR 780)*
Minor Street: *I-75 SB Ramps*

Coordination Timings (seconds) - Continued...											
Pattern	C-O-S	Cycle Length	Force Offs - CNA Inactive								
			1	2	3	4	5	6	7	8	
			EB/WB	SB							
1	1-1-1	140	0	64							
2	1-2-2	140	0	56							
3	1-3-3	140	0	64							
4	2-1-1	135	0	52							
5	3-1-1	160	0	57							
6	3-2-2	160	0	57							
7	6-1-1	150	0	56							
8	8-1-1	150	0	59							
9	8-2-2	150	0	46							
10	8-3-3	150	0	50							
11	8-4-4	150	0	90							

Coordination Timings (seconds) - Continued...											
Pattern	C-O-S	Cycle Length	Force Offs- CNA Active								
			1	2	3	4	5	6	7	8	
			EB/WB	SB							
1	1-1-1	140	0	64							
2	1-2-2	140	0	56							
3	1-3-3	140	0	64							
4	2-1-1	135	0	52							
5	3-1-1	160	0	57							
6	3-2-2	160	0	57							
7	6-1-1	150	0	56							
8	8-1-1	150	0	59							
9	8-2-2	150	0	46							
10	8-3-3	150	0	50							
11	8-4-4	150	0	90							

Coordination Timings (seconds) - Continued...											
Pattern	C-O-S	Cycle Length	End of Permissives								
			1	2	3	4	5	6	7	8	
			EB/WB	SB							
1	1-1-1	140	0	35							
2	1-2-2	140	0	25							
3	1-3-3	140	0	35							
4	2-1-1	135	0	25							
5	3-1-1	160	0	25							
6	3-2-2	160	0	25							
7	6-1-1	150	0	25							
8	8-1-1	150	0	44							
9	8-2-2	150	0	31							
10	8-3-3	150	0	35							
11	8-4-4	150	0	75							

Cycle Lengths								
	1	2	3	4	5	6	7	8
Sec	140	135	160			150		150

Offsets								
Sec	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
1	125	102	45			72		21
2	0		34					124
3	109							10
4								0
5								
%	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
1	89%	76%	28%			48%		14%
2	0%		21%					83%
3	78%							7%
4								0%
5								

Offset Reference Point	
	Start of First Through Movement
	Start of Second Through Movement
	Start of Arterial Phase
	End of Last Through Movement Green
	End of Penultimate Through Movement Green
	End of Arterial Phase Green
X	End of Last Through Movement Walk
	End of Penultimate Through Movement Walk
	End of Arterial Phase Walk

Year Program											
Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm
1	1	10	1	19	2	28	2	37	2	46	1
2	1	11	1	20	2	29	2	38	2	47	1
3	1	12	1	21	2	30	2	39	2	48	1
4	1	13	1	22	2	31	2	40	2	49	1
5	1	14	1	23	2	32	2	41	2	50	1
6	1	15	1	24	2	33	2	42	2	51	1
7	1	16	1	25	2	34	2	43	2	52	1
8	1	17	1	26	2	35	2	44	2	53	1
9	1	18	2	27	2	36	2	45	1		

Week Program							
Prgrm	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	3	1	1	1	1	1	2
2	3	1	1	1	1	1	2
3							
4							
5							
6							
7							
8							
9							
10							

Circuit Legend	
CKT	Description
9 - 12	Auxiliary MSD 1 - 4
13	Call for System (Coordination)
14	Call to Max II (Both Rings)
20 - 27	Vehicle Call Ø1 - Ø8
28 - 35	Pedestrian Call Ø1 - Ø8
64	Detector Low Threshold Inhibit
72 - 79	Max Plans 1 - 8 (MP 1 - MP 8)
80 - 87	Service Plans 1 - 8 (SP 1 - SP 8)

SARASOTA, FLORIDA

System # County Local # 5680

Fruitville Rd & I-75 SB (West)

Day Plan # 1				
Day	Time	Cycle	Split	Offset
M-F	00:00	CKT	13	OFF
M-F	06:00	CKT	13	ON
M-F	06:00	1	1	1
M-F	07:20	1	3	3
M-F	07:30	CKT	9	ON
M-F	07:50	1	1	1
M-F	09:00	3	2	2
M-F	10:00	CKT	9	OFF
M-F	11:00	2	1	1
M-F	12:30	CKT	9	ON
M-F	13:30	CKT	9	OFF
M-F	15:00	3	1	1
M-F	15:30	CKT	9	ON
M-F	18:30	1	2	2
M-F	18:30	CKT	9	OFF
M-F	22:00	CKT	13	OFF

Day Plan # 2				
Day	Time	Cycle	Split	Offset
SAT	00:00	CKT	13	OFF
SAT	07:30	CKT	13	ON
SAT	07:30	1	2	2
SAT	10:00	6	1	1
SAT	12:00	CKT	9	ON
SAT	13:30	CKT	9	OFF
SAT	19:00	1	2	2
SAT	22:00	CKT	13	OFF

Day Plan # 3				
Day	Time	Cycle	Split	Offset
SUN	00:00	CKT	13	OFF
SUN	08:30	CKT	13	ON
SUN	08:30	1	2	2
SUN	10:30	6	1	1
SUN	18:00	1	2	2
SUN	21:00	CKT	13	OFF

Day Plan # 4				
Day	Time	Cycle	Split	Offset

Day Plan # 5				
Day	Time	Cycle	Split	Offset

Day Plan # 6				
Day	Time	Cycle	Split	Offset

Designed By:	RJ
Date:	08/2011
Checked By:	JNB
Date:	08/2011
SOP:	*Special*

Location Details			
Section:	*17040*	Mile Post:	*5.364*
Major Street:	*Fruitville Rd (SR 780)*	Orientation:	*E-W*
Minor Street:	*I-75 NB Ramps*	Orientation:	*N-S*
Sig ID:	*940*	System ID:	*17000 A*

Controller Timings (seconds)

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	*EB/WB*	*NB*							
Turn Type									
Min Green	*20*	*12*							
Ext	*5.0*	*5.0*							
Yellow	*4.5*	*4.0*							
All Red	*1.5*	*3.5*							
Max I	*45*	*57*							
Max II	*65*	*115*							
Walk	*20*								
Flashing Don't Walk									
Detector Memory	*ON*	*OFF*							
Det. Cross Switch.									
Recall	*MIN*								
CNA	*ON*								
Coord Phase	*YES*								

Coordination Timings (seconds)

Pattern	C-O-S	Cycle Length	Splits								Offset A	Offset B
1	*1-1-1*	*140*	*64*	*76*							*122*	*122*
2	*1-2-2*	*140*	*67*	*73*							*0*	*0*
3	*1-3-3*	*140*	*59*	*81*							*106*	*106*
4	*2-1-1*	*135*	*70*	*65*							*87*	*87*
5	*3-1-1*	*160*	*75*	*85*							*28*	*28*
6	*3-2-2*	*160*	*87*	*73*							*5*	*5*
7	*6-1-1*	*150*	*70*	*80*							*51*	*51*
8	*8-1-1*	*150*	*40*	*110*							*8*	*8*
9	*8-2-2*	*150*	*62*	*88*							*137*	*137*
10	*8-3-3*	*150*	*59*	*91*							*21*	*21*
11	*8-4-4*	*150*	*63*	*87*							*22*	*22*

Offset Reference Point	
Offset A	*End of Main Street Green (phase 1)*
Offset B	*End of Main Street Walk (phase P1:CNA Offset)*

SOP Special

Ring - 1	1	2
Ring - 2		

Notes:

1) Use Max II during coordination and Max I during FREE operation.

2) Use Fixed Force Offs.

Designed By:	RJ	Checked By:	JWB	Major Street: *Fruitville Rd (SR 780)*
Date:	08/2011	Date:	08/2011	Minor Street: *I-75 NB Ramps*

Coordination Timings (seconds) - Continued...

Pattern	C-O-S	Cycle Length	Force Offs - CNA Inactive							
			1	2	3	4	5	6	7	8
			EB/WB	NB						
1	*1-1-1*	*140*	*0*	*75*						
2	*1-2-2*	*140*	*0*	*72*						
3	*1-3-3*	*140*	*0*	*80*						
4	*2-1-1*	*135*	*0*	*64*						
5	*3-1-1*	*160*	*0*	*84*						
6	*3-2-2*	*160*	*0*	*72*						
7	*6-1-1*	*150*	*0*	*79*						
8	*8-1-1*	*150*	*0*	*109*						
9	*8-2-2*	*150*	*0*	*87*						
10	*8-3-3*	*150*	*0*	*90*						
11	*8-4-4*	*150*	*0*	*86*						

Coordination Timings (seconds) - Continued...

Pattern	C-O-S	Cycle Length	Force Offs- CNA Active							
			1	2	3	4	5	6	7	8
			EB/WB	NB						
1	*1-1-1*	*140*	*0*	*75*						
2	*1-2-2*	*140*	*0*	*72*						
3	*1-3-3*	*140*	*0*	*80*						
4	*2-1-1*	*135*	*0*	*64*						
5	*3-1-1*	*160*	*0*	*84*						
6	*3-2-2*	*160*	*0*	*72*						
7	*6-1-1*	*150*	*0*	*79*						
8	*8-1-1*	*150*	*0*	*109*						
9	*8-2-2*	*150*	*0*	*87*						
10	*8-3-3*	*150*	*0*	*90*						
11	*8-4-4*	*150*	*0*	*86*						

Coordination Timings (seconds) - Continued...

Pattern	C-O-S	Cycle Length	End of Permissives							
			1	2	3	4	5	6	7	8
			EB/WB	NB						
1	*1-1-1*	*140*	*0*	*35*						
2	*1-2-2*	*140*	*0*	*30*						
3	*1-3-3*	*140*	*0*	*40*						
4	*2-1-1*	*135*	*0*	*30*						
5	*3-1-1*	*160*	*0*	*40*						
6	*3-2-2*	*160*	*0*	*30*						
7	*6-1-1*	*150*	*0*	*40*						
8	*8-1-1*	*150*	*0*	*92*						
9	*8-2-2*	*150*	*0*	*70*						
10	*8-3-3*	*150*	*0*	*73*						
11	*8-4-4*	*150*	*0*	*69*						

SARASOTA, FLORIDA

System # County Local # 5565

Fruitville Rd & I-75 NB (East)

Cycle Lengths								
	1	2	3	4	5	6	7	8
Sec	140	135	160			150		150

Offsets								
Sec	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
1	122	87	28			51		8
2	0		5					137
3	106							21
4								22
5								
%	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
1	87%	64%	18%			34%		5%
2	0%		3%					91%
3	76%							14%
4								15%
5								

Offset Reference Point	
	Start of First Through Movement
	Start of Second Through Movement
	Start of Arterial Phase
	End of Last Through Movement Green
	End of Penultimate Through Movement Green
	End of Arterial Phase Green
X	End of Last Through Movement Walk
	End of Penultimate Through Movement Walk
	End of Arterial Phase Walk

Year Program											
Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm	Week	Prgrm
1	1	10	1	19	2	28	2	37	2	46	1
2	1	11	1	20	2	29	2	38	2	47	1
3	1	12	1	21	2	30	2	39	2	48	1
4	1	13	1	22	2	31	2	40	2	49	1
5	1	14	1	23	2	32	2	41	2	50	1
6	1	15	1	24	2	33	2	42	2	51	1
7	1	16	1	25	2	34	2	43	2	52	1
8	1	17	1	26	2	35	2	44	2	53	1
9	1	18	2	27	2	36	2	45	1		

Week Program							
Prgrm	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	3	1	1	1	1	1	2
2	3	1	1	1	1	1	2
3							
4							
5							
6							
7							
8							
9							
10							

Circuit Legend	
CKT	Description
9 - 12	Auxiliary MSD 1 - 4
13	Call for System (Coordination)
14	Call to Max II (Both Rings)
20 - 27	Vehicle Call Ø1 - Ø8
28 - 35	Pedestrian Call Ø1 - Ø8
64	Detector Low Threshold Inhibit
72 - 79	Max Plans 1 - 8 (MP 1 - MP 8)
80 - 87	Service Plans 1 - 8 (SP 1 - SP 8)

SARASOTA, FLORIDA

System # County Local # 5565

Fruitville Rd & I-75 NB (East)

Day Plan # 1				
Day	Time	Cycle	Split	Offset
M-F	00:00	CKT	13	OFF
M-F	06:00	CKT	13	ON
M-F	06:00	1	1	1
M-F	07:20	1	3	3
M-F	07:50	1	1	1
M-F	09:00	3	2	2
M-F	11:00	2	1	1
M-F	15:00	3	1	1
M-F	18:30	1	2	2
M-F	22:00	CKT	13	OFF

Day Plan # 2				
Day	Time	Cycle	Split	Offset
SAT	00:00	CKT	13	OFF
SAT	07:30	CKT	13	ON
SAT	07:30	1	2	2
SAT	10:00	6	1	1
SAT	19:00	1	2	2
SAT	22:00	CKT	13	OFF

Day Plan # 3				
Day	Time	Cycle	Split	Offset
SUN	00:00	CKT	13	OFF
SUN	08:30	CKT	13	ON
SUN	08:30	1	2	2
SUN	10:30	6	1	1
SUN	18:00	1	2	2
SUN	21:00	CKT	13	OFF

Day Plan # 4				
Day	Time	Cycle	Split	Offset

Day Plan # 5				
Day	Time	Cycle	Split	Offset

Day Plan # 6				
Day	Time	Cycle	Split	Offset

Intersection Name: Fruitville Rd. & Coburn Rd. (# 5732) **Date:** 9/25/2012

	Phase (On/Off)							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB		NB	WBLT	EB		
Memory								
Ext Recall		On				On		
Max Recall								
Ped Recall								
CNA I								
CNA II								
FL Walk								
Soft Recall								
Walk Rest								
Cond Ped								
FWTPCL								

EBLT and WBL: Protected

SOP 13

Phases and Sequence Used								
Phases	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	On	On		On	On	On		
Sequence	2	1=Seq, 2=Dual ring, 3-7=Spec, 8=Lead/Lag						
Lead/Lag codes (only used if "8" was entered for sequence)								
Pairs	1 and 2		3 and 4		5 and 6		7 and 8	
Code								
Lead/lag Codes: 1=No Rev, 2=Always Rev, 3=Rev by C/S/O or Clock/Input								

	Phase Timings							
	1	2	3	4	5	6	7	8
Interval	EBLT	WB		NB	WBLT	EB		
Min Green	7	20		7	7	20		
Passage	3	5		4	3	5		
Yellow	4.5	4.5		4	4.5	4.5		
Red	2.5	2.5		2.5	2.5	2.5		
Max I	10	100		40	20	100		
Max II								
Walk				8		8		
Ped Clear				29		15		
S/A								
TBR								
TTR								
Min Gap								
Max VI								
Max Ext								
Auto Max								
AMR								

Initialize / Flash				
	Initialize	Enter Flash	Exit Flash	Interval Codes: 1=Red 2=Yellow 3=Green
Ring 1 Phase	2	1	2	
Ring 2 Phase	6	5	6	
Interval	3	1	3	

Power Up / Restart Timings		
Minimum Flash	0	(0-127 Seconds)
1st All Red After Flash	0	(0-127 Seconds)

APPENDIX E

Queue Storage Analysis &

Field vs. Model Queue Comparison

Existing Year (2014) AM Queue Storage Analysis

Intersection	Movement	Maximum Queue Length - Vissim (Feet)	Speed Limit (mph)	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	197	35	145	342	490
	NB TH	160	35	145	305	730
	NB RT	216	35	145	361	430
	SB LT	298	35	145	443	350
	SB TH	371	35	145	516	350
	SB RT	123	35	145	268	350
	EB LT	155	45	185	340	670
	EB TH	685	45	185	870	1460
	EB RT	67	45	185	252	1400
	WB LT	487	45	185	672	780
	WB TH	716	45	185	901	930
	WB RT	124	45	185	309	930
SB Off-ramp	SB LT	600	45	185	785	2065
	SB RT	606	45	185	791	1200
	EB TH	1176	45	185	1361	1190
	WB TH	976	45	185	1161	980
NB Off-ramp	NB LT	543	45	185	728	2250
	EB TH	490	45	185	675	1000
	WB TH	379	45	185	564	1560
Coburn Road (Signal)	NB LT	286	30	135	421	270
	NB RT	299	30	135	434	750
	EB TH	579	45	185	764	830
	EB RT	456	45	185	641	830
	WB LT	87	45	185	272	510
	WB TH	221	45	185	406	1240

Existing Year (2014) PM Queue Storage Analysis

Intersection	Approach	Maximum Queue Length - Vissim (Feet)	Speed Limit (mph)	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	311	35	145	456	490
	NB TH	349	35	145	494	730
	NB RT	672	35	145	817	430
	SB LT	555	35	145	700	350
	SB TH	233	35	145	378	350
	SB RT	131	35	145	276	350
	EB LT	222	45	185	407	670
	EB TH	1580	45	185	1765	1460
	EB RT	94	45	185	279	1400
	WB LT	217	45	185	402	780
	WB TH	532	45	185	717	930
	WB RT	137	45	185	322	930
SB Off-ramp	SB LT	405	45	185	590	2065
	SB RT	447	45	185	632	1200
	EB TH	1336	45	185	1521	1190
	WB TH	304	45	185	489	980
NB Off-ramp	NB LT	318	45	185	503	2250
	EB TH	199	45	185	384	1000
	WB TH	305	45	185	490	1560
Coburn Road (Signal)	NB LT	726	30	135	861	270
	NB RT	771	30	135	906	750
	EB TH	317	45	185	502	830
	EB RT	253	45	185	438	830
	WB LT	71	45	185	256	510
	WB TH	375	45	185	560	1240

Existing Year (2014) AM Field vs Model Queue Comparison

Intersection	Approach	Field Observed Queue (Feet)	VISSIM Model Queue (Feet)	% Change	Difference (Feet)
Cattlemen Road	WB	800	716	-11%	84
SB Offramp	SB	625	606	-3%	19
	WB	900	976	8%	76
NB Offramp	NB	500	543	9%	43

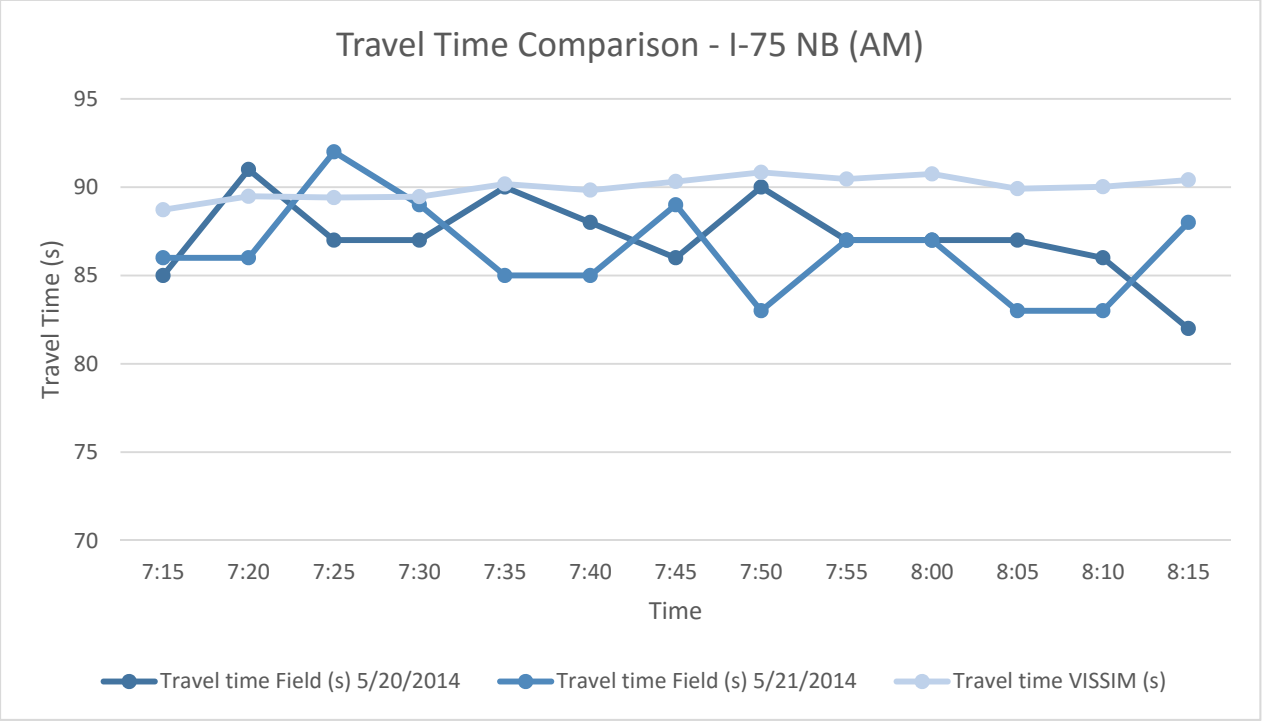
Existing Year (2014) PM Field vs Model Queue Comparison

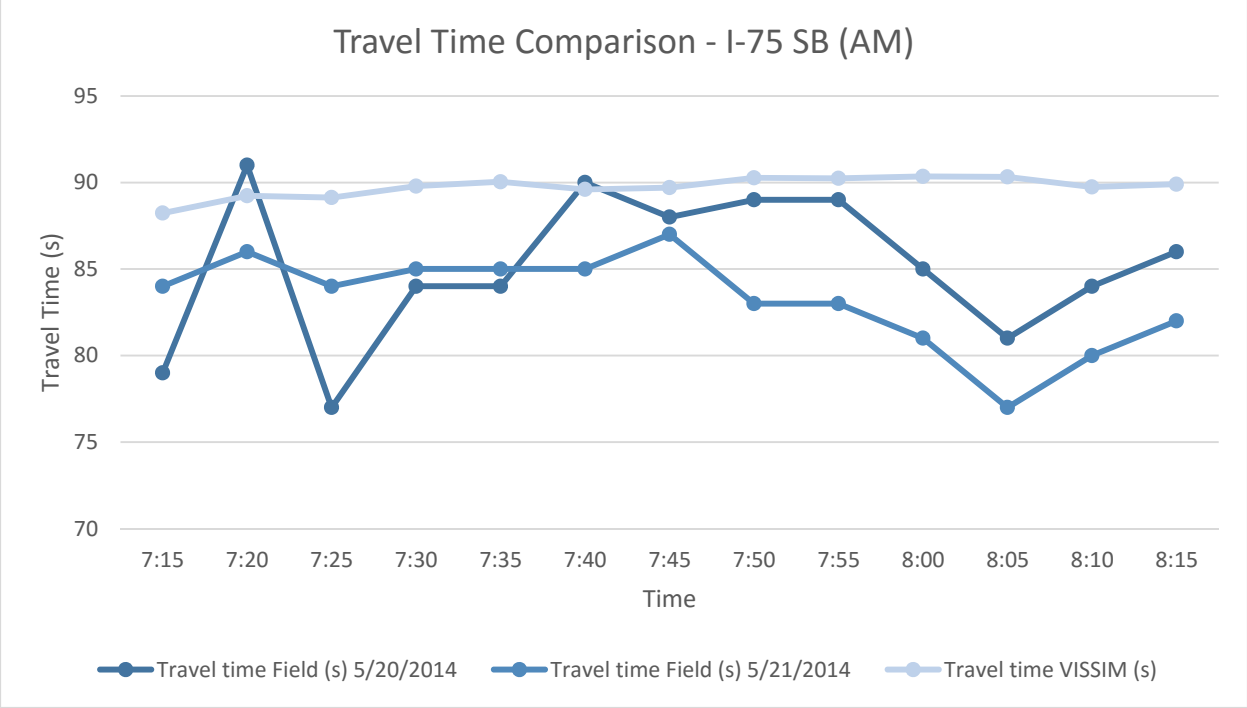
Intersection	Approach	Field Observed Queue (Feet)	VISSIM Model Queue (Feet)	% Change	Difference (Feet)
Paramount Drive	EB	1,700	1,794	6%	94
Cattlemen Road	EB	1,400	1,580	13%	180
SB Offramp	EB	1,100	1,336	21%	236

APPENDIX F

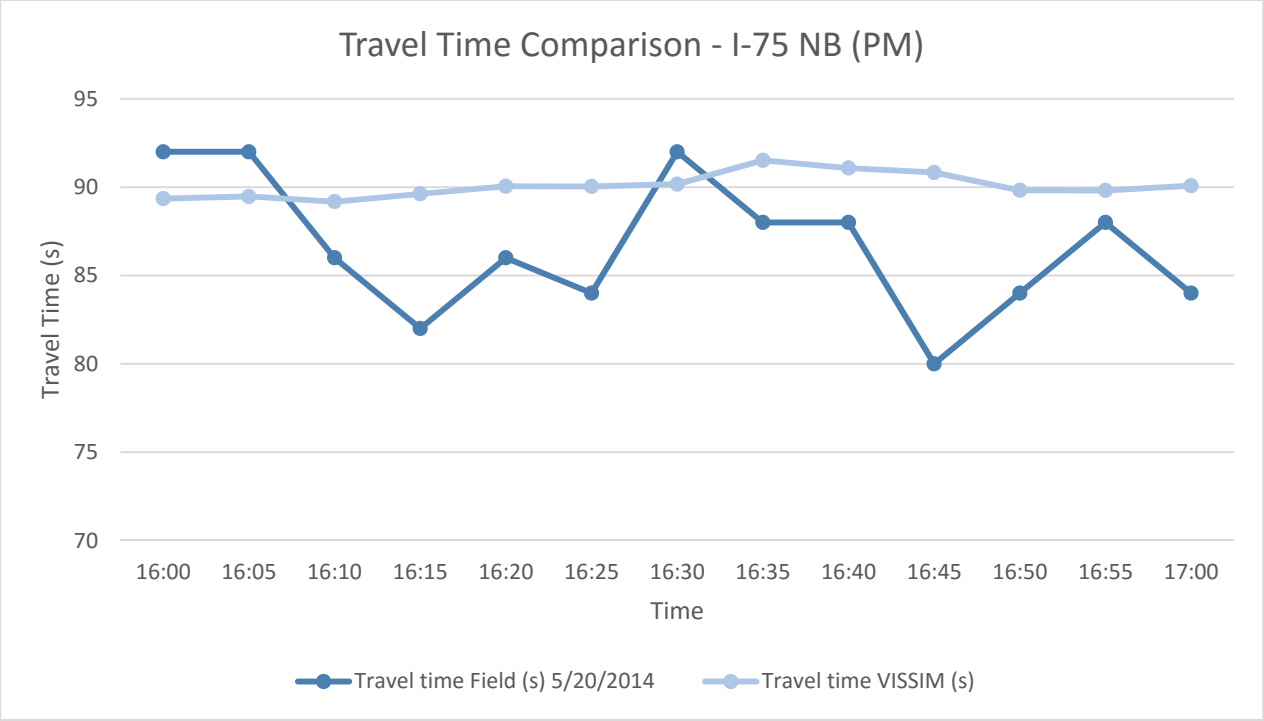
2014 Speed Profiles

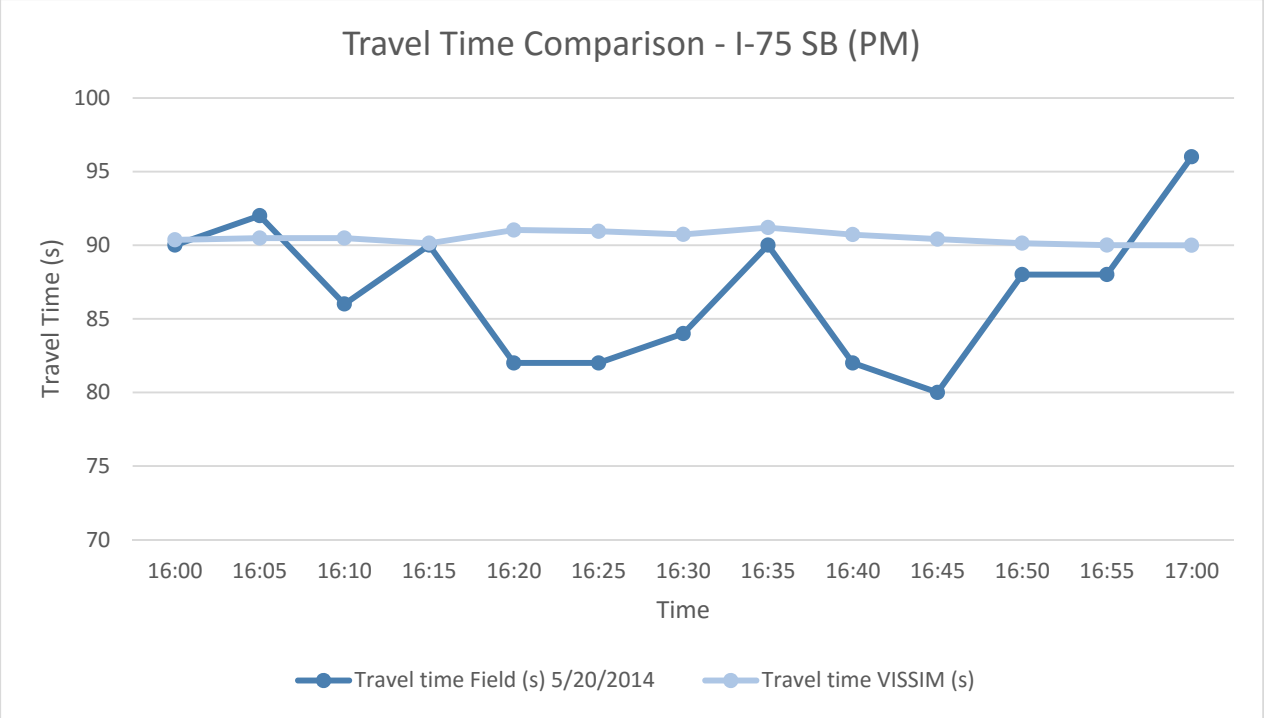
Speed Profiles: Field Travel Time Data and VISSIM Travel Time Comparison





Speed Profiles: Field Travel Time Data and VISSIM Travel Time Comparison





Addendum: VISSIM 8 Calibration Results

The existing year calibrated VISSIM model submitted as part of the approved *VISSIM Model Development and Calibration Memorandum* dated February 2, 2015 was created using VISSIM 7. A newer version of the software (VISSIM 8) has since been released and used to analyze the future conditions and report results for the I-75 at SR 780 (Fruitville Road) interchange Project Traffic Report. This Addendum has been prepared to verify that the VISSIM 8 existing year 2014 model Measures of Effectiveness (MOEs) still fall within the calibration target thresholds as outlined in the original Memorandum.

Calibration Target 1: Model Entry/ Exit point Volumes

Multiple simulation runs with existing year balanced AM and PM peak volumes were performed using VISSIM 8. The traffic volumes from VISSIM 8 model output were compared with the balanced counts collected in the field. Tables 1 and 2 summarize the peak hour flows at entry and exit locations.

The model traffic volumes fell within the target GEH statistic of less than 5 at all locations in both the AM and PM peak hour.

Table 1: Entry/Exit Volume Calibration Results – AM Model

VISSIM Entry / Exit Location	Data Collection Pt	Volume (Field)	VISSIM 7				VISSIM 8			
			Volume	Difference	% Difference	GEH	Volume	Difference	% Difference	GEH
Entry Univ SB Onramp	1	1370	1394	24	1.8%	0.6	1394	24	1.7%	0.6
Entry I-75 SB	2	3878	3824	54	1.4%	0.9	3824	54	1.4%	0.9
Entry Bee Rdg Loop Onramp	3	811	837	26	3.2%	0.9	837	26	3.1%	0.9
Entry Bee Rdg Onramp	4	454	437	17	3.7%	0.8	437	17	3.9%	0.8
Entry I-75 NB	5	3336	3334	2	0.1%	0.0	3334	2	0.1%	0.0
Entry Fruitville EB	6	1621	1579	42	2.6%	1.1	1579	42	2.7%	1.1
Entry Fruitville WB	7	978	964	14	1.4%	0.4	964	14	1.5%	0.4
Entry Honore NB	8	624	606	18	2.9%	0.7	606	18	3.0%	0.7
Entry Honore SB	9	644	649	5	0.8%	0.2	649	5	0.8%	0.2
Entry Paramount NB	10	221	213	8	3.6%	0.5	213	8	3.8%	0.5
Entry Cattlemen NB	11	650	621	29	4.5%	1.2	620	30	4.8%	1.2
Entry Cattlemen SB	12	661	648	13	2.0%	0.5	648	13	2.0%	0.5
Entry Coburn-stop	13	102	103	1	1.0%	0.1	103	1	1.0%	0.1
Entry Coburn-signal	14	229	226	3	1.3%	0.2	226	3	1.3%	0.2
Exit I-75 NB	15	2873	2777	96	3.3%	1.8	2777	96	3.5%	1.8
Exit Univ NB Offramp	16	1566	1486	80	5.1%	2.0	1486	80	5.4%	2.0
Exit I-75 SB	17	2807	2751	56	2.0%	1.1	2754	53	1.9%	1.0
Exit Bee Rdg Offramp	18	1321	1284	37	2.8%	1.0	1285	36	2.8%	1.0
Exit Fruitville EB	19	879	855	24	2.7%	0.8	857	22	2.6%	0.7
Exit Fruitville WB	20	2273	2181	92	4.0%	1.9	2180	93	4.3%	2.0
Exit Honore NB	21	719	694	25	3.5%	0.9	694	25	3.6%	0.9
Exit Honore SB	22	520	509	11	2.1%	0.5	509	11	2.2%	0.5
Exit Cattlemen SB	41	803	782	21	2.6%	0.7	782	21	2.7%	0.7
Exit Cattlemen NB	42	686	661	25	3.6%	1.0	661	25	3.8%	1.0
Exit Paramount SB	43	639	620	19	3.0%	0.8	620	19	3.1%	0.8
Exit Coburn-sig SB	44	437	416	21	4.8%	1.0	417	20	4.8%	1.0
Exit Coburn-stop NB	45	56	57	1	1.8%	0.1	58	2	3.4%	0.3

Table 2: Entry/Exit Volume Calibration Results – PM Model

VISSIM Entry / Exit Location	Data Collection Pt	Volume (Field)	VISSIM 7				VISSIM 8			
			Volume	Difference	% Difference	GEH	Volume	Difference	% Difference	GEH
Entry Univ SB Onramp	1	1713	1728	15	0.9%	0.4	1797	84	4.9%	2.0
Entry I-75 SB	2	2953	2899	54	1.8%	1.0	2914	39	1.3%	0.7
Entry Bee Rdg Loop Onramp	3	1004	1038	34	3.4%	1.1	982	22	2.2%	0.7
Entry Bee Rdg Onramp	4	267	254	13	4.9%	0.8	254	13	4.9%	0.8
Entry I-75 NB	5	2967	2958	9	0.3%	0.2	3098	131	4.4%	2.4
Entry Fruitville EB	6	2576	2516	60	2.3%	1.2	2456	120	4.7%	2.4
Entry Fruitville WB	7	967	950	17	1.8%	0.5	987	20	2.1%	0.6
Entry Honore NB	8	693	680	13	1.9%	0.5	726	33	4.8%	1.2
Entry Honore SB	9	673	680	7	1.0%	0.3	716	43	6.4%	1.6
Entry Paramount NB	10	477	444	33	6.9%	1.5	419	58	12.2%	2.7
Entry Cattlemen NB	11	1002	981	21	2.1%	0.7	1014	12	1.2%	0.4
Entry Cattlemen SB	12	859	843	16	1.9%	0.5	857	2	0.2%	0.1
Entry Coburn-stop	13	81	81	0	0.0%	0.0	76	5	6.2%	0.6
Entry Coburn-signal	14	384	376	8	2.1%	0.4	437	53	13.8%	2.6
Exit I-75 NB	15	4282	4204	78	1.8%	1.2	4226	56	1.3%	0.9
Exit Univ NB Offramp	16	1383	1357	26	1.9%	0.7	1369	14	1.0%	0.4
Exit I-75 SB	17	3573	3551	22	0.6%	0.4	3586	13	0.4%	0.2
Exit Bee Rdg Offramp	18	1257	1236	21	1.7%	0.6	1248	9	0.7%	0.3
Exit Fruitville EB	19	730	715	15	2.1%	0.6	718	12	1.6%	0.4
Exit Fruitville WB	20	1809	1805	4	0.2%	0.1	1857	48	2.7%	1.1
Exit Honore NB	21	830	821	9	1.1%	0.3	842	12	1.4%	0.4
Exit Honore SB	22	616	629	13	2.1%	0.5	636	20	3.2%	0.8
Exit Cattlemen SB	41	701	670	31	4.4%	1.2	636	65	9.3%	2.5
Exit Cattlemen NB	42	824	810	14	1.7%	0.5	822	2	0.2%	0.1
Exit Paramount SB	43	333	324	9	2.7%	0.5	313	20	6.0%	1.1
Exit Coburn-sig SB	44	151	143	8	5.3%	0.7	150	1	0.7%	0.1
Exit Coburn-stop NB	45	126	125	1	0.8%	0.1	118	8	6.3%	0.7

Calibration Target 2: Intersection Turning Movement Volumes

The second MOE used for calibration was turning movement volumes at each signalized intersection. Tables 3 and 4 summarize turning movement volumes at each signalized intersection compared with balanced existing year counts collected in the field for the AM and PM peak hours. The model traffic volumes fell within the target GEH number of less than 5 at all locations.

Table 3: Intersection Turning Movement Volume Calibration Results – AM Model

	Movement	Volume (Field)	VISSIM 7		VISSIM 8	
			Volume	GEH	Volume	GEH
Honore Avenue	NB LT	255	240	1.0	240	1.0
	NB TH	255	251	0.3	251	0.3
	NB RT	114	114	0.0	113	0.1
	SB LT	306	314	0.5	314	0.5
	SB TH	247	248	0.1	249	0.1
	SB RT	91	91	0.0	91	0.0
	EB LT	140	134	0.5	134	0.5
	EB TH	1313	1272	1.1	1272	1.1
	EB RT	168	162	0.5	162	0.5
	WB LT	105	99	0.6	99	0.6
	WB TH	1927	1866	1.4	1865	1.4
	WB RT	324	310	0.8	310	0.8
Paramount Drive	NB LT	76	71	0.6	71	0.6
	NB RT	145	141	0.3	141	0.3
	EB TH	1534	1496	1.0	1497	1.0
	EB RT	199	189	0.7	189	0.7
	WB LT	440	432	0.4	431	0.4
	WB TH	2280	2218	1.3	2216	1.3
Cattlemen Road	NB LT	227	215	0.8	215	0.8
	NB TH	154	143	0.9	143	0.9
	NB RT	269	258	0.7	258	0.7
	SB LT	295	296	0.1	296	0.1
	SB TH	199	192	0.5	192	0.5
	SB RT	167	156	0.9	156	0.9
	EB LT	158	150	0.6	150	0.6
	EB TH	1295	1261	1.0	1262	0.9
	EB RT	226	227	0.1	228	0.1
	WB LT	378	360	0.9	359	1.0
	WB TH	2326	2294	0.7	2290	0.7
	WB RT	374	366	0.4	366	0.4
SB Offramp	SB LT	568	550	0.8	550	0.8
	SB RT	1409	1364	1.2	1364	1.2
	EB TH	1339	1287	1.4	1290	1.4
	WB TH	1669	1650	0.5	1650	0.5
NB Offramp	NB LT	1214	1208	0.2	1206	0.2
	EB TH	952	909	1.4	908	1.4
	WB TH	792	773	0.7	773	0.7
Coburn Road (Stop Sign)	SB LT	8	8	0.0	8	0.0
	SB RT	94	95	0.1	95	0.1
	EB LT	45	46	0.1	47	0.3
	EB TH	1153	1115	1.1	1115	1.1
	WB TH	1041	1020	0.7	1021	0.6
	WB RT	11	11	0.0	11	0.0
Coburn Road (Signal)	NB LT	176	170	0.5	170	0.5
	NB RT	53	53	0.0	54	0.1
	EB TH	826	802	0.8	804	0.8
	EB RT	335	316	1.1	317	1.0
	WB LT	102	101	0.1	101	0.1
	WB TH	876	861	0.5	862	0.5

Table 4: Intersection Turning Movement Volume Calibration Results – PM Model

	Movement	Volume (Field)	VISSIM 7		VISSIM 8	
			Volume	GEH	Volume	GEH
Honore Avenue	NB LT	320	316	0.2	334	0.8
	NB TH	318	320	0.1	342	1.3
	NB RT	55	57	0.3	59	0.5
	SB LT	330	337	0.4	345	0.8
	SB TH	259	268	0.6	278	1.2
	SB RT	84	89	0.5	93	1.0
	EB LT	255	245	0.6	238	1.1
	EB TH	2137	2056	1.8	1990	3.2
	EB RT	184	178	0.4	173	0.8
	WB LT	173	185	0.9	186	1.0
	WB TH	1405	1400	0.1	1433	0.7
	WB RT	257	256	0.1	263	0.4
Paramount Drive	NB LT	127	119	0.7	120	0.6
	NB RT	350	318	1.8	288	3.5
	EB TH	2373	2266	2.2	2201	3.6
	EB RT	149	138	0.9	127	1.9
	WB LT	184	186	0.1	186	0.1
	WB TH	1708	1711	0.1	1749	1.0
Cattlemen Road	NB LT	329	308	1.2	315	0.8
	NB TH	298	291	0.4	296	0.1
	NB RT	375	365	0.5	368	0.4
	SB LT	405	394	0.6	391	0.7
	SB TH	219	216	0.2	216	0.2
	SB RT	235	224	0.7	225	0.7
	EB LT	237	222	1.0	221	1.1
	EB TH	2228	2098	2.8	2026	4.4
	EB RT	258	234	1.5	195	4.2
	WB LT	224	220	0.3	225	0.1
	WB TH	1328	1360	0.9	1391	1.7
	WB RT	289	292	0.2	297	0.5
SB Offramp	SB LT	218	209	0.6	213	0.3
	SB RT	873	861	0.4	879	0.2
	EB TH	2107	1979	2.8	1966	3.1
	WB TH	969	971	0.1	994	0.8
NB Offramp	NB LT	574	579	0.2	581	0.3
	EB TH	734	704	1.1	698	1.3
	WB TH	749	740	0.3	785	1.3
Coburn Road (Stop Sign)	SB LT	6	13	2.3	5	0.4
	SB RT	75	76	0.1	71	0.5
	EB LT	114	112	0.2	105	0.9
	EB TH	762	741	0.8	745	0.6
	WB TH	1226	1209	0.5	1291	1.8
	WB RT	12	13	0.3	14	0.6
Coburn Road (Signal)	NB LT	327	320	0.4	372	2.4
	NB RT	57	57	0.0	65	1.0
	EB TH	673	658	0.6	654	0.7
	EB RT	95	87	0.8	92	0.3
	WB LT	56	55	0.1	57	0.1
	WB TH	911	897	0.5	931	0.7

Calibration Target 3: Travel Time

As the last measure of Effectiveness (MOE), travel time results obtained from VISSIM 8 were compared with the Bluetooth data. All model travel times fell within the 15% target for calibration. Table 5 summarizes the AM and PM peak hour travel times.

Table 5: Travel Time Calibration Results for AM & PM

	Direction	Begin	End	Travel Time (sec.)				
				Bluetooth	VISSIM 7		VISSIM 8	
					VISSIM	% Diff	VISSIM	% Diff
AM Peak 7:15 - 8:15	EB Fruitville	Fruitville West of Cattleman	Fruitville West of Coburn Signal	132	131	0.80%	132	0.19%
	WB Fruitville	Fruitville East of Coburn Signal	Fruitville West of Cattleman	170	169	0.90%	153	9.85%
	NB I-75	NB I-75 South of Fruitville	NB I-75 North of Fruitville	89	90	1.10%	90	1.13%
	SB I-75	SB I-75 North of Fruitville	SB I-75 South of Fruitville	89	90	1.10%	90	0.91%
PM Peak 5:00 - 6:00	EB Fruitville	Fruitville West of Cattleman	Fruitville West of Coburn Signal	114	128	12.30%	116	2.10%
	WB Fruitville	Fruitville East of Coburn Signal	Fruitville West of Cattleman	137	151	10.20%	142	3.74%
	NB I-75	NB I-75 South of Fruitville	NB I-75 North of Fruitville	98	91	7.10%	90	8.01%
	SB I-75	SB I-75 North of Fruitville	SB I-75 South of Fruitville	87	91	4.60%	91	4.11%

The visual inspection of the model animation using VISSIM 8 showed queue lengths and traffic operations similar to what was observed during field reviews at the interchange and in the VISSIM 7 animations. In the AM model, the westbound traffic coming from the I-75 northbound and southbound off-ramps queues at the westbound Cattlemen Road signal. In the PM model, the eastbound traffic routing to I-75 correctly utilizes the right-most through lanes in preparation for entering the on-ramp and loop on-ramp. These observations were successfully replicated in the model.

Conclusion

Based on the calibration targets and visual audit in comparison with field observations and results obtained from the approved VISSIM 7 model, the existing year 2014 VISSIM 8 model is also calibrated and recommended for future analysis models.

Appendix E: VISSIM OUTPUT

VISSIM Output

Existing Year (2014) AM Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	215	64	197
	NB TH	143	68	160
	NB RT	258	21	216
	SB LT	296	65	298
	SB TH	192	78	371
	SB RT	156	13	123
	EB LT	150	69	155
	EB TH	1262	22	685
	EB RT	228	4	67
	WB LT	359	80	487
	WB TH	2290	17	716
	WB RT	366	6	124
Intersection Control Delay			**29**	
SB Off-ramp	SB LT	550	48	600
	SB RT	1364	52	606
	EB TH	1290	22	1176
	WB TH	1650	42	976
Intersection Control Delay			**40**	
NB Off-ramp	NB LT	1206	49	543
	EB TH	908	18	490
	WB TH	773	19	379
Intersection Control Delay			**31**	
Coburn Road (Signal)	NB LT	170	44	286
	NB RT	54	32	299
	EB TH	804	10	579
	EB RT	317	11	456
	WB LT	101	11	87
	WB TH	862	6	221
Intersection Control Delay			**12**	

VISSIM Output

Existing Year (2014) PM Intersection Operational Analysis

Intersection	Approach	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	315	76	311
	NB TH	296	100	349
	NB RT	368	85	672
	SB LT	391	92	555
	SB TH	216	74	233
	SB RT	225	10	131
	EB LT	221	93	222
	EB TH	2026	97	1580
	EB RT	195	102	94
	WB LT	225	91	217
	WB TH	1391	22	532
	WB RT	297	7	137
Intersection Control Delay			**70**	
SB Off-ramp	SB LT	213	51	405
	SB RT	879	57	447
	EB TH	1966	32	1336
	WB TH	994	15	304
Intersection Control Delay			**34**	
NB Off-ramp	NB LT	581	61	318
	EB TH	698	7	199
	WB TH	785	8	305
Intersection Control Delay			**23**	
Coburn Road (Signal)	NB LT	372	44	726
	NB RT	65	41	771
	EB TH	654	14	317
	EB RT	92	12	253
	WB LT	57	11	71
	WB TH	931	11	375
Intersection Control Delay			**19**	

VISSIM Output

Opening Year (2020) AM - SIMR Preferred Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	319	62	198
	NB TH	283	70	234
	NB RT	264	48	432
	SB LT	500	59	314
	SB TH	252	59	219
	SB RT	247	11	155
	EB LT	280	62	237
	EB TH	1468	29	502
	EB RT	333	3	0
	WB LT	369	68	307
	WB TH	2348	23	523
	WB RT	460	11	249
Intersection Control Delay			**34**	
SB Off-ramp	SB LT	639	35	625
	SB RT	1491	41	636
	EB TH	1507	1	14
	EB RT	731	2	14
	WB TH	1701	24	657
	WB RT	498	3	0
Intersection Control Delay			**20**	
NB Off-ramp	NB LT	1193	52	604
	NB RT	423	3	0
	EB TH	1109	18	438
	EB RT	1021	0	0
	WB TH	972	4	0
	WB RT	595	6	0
Intersection Control Delay			**17**	
Coburn Road (Signal)	NB LT	382	63	346
	NB TH	30	54	70
	NB RT	59	8	61
	SB LT	296	57	288
	SB TH	176	59	197
	SB RT	426	14	366
	EB LT	567	64	473
	EB TH	567	28	412
	EB RT	401	10	412
	WB LT	71	71	174
	WB TH	683	37	412
	WB RT	382	8	174
Intersection Control Delay			**37**	

VISSIM Output

Opening Year (2020) PM - SIMR Preferred Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	359	62	219
	NB TH	260	65	228
	NB RT	386	3	18
	SB LT	480	70	411
	SB TH	296	67	290
	SB RT	304	12	187
	EB LT	224	63	217
	EB TH	1979	56	755
	EB RT	286	3	0
	WB LT	281	84	270
	WB TH	1661	34	363
	WB RT	496	15	363
Intersection Control Delay			**44**	
SB Off-ramp	SB LT	573	46	516
	SB RT	1086	48	526
	EB TH	1775	3	95
	EB RT	1090	5	95
	WB TH	1372	34	489
	WB RT	441	2	0
Intersection Control Delay			**22**	
NB Off-ramp	NB LT	794	37	366
	NB RT	489	2	0
	EB TH	1009	22	486
	EB RT	1377	1	0
	WB TH	979	4	0
	WB RT	664	6	0
Intersection Control Delay			**12**	
Coburn Road (Signal)	NB LT	419	80	909
	NB TH	160	54	208
	NB RT	70	9	69
	SB LT	431	66	479
	SB TH	32	59	78
	SB RT	556	18	589
	EB LT	464	65	391
	EB TH	658	36	459
	EB RT	377	12	459
	WB LT	59	76	193
	WB TH	617	42	567
	WB RT	243	8	102
Intersection Control Delay			**43**	

VISSIM Output

Opening Year (2020) AM - DDI Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	306	91	346
	NB TH	287	70	266
	NB RT	269	10	133
	SB LT	494	105	662
	SB TH	256	60	221
	SB RT	247	14	202
	EB LT	316	76	276
	EB TH	1569	38	472
	EB RT	360	14	353
	WB LT	384	63	313
	WB TH	2283	34	781
	WB RT	457	14	499
Intersection Control Delay			**44**	
SB Off-ramp	SB LT	653	37	395
	SB RT	1470	36	565
	EB TH	1537	20	458
	EB RT	765	1	9
	WB LT	507	1	382
	WB TH	1717	41	600
Intersection Control Delay			**27**	
NB Off-ramp	NB LT	1201	30	461
	NB RT	425	35	294
	EB LT	1052	2	0
	EB TH	1107	28	455
	WB TH	991	34	453
	WB RT	597	9	0
Intersection Control Delay			**23**	
Coburn Road (Signal)	NB LT	389	66	466
	NB TH	31	53	65
	NB RT	59	7	63
	SB LT	303	60	302
	SB TH	181	62	202
	SB RT	426	1	0
	EB LT	550	71	466
	EB TH	565	22	319
	EB RT	398	8	319
	WB LT	68	71	181
	WB TH	675	35	432
	WB RT	384	14	205
Intersection Control Delay			**36**	

VISSIM Output

Opening Year (2020) PM - DDI Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	351	71	294
	NB TH	255	64	232
	NB RT	386	17	251
	SB LT	471	98	539
	SB TH	291	57	248
	SB RT	304	11	187
	EB LT	261	86	216
	EB TH	2348	24	654
	EB RT	330	10	277
	WB LT	284	70	252
	WB TH	1683	30	509
	WB RT	497	8	334
Intersection Control Delay			**36**	
SB Off-ramp	SB LT	576	45	382
	SB RT	1129	27	415
	EB TH	2038	23	988
	EB RT	1218	2	31
	WB LT	435	1	245
	WB TH	1338	42	465
Intersection Control Delay			**24**	
NB Off-ramp	NB LT	813	23	281
	NB RT	484	43	336
	EB LT	1590	2	0
	EB TH	1050	26	428
	WB TH	966	40	431
	WB RT	666	10	0
Intersection Control Delay			**21**	
Coburn Road (Signal)	NB LT	417	115	1113
	NB TH	160	59	210
	NB RT	70	8	64
	SB LT	431	67	562
	SB TH	32	62	75
	SB RT	557	1	0
	EB LT	470	67	360
	EB TH	677	26	393
	EB RT	387	13	393
	WB LT	59	71	157
	WB TH	618	32	457
	WB RT	242	7	96
Intersection Control Delay			**41**	

VISSIM Output

Design Year (2040) AM - SIMR Preferred Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	369	66	235
	NB TH	319	124	503
	NB RT	372	56	622
	SB LT	600	62	361
	SB TH	347	76	361
	SB RT	398	22	384
	EB LT	344	63	280
	EB TH	1676	32	481
	EB RT	267	3	0
	WB LT	453	61	377
	WB TH	3101	38	735
	WB RT	543	16	322
Intersection Control Delay			**44**	
SB Off-ramp	SB LT	748	36	628
	SB RT	1568	43	643
	EB TH	1866	1	0
	EB RT	782	2	0
	WB TH	2574	28	873
	WB RT	489	2	0
Intersection Control Delay			**21**	
NB Off-ramp	NB LT	1697	58	1388
	NB RT	889	12	0
	EB TH	1548	24	523
	EB RT	1059	0	0
	WB TH	1307	5	0
	WB RT	583	7	0
Intersection Control Delay			**22**	
Coburn Road (Signal)	NB LT	239	108	291
	NB TH	772	213	1440
	NB RT	67	43	60
	SB LT	441	204	1508
	SB TH	721	232	1508
	SB RT	401	168	1508
	EB LT	639	103	852
	EB TH	1297	65	1224
	EB RT	459	34	1224
	WB LT	153	180	656
	WB TH	1098	173	1621
	WB RT	307	122	207
Intersection Control Delay			**142**	

VISSIM Output

Design Year (2040) PM - SIMR Preferred Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	250	215	554
	NB TH	312	132	363
	NB RT	430	217	1061
	SB LT	586	90	555
	SB TH	351	71	365
	SB RT	394	24	400
	EB LT	284	72	292
	EB TH	2235	49	751
	EB RT	266	3	0
	WB LT	309	103	396
	WB TH	1783	80	959
	WB RT	566	19	539
Intersection Control Delay			**76**	
SB Off-ramp	SB LT	648	45	1517
	SB RT	1127	59	1527
	EB TH	1947	2	234
	EB RT	1328	6	234
	WB TH	1649	49	778
	WB RT	751	3	0
Intersection Control Delay			**25**	
NB Off-ramp	NB LT	873	38	404
	NB RT	562	2	0
	EB TH	1359	23	596
	EB RT	1275	0	0
	WB TH	1515	7	0
	WB RT	661	8	0
Intersection Control Delay			**13**	
Coburn Road (Signal)	NB LT	476	215	1480
	NB TH	832	277	1511
	NB RT	180	99	326
	SB LT	290	129	698
	SB TH	606	217	1510
	SB RT	417	142	1401
	EB LT	538	82	583
	EB TH	1127	53	887
	EB RT	229	21	887
	WB LT	57	193	168
	WB TH	1132	191	1627
	WB RT	387	142	265
Intersection Control Delay			**155**	

VISSIM Output

Design Year (2040) AM - DDI Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	374	72	349
	NB TH	337	75	305
	NB RT	381	13	215
	SB LT	603	116	536
	SB TH	355	66	319
	SB RT	401	30	470
	EB LT	392	69	359
	EB TH	1888	40	482
	EB RT	305	9	162
	WB LT	463	75	419
	WB TH	3097	38	1225
	WB RT	543	7	125
Intersection Control Delay			**46**	
SB Off-ramp	SB LT	741	35	447
	SB RT	1609	41	635
	EB TH	2041	22	819
	EB RT	854	1	11
	WB LT	504	2	713
	WB TH	2541	44	923
Intersection Control Delay			**30**	
NB Off-ramp	NB LT	1768	44	944
	NB RT	872	38	591
	EB LT	1159	2	0
	EB TH	1637	32	625
	WB TH	1359	47	651
	WB RT	620	10	0
Intersection Control Delay			**32**	
Coburn Road (Signal)	NB LT	234	127	831
	NB TH	752	260	1585
	NB RT	63	160	94
	SB LT	496	133	1511
	SB TH	801	189	1511
	SB RT	432	99	0
	EB LT	611	167	1689
	EB TH	1315	57	1629
	EB RT	465	35	1629
	WB LT	164	129	639
	WB TH	1176	111	1618
	WB RT	331	96	655
Intersection Control Delay			**127**	

VISSIM Output

Design Year (2040) PM - DDI Alternative - Intersection Operational Analysis

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	282	79	395
	NB TH	346	87	372
	NB RT	492	34	601
	SB LT	576	87	498
	SB TH	344	59	297
	SB RT	391	19	317
	EB LT	390	70	313
	EB TH	2996	37	980
	EB RT	348	10	239
	WB LT	360	75	313
	WB TH	1953	44	741
	WB RT	588	12	558
Intersection Control Delay			**45**	
SB Off-ramp	SB LT	651	45	427
	SB RT	1212	29	463
	EB TH	2481	24	1054
	EB RT	1632	2	163
	WB LT	784	2	329
	WB TH	1692	43	543
Intersection Control Delay			**24**	
NB Off-ramp	NB LT	904	24	316
	NB RT	548	44	399
	EB LT	1617	2	0
	EB TH	1530	22	520
	WB TH	1592	55	902
	WB RT	710	10	0
Intersection Control Delay			**26**	
Coburn Road (Signal)	NB LT	460	271	1638
	NB TH	793	309	1666
	NB RT	173	213	307
	SB LT	312	119	1297
	SB TH	647	199	1516
	SB RT	455	113	1192
	EB LT	599	108	800
	EB TH	1202	34	680
	EB RT	253	13	680
	WB LT	64	152	187
	WB TH	1274	154	1643
	WB RT	429	123	584
Intersection Control Delay			**149**	

VISSIM Output

Existing Year (2014) AM - 45 Minute Cool Down Period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	227	63	213
	NB TH	154	61	171
	NB RT	269	20	229
	SB LT	295	60	261
	SB TH	199	73	339
	SB RT	167	13	96
	EB LT	158	67	144
	EB TH	1295	21	546
	EB RT	226	4	64
	WB LT	378	77	454
	WB TH	2326	17	720
	WB RT	374	6	136
Intersection Control Delay			**29**	
SB Off-ramp	SB LT	568	48	560
	SB RT	1409	51	549
	EB TH	1339	23	849
	WB TH	1669	41	968
Intersection Control Delay			**37**	
NB Off-ramp	NB LT	1214	49	547
	EB TH	952	17	498
	WB TH	792	18	356
Intersection Control Delay			**32**	
Coburn Road (Signal)	NB LT	176	43	380
	NB RT	53	30	398
	EB TH	826	10	593
	EB RT	335	12	379
	WB LT	102	10	79
	WB TH	876	6	233
Intersection Control Delay			**15**	

VISSIM Output

Existing Year (2014) PM 45 Minute Cool Down Period

Intersection	Approach	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	180	74	230
	NB TH	176	79	245
	NB RT	215	51	484
	SB LT	242	81	451
	SB TH	123	69	167
	SB RT	127	8	89
	EB LT	144	86	196
	EB TH	1459	79	1527
	EB RT	191	91	281
	WB LT	128	91	172
	WB TH	792	21	464
	WB RT	167	7	126
Intersection Control Delay			**62**	
SB Off-ramp	SB LT	142	55	350
	SB RT	561	58	375
	EB TH	1326	21	1327
	WB TH	522	11	182
Intersection Control Delay			**29**	
NB Off-ramp	NB LT	340	63	255
	EB TH	467	5	150
	WB TH	330	6	176
Intersection Control Delay			**23**	
Coburn Road (Signal)	NB LT	134	25	200
	NB RT	23	15	246
	EB TH	421	8	187
	EB RT	66	7	166
	WB LT	24	8	48
	WB TH	391	6	135
Intersection Control Delay			**10**	

VISSIM Output

Opening Year (2020) AM - SIMR Preferred Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	252	60	201
	NB TH	235	83	348
	NB RT	224	44	439
	SB LT	330	61	304
	SB TH	174	58	197
	SB RT	167	10	155
	EB LT	235	69	258
	EB TH	1156	29	524
	EB RT	255	3	0
	WB LT	298	66	286
	WB TH	1708	24	541
	WB RT	345	12	249
Intersection Control Delay			**36**	
SB Off-ramp	SB LT	460	35	622
	SB RT	1093	41	633
	EB TH	1159	1	8
	EB RT	550	2	8
	WB TH	1269	21	668
	WB RT	357	2	0
Intersection Control Delay			**19**	
NB Off-ramp	NB LT	942	51	584
	NB RT	325	2	0
	EB TH	837	18	409
	EB RT	794	0	0
	WB TH	682	4	0
	WB RT	416	5	0
Intersection Control Delay			**17**	
Coburn Road (Signal)	NB LT	409	112	1058
	NB TH	30	56	82
	NB RT	63	7	62
	SB LT	125	60	186
	SB TH	78	64	145
	SB RT	177	12	152
	EB LT	405	62	416
	EB TH	450	22	365
	EB RT	303	9	365
	WB LT	44	72	144
	WB TH	476	33	388
	WB RT	256	8	131
Intersection Control Delay			**43**	

VISSIM Output

Opening Year (2020) PM - SIMR Preferred Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	169	64	163
	NB TH	124	68	187
	NB RT	185	2	6
	SB LT	247	68	294
	SB TH	159	68	190
	SB RT	159	8	98
	EB LT	153	63	198
	EB TH	1468	44	685
	EB RT	199	3	0
	WB LT	163	85	227
	WB TH	932	23	257
	WB RT	274	9	202
Intersection Control Delay			**38**	
SB Off-ramp	SB LT	368	51	451
	SB RT	690	52	462
	EB TH	1181	3	59
	EB RT	718	4	59
	WB TH	669	29	351
	WB RT	199	2	0
Intersection Control Delay			**21**	
NB Off-ramp	NB LT	426	34	261
	NB RT	251	1	0
	EB TH	623	23	432
	EB RT	920	1	0
	WB TH	442	3	0
	WB RT	315	4	0
Intersection Control Delay			**11**	
Coburn Road (Signal)	NB LT	168	65	220
	NB TH	66	62	120
	NB RT	28	8	51
	SB LT	257	62	302
	SB TH	18	58	65
	SB RT	319	12	265
	EB LT	262	60	280
	EB TH	397	20	311
	EB RT	217	8	311
	WB LT	23	71	87
	WB TH	232	24	186
	WB RT	95	4	54
Intersection Control Delay			**33**	

VISSIM Output

Opening Year (2020) AM - DDI Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	219	262	720
	NB TH	213	82	325
	NB RT	199	20	182
	SB LT	340	90	521
	SB TH	174	65	205
	SB RT	168	18	186
	EB LT	228	79	272
	EB TH	1208	33	431
	EB RT	257	10	247
	WB LT	268	69	300
	WB TH	1710	63	984
	WB RT	336	13	478
Intersection Control Delay			**58**	
SB Off-ramp	SB LT	448	41	362
	SB RT	1075	51	957
	EB TH	1206	24	517
	EB RT	570	1	7
	WB LT	351	2	402
	WB TH	1250	47	613
Intersection Control Delay			**33**	
NB Off-ramp	NB LT	927	30	439
	NB RT	327	35	280
	EB LT	828	2	0
	EB TH	836	29	489
	WB TH	674	42	421
	WB RT	410	8	0
Intersection Control Delay			**24**	
Coburn Road (Signal)	NB LT	403	162	1283
	NB TH	30	66	85
	NB RT	64	9	70
	SB LT	123	66	167
	SB TH	74	70	132
	SB RT	177	1	0
	EB LT	424	79	459
	EB TH	450	16	209
	EB RT	299	7	209
	WB LT	46	74	159
	WB TH	473	33	422
	WB RT	255	12	146
Intersection Control Delay			**52**	

VISSIM Output

Opening Year (2020) PM - DDI Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	169	69	234
	NB TH	125	63	165
	NB RT	184	10	119
	SB LT	245	65	340
	SB TH	157	56	187
	SB RT	160	8	89
	EB LT	125	78	180
	EB TH	1141	17	455
	EB RT	159	8	121
	WB LT	166	66	199
	WB TH	920	23	323
	WB RT	274	5	183
Intersection Control Delay			**29**	
SB Off-ramp	SB LT	366	42	327
	SB RT	680	26	377
	EB TH	976	17	675
	EB RT	599	1	11
	WB LT	199	1	0
	WB TH	670	39	327
Intersection Control Delay			**22**	
NB Off-ramp	NB LT	416	22	194
	NB RT	253	40	231
	EB LT	754	1	0
	EB TH	590	27	374
	WB TH	444	36	256
	WB RT	314	7	0
Intersection Control Delay			**20**	
Coburn Road (Signal)	NB LT	168	63	255
	NB TH	66	62	122
	NB RT	28	7	53
	SB LT	256	63	310
	SB TH	18	58	66
	SB RT	319	1	0
	EB LT	258	74	293
	EB TH	383	18	266
	EB RT	211	9	266
	WB LT	22	71	95
	WB TH	232	23	204
	WB RT	96	4	53
Intersection Control Delay			**33**	

VISSIM Output

Design Year (2040) AM - SIMR Preferred Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	256	182	600
	NB TH	260	218	892
	NB RT	283	102	958
	SB LT	394	62	336
	SB TH	242	102	390
	SB RT	276	32	386
	EB LT	281	72	282
	EB TH	1320	30	479
	EB RT	207	3	0
	WB LT	349	73	369
	WB TH	2264	71	975
	WB RT	406	18	352
Intersection Control Delay			**68**	
SB Off-ramp	SB LT	551	37	853
	SB RT	1168	54	869
	EB TH	1407	1	16
	EB RT	594	2	16
	WB TH	1877	45	1041
	WB RT	381	3	0
Intersection Control Delay			**28**	
NB Off-ramp	NB LT	1303	77	2057
	NB RT	676	23	0
	EB TH	1180	24	489
	EB RT	792	0	0
	WB TH	1007	5	0
	WB RT	445	7	0
Intersection Control Delay			**28**	
Coburn Road (Signal)	NB LT	119	241	237
	NB TH	414	539	1514
	NB RT	33	217	69
	SB LT	240	145	1190
	SB TH	401	259	1508
	SB RT	219	192	1511
	EB LT	493	119	786
	EB TH	1024	49	902
	EB RT	352	24	902
	WB LT	131	151	459
	WB TH	906	159	1624
	WB RT	256	123	471
Intersection Control Delay			**164**	

VISSIM Output

Design Year (2040) PM - SIMR Preferred Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	144	485	767
	NB TH	173	140	395
	NB RT	241	218	1052
	SB LT	303	71	373
	SB TH	182	71	229
	SB RT	210	28	289
	EB LT	205	67	248
	EB TH	1578	45	695
	EB RT	175	2	0
	WB LT	166	225	553
	WB TH	1029	225	994
	WB RT	321	20	678
Intersection Control Delay			**114**	
SB Off-ramp	SB LT	313	164	5946
	SB RT	568	501	5956
	EB TH	1295	2	93
	EB RT	871	4	93
	WB TH	972	145	903
	WB RT	496	3	0
Intersection Control Delay			**87**	
NB Off-ramp	NB LT	448	106	542
	NB RT	277	18	0
	EB TH	772	22	571
	EB RT	834	0	0
	WB TH	1000	7	21
	WB RT	448	8	0
Intersection Control Delay			**19**	
Coburn Road (Signal)	NB LT	195	64	271
	NB TH	346	64	445
	NB RT	76	10	67
	SB LT	173	135	437
	SB TH	384	265	1509
	SB RT	269	191	1511
	EB LT	289	63	337
	EB TH	652	33	608
	EB RT	125	12	608
	WB LT	42	128	151
	WB TH	810	123	1618
	WB RT	271	84	347
Intersection Control Delay			**105**	

VISSIM Output

Design Year (2040) AM - DDI Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	295	81	408
	NB TH	266	81	366
	NB RT	302	15	214
	SB LT	403	102	491
	SB TH	232	65	270
	SB RT	275	30	368
	EB LT	297	69	330
	EB TH	1460	42	475
	EB RT	227	9	179
	WB LT	367	75	401
	WB TH	2353	38	1160
	WB RT	419	8	134
Intersection Control Delay			**46**	
SB Off-ramp	SB LT	543	35	410
	SB RT	1153	41	607
	EB TH	1525	23	739
	EB RT	642	1	9
	WB LT	372	2	650
	WB TH	1966	44	906
Intersection Control Delay			**31**	
NB Off-ramp	NB LT	1317	44	933
	NB RT	689	40	576
	EB LT	851	2	0
	EB TH	1210	34	617
	WB TH	996	46	674
	WB RT	423	9	0
Intersection Control Delay			**32**	
Coburn Road (Signal)	NB LT	156	242	1266
	NB TH	531	420	1662
	NB RT	43	316	80
	SB LT	261	154	1517
	SB TH	452	193	1518
	SB RT	247	100	0
	EB LT	502	315	2237
	EB TH	1048	89	2181
	EB RT	364	57	2181
	WB LT	125	186	704
	WB TH	845	177	1644
	WB RT	238	166	691
Intersection Control Delay			**189**	

VISSIM Output

Design Year (2040) PM - DDI Alternative - 45 Minute Cool Down period

Intersection	Movement	Volume (Veh./Hr)	Control Delay (Sec/Veh)	Maximum Queue Length (Feet)
Cattlemen Road	NB LT	124	475	445
	NB TH	150	103	244
	NB RT	206	46	377
	SB LT	301	84	429
	SB TH	182	58	194
	SB RT	214	35	352
	EB LT	236	69	277
	EB TH	1882	46	864
	EB RT	213	9	203
	WB LT	209	77	361
	WB TH	1096	106	793
	WB RT	333	8	259
Intersection Control Delay			**67**	
SB Off-ramp	SB LT	375	45	374
	SB RT	679	75	991
	EB TH	1447	37	964
	EB RT	972	2	71
	WB LT	475	3	225
	WB TH	955	64	481
Intersection Control Delay			**38**	
NB Off-ramp	NB LT	449	31	359
	NB RT	291	43	300
	EB LT	939	2	0
	EB TH	897	21	416
	WB TH	964	75	878
	WB RT	421	12	0
Intersection Control Delay			**31**	
Coburn Road (Signal)	NB LT	211	118	913
	NB TH	370	97	985
	NB RT	79	31	112
	SB LT	217	143	1406
	SB TH	472	268	1523
	SB RT	330	177	1524
	EB LT	349	72	377
	EB TH	708	29	547
	EB RT	149	11	547
	WB LT	34	105	135
	WB TH	685	95	1623
	WB RT	231	59	447
Intersection Control Delay			**107**	

Design Year (2040) Vehicle Travel Time results - DDI Alternative

	Direction	From Link	To Link	Distance (Feet)	Number of Vehicles	Travel Time (sec)
AM	WB	88: I-75 NB s of FV	217: WB FV	5360	1260	198
		76: I-75 SB n of FV	217: WB FV	4300	1178	172
PM	EB	204: FV EB at Para	709: SB Onramp	5410	990	162
		204: FV EB at Para	24	6397	1032	195

Design Year (2040) Vehicle Travel Time results - SIMR Alternative

	Direction	From Link	To Link	Distance (Feet)	Number of Vehicles	Travel Time (sec)
AM	WB	88: I-75 NB s of FV	217: WB FV	5360	1265	211
		76: I-75 SB n of FV	217: WB FV	4300	1216	134
PM	EB	204: FV EB at Para	30134: SB Onramp	5410	721	245
		204: FV EB at Para	30131: I-75 NB	7763	736	279

VISSIM Output

Opening Year (2020) AM - DDI Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit (mph)	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	346	35	145	491	440
	NB TH	266	35	145	411	712
	NB RT	133	35	145	278	470
	SB LT	662	35	145	807	839
	SB TH	221	35	145	366	2290
	SB RT	202	35	145	347	886
	EB LT	276	45	185	461	661
	EB TH	472	45	185	657	1400
	EB RT	353	45	185	538	1278
	WB LT	313	45	185	498	761
	WB TH	781	45	185	966	1048
	WB RT	499	45	185	684	708
SB Off-ramp	SB LT	395	45	185	580	2000
	SB RT	565	45	185	750	1116
	EB TH	458	30	135	593	1110
	EB RT	9	30	135	144	1141
	WB LT	382	30	135	517	600
	WB TH	600	30	135	735	800
NB Off-ramp	NB LT	461	45	185	646	1900
	NB RT	294	45	185	479	1910
	EB LT	0	30	135	135	870
	EB TH	455	30	135	590	1020
	WB TH	453	30	135	588	1560
	WB RT	0	30	135	135	915
Coburn Road (Signal)	NB LT	466	30	135	601	375
	NB TH	65	30	135	200	1610
	NB RT	63	30	135	198	570
	SB LT	302	30	135	437	386
	SB TH	202	30	135	337	1470
	SB RT	0	30	135	135	246
	EB LT	466	45	185	651	566
	EB TH	319	45	185	504	2250
	EB RT	319	45	185	504	2250
	WB LT	181	45	185	366	435
	WB TH	432	45	185	617	1610
	WB RT	205	45	185	390	350

VISSIM Output

Opening Year (2020) PM - DDI Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	294	35	145	439	440
	NB TH	232	35	145	377	712
	NB RT	251	35	145	396	470
	SB LT	539	35	145	684	839
	SB TH	248	35	145	393	2290
	SB RT	187	35	145	332	886
	EB LT	216	45	185	401	661
	EB TH	654	45	185	839	1400
	EB RT	277	45	185	462	1278
	WB LT	252	45	185	437	761
	WB TH	509	45	185	694	1048
	WB RT	334	45	185	519	708
SB Off-ramp	SB LT	382	45	185	567	2000
	SB RT	415	45	185	600	1116
	EB TH	988	30	135	1123	1110
	EB RT	31	30	135	166	1141
	WB LT	245	30	135	380	600
	WB TH	465	30	135	600	800
NB Off-ramp	NB LT	281	45	185	466	1900
	NB RT	336	45	185	521	1910
	EB LT	0	30	135	135	870
	EB TH	428	30	135	563	1020
	WB TH	431	30	135	566	1560
	WB RT	0	30	135	135	915
Coburn Road (Signal)	NB LT	1113	30	135	1248	375
	NB TH	210	30	135	345	1610
	NB RT	64	30	135	199	570
	SB LT	562	30	135	697	386
	SB TH	75	30	135	210	1470
	SB RT	0	30	135	135	246
	EB LT	360	45	185	545	566
	EB TH	393	45	185	578	2250
	EB RT	393	45	185	578	2250
	WB LT	157	45	185	342	435
	WB TH	457	45	185	642	1610
	WB RT	96	45	185	281	350

VISSIM Output

Opening Year (2020) AM - SIMR Preferred Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	198	35	145	343	510
	NB TH	234	35	145	379	690
	NB RT	432	35	145	577	635
	SB LT	314	35	145	459	830
	SB TH	219	35	145	364	890
	SB RT	155	35	145	300	270
	EB LT	237	45	185	422	670
	EB TH	502	45	185	687	1435
	EB RT	0	45	185	185	1335
	WB LT	307	45	185	492	730
	WB TH	523	45	185	708	900
	WB RT	249	45	185	434	844
SB Off-ramp	SB LT	625	45	185	810	2110
	SB RT	636	45	185	821	790
	EB TH	14	45	185	199	970
	EB RT	14	45	185	199	1070
	WB TH	657	45	185	842	990
	WB RT	0	45	185	185	900
NB Off-ramp	NB LT	604	45	185	789	2235
	NB RT	0	45	185	185	2480
	EB TH	438	45	185	623	1285
	EB RT	0	45	185	185	1160
	WB TH	0	45	185	185	1685
	WB RT	0	45	185	185	1140
Coburn Road (Signal)	NB LT	346	30	135	481	365
	NB TH	70	30	135	205	1460
	NB RT	61	30	135	196	540
	SB LT	288	30	135	423	385
	SB TH	197	30	135	332	1470
	SB RT	366	30	135	501	250
	EB LT	473	45	185	658	580
	EB TH	412	45	185	597	2445
	EB RT	412	45	185	597	2445
	WB LT	174	45	185	359	435
	WB TH	412	45	185	597	1610
	WB RT	174	45	185	359	350

VISSIM Output

Opening Year (2020) PM - SIMR Preferred Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	219	35	145	364	510
	NB TH	228	35	145	373	690
	NB RT	18	35	145	163	635
	SB LT	411	35	145	556	830
	SB TH	290	35	145	435	890
	SB RT	187	35	145	332	270
	EB LT	217	45	185	402	670
	EB TH	755	45	185	940	1435
	EB RT	0	45	185	185	1335
	WB LT	270	45	185	455	730
	WB TH	363	45	185	548	900
	WB RT	363	45	185	548	844
SB Off-ramp	SB LT	516	45	185	701	2110
	SB RT	526	45	185	711	790
	EB TH	95	45	185	280	970
	EB RT	95	45	185	280	1070
	WB TH	489	45	185	674	990
	WB RT	0	45	185	185	900
NB Off-ramp	NB LT	366	45	185	551	2235
	NB RT	0	45	185	185	2480
	EB TH	486	45	185	671	1285
	EB RT	0	45	185	185	1160
	WB TH	0	45	185	185	1685
	WB RT	0	45	185	185	1140
Coburn Road (Signal)	NB LT	909	30	135	1044	365
	NB TH	208	30	135	343	1460
	NB RT	69	30	135	204	540
	SB LT	479	30	135	614	385
	SB TH	78	30	135	213	1470
	SB RT	589	30	135	724	250
	EB LT	391	45	185	576	580
	EB TH	459	45	185	644	2445
	EB RT	459	45	185	644	2445
	WB LT	193	45	185	378	435
	WB TH	567	45	185	752	1610
	WB RT	102	45	185	287	350

VISSIM Output

Design Year (2040) AM - DDI Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit (mph)	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	349	35	145	494	440
	NB TH	305	35	145	450	712
	NB RT	215	35	145	360	470
	SB LT	536	35	145	681	839
	SB TH	319	35	145	464	2290
	SB RT	470	35	145	615	886
	EB LT	359	45	185	544	661
	EB TH	482	45	185	667	1400
	EB RT	162	45	185	347	1278
	WB LT	419	45	185	604	761
	WB TH	1225	45	185	1410	1048
	WB RT	125	45	185	310	708
SB Off-ramp	SB LT	447	45	185	632	2000
	SB RT	635	45	185	820	1116
	EB TH	819	30	135	954	1110
	EB RT	11	30	135	146	1141
	WB LT	713	30	135	848	600
	WB TH	923	30	135	1058	800
NB Off-ramp	NB LT	944	45	185	1129	1900
	NB RT	591	45	185	776	1910
	EB LT	0	30	135	135	870
	EB TH	625	30	135	760	1020
	WB TH	651	30	135	786	1560
	WB RT	0	30	135	135	915
Coburn Road (Signal)	NB LT	831	30	135	966	375
	NB TH	1585	30	135	1720	1610
	NB RT	94	30	135	229	570
	SB LT	1511	30	135	1646	386
	SB TH	1511	30	135	1646	1470
	SB RT	0	30	135	135	246
	EB LT	1689	45	185	1874	566
	EB TH	1629	45	185	1814	2250
	EB RT	1629	45	185	1814	2250
	WB LT	639	45	185	824	435
	WB TH	1618	45	185	1803	1610
	WB RT	655	45	185	840	350

VISSIM Output

Design Year (2040) PM - DDI Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit (mph)	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	395	35	145	540	440
	NB TH	372	35	145	517	712
	NB RT	601	35	145	746	470
	SB LT	498	35	145	643	839
	SB TH	297	35	145	442	2290
	SB RT	317	35	145	462	886
	EB LT	313	45	185	498	661
	EB TH	980	45	185	1165	1400
	EB RT	239	45	185	424	1278
	WB LT	313	45	185	498	761
	WB TH	741	45	185	926	1048
	WB RT	558	45	185	743	708
SB Off-ramp	SB LT	427	45	185	612	2000
	SB RT	463	45	185	648	1116
	EB TH	1054	30	135	1189	1110
	EB RT	163	30	135	298	1141
	WB LT	329	30	135	464	600
	WB TH	543	30	135	678	800
NB Off-ramp	NB LT	316	45	185	501	1900
	NB RT	399	45	185	584	1910
	EB LT	0	30	135	135	870
	EB TH	520	30	135	655	1020
	WB TH	902	30	135	1037	1560
	WB RT	0	30	135	135	915
Coburn Road (Signal)	NB LT	1638	30	135	1773	375
	NB TH	1666	30	135	1801	1610
	NB RT	307	30	135	442	570
	SB LT	1297	30	135	1432	386
	SB TH	1516	30	135	1651	1470
	SB RT	1192	30	135	1327	246
	EB LT	800	45	185	985	566
	EB TH	680	45	185	865	2250
	EB RT	680	45	185	865	2250
	WB LT	187	45	185	372	435
	WB TH	1643	45	185	1828	1610
	WB RT	584	45	185	769	350

VISSIM Output

Design Year (2040) AM - SIMR Preferred Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	235	35	145	380	510
	NB TH	503	35	145	648	690
	NB RT	622	35	145	767	635
	SB LT	361	35	145	506	830
	SB TH	361	35	145	506	890
	SB RT	384	35	145	529	270
	EB LT	280	45	185	465	670
	EB TH	481	45	185	666	1435
	EB RT	0	45	185	185	1335
	WB LT	377	45	185	562	730
	WB TH	735	45	185	920	900
	WB RT	322	45	185	507	844
SB Off-ramp	SB LT	628	45	185	813	2110
	SB RT	643	45	185	828	790
	EB TH	0	45	185	185	970
	EB RT	0	45	185	185	1070
	WB TH	873	45	185	1058	990
	WB RT	0	45	185	185	900
NB Off-ramp	NB LT	1388	45	185	1573	2235
	NB RT	0	45	185	185	2480
	EB TH	523	45	185	708	1285
	EB RT	0	45	185	185	1160
	WB TH	0	45	185	185	1685
	WB RT	0	45	185	185	1140
Coburn Road (Signal)	NB LT	291	30	135	426	365
	NB TH	1440	30	135	1575	1460
	NB RT	60	30	135	195	540
	SB LT	1508	30	135	1643	385
	SB TH	1508	30	135	1643	1470
	SB RT	1508	30	135	1643	250
	EB LT	852	45	185	1037	580
	EB TH	1224	45	185	1409	2445
	EB RT	1224	45	185	1409	2445
	WB LT	656	45	185	841	435
	WB TH	1621	45	185	1806	1610
	WB RT	207	45	185	392	350

VISSIM Output

Design Year (2040) PM - SIMR Preferred Alternative - Queue Analysis

Intersection	Movement	Maximum Queue Length (Feet)	Speed Limit	Deceleration Distance (Feet)	Required Queue Storage (Feet)	Queue Storage Length (Feet)
Cattlemen Road	NB LT	554	35	145	699	510
	NB TH	363	35	145	508	690
	NB RT	1061	35	145	1206	635
	SB LT	555	35	145	700	830
	SB TH	365	35	145	510	890
	SB RT	400	35	145	545	270
	EB LT	292	45	185	477	670
	EB TH	751	45	185	936	1435
	EB RT	0	45	185	185	1335
	WB LT	396	45	185	581	730
	WB TH	959	45	185	1144	900
	WB RT	539	45	185	724	844
SB Off-ramp	SB LT	1517	45	185	1702	2110
	SB RT	1527	45	185	1712	790
	EB TH	234	45	185	419	970
	EB RT	234	45	185	419	1070
	WB TH	778	45	185	963	990
	WB RT	0	45	185	185	900
NB Off-ramp	NB LT	404	45	185	589	2235
	NB RT	0	45	185	185	2480
	EB TH	596	45	185	781	1285
	EB RT	0	45	185	185	1160
	WB TH	0	45	185	185	1685
	WB RT	0	45	185	185	1140
Coburn Road (Signal)	NB LT	1480	30	135	1615	365
	NB TH	1511	30	135	1646	1460
	NB RT	326	30	135	461	540
	SB LT	698	30	135	833	385
	SB TH	1510	30	135	1645	1470
	SB RT	1401	30	135	1536	250
	EB LT	583	45	185	768	580
	EB TH	887	45	185	1072	2445
	EB RT	887	45	185	1072	2445
	WB LT	168	45	185	353	435
	WB TH	1627	45	185	1812	1610
	WB RT	265	45	185	450	350

VISSIM Output

Design Year (2040) AM PM - DDI Alternative - Demand-Simulated Volume Comparison

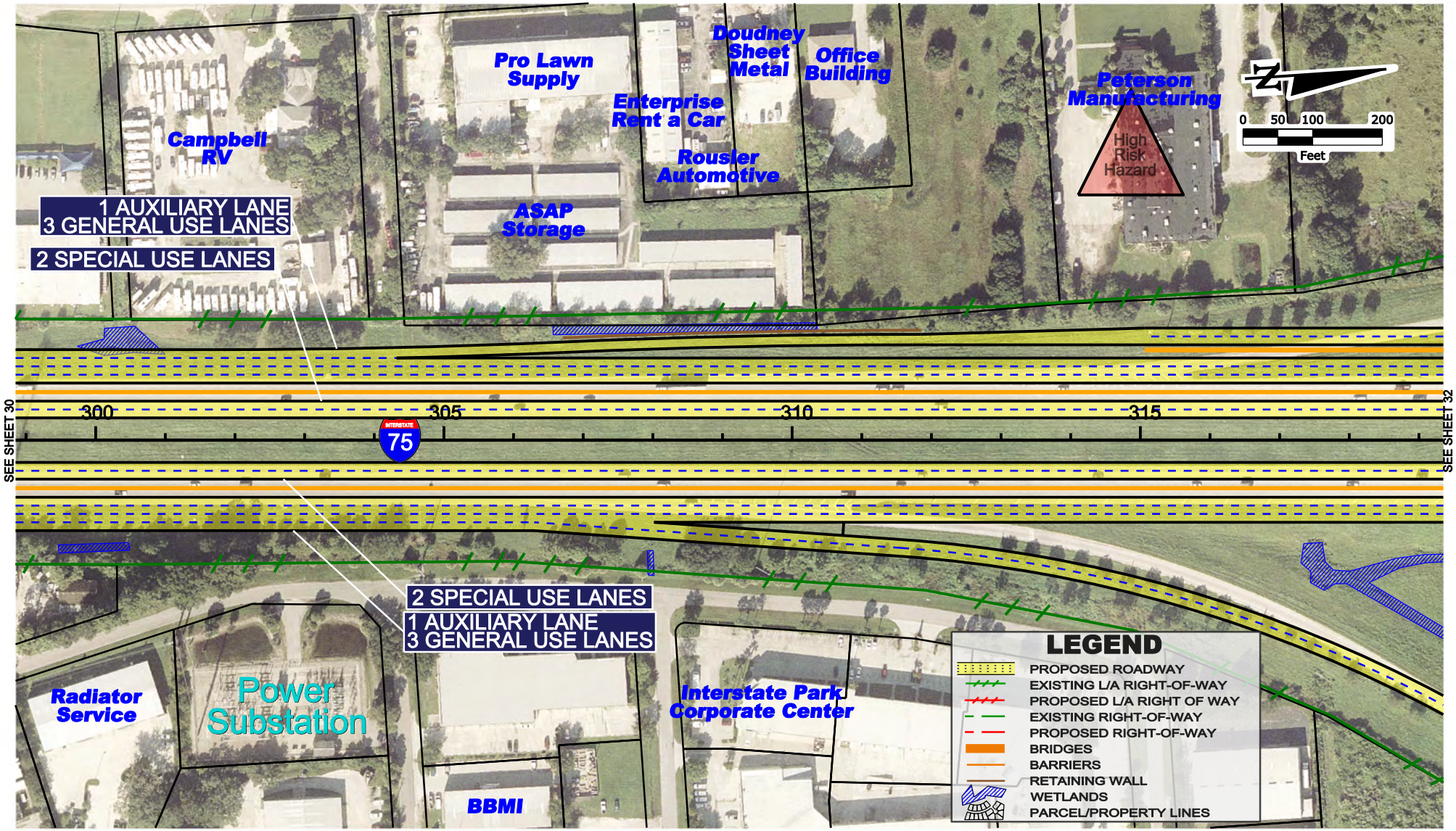
Intersection	Movement	AM				PM			
		Simulated Volume (Veh./Hr)	Demand (Veh./Hr)	Difference (Veh./Hr)	% Difference	Simulated Volume (Veh./Hr)	Demand (Veh./Hr)	Difference (Veh./Hr)	% Difference
Cattlemen Road	NB	1092	1120	28	3%	1120	1175	55	5%
	SB	1359	1370	11	1%	1311	1335	24	2%
	EB	2585	2730	145	5%	3734	4100	366	9%
	WB	4103	4380	277	6%	2901	2990	89	3%
SB Off-ramp	SB	2350	2500	150	6%	1863	1850	13	1%
	EB	2895	2990	95	3%	4113	4380	267	6%
	WB	3045	3230	185	6%	2476	2700	224	8%
NB Off-ramp	NB	2640	2650	10	0%	1452	1430	22	2%
	EB	2796	2910	114	4%	3147	3290	143	4%
	WB	1979	2140	161	8%	2302	2620	318	12%
Coburn Road (Signal)	NB	1049	1185	136	11%	1426	1540	114	7%
	SB	1729	1960	231	12%	1414	1930	516	27%
	EB	2391	2620	229	9%	2054	2140	86	4%
	WB	1671	1855	184	10%	1767	2010	243	12%
I-75 Mainline	NB South of Fruitville	6043	6025	18	0%	4848	5190	342	7%
	NB North of Fruitville	6280	6850	570	8%	7079	7590	511	7%
	SB North of Fruitville	7315	7590	275	4%	6802	6850	48	1%
	SB South of Fruitville	4854	5190	336	6%	5858	6025	167	3%
I-75 Ramps	NB On Ramp	1779	1850	71	4%	2327	2500	173	7%
	NB Off Ramp	2640	2650	10	0%	1452	1430	22	2%
	SB On Ramp	1358	1430	72	5%	2416	2650	234	9%
	SB Off Ramp	2350	2500	150	6%	1863	1850	13	1%

VISSIM Output

Design Year (2040) AM PM -SIMR Alternative - Demand-Simulated Volume Comparison

Intersection	Movement	AM				PM			
		Simulated Volume (Veh./Hr)	Demand (Veh./Hr)	Difference	% Difference	Simulated Volume (Veh./Hr)	Demand (Veh./Hr)	Difference	% Difference
Cattlemen Road	NB	1092	1120	28	3%	992	1175	183	18%
	SB	1359	1370	11	1%	1331	1335	4	0%
	EB	2585	2730	145	6%	2785	4100	1315	47%
	WB	4103	4380	277	7%	2658	2990	332	12%
SB Off-ramp	SB	2316	2500	184	8%	1775	1850	75	4%
	EB	2648	2990	342	13%	3275	4380	1105	34%
	WB	3063	3230	167	5%	2400	2700	300	13%
NB Off-ramp	NB	2586	2650	64	2%	1435	1430	5	0%
	EB	2607	2910	303	12%	2634	3290	656	25%
	WB	1890	2140	250	13%	2176	2620	444	20%
Coburn Road (Signal)	NB	1078	1185	107	10%	1488	1540	52	3%
	SB	1563	1960	397	25%	1313	1930	617	47%
	EB	2395	2620	225	9%	1894	2140	246	13%
	WB	1558	1855	297	19%	1576	2010	434	28%
I-75 Mainline	NB South of Fruitville	6043	6025	18	0%	5180	5190	10	0%
	NB North of Fruitville	6173	6850	677	10%	6757	7590	833	11%
	SB North of Fruitville	7252	7590	338	4%	6803	6850	47	1%
	SB South of Fruitville	4799	5190	391	8%	5584	6025	441	7%
I-75 Ramps	NB On Ramp	1642	1850	208	11%	2020	2500	480	19%
	NB Off Ramp	2586	2650	64	2%	1435	1430	5	0%
	SB On Ramp	1271	1430	159	11%	2079	2650	571	22%
	SB Off Ramp	2316	2500	184	7%	1775	1850	75	4%

Appendix F: SIMR ARTERIAL SEPARATOR CONCEPT PLANS


Campbell RV
Pro Lawn Supply
Doudney Sheet Metal
Office Building
Enterprise Rent a Car
Rousler Automotive
ASAP Storage
Peterson Manufacturing
High Risk Hazard
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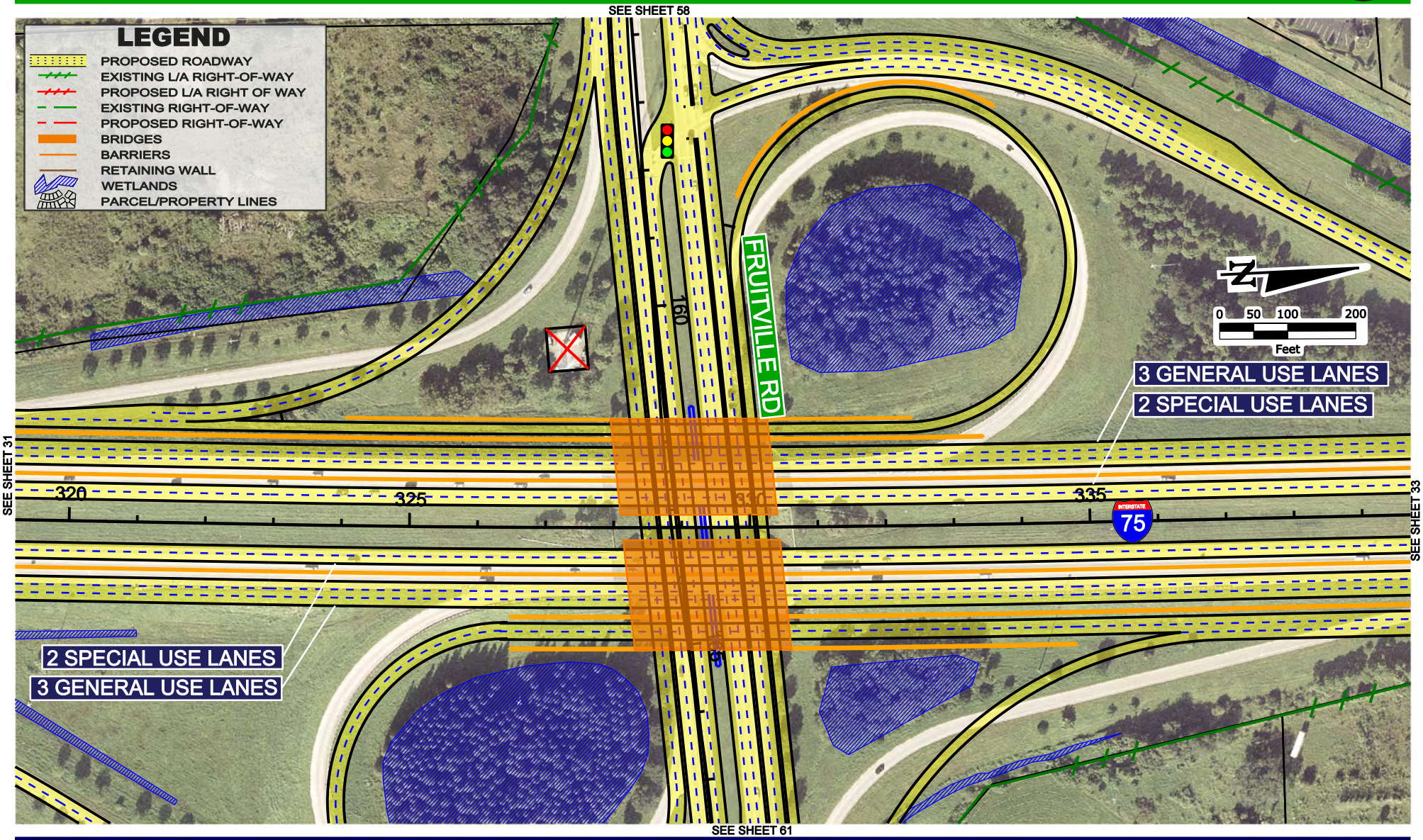
3 GENERAL USE LANES
2 SPECIAL USE LANES
0 50 100 200
Feet
SEE SHEET 30
300
305
310
315
75
SEE SHEET 32
2 SPECIAL USE LANES
1 AUXILIARY LANE
3 GENERAL USE LANES
Radiator Service
Power Substation
BBMI
Interstate Park Corporate Center
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES

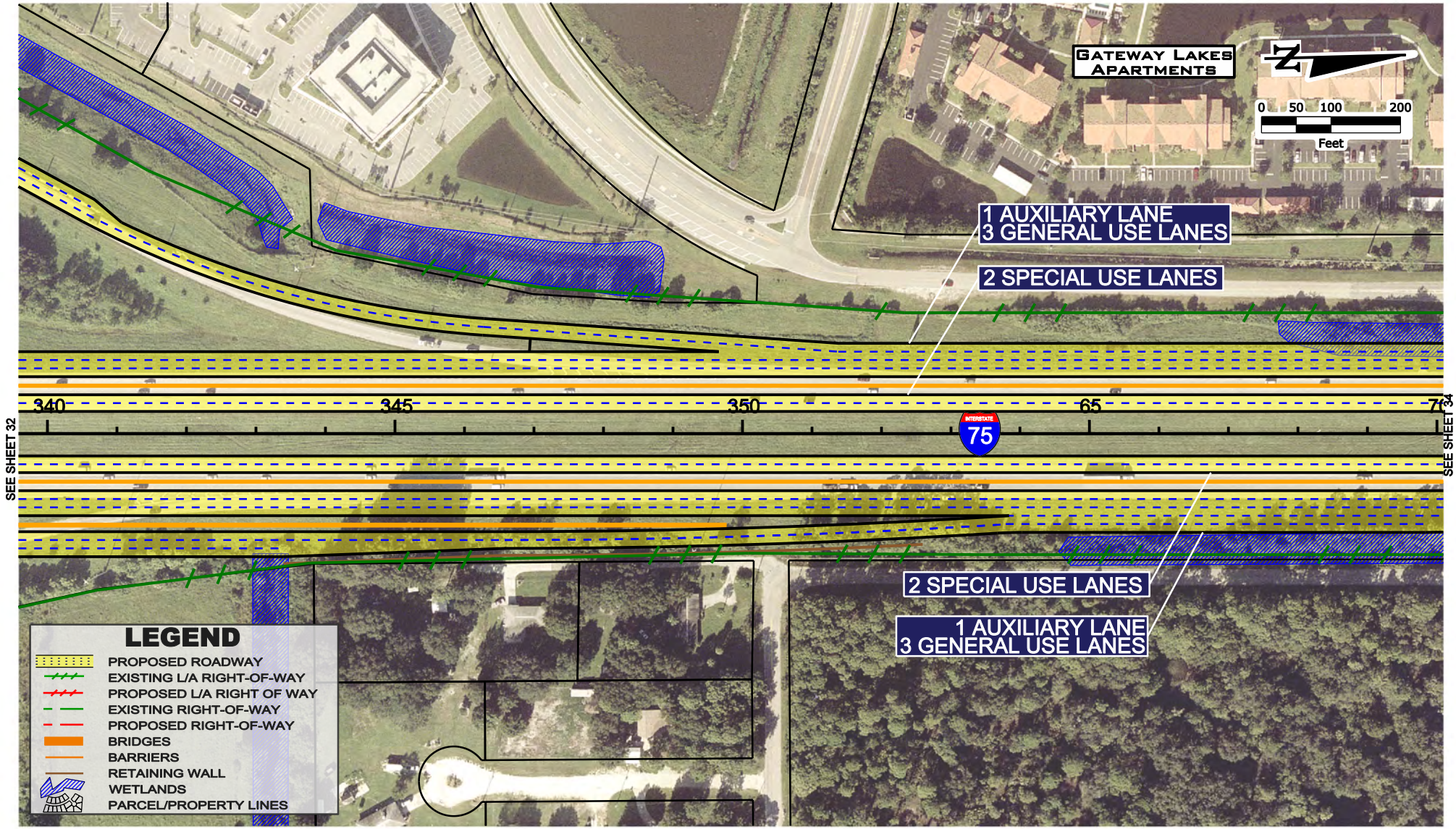
Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



Carter::Burgess

Sheet No. 32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0 50 100 200
Feet
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3 GENERAL USE LANES
2 SPECIAL USE LANES
340
345
350
65
INTERSTATE
75
SEE SHEET 32
SEE SHEET 34
2 SPECIAL USE LANES
1 AUXILIARY LANE
3 GENERAL USE LANES
LEGEND
PROPOSED ROADWAY
EXISTING L/A RIGHT-OF-WAY
PROPOSED L/A RIGHT OF WAY
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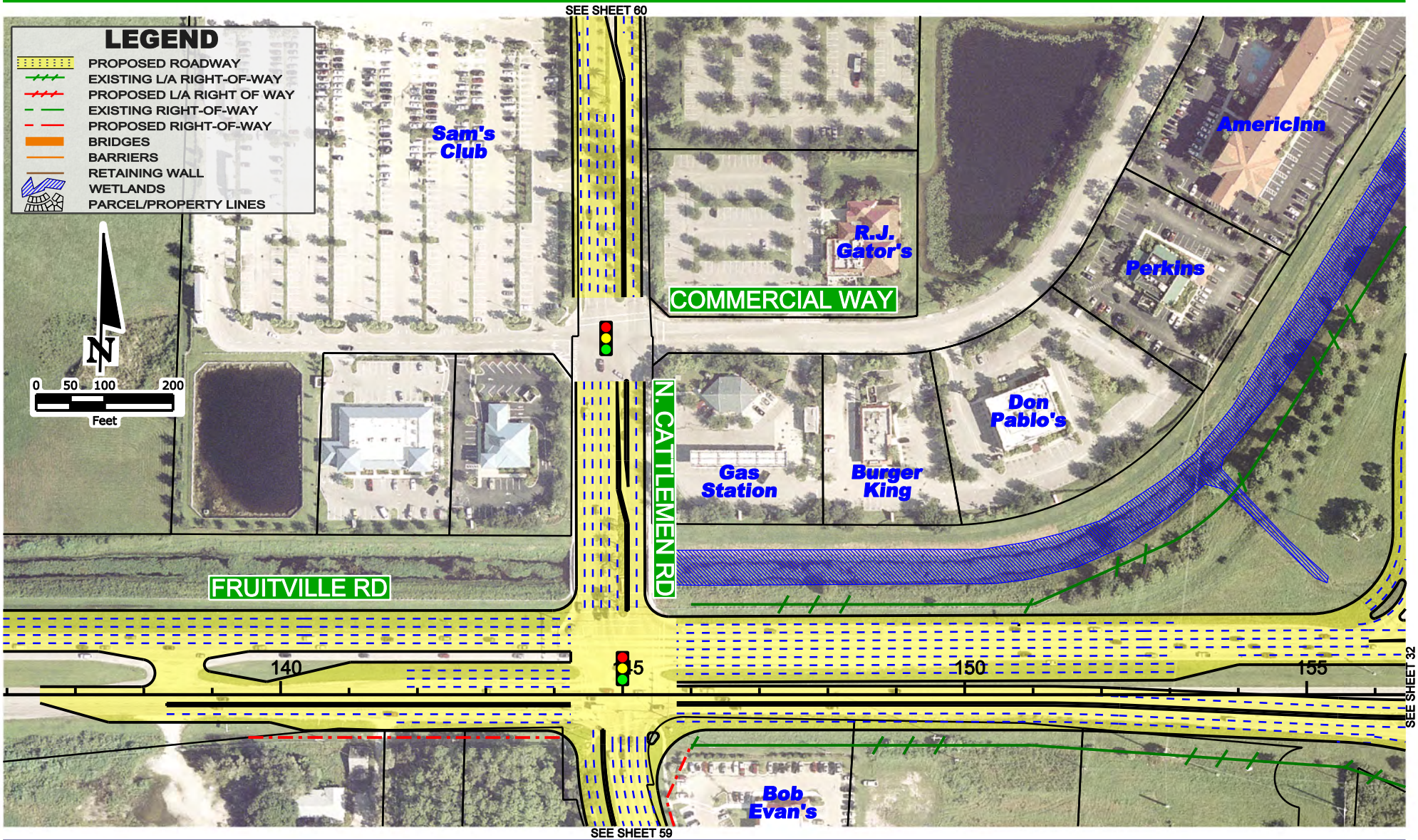
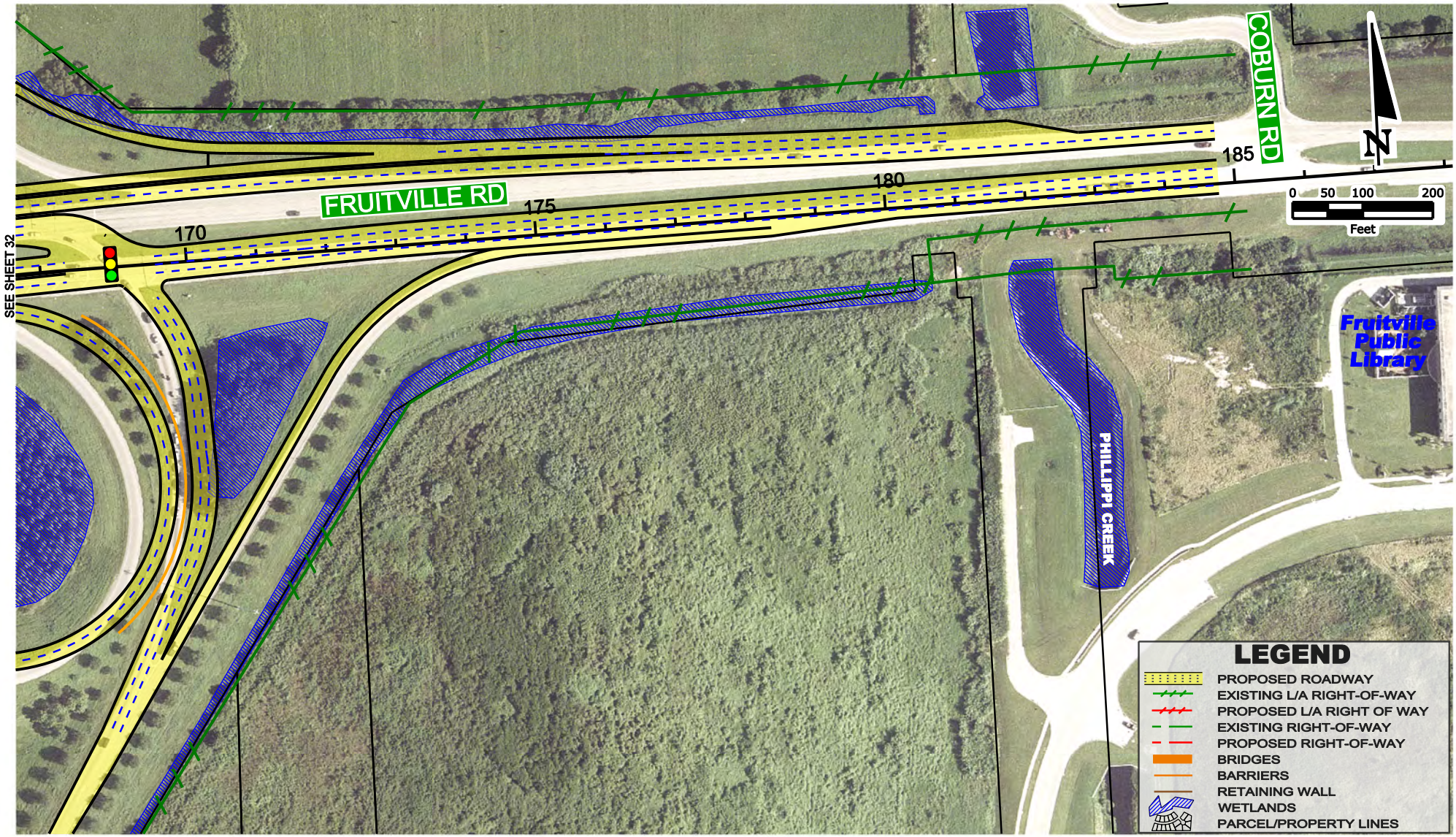
PROPOSED RIGHT-OF-WAY
BRIDGES
BARRIERS
RETAINING WALL
WETLANDS
PARCEL/PROPERTY LINES



Carter::Burgess

Interstate 75 Project Development and Environment Study
From south of S.R. 681 to north of University Parkway - Sarasota and Manatee Counties

FPID
201277-1-22-01



Carter::Burgess

Appendix G: DDI ALTERNATIVE CONCEPT PLANS

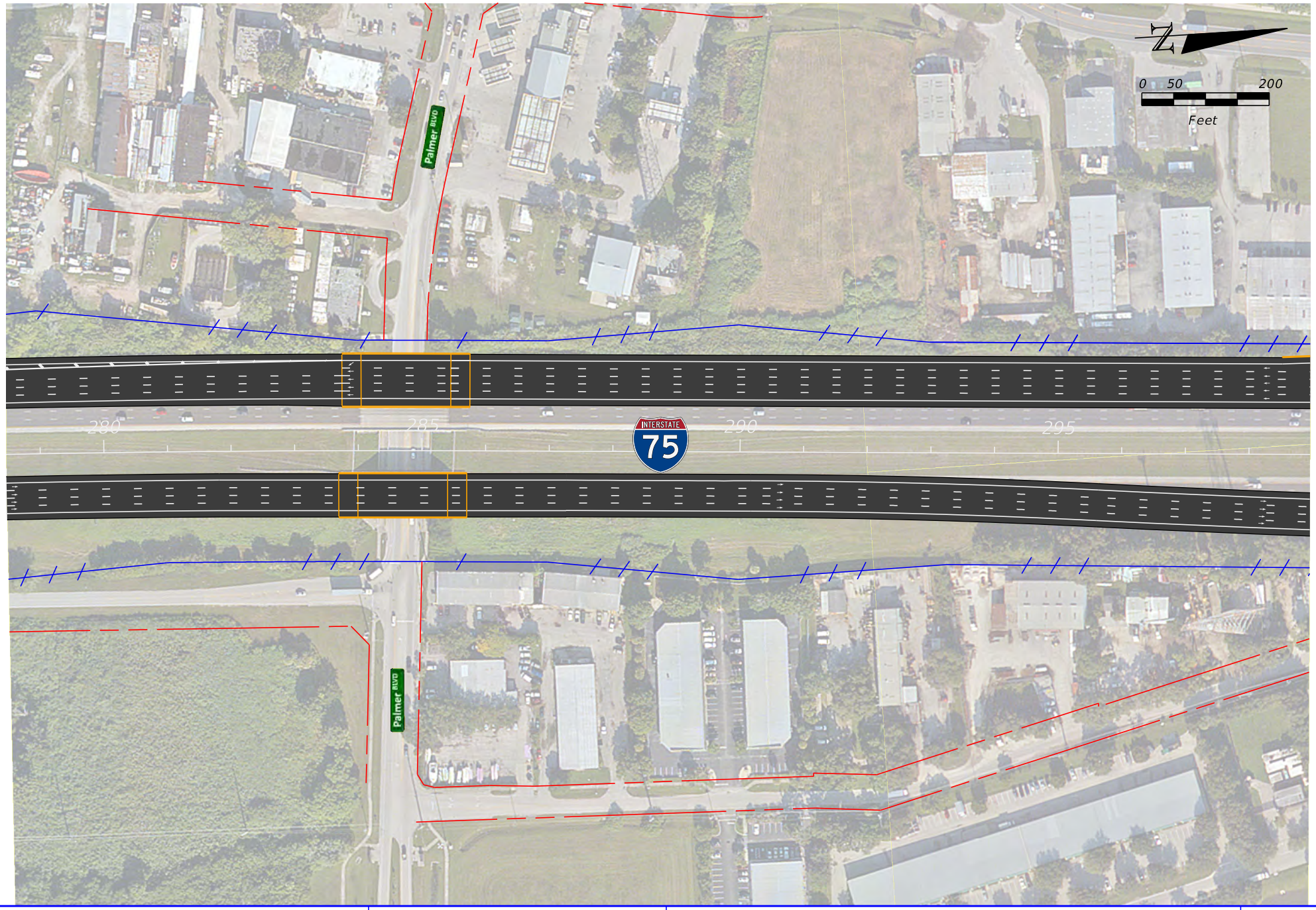
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SARASOTA	420613-2-52-01

ICON CONSULTANT GROUP, INC.
10006 N. DALE MABRY HWY., SUITE 201
TAMPA, FL 33618
CERTIFICATE OF AUTHORIZATION NO. 8320

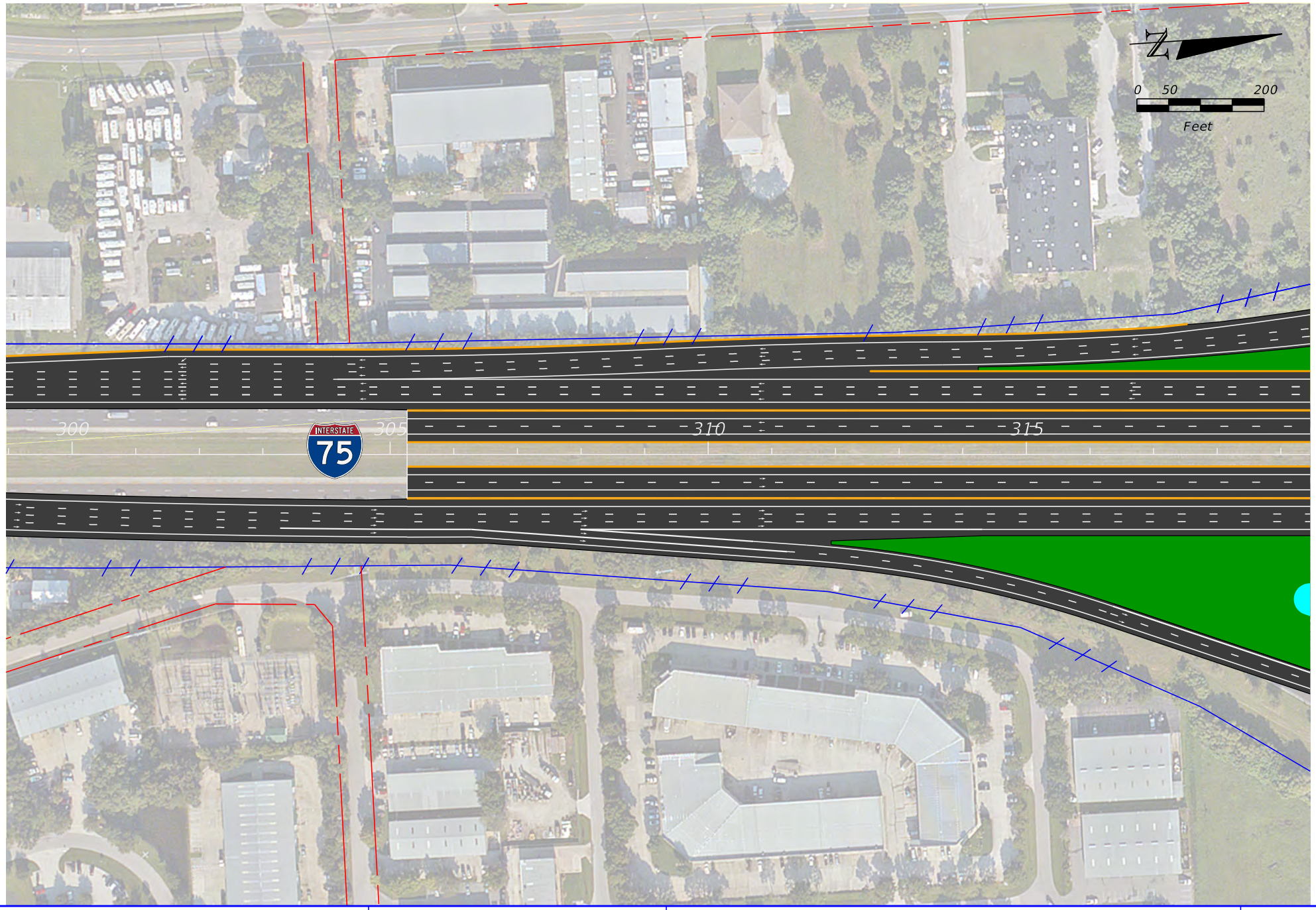
PREFERRED ALTERNATIVE CONCEPT PLANS

SHEET NO.

1



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			2
SR 93	SARASOTA	420613-2-52-01			



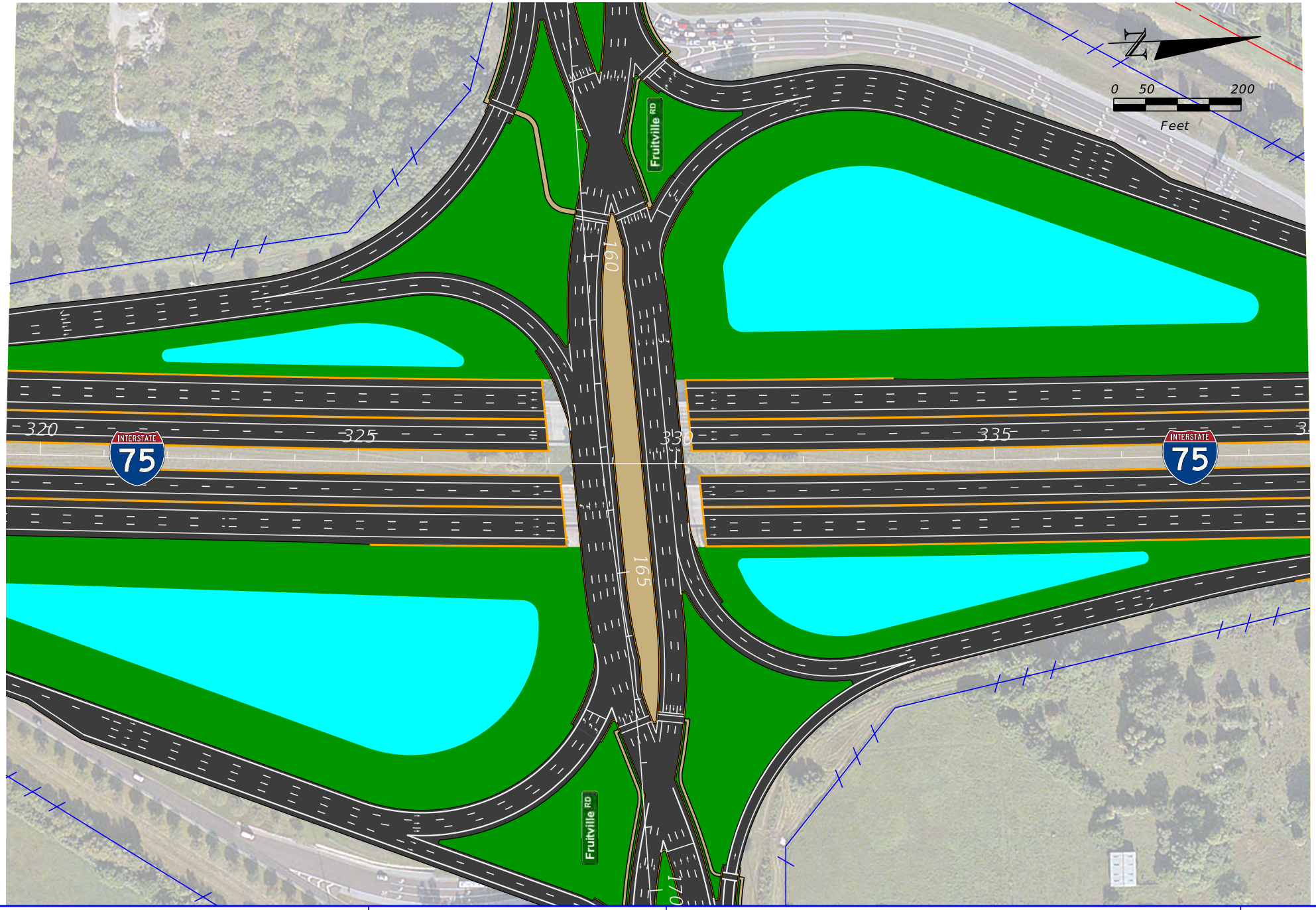
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SARASOTA	420613-2-52-01

ICON CONSULTANT GROUP, INC.
10006 N. DALE MABRY HWY., SUITE 201
TAMPA, FL 33618
CERTIFICATE OF AUTHORIZATION NO. 8320

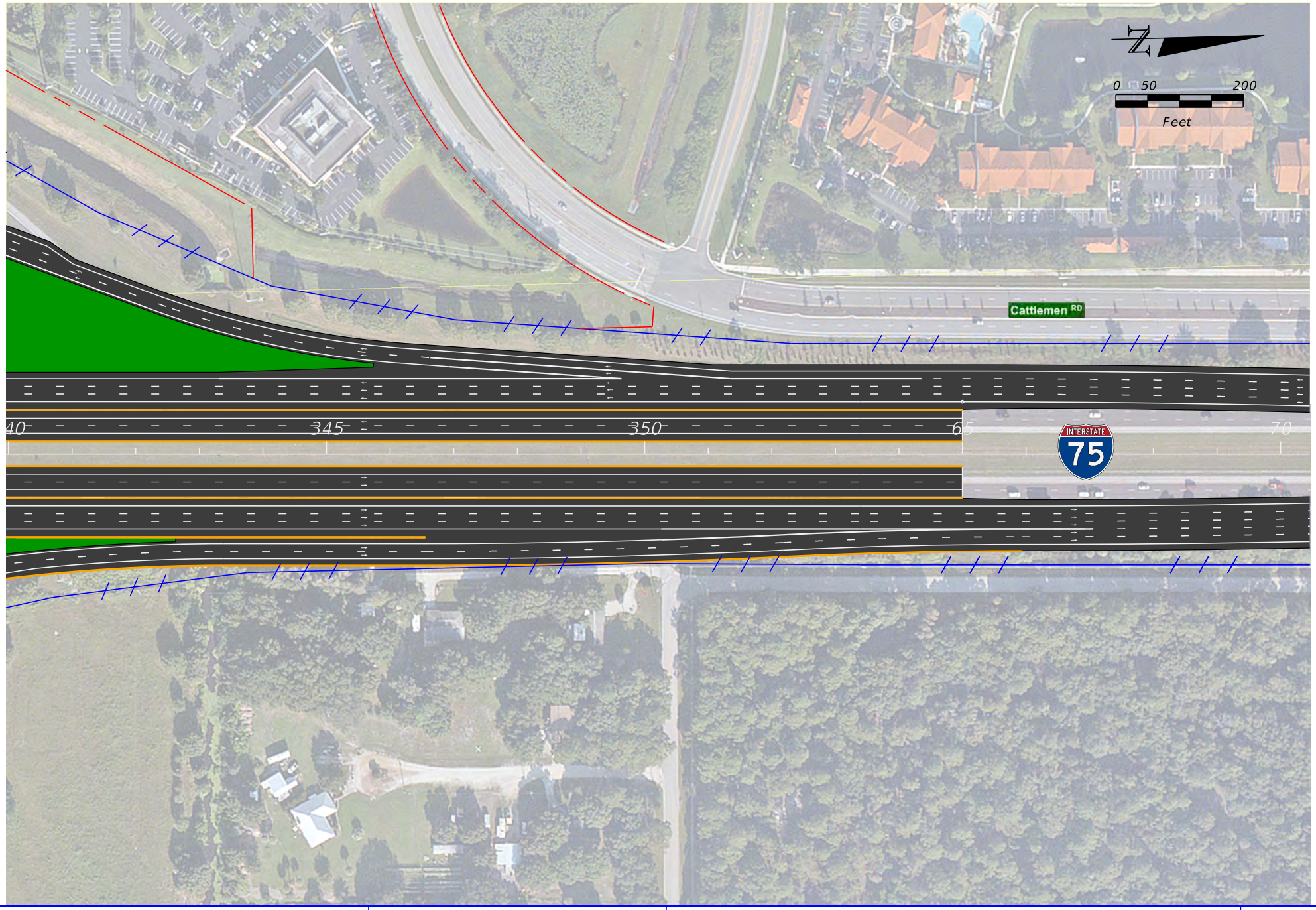
PREFERRED ALTERNATIVE CONCEPT PLANS

SHEET NO.

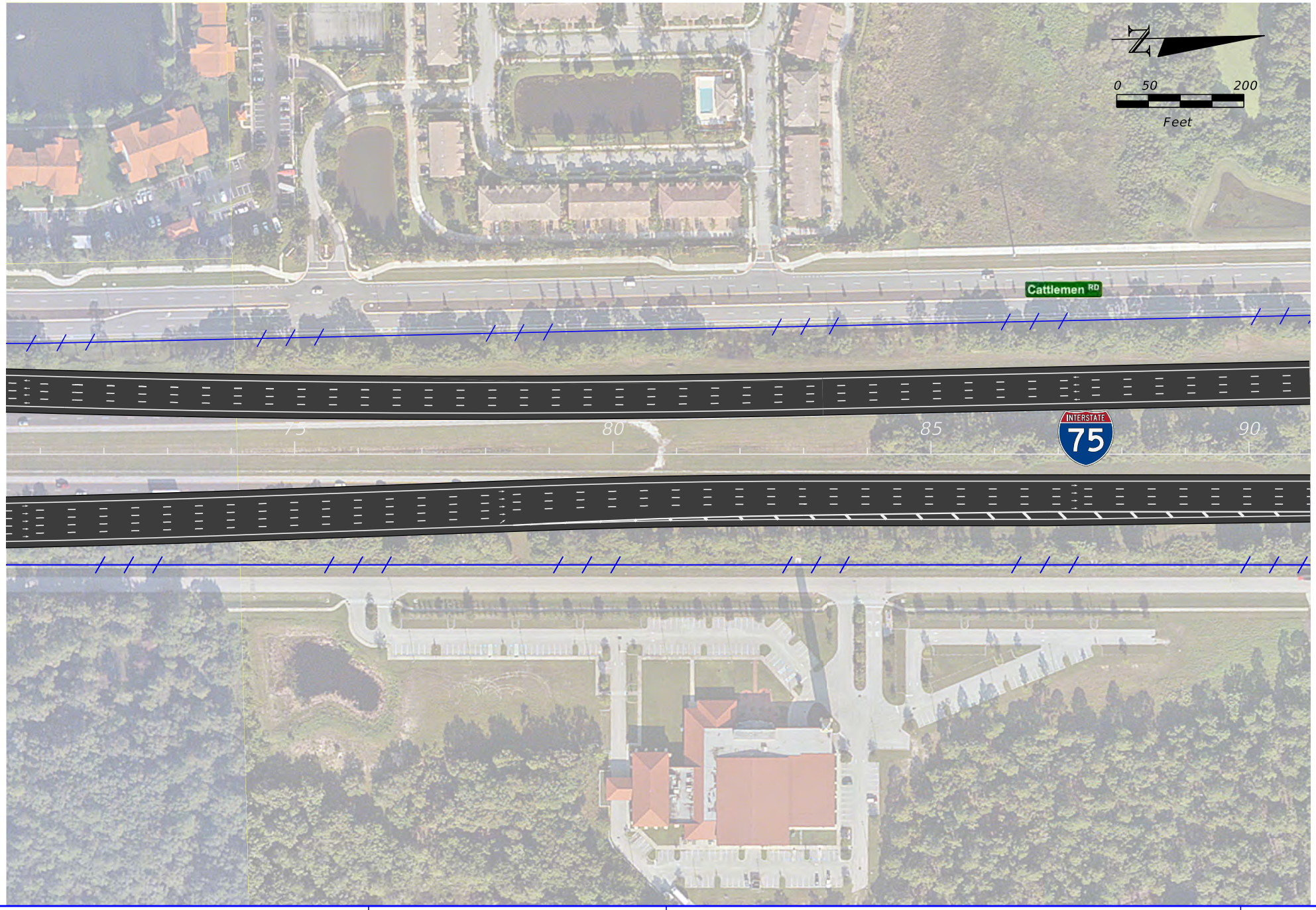
3



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			4
SR 93	SARASOTA	420613-2-52-01			



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			5
SR 93	SARASOTA	420613-2-52-01			



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			6
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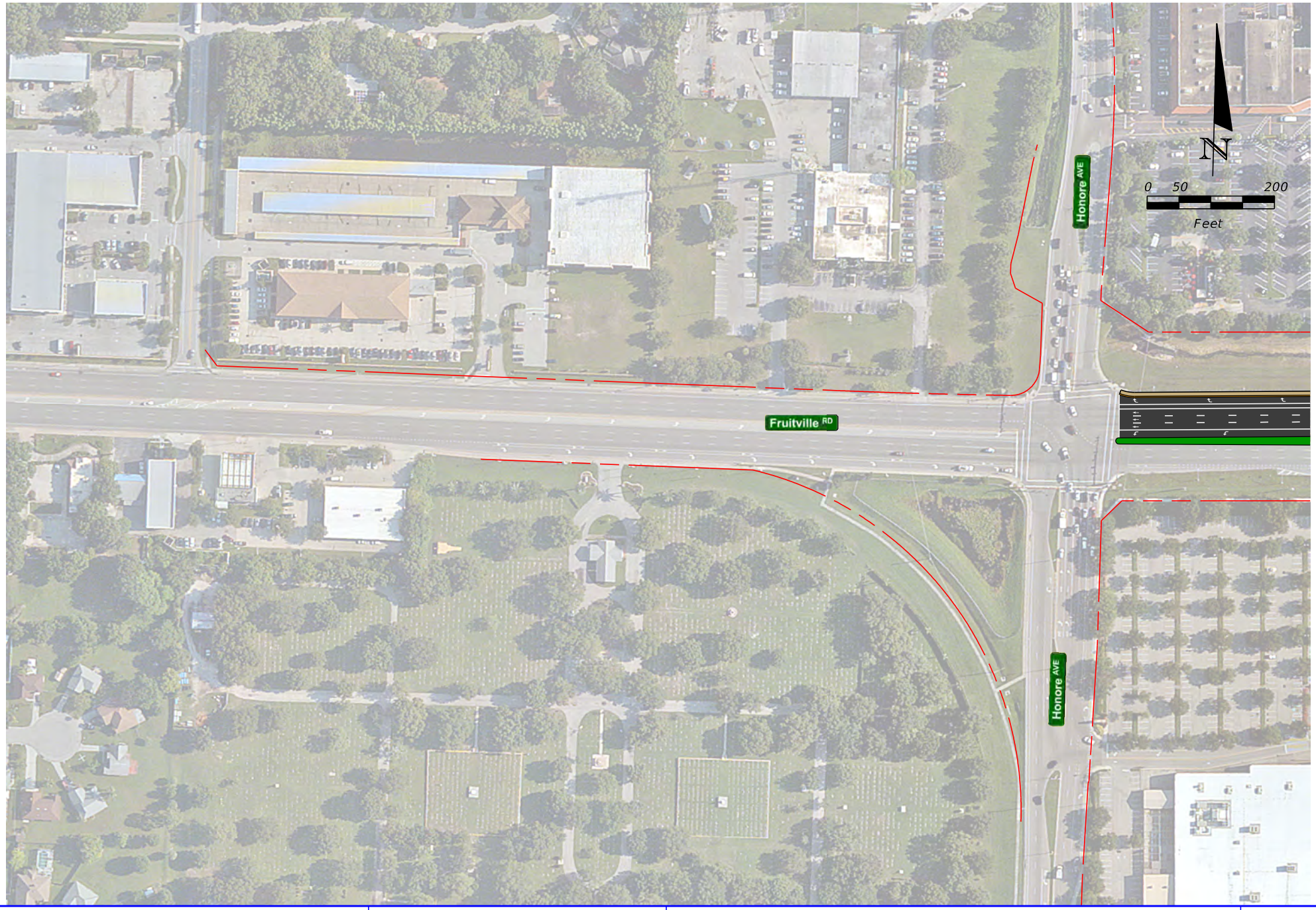
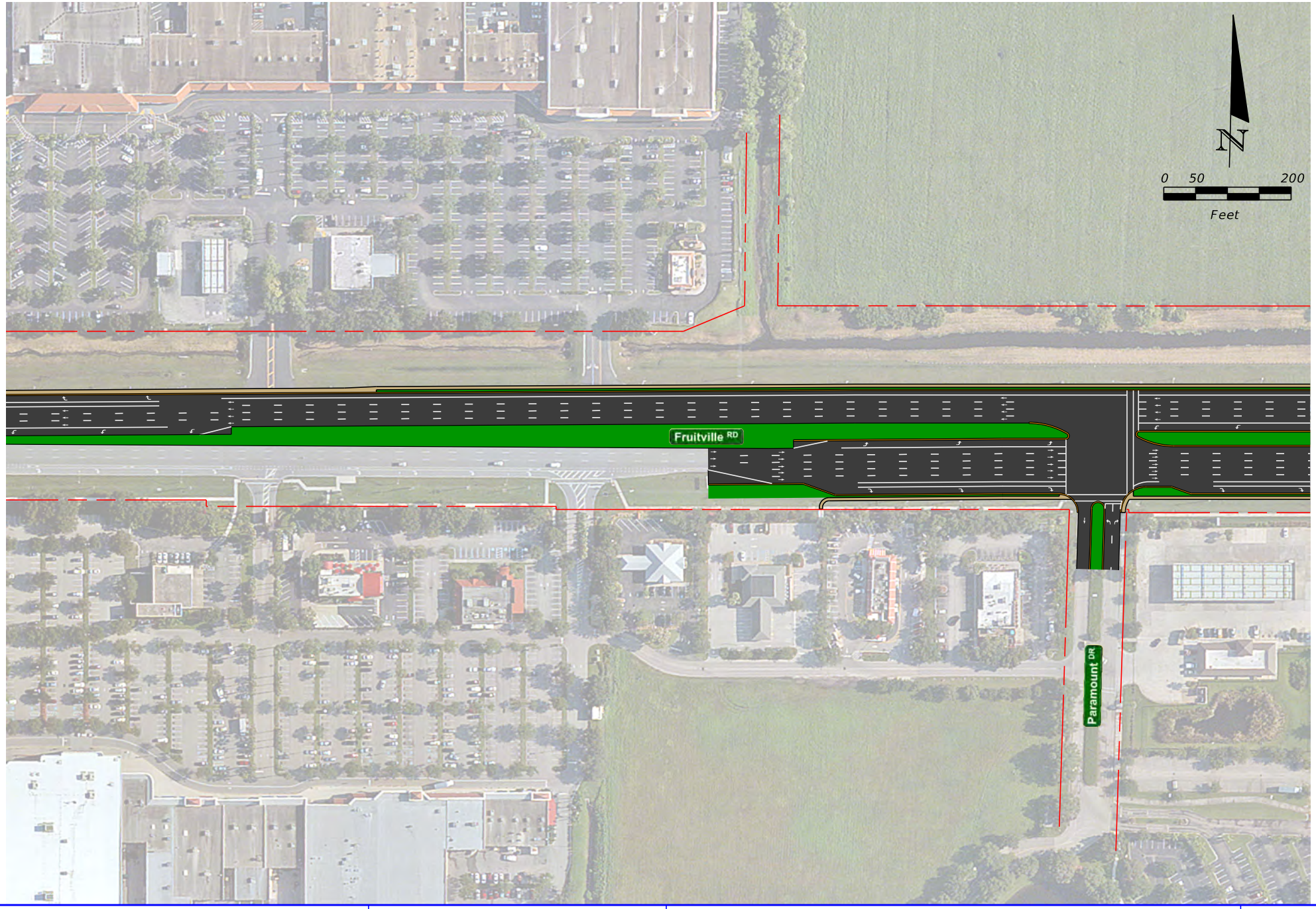


STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
SR 93	SARASOTA	420613-2-52-01			7



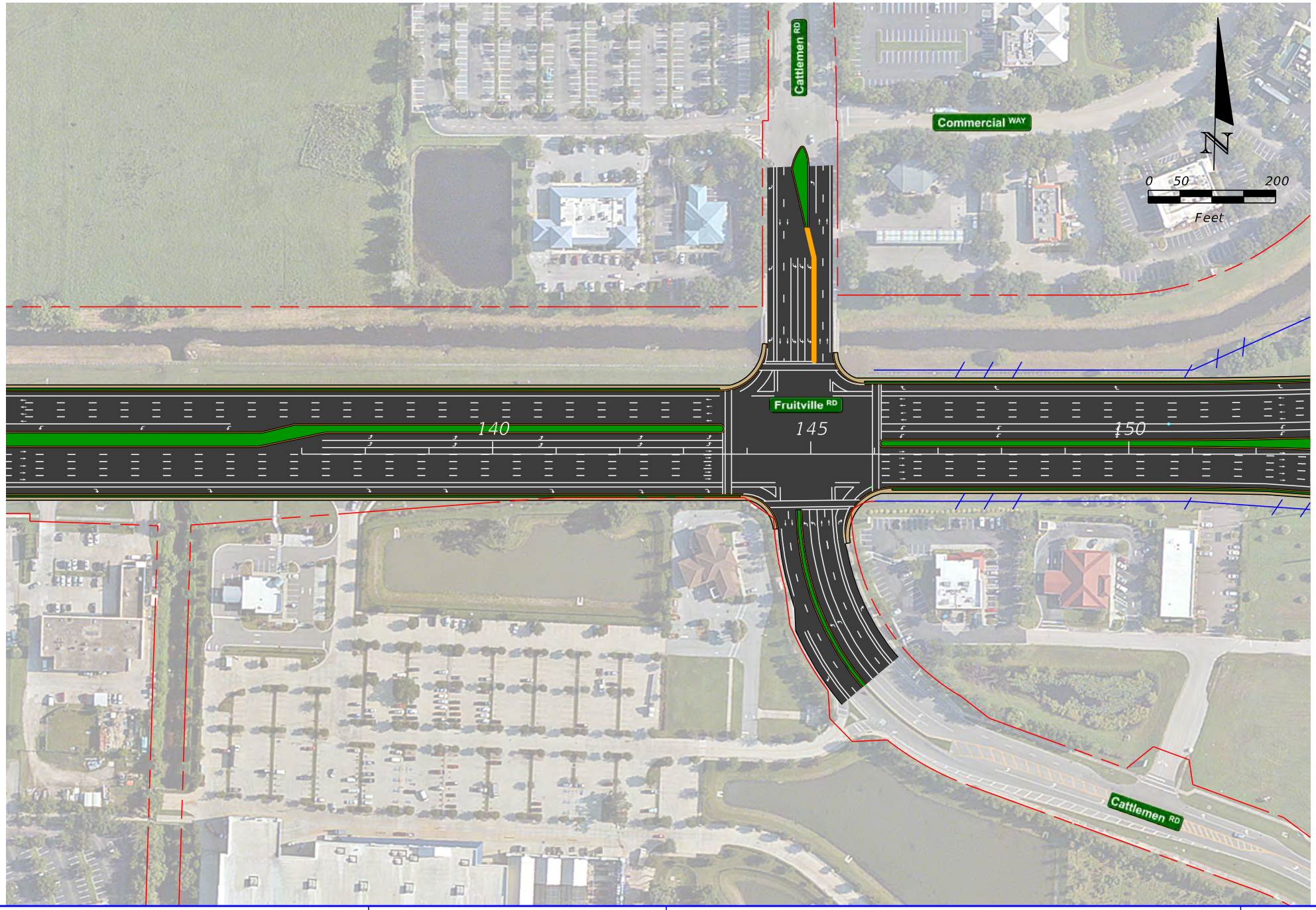
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SARASOTA	420613-2-52-01

ICON CONSULTANT GROUP, INC.
10006 N. DALE MABRY HWY., SUITE 201
TAMPA, FL 33618
CERTIFICATE OF AUTHORIZATION NO. 8320

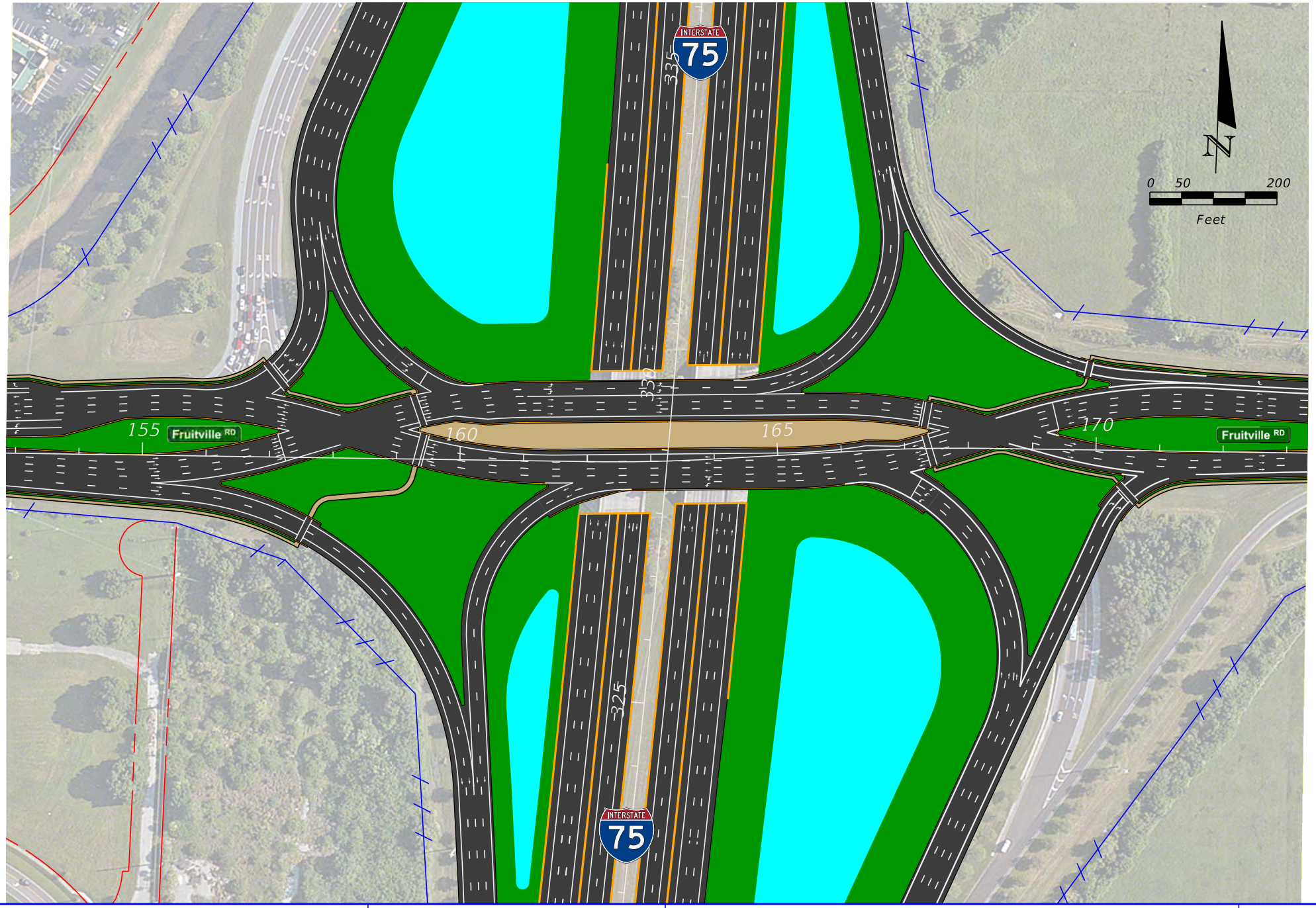
PREFERRED ALTERNATIVE CONCEPT PLANS

SHEET NO.

8



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
SR 93	SARASOTA	420613-2-52-01			9



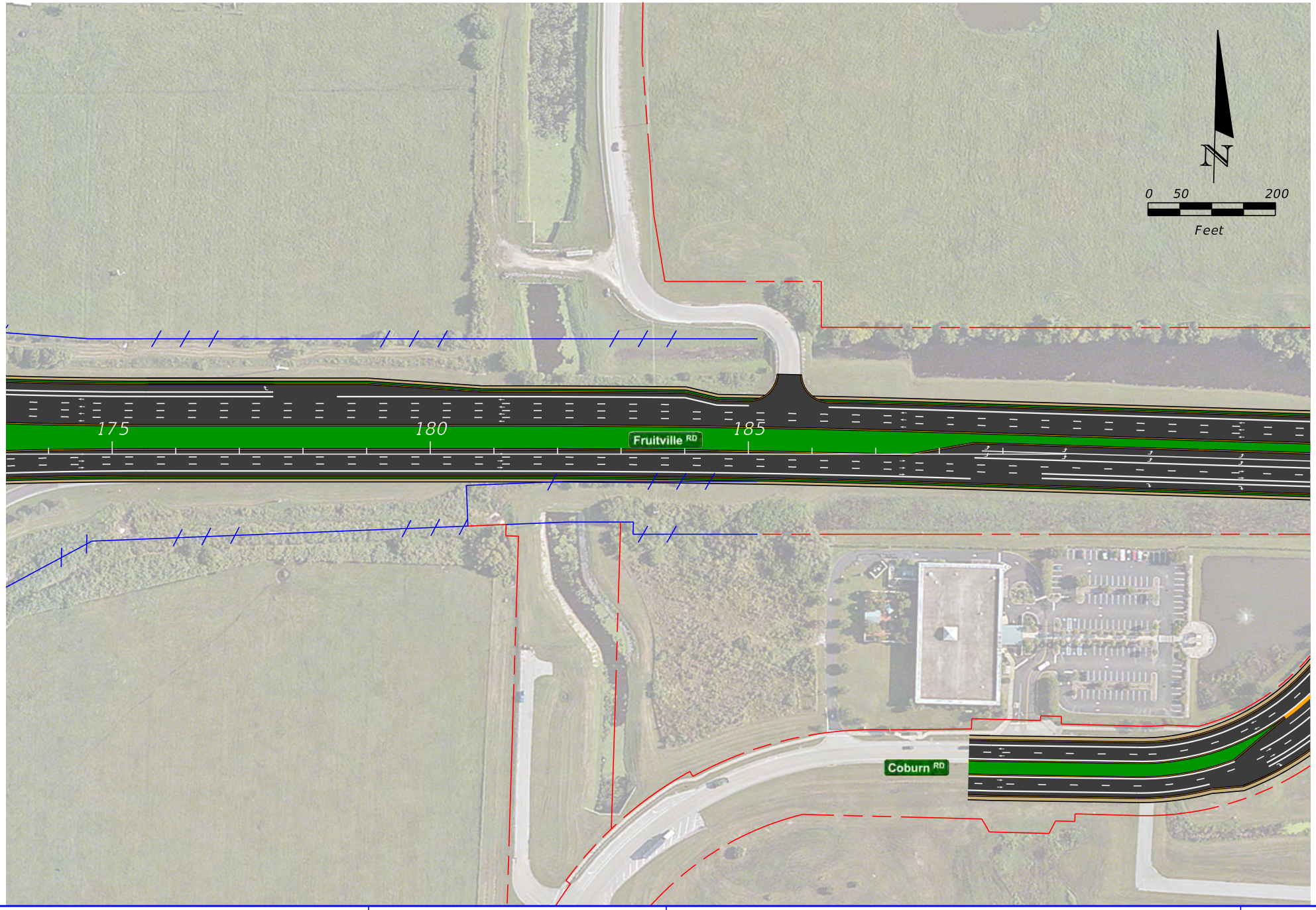
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SARASOTA	420613-2-52-01

ICON CONSULTANT GROUP, INC.
10006 N. DALE MABRY HWY., SUITE 201
TAMPA, FL 33618
CERTIFICATE OF AUTHORIZATION NO. 8320

PREFERRED ALTERNATIVE CONCEPT PLANS

SHEET NO.

10



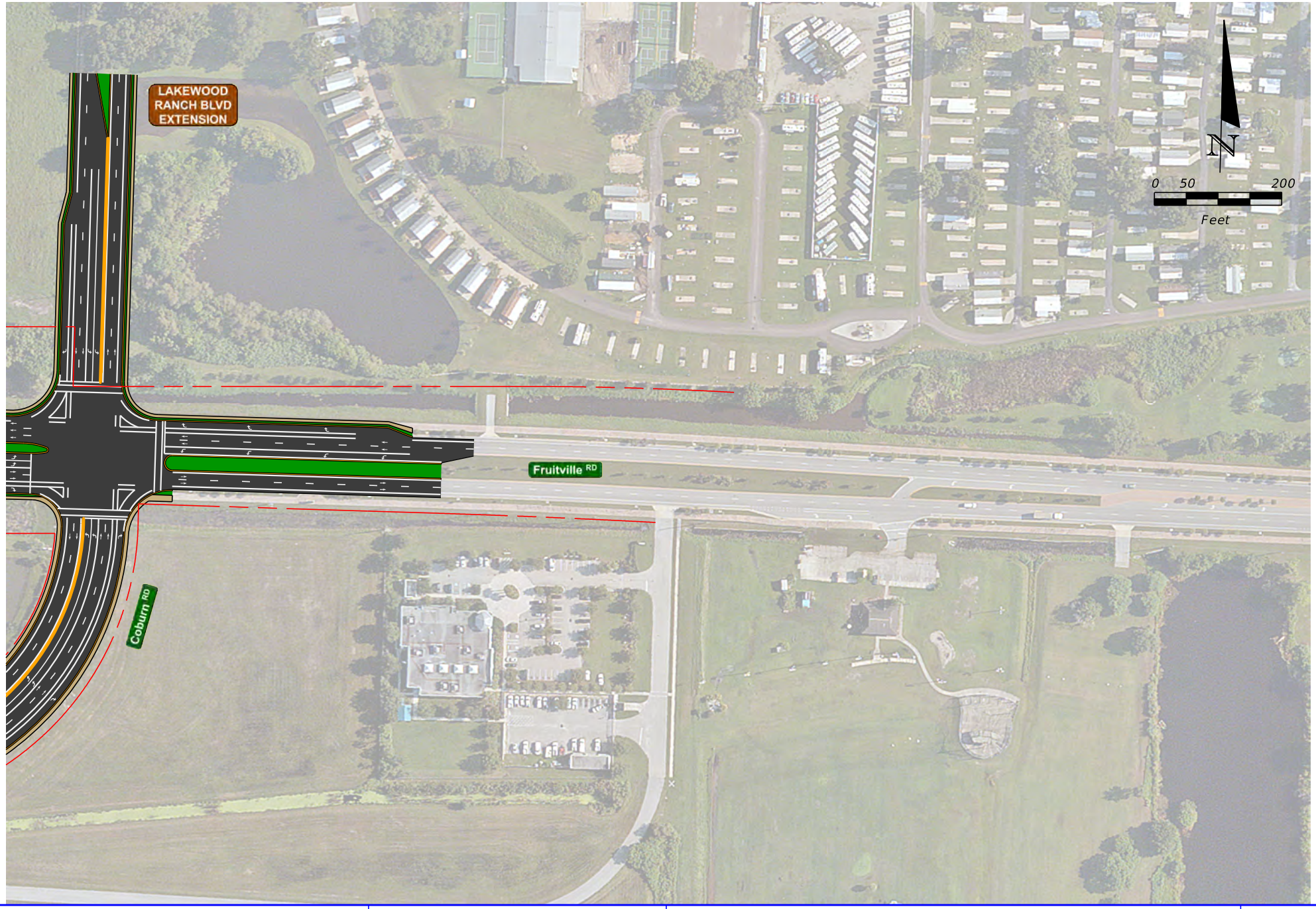
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SARASOTA	420613-2-52-01

ICON CONSULTANT GROUP, INC.
10006 N. DALE MABRY HWY., SUITE 201
TAMPA, FL 33618
CERTIFICATE OF AUTHORIZATION NO. 8320

PREFERRED ALTERNATIVE CONCEPT PLANS

SHEET NO.

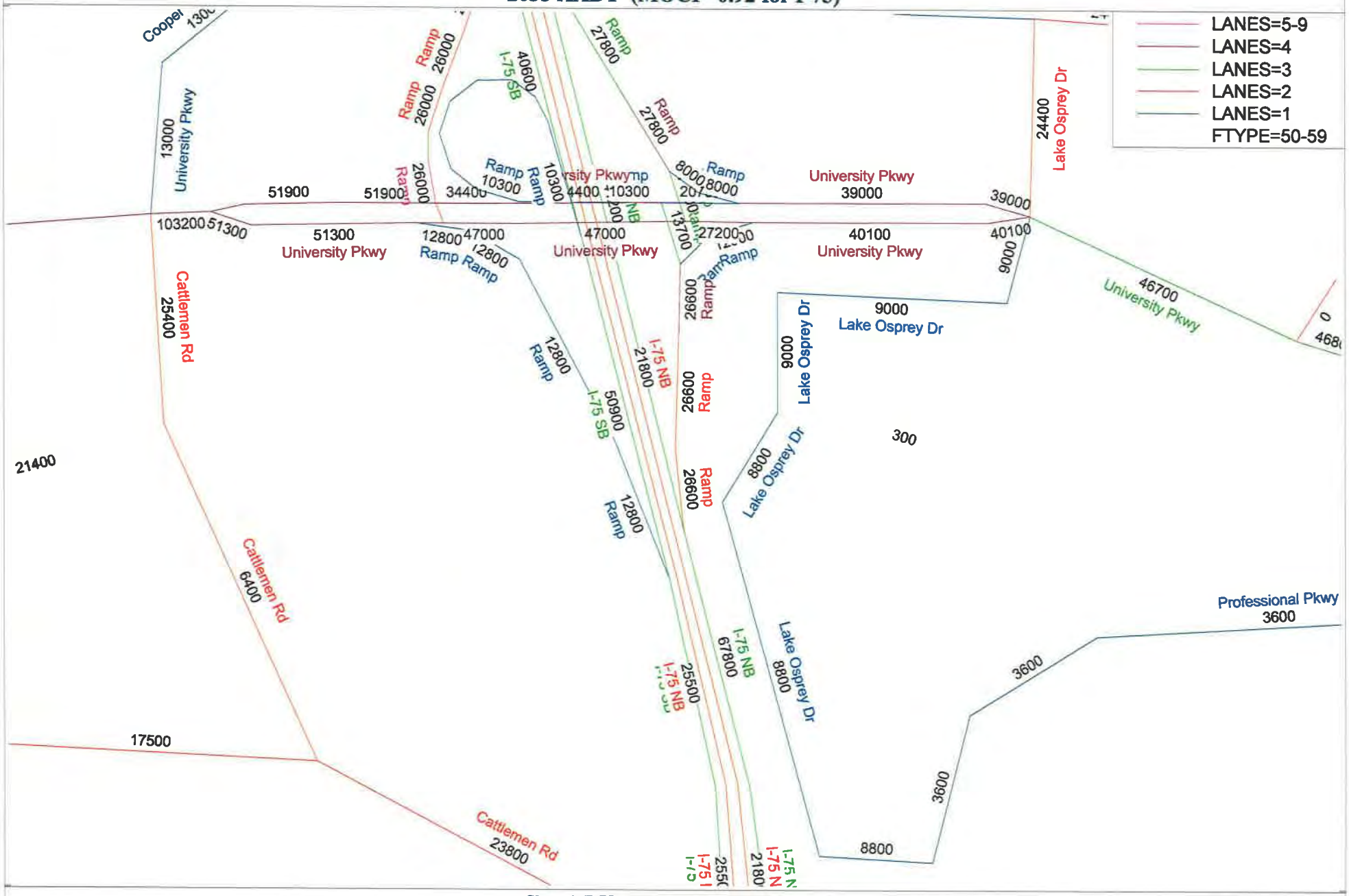
11



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ICON CONSULTANT GROUP, INC. 10006 N. DALE MABRY HWY., SUITE 201 TAMPA, FL 33618 CERTIFICATE OF AUTHORIZATION NO. 8320	PREFERRED ALTERNATIVE CONCEPT PLANS	SHEET NO.
ROAD NO.	COUNTY	FINANCIAL PROJECT ID			12
SR 93	SARASOTA	420613-2-52-01			

Appendix H: 2035 SMC MODEL PLOTS

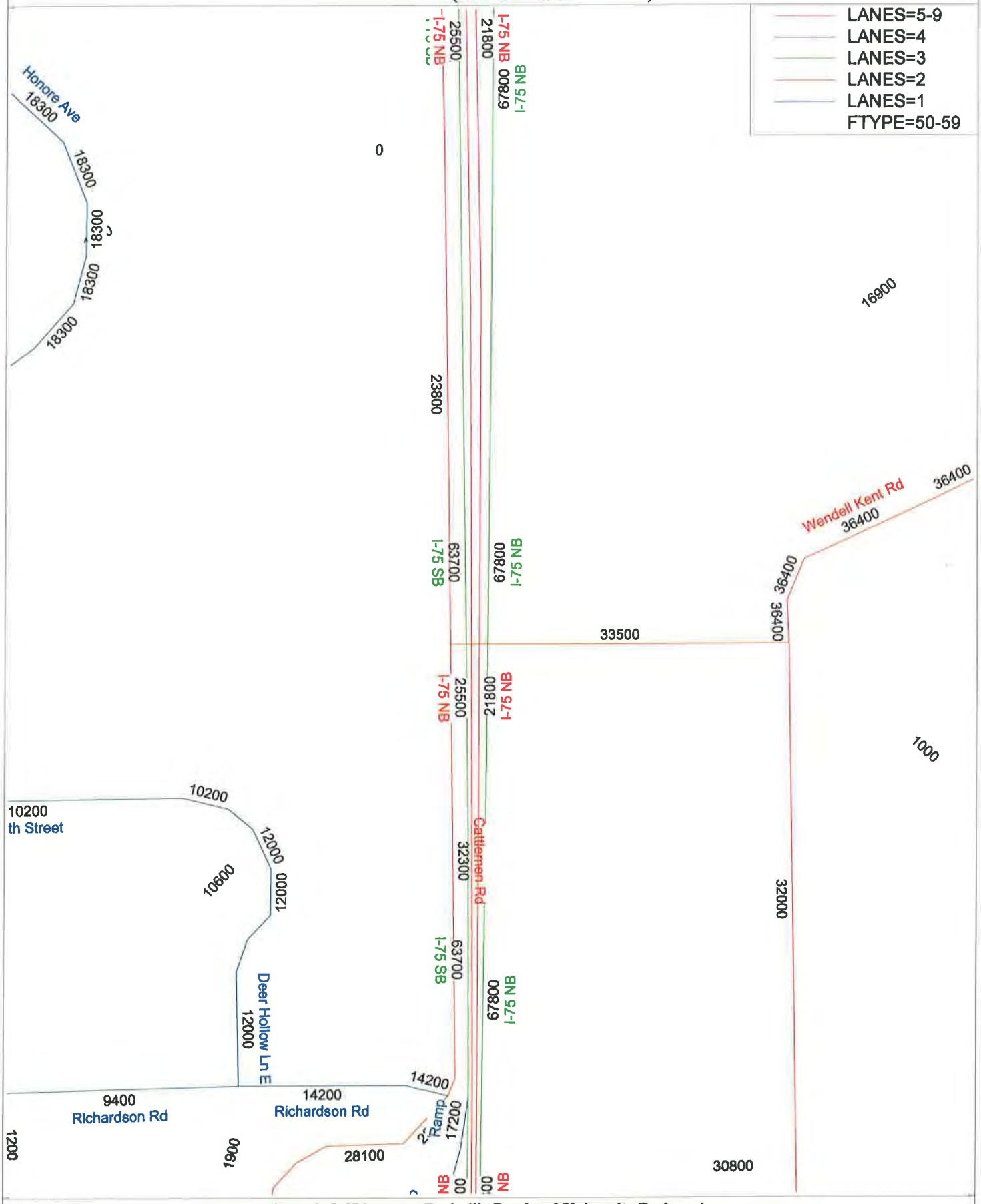
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 1 (I-75 south of University Parkway)

cube

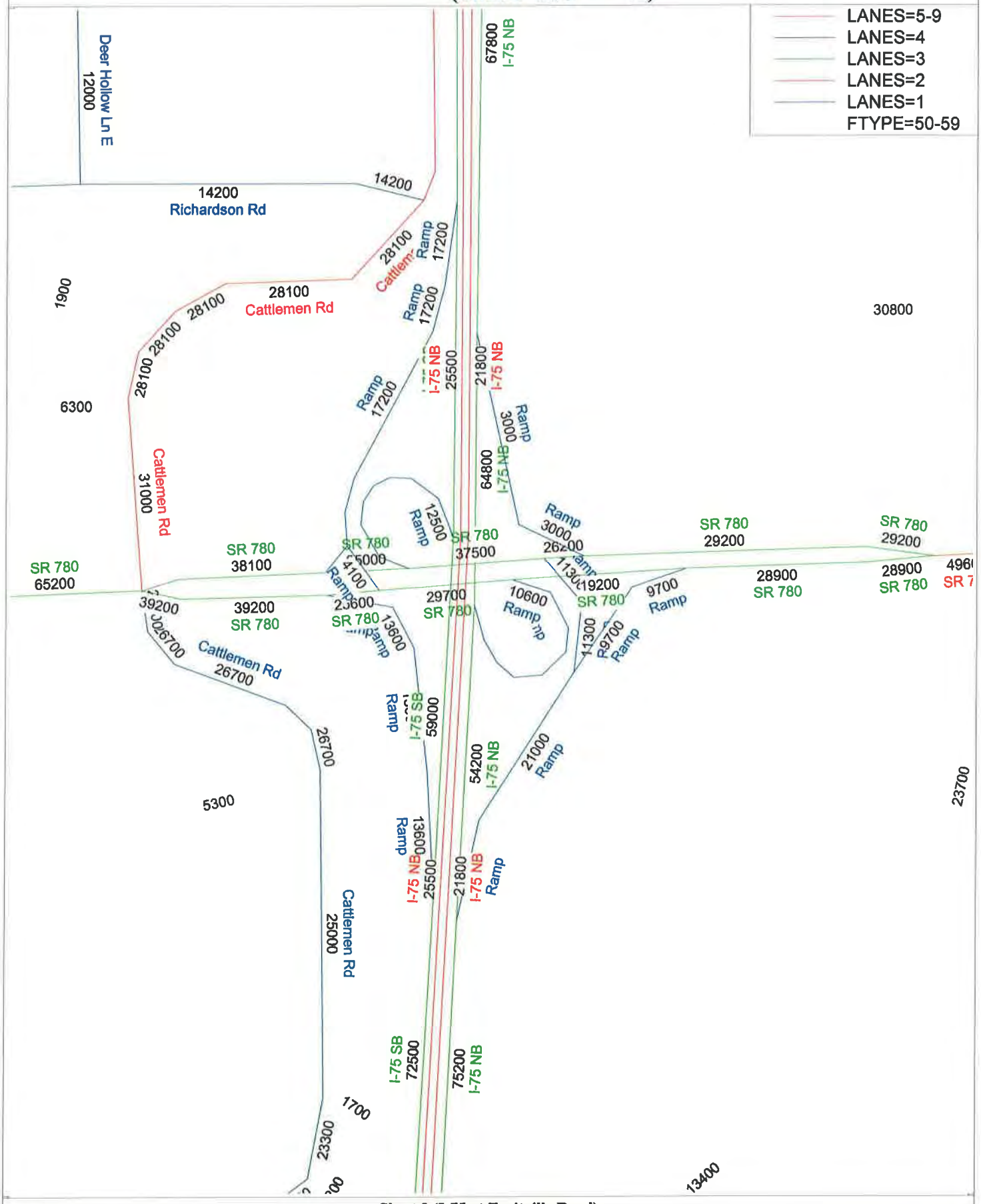
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 2 (I-75 between Fruitville Road and University Parkway)

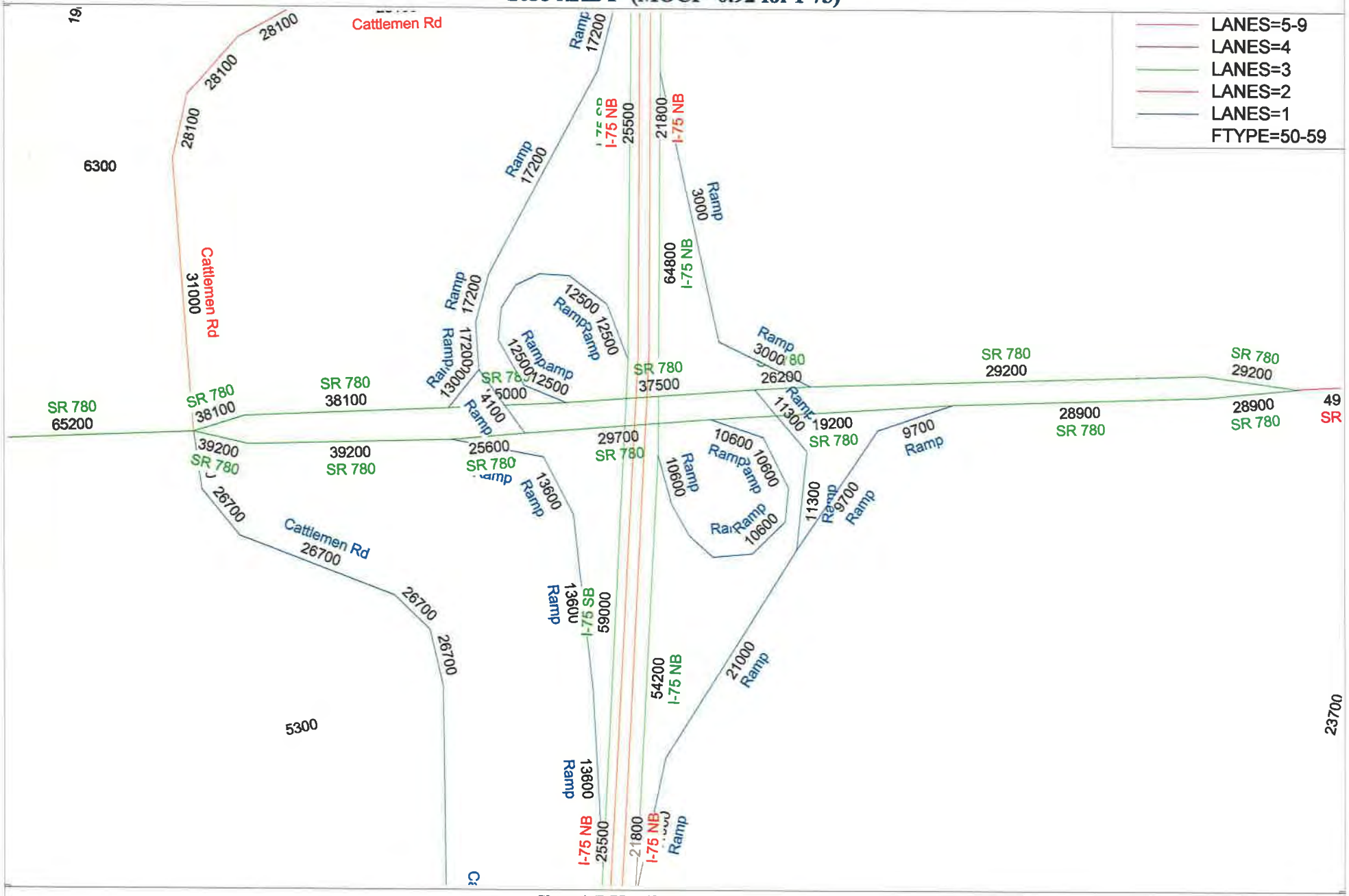
cube

2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 3 (I-75 at Fruitville Road)

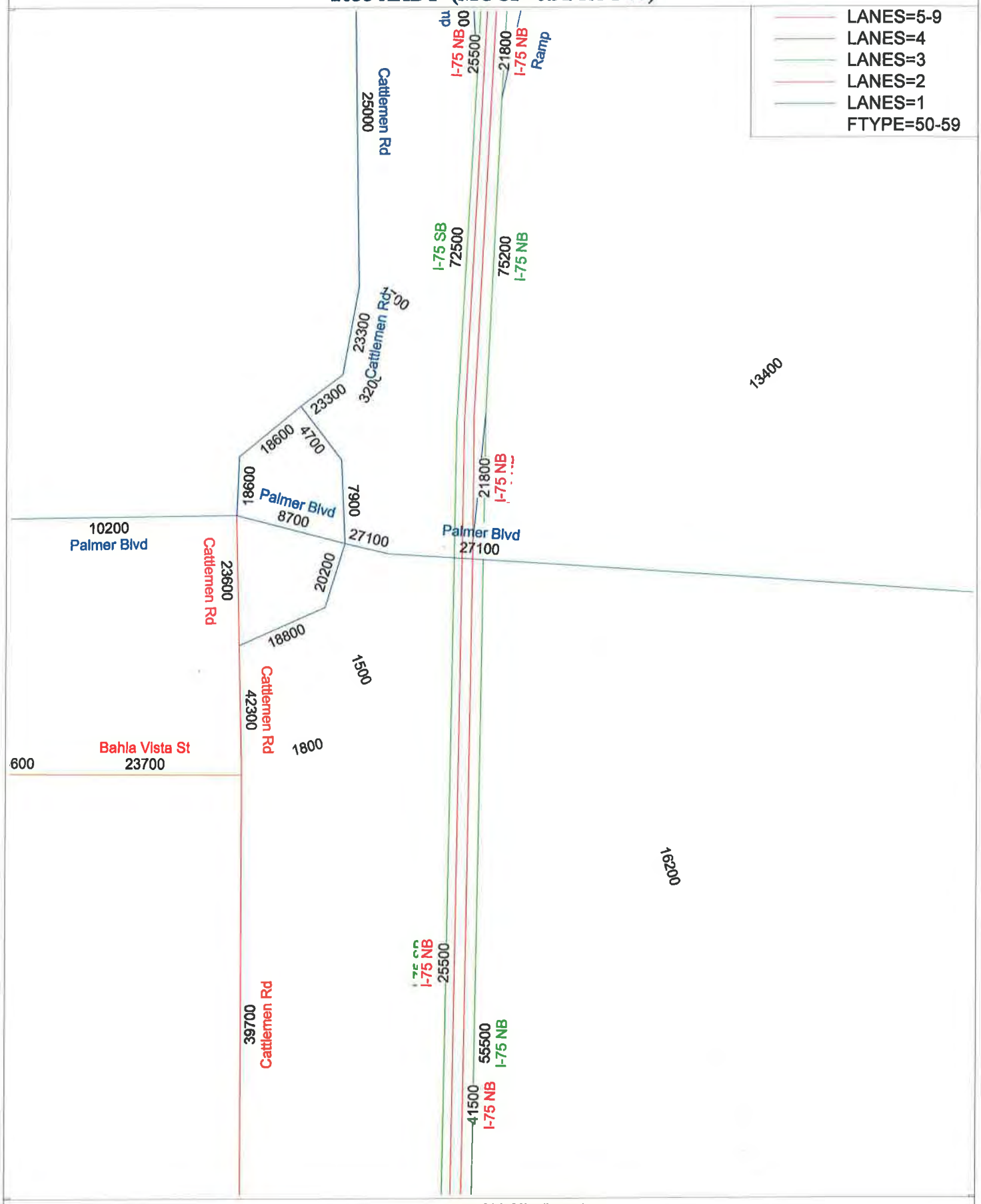
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 4 (I-75 at Fruitville Road Ramps)

cube

2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)

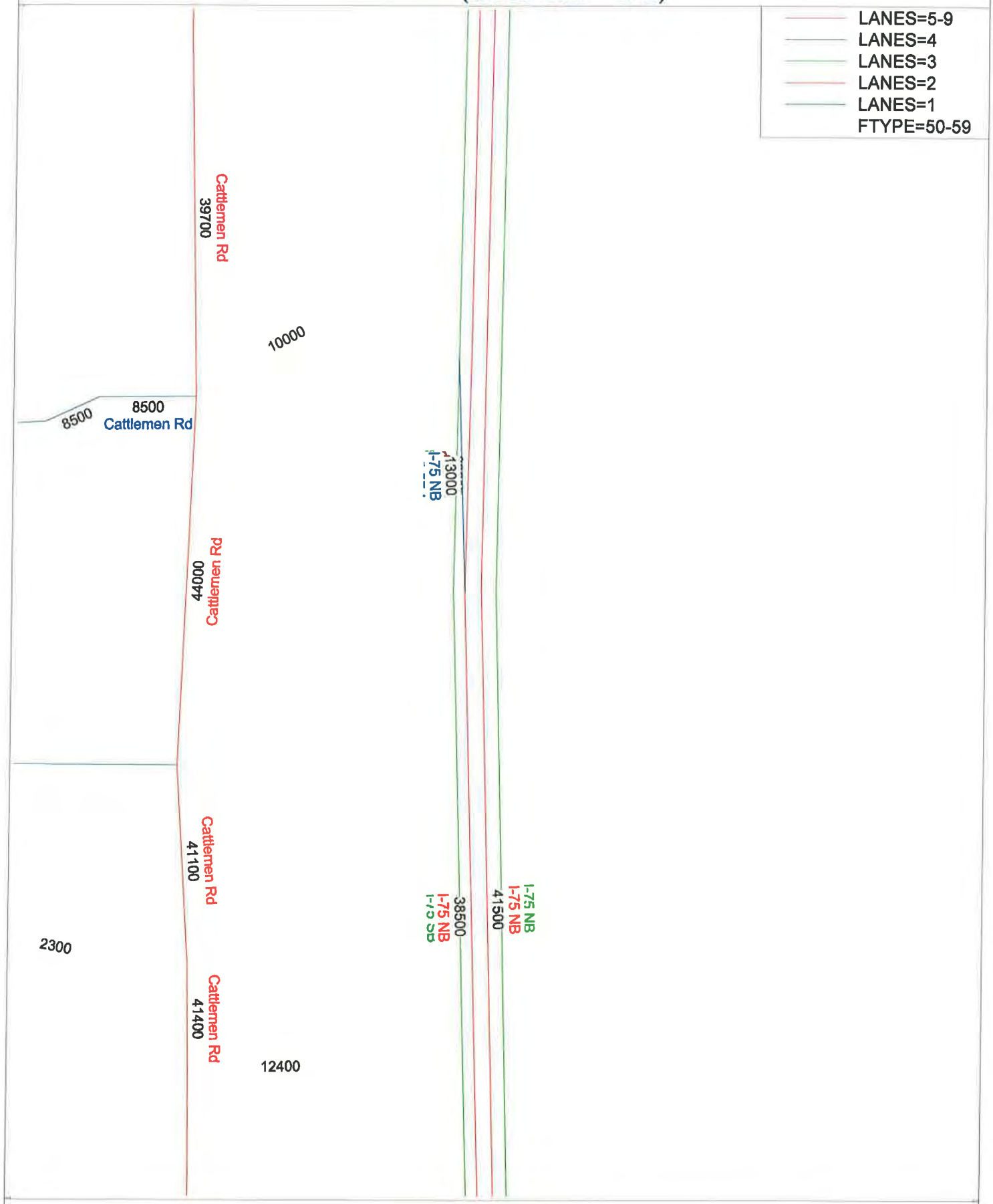


Sheet 5 (I-75 NB Slip Ramp)

cube

(Licensed to URS)

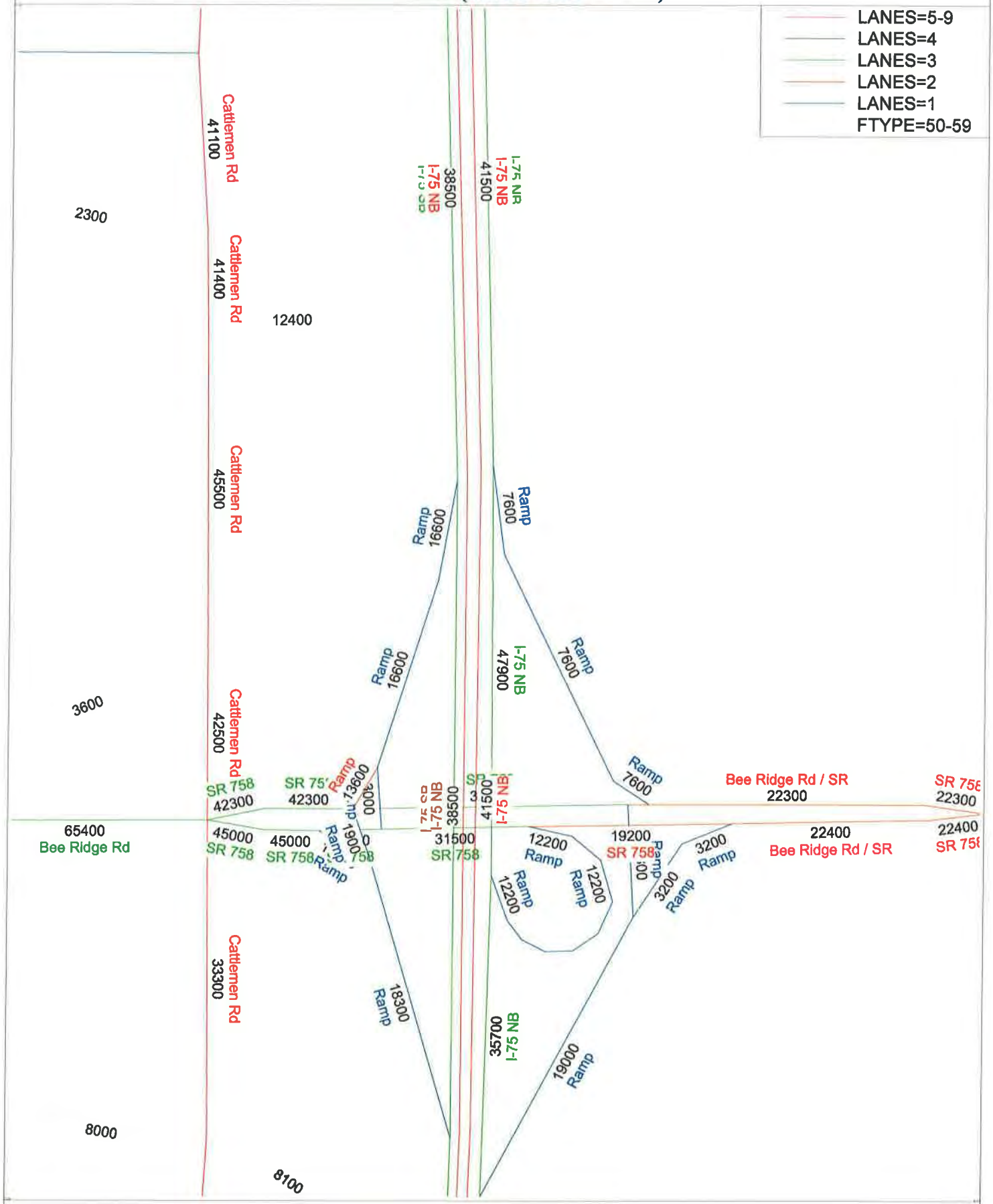
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 6 (I-75 SB Slip Ramp)

cube

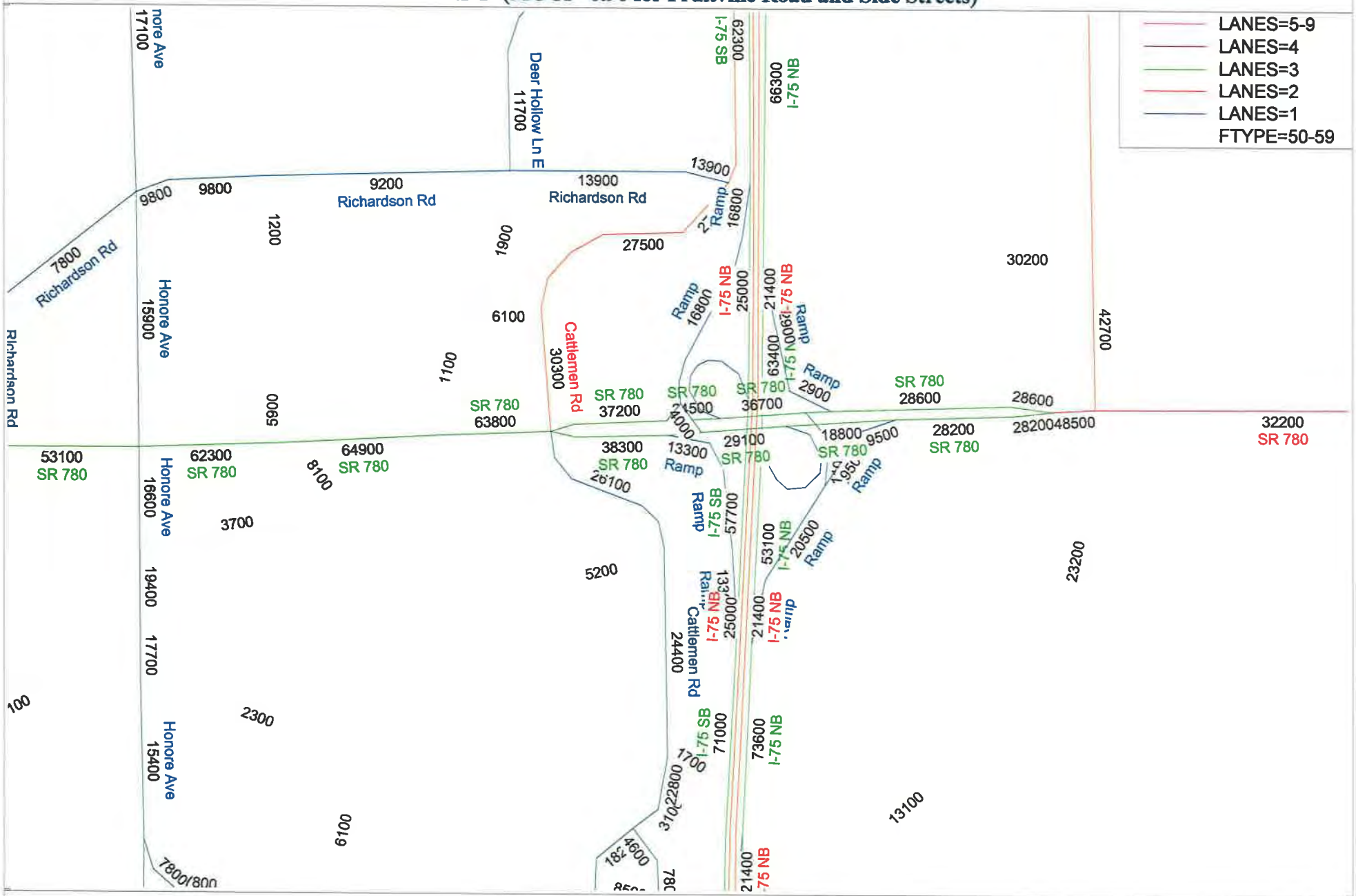
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.92 for I-75)



Sheet 7 (I-75 at Bee Ridge Road)

cube

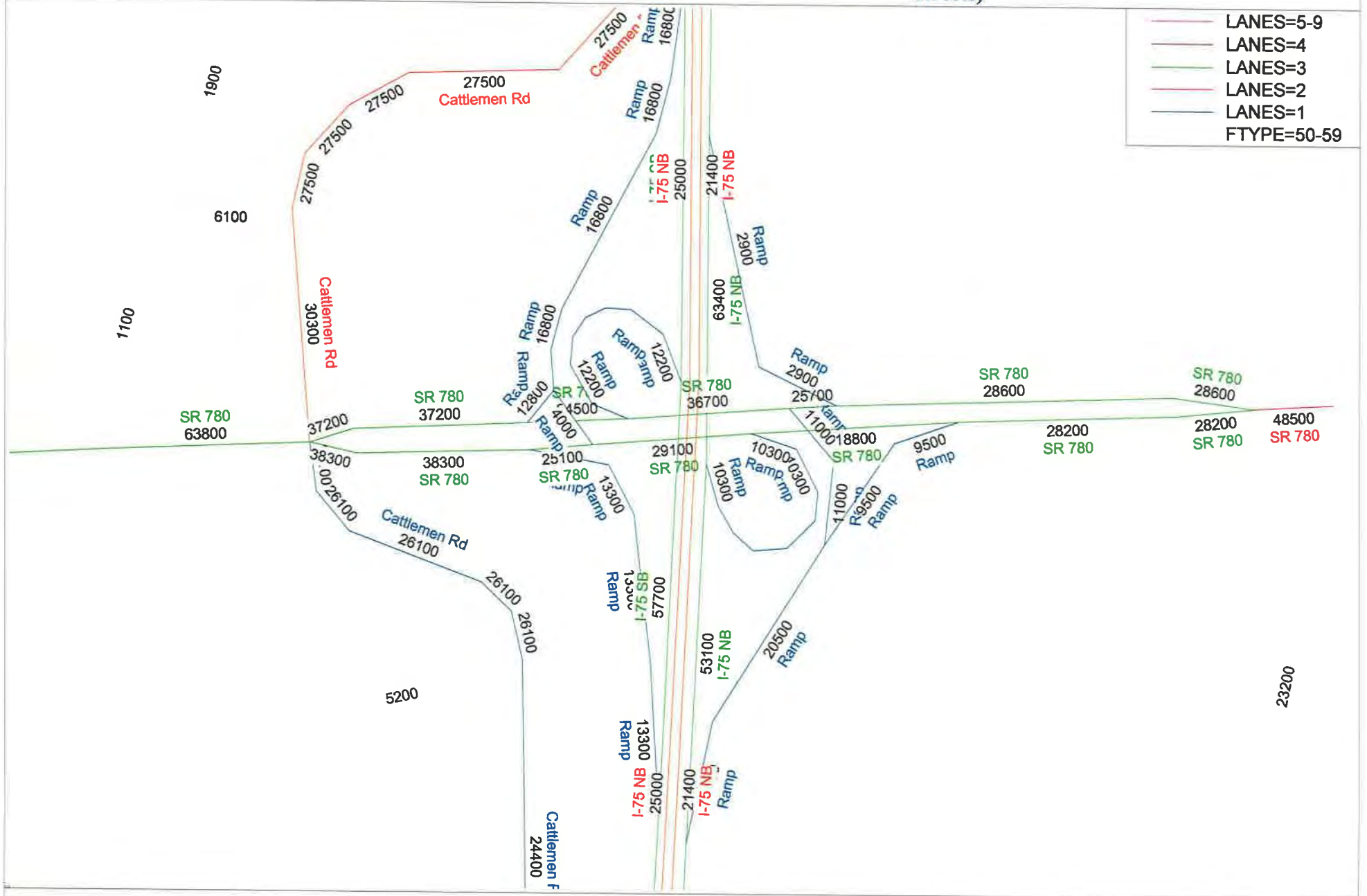
2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.90 for Fruitville Road and Side Streets)



Sheet 1 (Fruitville Road)

cube

2035 Financial Feasible Plan SMC Model with Fruitville Road Initiative
2035 AADT (MOCF=0.90 for Fruitville Road and Side Streets)



Sheet 2 (Fruitville Road interchange Zoom in)

cube

Appendix I: LRE COST ESTIMATES

LRE
DDI ALTERNATIVE
JANUARY 2016

Date: 2/4/2016 4:07:26 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 420613-2-52-01 **Letting Date:** 09/2023

Description: I-75 AT FRUITVILLE ROAD/CR 780

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 2.040 MI

Project Manager: CES-KSI-AES

Version 7-P Project Grand Total **$75,871,733.29**

Description: January 2016 Unit Cost Update with PM Mark Ups from Version 5P - 1/21/2016

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.947 MI 5,000 LF

Description: I-75 MAINLINE 6-LANE SECTION (Within Interchange)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.663
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00

Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	45.92	AC	$11,245.26	$516,382.34
120-6	EMBANKMENT	584,777.11	CY	$8.24	$4,818,563.39
	Earthwork Component Total				$5,334,945.73

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	66,668.80	SY	$3.45	$230,007.36
285-712	OPTIONAL BASE,BASE GROUP 12	40,734.64	SY	$15.04	$612,648.99
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	8,800.28	TN	$93.12	$819,482.07
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,600.05	TN	$140.26	$224,423.01

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	4,089.00	LF	$2.58	$10,549.62

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	639.00	EA	$3.90	$2,492.10
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	7.58	NM	$911.74	$6,910.99
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.79	GM	$378.22	$1,433.45

711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	7.58	NM	$4,022.60	$30,491.31
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.79	GM	$1,223.23	$4,636.04

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	136.30	TN	$171.84	$23,421.79
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	4,089.00	LF	$24.39	$99,730.71
	Roadway Component Total				$2,066,227.44

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	13,700.44	SY	$18.57	$254,417.17
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,466.71	TN	$93.12	$136,580.04
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	533.35	TN	$140.26	$74,807.67
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.89	PM	$878.10	$1,659.61

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	618.00	CY	$1,055.13	$652,070.34
521-8-1	CONC TRAF RAIL BAR, JCT SLAB,32"F SHAPE	2,502.00	LF	$215.00	$537,930.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	13,000.42	LF	$0.93	$12,090.39
104-11	FLOATING TURBIDITY BARRIER	236.75	LF	$10.21	$2,417.22
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	236.75	LF	$6.16	$1,458.38
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
104-18	INLET PROTECTION SYSTEM	6.00	EA	$81.27	$487.62
107-1	LITTER REMOVAL	22.96	AC	$28.47	$653.67
107-2	MOWING	22.96	AC	$93.29	$2,141.94
	Shoulder Component Total				$1,678,784.60

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	164.00
Performance Turf Width	140.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	13,700.44	SY	$18.57	$254,417.17
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,466.71	TN	$93.12	$136,580.04
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	29.33	TN	$140.26	$4,113.83
521-1	MEDIAN CONC BARRIER WALL	13,092.00	LF	$128.29	$1,679,572.68
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	2.00	PM	$878.10	$1,756.20
570-1-2	PERFORMANCE TURF, SOD	77,780.27	SY	$2.51	$195,228.48
	Median Component Total				$2,271,668.40

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	17.05	CY	$1,309.26	$22,322.88
425-1-551	INLETS, DT BOT, TYPE E, <10'	6.00	EA	$3,483.57	$20,901.42
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	760.00	LF	$57.39	$43,616.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	328.00	LF	$64.99	$21,316.72
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	288.00	LF	$105.32	$30,332.16
430-984-129	MITERED END SECT, OPTIONAL	38.00	EA	$1,042.56	$39,617.28

	RD, 24" SD			
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,894.00 SY	$75.46	$142,921.24
570-1-1	PERFORMANCE TURF	666.69 SY	$0.62	$413.35
	Drainage Component Total			$321,441.45

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$352.68	$705.36
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	23.00	AS	$1,230.45	$28,300.35
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$3,976.99	$7,953.98
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	6.00	AS	$5,636.55	$33,819.30
	Signing Component Total				$70,778.99

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$158,453.05

BRIDGES COMPONENT

Bridge 170083

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	265.00
Width (LF)	114.00
Type	Overpass Bridge
Cost Factor	1.75
Structure No.	
Removal of Existing Structures area	15,000.00
Default Cost per SF	$122.00
Factored Cost per SF	$213.50
Final Cost per SF	**$217.89**
Basic Bridge Cost	**$6,449,835.00**
Description	I-75 BRIDGE OVER FRUITVILLE ROAD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	15,000.00	SF	$44.18	$662,700.00
400-2-10	CONC CLASS II, APPROACH	253.33	CY	$348.80	$88,361.50

	SLABS			
415-1-9	REINF STEEL- APPROACH SLABS	44,332.75 LB	$1.00	$44,332.75
	Bridge 170083 Total			$7,245,229.25

Bridge 170084

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	260.00
Width (LF)	114.00
Type	Overpass Bridge
Cost Factor	1.75
Structure No.	
Removal of Existing Structures area	15,000.00
Default Cost per SF	$122.00
Factored Cost per SF	$213.50
Final Cost per SF	**$217.98**
Basic Bridge Cost	**$6,328,140.00**
Description	I-75 BRIDGE OVER FRUITVILLE ROAD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	15,000.00	SF	$44.18	$662,700.00
400-2-10	CONC CLASS II, APPROACH SLABS	253.33	CY	$348.80	$88,361.50
415-1-9	REINF STEEL- APPROACH SLABS	44,332.75	LB	$1.00	$44,332.75
	Bridge 170084 Total				$7,123,534.25
	Bridges Component Total				$14,368,763.50

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	10,937.50	SF	$23.64	$258,562.50

Retaining Wall 2

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00

Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	10,937.50	SF	$23.64	$258,562.50

Retaining Wall 3

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	10,937.50	SF	$23.64	$258,562.50

Retaining Wall 4

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	10,937.50	SF	$23.64	$258,562.50

Retaining Walls Component Total $1,034,250.00

Sequence 1 Total $27,305,313.16

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 2.273 MI 12,000 LF

Description: I-75 MAINLINE 6-LANE SECTION (North and South of Ramps)(Including Axillary Lanes)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	2.270
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	110.21	AC	$11,245.26	$1,239,340.10
120-6	EMBANKMENT	379,872.49	CY	$8.24	$3,130,149.32
	Earthwork Component Total				$4,369,489.42

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	159,998.08	SY	$3.45	$551,993.38
285-712	OPTIONAL BASE,BASE GROUP 12	97,758.83	SY	$15.04	$1,470,292.80
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	21,119.75	TN	$93.12	$1,966,671.12
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	3,839.95	TN	$140.26	$538,591.39

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	632.00	LF	$2.58	$1,630.56

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,534.00	EA	$3.90	$5,982.60
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	18.18	NM	$911.74	$16,575.43
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	9.09	GM	$378.22	$3,438.02
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	18.18	NM	$4,022.60	$73,130.87
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	9.09	GM	$1,223.23	$11,119.16

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	21.07	TN	$171.84	$3,620.67
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	632.00	LF	$24.39	$15,414.48
	Roadway Component Total				$4,658,460.48

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	27,546.34	SY	$18.57	$511,535.53
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	2,933.30	TN	$93.12	$273,148.90
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	70.40	TN	$140.26	$9,874.30
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	4.55	PM	$878.10	$3,995.36

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	31,199.63	LF	$0.93	$29,015.66
104-11	FLOATING TURBIDITY BARRIER	568.17	LF	$10.21	$5,801.02
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	568.17	LF	$6.16	$3,499.93
104-15	SOIL TRACKING PREVENTION DEVICE	3.00	EA	$2,070.55	$6,211.65
104-18	INLET PROTECTION SYSTEM	14.00	EA	$81.27	$1,137.78
107-1	LITTER REMOVAL	55.09	AC	$28.47	$1,568.41
107-2	MOWING	55.09	AC	$93.29	$5,139.35
	Shoulder Component Total				$850,927.89

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	125.00
Performance Turf Width	105.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	27,546.34	SY	$18.57	$511,535.53
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	2,933.30	TN	$93.12	$273,148.90
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	70.40	TN	$140.26	$9,874.30
521-1	MEDIAN CONC BARRIER WALL	1,264.00	LF	$128.29	$162,158.56
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	5.00	PM	$878.10	$4,390.50
570-1-2	PERFORMANCE TURF, SOD	139,998.32	SY	$2.51	$351,395.78
	Median Component Total				$1,312,503.57

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	40.91	CY	$1,309.26	$53,561.83
425-1-551	INLETS, DT BOT, TYPE E, <10'	14.00	EA	$3,483.57	$48,769.98
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,824.00	LF	$57.39	$104,679.36
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	784.00	LF	$64.99	$50,952.16
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	672.00	LF	$105.32	$70,775.04
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	91.00	EA	$1,042.56	$94,872.96
524-1-1	CONCRETE DITCH PAVT, NR, 3"	4,545.40	SY	$75.46	$342,995.88
570-1-1	PERFORMANCE TURF	1,599.98	SY	$0.62	$991.99
	Drainage Component Total				$767,599.20

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	5.00	AS	$352.68	$1,763.40
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	55.00	AS	$1,230.45	$67,674.75
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	5.00	AS	$3,976.99	$19,884.95
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	14.00	AS	$5,636.55	$78,911.70
	Signing Component Total				$168,234.80

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$189,737.28

Sequence 2 Total	$12,316,952.64

Sequence: 5 NDU - New Construction, Divided, Urban **Net Length:** 0.379 MI 2,000 LF

Description: 10- LANE DDI

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.379
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.65	AC	$11,245.26	$108,516.76
120-6	EMBANKMENT	60,433.82	CY	$8.24	$497,974.68
	Earthwork Component Total				$606,491.44

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	10
Roadway Pavement Width L/R	82.00 / 82.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	38,739.02	SY	$3.45	$133,649.62
285-710	OPTIONAL BASE,BASE GROUP 10	36,445.61	SY	$19.10	$696,111.15
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	6,013.53	TN	$102.50	$616,386.82
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,457.82	TN	$140.26	$204,473.83

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	10
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	460.00	EA	$3.90	$1,794.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.79	NM	$911.74	$3,455.49
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.03	GM	$378.22	$1,146.01
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.79	NM	$4,022.60	$15,245.65
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.03	GM	$1,223.23	$3,706.39
	Roadway Component Total				$1,675,968.97

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,000.06	LF	$18.95	$37,901.14
	CONCRETE CURB & GUTTER,				

520-1-10	TYPE F	2,000.06	LF	$18.95	$37,901.14
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,222.29	SY	$31.39	$69,757.68
570-1-2	PERFORMANCE TURF, SOD	2,222.29	SY	$2.51	$5,577.95

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,000.13	LF	$0.93	$3,720.12
104-11	FLOATING TURBIDITY BARRIER	94.70	LF	$10.21	$966.89
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	94.70	LF	$6.16	$583.35
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
104-18	INLET PROTECTION SYSTEM	20.00	EA	$81.27	$1,625.40
107-1	LITTER REMOVAL	9.64	AC	$28.47	$274.45
107-2	MOWING	9.64	AC	$93.29	$899.32
	Shoulder Component Total				$161,277.99

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	22.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	4,000.13	LF	$22.08	$88,322.87
570-1-2	PERFORMANCE TURF, SOD	4,889.05	SY	$2.51	$12,271.52
	Median Component Total				$100,594.39

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.82	CY	$1,309.26	$8,929.15
425-1-351	INLETS, CURB, TYPE P-5, <10'	14.00	EA	$4,067.60	$56,946.40
425-1-451	INLETS, CURB, TYPE J-5, <10'	4.00	EA	$5,199.22	$20,796.88
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$2,587.48	$5,174.96
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$3,612.03	$7,224.06
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,008.00	LF	$64.99	$65,509.92
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	96.00	LF	$105.32	$10,110.72
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	1,896.00	LF	$149.52	$283,489.92
570-1-1	PERFORMANCE TURF	115.16	SY	$0.62	$71.40

Drainage Component Total $458,253.41

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	10.00	AS	$352.68	$3,526.80
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,230.45	$1,230.45
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$5,636.55	$5,636.55
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	1.00	AS	$8,671.83	$8,671.83

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-210	SIGN PANEL, F&I OM, 501-600 SF	6.00	EA	$13,513.85	$81,083.10
700-3-211	SIGN PANEL, F&I OM, 601 SF AND GREATER	6.00	EA	$16,703.72	$100,222.32
700-4-125	OH STATIC SIGN STR, F&I, S 51-100 FT	1.00	EA	$124,440.12	$124,440.12
700-4-126	OH STATIC SIGN STR, F&I, S 101-150 FT	3.00	EA	$152,623.43	$457,870.29
700-4-128	OH STATIC SIGN STR, F&I, S 201 FT AND GR	2.00	EA	$249,029.33	$498,058.66
700-4-140	OH STATIC SIGN STR, F&I, O BR MOUNT	2.00	EA	$41,036.53	$82,073.06
700-4-610	OH STATIC SIGN STR, REMOVE, CANT	3.00	EA	$3,432.24	$10,296.72
700-4-620	OH STATIC SIGN STR, REMOVE, SPAN	1.00	EA	$14,236.55	$14,236.55

Signing Component Total $1,387,346.45

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.51	$4,557.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$20.83	$6,249.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$6,078.36	$6,078.36
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$560.87	$12,339.14
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.30	$198.00
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,225.01	$1,225.01

649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,011.11	$1,011.11
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$56,010.37	$224,041.48
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$172.58	$3,451.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,047.98	$20,959.60
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$1,330.26	$10,642.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$29,021.65	$29,021.65

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
639-1-122	ELECTRICAL POWER SRV,F&I, UG,PUR CONT	1.00	AS	$1,794.69	$1,794.69
650-1-14	TRAFFIC SIGNAL,F&I ALUMINUM, 3 S 1 W	20.00	AS	$966.25	$19,325.00
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$617.18	$4,937.44

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.51	$4,557.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$20.83	$6,249.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$6,078.36	$6,078.36
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$560.87	$12,339.14
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.30	$198.00
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,225.01	$1,225.01
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,011.11	$1,011.11
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$56,010.37	$224,041.48
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$172.58	$3,451.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,047.98	$20,959.60
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$1,330.26	$10,642.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$29,021.65	$29,021.65

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
639-1-122	ELECTRICAL POWER SRV,F&I, UG,PUR CONT	1.00	AS	$1,794.69	$1,794.69
	TRAFFIC SIGNAL,F&I ALUMINUM,				

650-1-14	3 S 1 W	20.00	AS	$966.25	$19,325.00
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$617.18	$4,937.44

Signalization 3

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.51	$4,557.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$20.83	$6,249.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$6,078.36	$6,078.36
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$560.87	$12,339.14
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.30	$198.00
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,225.01	$1,225.01
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,011.11	$1,011.11
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$56,010.37	$224,041.48
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$172.58	$3,451.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,047.98	$20,959.60
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$1,330.26	$10,642.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$29,021.65	$29,021.65

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
639-1-122	ELECTRICAL POWER SRV,F&I, UG,PUR CONT	1.00	AS	$1,794.69	$1,794.69
650-1-14	TRAFFIC SIGNAL,F&I ALUMINUM, 3 S 1 W	20.00	AS	$966.25	$19,325.00
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$617.18	$4,937.44

Interconnect Subcomponent

Description	Value
Type	U
Length of Fiber Run	4,500.00
Number of Intersections	3
Percentage of Underpavement Conduit	30.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	12.00	AS	$762.62	$9,151.44

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,150.00	LF	$6.51	$20,506.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	1,350.00	LF	$20.83	$28,120.50
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36"	6.00	EA	$1,213.81	$7,282.86
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" OR 36"	3.00	EA	$2,686.10	$8,058.30
	Signalizations Component Total				$1,110,613.08

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
633-1-121	FIBER OPTIC CABLE, F&I, UG,2-12	30.00	LF	$3.23	$96.90
	Comment: for signal interconnect				
633-1-122	FIBER OPTIC CABLE, F&I, UG,13-48	4,500.00	LF	$2.43	$10,935.00
	Comment: for signal interconnect				
	Intelligent Traffic System (ITS) Component Total				$11,031.90

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,000.06	LF	$6.51	$13,020.39
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	396.98	LF	$20.83	$8,269.09
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	14.00	EA	$560.87	$7,852.18
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	7,304.78	LF	$1.85	$13,513.84
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	14.00	EA	$4,762.21	$66,670.94
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	14.00	EA	$650.89	$9,112.46
	Subcomponent Total				$118,438.91
	Lighting Component Total				$118,438.90

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$59,902.37
Sequence 5 Total	$5,689,918.90

Sequence: 6 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.852 MI 4,500 LF

Description: 10 Lane

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.852
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.16	AC	$11,245.26	$58,025.54
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,689.46	CY	$23.96	$40,479.46
	Earthwork Component Total				$98,505.00

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	10
Existing Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	29.00 / 18.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	330
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	26,080.83	SY	$3.45	$89,978.86

285-709	OPTIONAL BASE,BASE GROUP 09	23,830.76	SY	$22.10	$526,659.80
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	48,001.54	SY	$2.21	$106,083.40
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	7,920.25	TN	$102.50	$811,825.62
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,877.62	TN	$102.50	$397,456.05
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,920.06	TN	$118.16	$226,874.29
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	940.03	TN	$118.16	$111,073.94

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,036.00	EA	$3.90	$4,040.40
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.41	NM	$911.74	$3,109.03
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	6.82	GM	$378.22	$2,579.46
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.41	NM	$4,022.60	$13,717.07
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	6.82	GM	$1,223.23	$8,342.43
	Roadway Component Total				$2,301,740.36

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	12.25 / 12.25
New Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,500.14	LF	$18.95	$85,277.65
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,500.14	LF	$18.95	$85,277.65
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	5,000.16	SY	$31.39	$156,955.02
570-1-1	PERFORMANCE TURF	5,000.16	SY	$0.62	$3,100.10

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	9,000.29	LF	$0.93	$8,370.27
104-11	FLOATING TURBIDITY BARRIER	85.23	LF	$10.21	$870.20
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	85.23	LF	$6.16	$525.02
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
104-18	INLET PROTECTION SYSTEM	40.00	EA	$81.27	$3,250.80
107-1	LITTER REMOVAL	7.43	AC	$28.47	$211.53
107-2	MOWING	7.43	AC	$93.29	$693.14
	Shoulder Component Total				$346,601.93

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	2,670.09	SY	$0.62	$1,655.46
	Median Component Total				$1,655.46

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	15.34	CY	$1,309.26	$20,084.05
425-1-351	INLETS, CURB, TYPE P-5, <10'	31.00	EA	$4,067.60	$126,095.60
425-1-451	INLETS, CURB, TYPE J-5, <10'	9.00	EA	$5,199.22	$46,792.98
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	472.00	LF	$64.99	$30,675.28
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	144.00	LF	$105.32	$15,166.08
570-1-1	PERFORMANCE TURF	259.10	SY	$0.62	$160.64
	Drainage Component Total				$238,974.63

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	19.00	AS	$352.68	$6,700.92
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,230.45	$2,460.90

700-1-50	SINGLE POST SIGN, RELOCATE	2.00 AS	$181.10	$362.20
700-1-60	SINGLE POST SIGN, REMOVE	19.00 AS	$16.94	$321.86
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00 AS	$3,976.99	$7,953.98
700-2-60	MULTI- POST SIGN, REMOVE	2.00 AS	$442.06	$884.12
	Signing Component Total			$18,683.98

Sequence 6 Total $3,006,161.36

Sequence: 7 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.474 MI 2,500 LF

Description: 6 Lane

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.473
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.87	AC	$11,245.26	$32,273.90
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,098.87	CY	$23.96	$26,328.93
	Earthwork Component Total				$58,602.83

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Existing Roadway Pavement Width L/R	30.00 / 30.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	18.00 / 18.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	330
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,433.70	SY	$3.45	$39,446.26
285-709	OPTIONAL BASE,BASE GROUP 09	10,183.66	SY	$22.10	$225,058.89
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	16,667.20	SY	$2.21	$36,834.51
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,750.09	TN	$102.50	$281,884.22
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,650.05	TN	$102.50	$169,130.12
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	666.69	TN	$118.16	$78,776.09
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	400.01	TN	$118.16	$47,265.18

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	320.00	EA	$3.90	$1,248.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.89	NM	$911.74	$1,723.19
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.89	GM	$378.22	$714.84
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.89	NM	$4,022.60	$7,602.71
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.89	GM	$1,223.23	$2,311.90
	Roadway Component Total				$891,995.94

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	12.25 / 12.25
New Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,500.08	LF	$18.95	$47,376.52
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,500.08	LF	$18.95	$47,376.52
522-1	CONCRETE SIDEWALK AND	2,777.87	SY	$31.39	$87,197.34

	DRIVEWAYS, 4"				
570-1-1	PERFORMANCE TURF	2,777.87	SY	$0.62	$1,722.28

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,000.16	LF	$0.93	$4,650.15
104-11	FLOATING TURBIDITY BARRIER	47.35	LF	$10.21	$483.44
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	47.35	LF	$6.16	$291.68
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
104-18	INLET PROTECTION SYSTEM	22.00	EA	$81.27	$1,787.94
107-1	LITTER REMOVAL	4.13	AC	$28.47	$117.58
107-2	MOWING	4.13	AC	$93.29	$385.29
	Shoulder Component Total				$193,459.29

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	1,483.38	SY	$0.62	$919.70
	Median Component Total				$919.70

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	8.52	CY	$1,309.26	$11,154.90
425-1-351	INLETS, CURB, TYPE P-5, <10'	18.00	EA	$4,067.60	$73,216.80
425-1-451	INLETS, CURB, TYPE J-5, <10'	5.00	EA	$5,199.22	$25,996.10
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	264.00	LF	$64.99	$17,157.36
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	80.00	LF	$105.32	$8,425.60
570-1-1	PERFORMANCE TURF	143.94	SY	$0.62	$89.24
	Drainage Component Total				$136,040.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	11.00	AS	$352.68	$3,879.48

700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00 AS	$1,230.45	$1,230.45
700-1-50	SINGLE POST SIGN, RELOCATE	1.00 AS	$181.10	$181.10
700-1-60	SINGLE POST SIGN, REMOVE	11.00 AS	$16.94	$186.34
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$3,976.99	$3,976.99
700-2-60	MULTI- POST SIGN, REMOVE	1.00 AS	$442.06	$442.06
	Signing Component Total			$9,896.42

Sequence 7 Total $1,290,914.18

Sequence: 10 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.142 MI 750 LF

Description: CATTLEMAN 4- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.142
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.86	AC	$11,245.26	$9,670.92
120-1	REGULAR EXCAVATION	1,615.59	CY	$12.69	$20,501.84
	Earthwork Component Total				$30,172.76

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	7
Existing Roadway Pavement Width L/R	42.00 / 42.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Inside Pavement Width L/R	16.00 / 0.00
Widened Structural Spread Rate	330
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,547.84	SY	$3.45	$5,340.05
285-709	OPTIONAL BASE,BASE GROUP 09	1,360.40	SY	$22.10	$30,064.84
327-70-5	MILLING EXIST ASPH PAVT, 2"	6,997.76	SY	$2.21	$15,465.05

	AVG DEPTH			
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,154.63 TN	$102.50	$118,349.58
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	219.93 TN	$102.50	$22,542.82
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	279.91 TN	$118.16	$33,074.17
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	53.32 TN	$118.16	$6,300.29

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	115.00	EA	$3.90	$448.50
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.57	NM	$911.74	$519.69
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.71	GM	$378.22	$268.54
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.57	NM	$4,022.60	$2,292.88
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.71	GM	$1,223.23	$868.49
	Roadway Component Total				$235,534.91

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	12.25 / 12.25
New Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	749.76	LF	$18.95	$14,207.95
520-1-10	CONCRETE CURB & GUTTER, TYPE F	749.76	LF	$18.95	$14,207.95
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	833.07	SY	$31.39	$26,150.07
570-1-1	PERFORMANCE TURF	833.07	SY	$0.62	$516.50

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,499.52	LF	$0.93	$1,394.55
104-11	FLOATING TURBIDITY BARRIER	14.20	LF	$10.21	$144.98
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	14.20	LF	$6.16	$87.47
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
104-18	INLET PROTECTION SYSTEM	7.00	EA	$81.27	$568.89
107-1	LITTER REMOVAL	1.24	AC	$28.47	$35.30
107-2	MOWING	1.24	AC	$93.29	$115.68
	Shoulder Component Total				$59,499.89

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	444.86	SY	$0.62	$275.81
	Median Component Total				$275.81

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.56	CY	$1,309.26	$3,351.71
425-1-351	INLETS, CURB, TYPE P-5, <10'	6.00	EA	$4,067.60	$24,405.60
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$5,199.22	$10,398.44
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	80.00	LF	$64.99	$5,199.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$105.32	$2,527.68
570-1-1	PERFORMANCE TURF	43.17	SY	$0.62	$26.77
	Drainage Component Total				$45,909.40

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	4.00	AS	$352.68	$1,410.72
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,230.45	$1,230.45
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$181.10	$181.10
700-1-60	SINGLE POST SIGN, REMOVE	4.00	AS	$16.94	$67.76

700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$3,976.99	$3,976.99
700-2-60	MULTI- POST SIGN, REMOVE	1.00 AS	$442.06	$442.06
	Signing Component Total			$7,309.08

Sequence 10 Total $378,701.85

Sequence: 11 NUR - New Construction, Undivided, Rural **Net Length:** 0.095 MI 500 LF

Description: SINGLE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.095
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.15	AC	$11,245.26	$12,932.05
120-6	EMBANKMENT	4,619.18	CY	$8.24	$38,062.04
	Earthwork Component Total				$50,994.09

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,944.51	SY	$3.45	$6,708.56
285-710	OPTIONAL BASE,BASE GROUP 10	870.03	SY	$19.10	$16,617.57
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	137.50	TN	$93.12	$12,804.00
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	33.33	TN	$140.26	$4,674.87

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.19	NM	$911.74	$173.23
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.19	NM	$4,022.60	$764.29
	Roadway Component Total				$41,742.52

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	814.47	SY	$18.57	$15,124.71
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	85.56	TN	$93.12	$7,967.35
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	2.93	TN	$140.26	$410.96
570-1-2	PERFORMANCE TURF, SOD	333.34	SY	$2.51	$836.68

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,300.04	LF	$0.93	$1,209.04
104-11	FLOATING TURBIDITY BARRIER	23.68	LF	$10.21	$241.77
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	23.68	LF	$6.16	$145.87
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,070.55	$2,070.55
107-1	LITTER REMOVAL	1.15	AC	$28.47	$32.74
107-2	MOWING	1.15	AC	$93.29	$107.28
	Shoulder Component Total				$28,146.95

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	1.70	CY	$1,309.26	$2,225.74
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	80.00	LF	$57.39	$4,591.20
	PIPE CULV, OPT MATL, ROUND,				

430-175-136	36"S/CD	16.00 LF	$105.32	$1,685.12
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00 EA	$1,042.56	$4,170.24
570-1-1	PERFORMANCE TURF	66.67 SY	$0.62	$41.34
	Drainage Component Total			$12,713.64

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$352.68	$352.68
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,230.45	$2,460.90
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$3,976.99	$3,976.99
	Signing Component Total				$6,790.57

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$2,065.08

Sequence 11 Total $142,452.85

Sequence: 12 NUR - New Construction, Undivided, Rural **Net Length:** 1.553 MI 8,200 LF

Description: TWO LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.553
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	18.82	AC	$11,245.26	$211,635.79
120-6	EMBANKMENT	83,690.00	CY	$8.24	$689,605.60
	Earthwork Component Total				$901,241.39

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	40,088.11	SY	$3.45	$138,303.98
285-710	OPTIONAL BASE,BASE GROUP 10	22,467.56	SY	$19.10	$429,130.40
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	3,607.93	TN	$93.12	$335,970.44
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	874.65	TN	$140.26	$122,678.41

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	210.00	EA	$3.90	$819.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.11	NM	$911.74	$2,835.51
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.55	GM	$378.22	$586.24
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.11	NM	$4,022.60	$12,510.29
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.55	GM	$1,223.23	$1,896.01
	Roadway Component Total				$1,044,730.28

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	13,356.63	SY	$18.57	$248,032.62
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	1,403.08	TN	$93.12	$130,654.81
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	48.11	TN	$140.26	$6,747.91

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	21,319.58	LF	$0.93	$19,827.21
104-11	FLOATING TURBIDITY BARRIER	388.25	LF	$10.21	$3,964.03
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	388.25	LF	$6.16	$2,391.62
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$2,070.55	$4,141.10
107-1	LITTER REMOVAL	18.82	AC	$28.47	$535.81
107-2	MOWING	18.82	AC	$93.29	$1,755.72
	Shoulder Component Total				$418,050.83

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	27.95	CY	$1,309.26	$36,593.82
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,248.00	LF	$57.39	$71,622.72
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	264.00	LF	$105.32	$27,804.48
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	63.00	EA	$1,042.56	$65,681.28
570-1-1	PERFORMANCE TURF	1,093.31	SY	$0.62	$677.85
	Drainage Component Total				$202,380.15

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	4.00	AS	$352.68	$1,410.72
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	32.00	AS	$1,230.45	$39,374.40
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	4.00	AS	$3,976.99	$15,907.96
	Signing Component Total				$56,693.08

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$41,629.03
Sequence 12 Total		$2,664,724.76

Sequence: 13 NUR - New Construction, Undivided, Rural **Net Length:** 0.758 MI 4,000 LF

Description: THREE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.758
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.19	AC	$11,245.26	$103,343.94
120-6	EMBANKMENT	45,870.12	CY	$8.24	$377,969.79
	Earthwork Component Total				$481,313.73

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	24.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	24,889.69	SY	$3.45	$85,869.43
285-710	OPTIONAL BASE,BASE GROUP 10	16,293.85	SY	$19.10	$311,212.53
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	2,640.08	TN	$93.12	$245,844.25
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	640.02	TN	$140.26	$89,769.21

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	409.00	EA	$3.90	$1,595.10
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.52	NM	$911.74	$1,385.84
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.52	GM	$378.22	$574.89
711-15-111	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.52	NM	$4,022.60	$6,114.35
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.52	GM	$1,223.23	$1,859.31
	Roadway Component Total				$744,224.92

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	6,515.76	SY	$18.57	$120,997.66
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22,PMA	684.47	TN	$93.12	$63,737.85
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	248.90	TN	$140.26	$34,910.71
570-1-2	PERFORMANCE TURF, SOD	2,666.75	SY	$2.51	$6,693.54

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	10,400.33	LF	$0.93	$9,672.31
104-11	FLOATING TURBIDITY BARRIER	189.40	LF	$10.21	$1,933.77
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	189.40	LF	$6.16	$1,166.70

104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$2,070.55	$2,070.55
107-1	LITTER REMOVAL	9.18 AC	$28.47	$261.35
107-2	MOWING	9.18 AC	$93.29	$856.40
	Shoulder Component Total			$242,300.84

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	13.64	CY	$1,309.26	$17,858.31
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	608.00	LF	$57.39	$34,893.12
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	128.00	LF	$105.32	$13,480.96
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	31.00	EA	$1,042.56	$32,319.36
570-1-1	PERFORMANCE TURF	533.35	SY	$0.62	$330.68
	Drainage Component Total				$98,882.43

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$352.68	$705.36
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	16.00	AS	$1,230.45	$19,687.20
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$3,976.99	$7,953.98
	Signing Component Total				$28,346.54

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$27,135.20

Sequence 13 Total $1,622,203.66

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FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 420613-2-52-01 **Letting Date:** 09/2023

Description: I-75 AT FRUITVILLE ROAD/CR 780

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 2.040 MI

Project Manager: CES-KSI-AES

Version 7-P Project Grand Total **$75,871,733.29**

Description: January 2016 Unit Cost Update with PM Mark Ups from Version 5P - 1/21/2016

Project Sequences Subtotal			**$54,417,343.36**
102-1	Maintenance of Traffic	15.00 %	$8,162,601.50
101-1	Mobilization	10.00 %	$6,257,994.49
Project Sequences Total			**$68,837,939.35**
Project Unknowns		10.00 %	$6,883,793.94
Justification for high %:	High %'s due to bridge work over I-75		
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 7-P Project Grand Total					**$75,871,733.29**

LRE
SIMR ALTERNATIVE
APRIL 2009
(INCLUDES FUTURE EXPRESS LANES)

Date: 7/7/2009 11:17:05 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-1-22-01 **Letting Date:** 01/2099

Description: I-75 FROM SR 681 TO UNIVERSITY PARKWAY

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English
Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 13.770 MI

Project Manager: MGR-RLC-MJB

Version 64 Project Grand Total **$156,023,574.11**
Description: FRUITVILLE INTERCHANGE CB - Unit Cost Update April 2009 - (From Version 50)

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.774 MI
Description: I-75 MAINLINE 10-LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.142
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.490
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1

Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	37.53	AC	$25,000.00	$938,250.00
120-6	EMBANKMENT	515,539.86	CY	$16.29	$8,398,144.32
	Earthwork Component Total				$9,336,394.32

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	14
Roadway Pavement Width L/R	84.00 / 84.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	98,081.28	SY	$6.00	$588,487.68
285-712	OPTIONAL BASE,BASE GROUP 12	76,884.83	SY	$49.45	$3,801,954.84
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	16,782.80	TN	$128.25	$2,152,394.10
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	3,051.42	TN	$129.60	$395,464.03

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	4,089.00	LF	$3.67	$15,006.63

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	12
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,358.00	EA	$4.78	$6,491.24
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	6.19	NM	$1,164.77	$7,209.93
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	9.29	GM	$402.72	$3,741.27
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	6.19	NM	$3,741.79	$23,161.68
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	9.29	GM	$1,202.83	$11,174.29

	Roadway Component Total	$7,005,085.69

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	9,381.29	SY	$25.00	$234,532.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	998.98	TN	$128.25	$128,119.18
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	363.26	TN	$129.60	$47,078.50
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.55	PM	$2,700.00	$4,185.00
570-1-2	PERFORMANCE TURF, SOD	1,816.32	SY	$2.00	$3,632.64

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS	618.00	CY	$1,025.00	$633,450.00
521-8-1	CONC TRAF RAIL BAR,RET WALL SYS,32"F SHP	2,502.00	LF	$230.22	$576,010.44

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	817.34	LF	$9.53	$7,789.25
104-11	FLOATING TURBIDITY BARRIER	193.50	LF	$9.48	$1,834.38
104-12	STAKED TURBIDITY BARRIER	193.50	LF	$5.06	$979.11
104-13-1	STAKED SILT FENCE, TYPE III	8,173.44	LF	$0.89	$7,274.36
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80

	Shoulder Component Total	$1,646,903.92

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220

Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	9,381.29	SY	$25.00	$234,532.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	998.98	TN	$128.25	$128,119.18
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	363.26	TN	$129.60	$47,078.50
521-1	MEDIAN CONC BARRIER WALL	13,092.00	LF	$122.17	$1,599,449.64
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	2.00	PM	$2,700.00	$5,400.00
570-1-2	PERFORMANCE TURF, SOD	19,979.52	SY	$2.00	$39,959.04

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	4,089.00	LF	$37.38	$152,846.82

Median Component Total $2,207,385.44

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	13.93	CY	$1,300.00	$18,109.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	5.00	EA	$2,098.49	$10,492.45
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	624.00	LF	$55.56	$34,669.44
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	31.00	EA	$1,317.51	$40,842.81
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,548.00	SY	$71.40	$110,527.20

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	264.00	LF	$40.48	$10,686.72
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	232.00	LF	$70.38	$16,328.16
570-1-2	PERFORMANCE TURF, SOD	545.00	SY	$2.00	$1,090.00

Drainage Component Total $242,745.78

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00	AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	19.00	AS	$923.06	$17,538.14
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00	AS	$4,089.43	$8,178.86

700-21-12	MULTI- POST SIGN, F&I, 51-100	5.00 AS	$4,808.00	$24,040.00
	Signing Component Total			$50,321.68

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$277,553.02

BRIDGES COMPONENT

Bridge 170081

Description	Value
Length	135.50
Width	56.00
Type	Overpass Widening
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	813.00
Default Cost per SF	$128.00
Factored Cost per SF	$224.00
Final Cost per SF	$236.85
Basic Bridge Cost	$1,699,712.00
Description	I-75 BRIDGE OVER PALMER BLVD.

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	813.00 SF	$36.00	$29,268.00
400-2-10	CONC CLASS II, APPROACH SLABS	124.44 CY	$600.00	$74,664.00
415-1-9	REINF STEEL- APPROACH SLABS	21,777.00 LB	$1.05	$22,865.85
	Bridge 170081 Total			$1,826,509.85

Bridge 170082

Description	Value
Length	135.50
Width	56.00
Type	Overpass Widening
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	813.00
Default Cost per SF	$128.00
Factored Cost per SF	$224.00
Final Cost per SF	$236.85
Basic Bridge Cost	$1,699,712.00
Description	I-75 BRIDGE OVER PALMER BLVD.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	813.00	SF	$36.00	$29,268.00
400-2-10	CONC CLASS II, APPROACH SLABS	124.44	CY	$600.00	$74,664.00
415-1-9	REINF STEEL- APPROACH SLABS	21,777.00	LB	$1.05	$22,865.85
	Bridge 170082 Total				$1,826,509.85

Bridge 170083

Description	Value
Length	230.00
Width	142.00
Type	Overpass Bridge
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	15,000.00
Default Cost per SF	$122.00
Factored Cost per SF	$213.50
Final Cost per SF	$221.07
Basic Bridge Cost	$6,972,910.00
Description	I-75 BRIDGE OVER FRUITVILLE ROAD.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	15,000.00	SF	$36.00	$540,000.00
400-2-10	CONC CLASS II, APPROACH SLABS	315.56	CY	$600.00	$189,336.00
415-1-9	REINF STEEL- APPROACH SLABS	55,223.00	LB	$1.05	$57,984.15
	Bridge 170083 Total				$7,760,230.15

Bridge 170084

Description	Value
Length	230.00
Width	161.00
Type	Overpass Bridge
Substructure Type	Multi Columns
Superstructure Type	AASHTO Girder
Cost Factor	1.75
Removal of existing structures area	15,000.00
Default Cost per SF	$122.00
Factored Cost per SF	$213.50
Final Cost per SF	$221.07
Basic Bridge Cost	$7,905,905.00
Description	I-75 BRIDGE OVER FRUITVILLE ROAD.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURE	15,000.00	SF	$36.00	$540,000.00
400-2-10	CONC CLASS II, APPROACH SLABS	357.78	CY	$600.00	$214,668.00
415-1-9	REINF STEEL- APPROACH SLABS	62,611.50	LB	$1.05	$65,742.08

Bridge 170084 Total	$8,726,315.08
Bridges Component Total	$20,139,564.93

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 2

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 3

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Wall 4

Description	Value
Length	625.00
Begin height	5.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RETAINING WALL SYSTEM,PERM, EXC BAR.	10,937.50	SF	$38.37	$419,671.88

Retaining Walls Component Total	$1,678,687.52
Sequence 1 Total	$42,584,642.30

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 0.120 MI
Description: I-75 MAINLINE 11-LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.120
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.82	AC	$25,000.00	$145,500.00
120-6	EMBANKMENT	19,945.02	CY	$16.29	$324,904.38
	Earthwork Component Total				$470,404.38

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	15
Roadway Pavement Width L/R	96.00 / 84.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	16,051.20	SY	$6.00	$96,307.20
285-712	OPTIONAL BASE,BASE GROUP 12	12,764.93	SY	$49.45	$631,225.79
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	2,787.84	TN	$128.25	$357,540.48
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	506.88	TN	$129.60	$65,691.65

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	632.00	LF	$3.67	$2,319.44

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8

Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	13
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	227.00	EA	$4.78	$1,085.06
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.96	NM	$1,164.77	$1,118.18
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.56	GM	$402.72	$628.24
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.96	NM	$3,741.79	$3,592.12
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.56	GM	$1,202.83	$1,876.41
	Roadway Component Total				$1,161,384.57

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,736.06	SY	$25.00	$43,401.50
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	185.86	TN	$128.25	$23,836.54
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	67.58	TN	$129.60	$8,758.37

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	126.72	LF	$9.53	$1,207.64
104-11	FLOATING TURBIDITY BARRIER	30.00	LF	$9.48	$284.40
104-12	STAKED TURBIDITY BARRIER	30.00	LF	$5.06	$151.80
104-13-1	STAKED SILT FENCE, TYPE III	1,267.20	LF	$0.89	$1,127.81
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$80,786.87

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,454.46	SY	$25.00	$36,361.50
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	154.88	TN	$128.25	$19,863.36
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	56.32	TN	$129.60	$7,299.07
521-1	MEDIAN CONC BARRIER WALL	1,264.00	LF	$122.17	$154,422.88
570-1-2	PERFORMANCE TURF, SOD	3,097.60	SY	$2.00	$6,195.20

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	632.00	LF	$37.38	$23,624.16

Median Component Total $247,766.17

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.16	CY	$1,300.00	$2,808.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	1.00	EA	$2,098.49	$2,098.49
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	96.00	LF	$55.56	$5,333.76
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$1,317.51	$6,587.55
524-1-1	CONCRETE DITCH PAVT, NR, 3"	240.00	SY	$71.40	$17,136.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	40.00	LF	$40.48	$1,619.20
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	40.00	LF	$70.38	$2,815.20
570-1-2	PERFORMANCE TURF, SOD	85.00	SY	$2.00	$170.00

Drainage Component Total $38,568.20

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	3.00 AS	$923.06	$2,769.18
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00 AS	$4,808.00	$4,808.00
	Signing Component Total			$11,948.95

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

Landscaping Component Total	$38,212.65

Sequence 2 Total	$2,049,071.79

Sequence: 3 NDR - New Construction, Divided, Rural **Net Length:** 1.354 MI
Description: I-75 MAINLINE 12-LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.354
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	65.65	AC	$25,000.00	$1,641,250.00
120-6	EMBANKMENT	253,926.15	CY	$16.29	$4,136,456.98
	Earthwork Component Total				$5,777,706.98

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	16
Roadway Pavement Width L/R	96.00 / 96.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	190,643.20	SY	$6.00	$1,143,859.20
285-712	OPTIONAL BASE,BASE GROUP 12	153,563.10	SY	$49.45	$7,593,695.30
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	33,553.20	TN	$128.25	$4,303,197.90
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	6,100.58	TN	$129.60	$790,635.17

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	7,150.00	LF	$3.67	$26,240.50

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8

Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	14
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	2,742.00	EA	$4.78	$13,106.76
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	10.83	NM	$1,164.77	$12,614.46
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	18.96	GM	$402.72	$7,635.57
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	10.83	NM	$3,741.79	$40,523.59
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	18.96	GM	$1,202.83	$22,805.66
	Roadway Component Total				$13,954,314.11

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	16,411.20	SY	$25.00	$410,280.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,747.56	TN	$128.25	$224,124.57
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	635.48	TN	$129.60	$82,358.21
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	2.71	PM	$2,700.00	$7,317.00
570-1-2	PERFORMANCE TURF, SOD	3,177.39	SY	$2.00	$6,354.78

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	1,429.82	LF	$9.53	$13,626.18
104-11	FLOATING TURBIDITY BARRIER	338.50	LF	$9.48	$3,208.98
104-12	STAKED TURBIDITY BARRIER	338.50	LF	$5.06	$1,712.81
104-13-1	STAKED SILT FENCE, TYPE III	14,298.24	LF	$0.89	$12,725.43
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$2,018.80	$4,037.60
	Shoulder Component Total				$765,745.56

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	90.00
Performance Turf Width	70.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	16,411.20	SY	$25.00	$410,280.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,747.56	TN	$128.25	$224,124.57
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	635.48	TN	$129.60	$82,358.21
521-1	MEDIAN CONC BARRIER WALL	14,300.00	LF	$122.17	$1,747,031.00
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	3.00	PM	$2,700.00	$8,100.00
570-1-2	PERFORMANCE TURF, SOD	55,604.27	SY	$2.00	$111,208.54

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	7,150.00	LF	$37.38	$267,267.00
	Median Component Total				$2,850,369.32

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	24.37	CY	$1,300.00	$31,681.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	9.00	EA	$2,098.49	$18,886.41
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	1,088.00	LF	$55.56	$60,449.28
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	55.00	EA	$1,317.51	$72,463.05
524-1-1	CONCRETE DITCH PAVT, NR, 3"	2,708.00	SY	$71.40	$193,351.20

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	464.00	LF	$40.48	$18,782.72
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	400.00	LF	$70.38	$28,152.00
570-1-2	PERFORMANCE TURF, SOD	953.00	SY	$2.00	$1,906.00
	Drainage Component Total				$425,671.66

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00	AS	$282.34	$847.02
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	33.00	AS	$923.06	$30,460.98
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	3.00	AS	$4,089.43	$12,268.29
700-21-12	MULTI- POST SIGN, F&I, 51-100	9.00	AS	$4,808.00	$43,272.00
	Signing Component Total				$86,848.29

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$449,902.52

Sequence 3 Total	$24,310,558.44

Sequence: 4 NDR - New Construction, Divided, Rural **Net Length:** 0.143 MI
Description: I-75 MAINLINE 13-LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	200.00 / 200.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.143
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	6.93	AC	$25,000.00	$173,250.00
120-6	EMBANKMENT	24,723.37	CY	$16.29	$402,743.70
	Earthwork Component Total				$575,993.70

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	17
Roadway Pavement Width L/R	108.00 / 96.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	21,141.12	SY	$6.00	$126,846.72
285-712	OPTIONAL BASE,BASE GROUP 12	17,224.98	SY	$49.45	$851,775.26
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	3,765.13	TN	$128.25	$482,877.92
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	684.57	TN	$129.60	$88,720.27

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	757.00	LF	$3.67	$2,778.19

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	8

Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	15
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	309.00	EA	$4.78	$1,477.02
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.14	NM	$1,164.77	$1,327.84
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.14	GM	$402.72	$861.82
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.14	NM	$3,741.79	$4,265.64
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	2.14	GM	$1,202.83	$2,574.06
	Roadway Component Total				$1,563,504.74

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,733.24	SY	$25.00	$43,331.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	184.57	TN	$128.25	$23,671.10
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	67.11	TN	$129.60	$8,697.46
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	0.29	PM	$2,700.00	$783.00
570-1-2	PERFORMANCE TURF, SOD	335.57	SY	$2.00	$671.14

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	151.01	LF	$9.53	$1,439.13
104-11	FLOATING TURBIDITY BARRIER	35.75	LF	$9.48	$338.91
104-12	STAKED TURBIDITY BARRIER	35.75	LF	$5.06	$180.90
104-13-1	STAKED SILT FENCE, TYPE III	1,510.08	LF	$0.89	$1,343.97
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$82,475.41

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	64.00
Performance Turf Width	44.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,733.24	SY	$25.00	$43,331.00
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	184.57	TN	$128.25	$23,671.10
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	67.11	TN	$129.60	$8,697.46
521-1	MEDIAN CONC BARRIER WALL	1,514.00	LF	$122.17	$184,965.38
570-1-2	PERFORMANCE TURF, SOD	3,691.31	SY	$2.00	$7,382.62

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	757.00	LF	$37.38	$28,296.66

Median Component Total $296,344.22

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.57	CY	$1,300.00	$3,341.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	1.00	EA	$2,098.49	$2,098.49
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	120.00	LF	$55.56	$6,667.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	6.00	EA	$1,317.51	$7,905.06
524-1-1	CONCRETE DITCH PAVT, NR, 3"	286.00	SY	$71.40	$20,420.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	48.00	LF	$40.48	$1,943.04
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	48.00	LF	$70.38	$3,378.24
570-1-2	PERFORMANCE TURF, SOD	101.00	SY	$2.00	$202.00

Drainage Component Total $45,955.43

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	4.00	AS	$923.06	$3,692.24
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$12,872.01

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$49,707.00

Sequence 4 Total	$2,626,852.51

Sequence: 5 NDU - New Construction, Divided, Urban **Net Length:** 0.175 MI
Description: FRUITVILLE 11- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.175
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.45	AC	$25,000.00	$111,250.00
120-6	EMBANKMENT	26,052.35	CY	$16.29	$424,392.78
	Earthwork Component Total				$535,642.78

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	11
Roadway Pavement Width L/R	72.00 / 60.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	14,611.52	SY	$6.00	$87,669.12
285-710	OPTIONAL BASE,BASE GROUP 10	13,552.00	SY	$51.75	$701,316.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,236.08	TN	$108.00	$241,496.64
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	542.08	TN	$129.60	$70,253.57

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	10
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	9
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	236.00	EA	$4.78	$1,128.08
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.75	NM	$1,164.77	$2,038.35
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.58	GM	$402.72	$636.30
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.75	NM	$3,741.79	$6,548.13
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.58	GM	$1,202.83	$1,900.47
	Roadway Component Total				$1,112,986.66

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	924.00	LF	$12.28	$11,346.72
520-1-10	CONCRETE CURB & GUTTER, TYPE F	924.00	LF	$12.28	$11,346.72
522-1	SIDEWALK CONC, 4" THICK	1,026.67	SY	$24.05	$24,691.41
570-1-2	PERFORMANCE TURF, SOD	1,026.67	SY	$2.00	$2,053.34

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	43.75	LF	$9.48	$414.75
104-12	STAKED TURBIDITY BARRIER	43.75	LF	$5.06	$221.38
104-13-1	STAKED SILT FENCE, TYPE III	1,848.00	LF	$0.89	$1,644.72
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	185.00	EA	$7.08	$1,309.80
	Shoulder Component Total				$55,047.64

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	22.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,848.00	LF	$12.40	$22,915.20

570-1-2	PERFORMANCE TURF, SOD	2,258.67 SY	$2.00	$4,517.34
	Median Component Total			$27,432.54

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	3.15 CY	$1,300.00	$4,095.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	7.00 EA	$2,940.07	$20,580.49
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00 EA	$4,428.41	$8,856.82
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00 EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00 EA	$2,210.69	$2,210.69

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	464.00 LF	$40.48	$18,782.72
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	48.00 LF	$70.38	$3,378.24
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	880.00 LF	$108.58	$95,550.40
570-1-2	PERFORMANCE TURF, SOD	53.00 SY	$2.00	$106.00
	Drainage Component Total			$155,735.77

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	5.00 AS	$282.34	$1,411.70
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00 AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00 AS	$4,808.00	$4,808.00
	Signing Component Total			$11,232.19

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00 LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00 LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00 PI	$6,253.28	$6,253.28

635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00 EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00 AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00 LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00 EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00 AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00 AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00 EA	$111.35	$1,113.50
659-108	SGNL HEAD AUXILIARIES,F&I,STEEL PEDESTAL	4.00 EA	$1,216.84	$4,867.36
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00 EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00 EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$26,581.94	$26,581.94
700-48-19	SIGN PANELS, F & I, 16 - 100	4.00 EA	$1,284.00	$5,136.00

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00	LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00	LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00	PI	$6,253.28	$6,253.28
635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00	EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00	AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00	LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00	EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00	AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00	AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00	EA	$111.35	$1,113.50
659-108	SGNL HEAD AUXILIARIES,F&I,STEEL	4.00	EA	$1,216.84	$4,867.36

	PEDESTAL			
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00 EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00 EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$26,581.94	$26,581.94
700-48-19	SIGN PANELS, F & I, 16 - 100	4.00 EA	$1,284.00	$5,136.00

Signalization 3

Description	Value
Type	6 Lane Mast Arm
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	700.00	LF	$3.05	$2,135.00
630-1-14	CONDUIT-SIGNALS,F& I, UG JACKED	300.00	LF	$15.72	$4,716.00
632-7-1	CABLE, SIGNAL, FURNISH & INSTALL	1.00	PI	$6,253.28	$6,253.28
635-1-11	PULL & JUNCTION BOXES, F&I, PULL BOX	22.00	EA	$528.55	$11,628.10
639-1-22	SIGNAL,ELECT POWER SERV,UG,PUR CONT	1.00	AS	$1,712.57	$1,712.57
639-2-1	SIGNAL,ELECTRICAL SERVICE WIRE	60.00	LF	$1.79	$107.40
649-417-006	M/ARM,F&I/HL,1ST-B7,2ND-0,POLE-Q6	4.00	EA	$27,500.00	$110,000.00
650-51-311	TRAFFIC SIGNAL, F&I, 3 SECT, 1 WAY, STD	16.00	AS	$855.21	$13,683.36
653-111	PEDESTRIAN SIGNAL, 12 IN, INCANDES,1 WAY	8.00	AS	$400.00	$3,200.00
659-101	SGNL HEAD AUXIL, F&I, BACK PLT 3 SECT	10.00	EA	$111.35	$1,113.50
659-108	SGNL HEAD AUXILIARIES,F&I,STEEL PEDESTAL	4.00	EA	$1,216.84	$4,867.36
659-109	SGNL HEAD AUXIL, F&I, CONC PED TYP II	1.00	EA	$862.53	$862.53
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$180.58	$3,611.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,035.11	$20,702.20
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00	EA	$141.79	$1,134.32
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$26,581.94	$26,581.94
700-48-19	SIGN PANELS, F & I, 16 - 100	4.00	EA	$1,284.00	$5,136.00

Interconnect Subcomponent

Description	Value
Type	U

Length of Fiber Run	4,500.00
Number of Intersections	3
Percentage of Underpavement Conduit	30.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT-SIGNALS, F& I, UNDERGROUND	3,150.00	LF	$3.05	$9,607.50
630-1-13	CONDUIT-SIGNALS, F&I, UNDER EXIST PAVT	1,350.00	LF	$20.03	$27,040.50
633-123-2	CAB-FIB OPT, F&I, UG, COMP, 26-50 PR	4,500.00	LF	$4.69	$21,105.00
633-132-1	CAB-FIB OPT, F&I,DROP,MULTI MODE,1 -25PR	30.00	LF	$22.12	$663.60
635-1-15	PULL & JUNCTION BOX, F&I, FIBER OPTICS	6.00	EA	$874.58	$5,247.48
635-1-16	PULL & JUNCTION BOX, F&I, SPECIAL	3.00	EA	$1,181.17	$3,543.51
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	12.00	AS	$621.04	$7,452.48
	Signalizations Component Total				$726,995.55

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,374.70	LF	$1.91	$6,445.68
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	924.00	LF	$5.13	$4,740.12
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	183.40	LF	$15.32	$2,809.69
715-14-11	LIGHTING - PULL BOX,F&I,ROADSIDE-MOULDED	7.00	EA	$327.28	$2,290.96
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	7.00	EA	$363.52	$2,544.64
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	7.00	EA	$2,702.55	$18,917.85
	Lighting Component Total				$37,748.94

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total	$33,780.07

Sequence 5 Total	$2,696,602.14

Sequence: 6 NDU - New Construction, Divided, Urban **Net Length:** 0.341 MI
Description: FRUITVILLE 9- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.341
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	8.68	AC	$25,000.00	$217,000.00
120-6	EMBANKMENT	59,998.00	CY	$16.29	$977,367.42
	Earthwork Component Total				$1,194,367.42

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	9
Roadway Pavement Width L/R	60.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	23,670.31	SY	$6.00	$142,021.86
285-710	OPTIONAL BASE,BASE GROUP 10	21,605.76	SY	$51.75	$1,118,098.08
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,564.95	TN	$108.00	$385,014.60
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	864.23	TN	$129.60	$112,004.21

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	6
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	7
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	368.00	EA	$4.78	$1,759.04
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.05	NM	$1,164.77	$2,387.78
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.39	GM	$402.72	$962.50
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	2.05	NM	$3,741.79	$7,670.67
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	2.39	GM	$1,202.83	$2,874.76
	Roadway Component Total				$1,772,793.50

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,800.48	LF	$12.28	$22,109.89
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,800.48	LF	$12.28	$22,109.89
522-1	SIDEWALK CONC, 4" THICK	2,000.53	SY	$24.05	$48,112.75
570-1-2	PERFORMANCE TURF, SOD	2,000.53	SY	$2.00	$4,001.06

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	85.25	LF	$9.48	$808.17
104-12	STAKED TURBIDITY BARRIER	85.25	LF	$5.06	$431.36
104-13-1	STAKED SILT FENCE, TYPE III	3,600.96	LF	$0.89	$3,204.85
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	361.00	EA	$7.08	$2,555.88
	Shoulder Component Total				$105,352.66

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	52.00
Performance Turf Width	52.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	3,600.96	LF	$12.40	$44,651.90

570-1-2	PERFORMANCE TURF, SOD	10,402.77 SY	$2.00	$20,805.54
	Median Component Total			$65,457.44

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.14	CY	$1,300.00	$7,982.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	13.00	EA	$2,940.07	$38,220.91
425-1-451	INLETS, CURB, TYPE J-5, <10'	4.00	EA	$4,428.41	$17,713.64
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$2,175.41	$4,350.82
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$2,210.69	$4,421.38

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	904.00	LF	$40.48	$36,593.92
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	88.00	LF	$70.38	$6,193.44
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	1,712.00	LF	$108.58	$185,888.96
570-1-2	PERFORMANCE TURF, SOD	104.00	SY	$2.00	$208.00
	Drainage Component Total				$301,573.07

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	9.00	AS	$282.34	$2,541.06
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$12,361.55

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	6,575.84	LF	$1.91	$12,559.85
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	1,800.48	LF	$5.13	$9,236.46
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	357.37	LF	$15.32	$5,474.91
715-14-11	LIGHTING - PULL	12.00	EA	$327.28	$3,927.36

	BOX,F&I,ROADSIDE-MOULDED			
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	12.00 EA	$363.52	$4,362.24
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	12.00 EA	$2,702.55	$32,430.60
	Lighting Component Total			$67,991.42

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$56,129.42

Sequence 6 Total $3,576,026.48

Sequence: 7 NDU - New Construction, Divided, Urban **Net Length:** 0.208 MI
Description: FRUITVILLE 8- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.208
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.29	AC	$25,000.00	$132,250.00
120-6	EMBANKMENT	37,197.80	CY	$16.29	$605,952.16
	Earthwork Component Total				$738,202.16

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	8
Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	12,973.88	SY	$6.00	$77,843.28
285-710	OPTIONAL BASE,BASE GROUP 10	11,714.56	SY	$51.75	$606,228.48
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,932.90	TN	$108.00	$208,753.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	468.58	TN	$129.60	$60,727.97

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	6
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	6
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	197.00	EA	$4.78	$941.66
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.25	NM	$1,164.77	$1,455.96
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.25	GM	$402.72	$503.40
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.25	NM	$3,741.79	$4,677.24
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.25	GM	$1,202.83	$1,503.54
	Roadway Component Total				$962,634.73

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,098.24	LF	$12.28	$13,486.39
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,098.24	LF	$12.28	$13,486.39
522-1	SIDEWALK CONC, 4" THICK	1,220.27	SY	$24.05	$29,347.49
570-1-2	PERFORMANCE TURF, SOD	1,220.27	SY	$2.00	$2,440.54

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	52.00	LF	$9.48	$492.96
104-12	STAKED TURBIDITY BARRIER	52.00	LF	$5.06	$263.12
104-13-1	STAKED SILT FENCE, TYPE III	2,196.48	LF	$0.89	$1,954.87
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	220.00	EA	$7.08	$1,557.60
	Shoulder Component Total				$65,048.16

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	58.00
Performance Turf Width	58.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	2,196.48	LF	$12.40	$27,236.35

570-1-2	PERFORMANCE TURF, SOD	7,077.55 SY	$2.00	$14,155.10
	Median Component Total			$41,391.45

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	3.74	CY	$1,300.00	$4,862.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	8.00	EA	$2,940.07	$23,520.56
425-1-451	INLETS, CURB, TYPE J-5, <10'	3.00	EA	$4,428.41	$13,285.23
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$2,175.41	$4,350.82
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$2,210.69	$4,421.38

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	552.00	LF	$40.48	$22,344.96
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	56.00	LF	$70.38	$3,941.28
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	1,040.00	LF	$108.58	$112,923.20
570-1-2	PERFORMANCE TURF, SOD	63.00	SY	$2.00	$126.00
	Drainage Component Total				$189,775.43

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	5.00	AS	$282.34	$1,411.70
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$11,232.19

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,011.07	LF	$1.91	$7,661.14
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	1,098.24	LF	$5.13	$5,633.97
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	217.98	LF	$15.32	$3,339.45
715-14-11	LIGHTING - PULL	8.00	EA	$327.28	$2,618.24

	BOX,F&I,ROADSIDE-MOULDED			
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	8.00 EA	$363.52	$2,908.16
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	8.00 EA	$2,702.55	$21,620.40
	Lighting Component Total			$43,781.36

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$31,471.24

Sequence 7 Total $2,083,536.72

Sequence: 8 NDU - New Construction, Divided, Urban **Net Length:** 0.022 MI
Description: FRUITVILLE 7- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.022
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.56	AC	$25,000.00	$14,000.00
120-6	EMBANKMENT	4,018.96	CY	$16.29	$65,468.86
	Earthwork Component Total				$79,468.86

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	7
Roadway Pavement Width L/R	48.00 / 36.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,217.36	SY	$6.00	$7,304.16
285-710	OPTIONAL BASE,BASE GROUP 10	1,084.16	SY	$51.75	$56,105.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	178.89	TN	$108.00	$19,320.12
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	43.37	TN	$129.60	$5,620.75

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	5
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	18.00	EA	$4.78	$86.04
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.09	NM	$1,164.77	$104.83
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.11	GM	$402.72	$44.30
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.09	NM	$3,741.79	$336.76
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.11	GM	$1,202.83	$132.31
	Roadway Component Total				$89,054.55

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	116.16	LF	$12.28	$1,426.44
520-1-10	CONCRETE CURB & GUTTER, TYPE F	116.16	LF	$12.28	$1,426.44
522-1	SIDEWALK CONC, 4" THICK	129.07	SY	$24.05	$3,104.13
570-1-2	PERFORMANCE TURF, SOD	129.07	SY	$2.00	$258.14

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	5.50	LF	$9.48	$52.14
104-12	STAKED TURBIDITY BARRIER	5.50	LF	$5.06	$27.83
104-13-1	STAKED SILT FENCE, TYPE III	232.32	LF	$0.89	$206.76
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	24.00	EA	$7.08	$169.92
	Shoulder Component Total				$8,690.60

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	65.00
Performance Turf Width	65.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	232.32	LF	$12.40	$2,880.77

570-1-2	PERFORMANCE TURF, SOD	838.93 SY	$2.00	$1,677.86
	Median Component Total			$4,558.63

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	0.40	CY	$1,300.00	$520.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	1.00	EA	$2,940.07	$2,940.07
425-1-451	INLETS, CURB, TYPE J-5, <10'	1.00	EA	$4,428.41	$4,428.41
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$2,210.69	$2,210.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	64.00	LF	$40.48	$2,590.72
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	8.00	LF	$70.38	$563.04
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	112.00	LF	$108.58	$12,160.96
570-1-2	PERFORMANCE TURF, SOD	7.00	SY	$2.00	$14.00
	Drainage Component Total				$27,603.30

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$10,102.83

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	424.25	LF	$1.91	$810.32
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	116.16	LF	$5.13	$595.90
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	23.06	LF	$15.32	$353.28
715-14-11	LIGHTING - PULL	1.00	EA	$327.28	$327.28

	BOX,F&I,ROADSIDE-MOULDED			
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	1.00 EA	$363.52	$363.52
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	1.00 EA	$2,702.55	$2,702.55
	Lighting Component Total			$5,152.85

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$3,247.68

Sequence 8 Total $227,879.30

Sequence: 9 NDU - New Construction, Divided, Urban **Net Length:** 0.121 MI
Description: FRUITVILLE 6- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.121
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.08	AC	$25,000.00	$77,000.00
120-6	EMBANKMENT	16,202.47	CY	$16.29	$263,938.24
	Earthwork Component Total				$340,938.24

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,843.62	SY	$6.00	$35,061.72
285-710	OPTIONAL BASE,BASE GROUP 10	5,111.04	SY	$51.75	$264,496.32
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	843.32	TN	$108.00	$91,078.56
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	204.44	TN	$129.60	$26,495.42

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	4
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	82.00	EA	$4.78	$391.96
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.48	NM	$1,164.77	$559.09
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.48	GM	$402.72	$193.31
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.48	NM	$3,741.79	$1,796.06
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.48	GM	$1,202.83	$577.36
	Roadway Component Total				$420,649.80

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	638.88	LF	$12.28	$7,845.45
520-1-10	CONCRETE CURB & GUTTER, TYPE F	638.88	LF	$12.28	$7,845.45
522-1	SIDEWALK CONC, 4" THICK	709.87	SY	$24.05	$17,072.37
570-1-2	PERFORMANCE TURF, SOD	709.87	SY	$2.00	$1,419.74

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	30.25	LF	$9.48	$286.77
104-12	STAKED TURBIDITY BARRIER	30.25	LF	$5.06	$153.06
104-13-1	STAKED SILT FENCE, TYPE III	1,277.76	LF	$0.89	$1,137.21
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	128.00	EA	$7.08	$906.24
	Shoulder Component Total				$38,685.10

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	30.00
Performance Turf Width	30.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,277.76	LF	$12.40	$15,844.22

570-1-2	PERFORMANCE TURF, SOD	2,129.60 SY	$2.00	$4,259.20
	Median Component Total			$20,103.42

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.18	CY	$1,300.00	$2,834.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	5.00	EA	$2,940.07	$14,700.35
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$4,428.41	$8,856.82
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$2,210.69	$2,210.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	328.00	LF	$40.48	$13,277.44
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	32.00	LF	$70.38	$2,252.16
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	608.00	LF	$108.58	$66,016.64
570-1-2	PERFORMANCE TURF, SOD	37.00	SY	$2.00	$74.00
	Drainage Component Total				$112,397.51

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00	AS	$282.34	$847.02
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$10,667.51

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,333.36	LF	$1.91	$4,456.72
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	638.88	LF	$5.13	$3,277.45
715-2-12	LIGHTING-CONDUIT, F&I, UNDER EXIST PVMT	126.81	LF	$15.32	$1,942.73
715-14-11	LIGHTING - PULL	5.00	EA	$327.28	$1,636.40

	BOX,F&I,ROADSIDE-MOULDED			
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00 EA	$363.52	$1,817.60
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	5.00 EA	$2,702.55	$13,512.75
	Lighting Component Total			$26,643.65

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$14,795.90
Sequence 9 Total		$984,881.13

Sequence: 10 NDU - New Construction, Divided, Urban **Net Length:** 0.470 MI

Description: CATTLEMAN 4- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.470
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.96	AC	$25,000.00	$299,000.00
120-6	EMBANKMENT	57,540.03	CY	$16.29	$937,327.09
	Earthwork Component Total				$1,236,327.09

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	16,080.77	SY	$6.00	$96,484.62
285-710	OPTIONAL BASE,BASE GROUP 10	13,235.20	SY	$51.75	$684,921.60
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,183.81	TN	$108.00	$235,851.48
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	529.41	TN	$129.60	$68,611.54

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	2
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	190.00	EA	$4.78	$908.20
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.88	NM	$1,164.77	$2,189.77
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.94	GM	$402.72	$378.56
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.88	NM	$3,741.79	$7,034.57
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.94	GM	$1,202.83	$1,130.66
	Roadway Component Total				$1,097,511.00

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,481.60	LF	$12.28	$30,474.05
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,481.60	LF	$12.28	$30,474.05
522-1	SIDEWALK CONC, 4" THICK	2,757.33	SY	$24.05	$66,313.79
570-1-2	PERFORMANCE TURF, SOD	2,757.33	SY	$2.00	$5,514.66

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	117.50	LF	$9.48	$1,113.90
104-12	STAKED TURBIDITY BARRIER	117.50	LF	$5.06	$594.55
104-13-1	STAKED SILT FENCE, TYPE III	4,963.20	LF	$0.89	$4,417.25
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	497.00	EA	$7.08	$3,518.76
	Shoulder Component Total				$144,439.81

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	30.00
Performance Turf Width	30.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

520-1-7	CONCRETE CURB & GUTTER, TYPE E	4,963.20 LF	$12.40	$61,543.68
570-1-2	PERFORMANCE TURF, SOD	8,272.00 SY	$2.00	$16,544.00
	Median Component Total			$78,087.68

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	8.46	CY	$1,300.00	$10,998.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	17.00	EA	$2,940.07	$49,981.19
425-1-451	INLETS, CURB, TYPE J-5, <10'	5.00	EA	$4,428.41	$22,142.05
425-1-521	INLETS, DT BOT, TYPE C, <10'	3.00	EA	$2,175.41	$6,526.23
425-2-41	MANHOLES, P-7, <10'	3.00	EA	$2,210.69	$6,632.07

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	1,248.00	LF	$40.48	$50,519.04
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	112.00	LF	$70.38	$7,882.56
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	2,352.00	LF	$108.58	$255,380.16
570-1-2	PERFORMANCE TURF, SOD	143.00	SY	$2.00	$286.00
	Drainage Component Total				$410,347.30

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	12.00	AS	$282.34	$3,388.08
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$13,208.57

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,063.48	LF	$1.91	$17,311.25
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	2,481.60	LF	$5.13	$12,730.61
715-2-12	LIGHTING-CONDUIT, F&I, UNDER	492.56	LF	$15.32	$7,546.02

	EXIST PVMT			
715-14-11	LIGHTING - PULL BOX,F&I,ROADSIDE-MOULDED	17.00 EA	$327.28	$5,563.76
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	17.00 EA	$363.52	$6,179.84
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	17.00 EA	$2,702.55	$45,943.35
	Lighting Component Total			$95,274.83

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

Landscaping Component Total	$43,259.64

Sequence 10 Total	$3,118,455.92

Sequence: 11 NUR - New Construction, Undivided, Rural **Net Length:** 0.976 MI

Description: SINGLE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.976
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.83	AC	$25,000.00	$295,750.00
120-6	EMBANKMENT	43,993.74	CY	$16.29	$716,658.02
	Earthwork Component Total				$1,012,408.02

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	15,459.84	SY	$6.00	$92,759.04
285-710	OPTIONAL BASE,BASE GROUP 10	8,966.71	SY	$51.75	$464,027.24
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,417.15	TN	$128.25	$181,749.49
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	343.55	TN	$129.60	$44,524.08

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.95	NM	$1,164.77	$2,271.30
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.95	NM	$3,741.79	$7,296.49
	Roadway Component Total				$792,627.64

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	3,813.43	SY	$25.00	$95,335.75
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	377.91	TN	$128.25	$48,466.96
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	137.42	TN	$129.60	$17,809.63
570-1-2	PERFORMANCE TURF, SOD	3,435.52	SY	$2.00	$6,871.04

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	1,030.66	LF	$9.53	$9,822.19
104-11	FLOATING TURBIDITY BARRIER	244.00	LF	$9.48	$2,313.12
104-12	STAKED TURBIDITY BARRIER	244.00	LF	$5.06	$1,234.64
104-13-1	STAKED SILT FENCE, TYPE III	10,306.56	LF	$0.89	$9,172.84
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$193,044.97

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	17.57	CY	$1,300.00	$22,841.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	784.00	LF	$55.56	$43,559.04
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	40.00	EA	$1,317.51	$52,700.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	168.00 LF	$70.38	$11,823.84
570-1-2	PERFORMANCE TURF, SOD	687.00 SY	$2.00	$1,374.00
	Drainage Component Total			$132,298.28

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00 AS	$282.34	$564.68
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	20.00 AS	$923.06	$18,461.20
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00 AS	$4,089.43	$8,178.86
	Signing Component Total			$27,204.74

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$27,949.27

Sequence 11 Total $2,185,532.92

Sequence: 12 NUR - New Construction, Undivided, Rural **Net Length:** 0.224 MI

Description: TWO LANE RAMPS, CLIMBING

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.224
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.72	AC	$25,000.00	$68,000.00
120-6	EMBANKMENT	193,980.10	CY	$16.29	$3,159,935.83
	Earthwork Component Total				$3,227,935.83

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	6,307.84	SY	$6.00	$37,847.04
285-710	OPTIONAL BASE,BASE GROUP 10	3,240.65	SY	$51.75	$167,703.64
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	520.40	TN	$128.25	$66,741.30
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	126.16	TN	$129.60	$16,350.34

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	1
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	30.00	EA	$4.78	$143.40
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.45	NM	$1,164.77	$524.15
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.22	GM	$402.72	$88.60
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.45	NM	$3,741.79	$1,683.81
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.22	GM	$1,202.83	$264.62
	Roadway Component Total				$291,346.90

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	3,240.65	SY	$25.00	$81,016.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	346.93	TN	$128.25	$44,493.77
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	126.16	TN	$129.60	$16,350.34

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	236.54	LF	$9.53	$2,254.23
104-11	FLOATING TURBIDITY BARRIER	56.00	LF	$9.48	$530.88
104-12	STAKED TURBIDITY BARRIER	56.00	LF	$5.06	$283.36
104-13-1	STAKED SILT FENCE, TYPE III	2,365.44	LF	$0.89	$2,105.24
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$149,052.87

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.03	CY	$1,300.00	$5,239.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	184.00	LF	$55.56	$10,223.04
430-984-129	MITERED END SECT, OPTIONAL	9.00	EA	$1,317.51	$11,857.59

RD, 24" SD

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	40.00	LF	$70.38	$2,815.20
570-1-2	PERFORMANCE TURF, SOD	158.00	SY	$2.00	$316.00
	Drainage Component Total				$30,450.83

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	5.00	AS	$923.06	$4,615.30
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
	Signing Component Total				$8,987.07

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$11,771.27

Sequence 12 Total $3,719,544.77

Sequence: 13 NUR - New Construction, Undivided, Rural **Net Length:** 0.463 MI

Description: THREE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.463
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.61	AC	$25,000.00	$140,250.00
120-6	EMBANKMENT	28,018.29	CY	$16.29	$456,417.94
	Earthwork Component Total				$596,667.94

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	24.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	15,211.09	SY	$6.00	$91,266.54
285-710	OPTIONAL BASE,BASE GROUP 10	9,957.83	SY	$51.75	$515,317.70
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	1,613.46	TN	$128.25	$206,926.24
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	391.14	TN	$129.60	$50,691.74

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	2
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	250.00	EA	$4.78	$1,195.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.93	NM	$1,164.77	$1,083.24
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.93	GM	$402.72	$374.53
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.93	NM	$3,741.79	$3,479.86
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.93	GM	$1,202.83	$1,118.63
	Roadway Component Total				$871,453.49

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	3,982.05	SY	$25.00	$99,551.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	418.31	TN	$128.25	$53,648.26
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	152.11	TN	$129.60	$19,713.46
570-1-2	PERFORMANCE TURF, SOD	1,629.76	SY	$2.00	$3,259.52

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	488.93	LF	$9.53	$4,659.50
104-11	FLOATING TURBIDITY BARRIER	115.75	LF	$9.48	$1,097.31
104-12	STAKED TURBIDITY BARRIER	115.75	LF	$5.06	$585.70
104-13-1	STAKED SILT FENCE, TYPE III	4,889.28	LF	$0.89	$4,351.46
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$188,885.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	8.33	CY	$1,300.00	$10,829.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	376.00	LF	$55.56	$20,890.56

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	19.00 EA	$1,317.51	$25,032.69

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	80.00 LF	$70.38	$5,630.40
570-1-2	PERFORMANCE TURF, SOD	326.00 SY	$2.00	$652.00
	Drainage Component Total			$63,034.65

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	10.00 AS	$923.06	$9,230.60
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	$4,089.43	$4,089.43
	Signing Component Total			$13,602.37

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$28,084.34

Sequence 13 Total $1,761,728.05

Sequence: 14 NUR - New Construction, Undivided, Rural **Net Length:** 0.124 MI

Description: FIVE LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.124
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.50	AC	$25,000.00	$37,500.00
120-6	EMBANKMENT	9,100.12	CY	$16.29	$148,240.95
	Earthwork Component Total				$185,740.95

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Roadway Pavement Width L/R	36.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,819.73	SY	$6.00	$34,918.38
285-710	OPTIONAL BASE,BASE GROUP 10	4,412.81	SY	$51.75	$228,362.92
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	720.19	TN	$128.25	$92,364.37
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	174.59	TN	$129.60	$22,626.86

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	4
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	100.00	EA	$4.78	$478.00
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.25	NM	$1,164.77	$291.19
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.50	GM	$402.72	$201.36
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.25	NM	$3,741.79	$935.45
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.50	GM	$1,202.83	$601.42
	Roadway Component Total				$380,779.95

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,066.47	SY	$25.00	$26,661.75
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	112.03	TN	$128.25	$14,367.85
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	40.74	TN	$129.60	$5,279.90
570-1-2	PERFORMANCE TURF, SOD	436.48	SY	$2.00	$872.96

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	130.94	LF	$9.53	$1,247.86
104-11	FLOATING TURBIDITY BARRIER	31.00	LF	$9.48	$293.88
104-12	STAKED TURBIDITY BARRIER	31.00	LF	$5.06	$156.86
104-13-1	STAKED SILT FENCE, TYPE III	1,309.44	LF	$0.89	$1,165.40
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$52,065.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.23	CY	$1,300.00	$2,899.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	104.00	LF	$55.56	$5,778.24

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00 EA	$1,317.51	$6,587.55
570-1-2	PERFORMANCE TURF, SOD	87.30 SY	$2.00	$174.60

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	24.00 LF	$70.38	$1,689.12

Drainage Component Total $17,128.51

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	3.00 AS	$923.06	$2,769.18
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	$4,089.43	$4,089.43

Signing Component Total $7,140.95

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

Landscaping Component Total $11,249.34

Sequence 14 Total $654,104.96

Sequence: 15 NUR - New Construction, Undivided, Rural **Net Length:** 1.800 MI

Description: AUXILIARY (TURN) LANES

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.800
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	21.82	AC	$25,000.00	$545,500.00
120-6	EMBANKMENT	39,737.28	CY	$16.29	$647,320.29
	Earthwork Component Total				$1,192,820.29

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	12,672.00	SY	$6.00	$76,032.00
285-710	OPTIONAL BASE,BASE GROUP 10	13,020.48	SY	$51.75	$673,809.84
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22	2,090.88	TN	$128.25	$268,155.36
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	506.88	TN	$129.60	$65,691.65

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.60	NM	$1,164.77	$4,193.17
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	3.60	NM	$3,741.79	$13,470.44
	Roadway Component Total				$1,101,352.46

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	32.40	CY	$1,300.00	$42,120.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	1,440.00	LF	$55.56	$80,006.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	72.00	EA	$1,317.51	$94,860.72

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	304.00	LF	$70.38	$21,395.52
570-1-2	PERFORMANCE TURF, SOD	1,267.00	SY	$2.00	$2,534.00
	Drainage Component Total				$240,916.64

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	4.00	AS	$282.34	$1,129.36
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	36.00	AS	$923.06	$33,230.16
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	4.00	AS	$4,089.43	$16,357.72
	Signing Component Total				$50,717.24

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$33,556.73

Sequence 15 Total $2,619,363.36

Sequence: 16 NDU - New Construction, Divided, Urban **Net Length:** 0.100 MI

Description: CATTLEMAN 3- LANE SECTION

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	105.00 / 105.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.100
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.55	AC	$25,000.00	$63,750.00
120-6	EMBANKMENT	10,236.75	CY	$16.29	$166,756.66
	Earthwork Component Total				$230,506.66

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	24.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,717.44	SY	$6.00	$16,304.64
285-710	OPTIONAL BASE,BASE GROUP 10	2,112.00	SY	$51.75	$109,296.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	348.48	TN	$108.00	$37,635.84
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	84.48	TN	$129.60	$10,948.61

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	4
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	1
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	27.00	EA	$4.78	$129.06
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.40	NM	$1,164.77	$465.91
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.10	GM	$402.72	$40.27
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.40	NM	$3,741.79	$1,496.72
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.10	GM	$1,202.83	$120.28
	Roadway Component Total				$176,437.33

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	528.00	LF	$12.28	$6,483.84
520-1-10	CONCRETE CURB & GUTTER, TYPE F	528.00	LF	$12.28	$6,483.84
522-1	SIDEWALK CONC, 4" THICK	586.67	SY	$24.05	$14,109.41
570-1-2	PERFORMANCE TURF, SOD	586.67	SY	$2.00	$1,173.34

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	25.00	LF	$9.48	$237.00
104-12	STAKED TURBIDITY BARRIER	25.00	LF	$5.06	$126.50
104-13-1	STAKED SILT FENCE, TYPE III	1,056.00	LF	$0.89	$939.84
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
104-16	ROCK BAG	106.00	EA	$7.08	$750.48
	Shoulder Component Total				$32,323.05

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	18.00
Performance Turf Width	18.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

520-1-7	CONCRETE CURB & GUTTER, TYPE E	1,056.00 LF	$12.40	$13,094.40
570-1-2	PERFORMANCE TURF, SOD	1,056.00 SY	$2.00	$2,112.00
	Median Component Total			$15,206.40

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	1.80	CY	$1,300.00	$2,340.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	4.00	EA	$2,940.07	$11,760.28
425-1-451	INLETS, CURB, TYPE J-5, <10'	1.00	EA	$4,428.41	$4,428.41
425-1-521	INLETS, DT BOT, TYPE C, <10'	1.00	EA	$2,175.41	$2,175.41
425-2-41	MANHOLES, P-7, <10'	1.00	EA	$2,210.69	$2,210.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-101	PIPE CULV, OPT MATL, ROUND, 0-24"S/CD	264.00	LF	$40.48	$10,686.72
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	24.00	LF	$70.38	$1,689.12
430-175-103	PIPE CULV, OPT MATL, ROUND, 37-48"S/CD	504.00	LF	$108.58	$54,724.32
570-1-2	PERFORMANCE TURF, SOD	30.40	SY	$2.00	$60.80
	Drainage Component Total				$90,075.75

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00	AS	$282.34	$847.02
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	1.00	AS	$923.06	$923.06
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	$4,089.43	$4,089.43
700-21-12	MULTI- POST SIGN, F&I, 51-100	1.00	AS	$4,808.00	$4,808.00
	Signing Component Total				$10,667.51

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	1,928.40	LF	$1.91	$3,683.24
715-2-11	LIGHTING-CONDUIT, F&I, UNDERGROUND	528.00	LF	$5.13	$2,708.64
715-2-12	LIGHTING-CONDUIT, F&I, UNDER	104.80	LF	$15.32	$1,605.54

	EXIST PVMT			
715-14-11	LIGHTING - PULL BOX,F&I,ROADSIDE-MOULDED	4.00 EA	$327.28	$1,309.12
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00 EA	$363.52	$1,454.08
715-511-140	LIGHT POLE COMP,F&I,SGL ARM SM, AL,40'	4.00 EA	$2,702.55	$10,810.20
	Lighting Component Total			$21,570.82

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.50
Component Detail	N

Landscaping Component Total	$7,851.06

Sequence 16 Total	$584,638.58

Sequence: 17 NUR - New Construction, Undivided, Rural **Net Length:** 0.262 MI

Description: SINGLE LANE RAMPS,CLIMBING

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.262
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	135.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.18	AC	$25,000.00	$79,500.00
120-6	EMBANKMENT	212,147.99	CY	$16.29	$3,455,890.76
	Earthwork Component Total				$3,535,390.76

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,150.08	SY	$6.00	$24,900.48
285-710	OPTIONAL BASE,BASE GROUP 10	2,407.05	SY	$51.75	$124,564.84
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	380.42	TN	$128.25	$48,788.86
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	92.22	TN	$129.60	$11,951.71

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	0
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.52	NM	$1,164.77	$605.68
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.52	NM	$3,741.79	$1,945.73
	Roadway Component Total				$212,757.31

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	1,945.93	SY	$25.00	$48,648.25
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	202.89	TN	$128.25	$26,020.64
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	73.78	TN	$129.60	$9,561.89

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	276.67	LF	$9.53	$2,636.67
104-11	FLOATING TURBIDITY BARRIER	65.50	LF	$9.48	$620.94
104-12	STAKED TURBIDITY BARRIER	65.50	LF	$5.06	$331.43
104-13-1	STAKED SILT FENCE, TYPE III	2,766.72	LF	$0.89	$2,462.38
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,018.80	$2,018.80
	Shoulder Component Total				$92,301.00

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.72	CY	$1,300.00	$6,136.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	216.00	LF	$55.56	$12,000.96
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	11.00	EA	$1,317.51	$14,492.61

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	48.00	LF	$70.38	$3,378.24

570-1-2	PERFORMANCE TURF, SOD	184.45 SY	$2.00	$368.90
	Drainage Component Total			$36,376.71

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	$282.34	$282.34
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	6.00 AS	$923.06	$5,538.36
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	$4,089.43	$4,089.43
	Signing Component Total			$9,910.13

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N

	Landscaping Component Total	$8,535.88

Sequence 17 Total $3,895,271.79

Sequence: 18 NUR - New Construction, Undivided, Rural **Net Length:** 1.095 MI

Description: TWO-LANE RAMPS

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.095
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	13.27	AC	$25,000.00	$331,750.00
120-6	EMBANKMENT	59,008.72	CY	$16.29	$961,252.05
	Earthwork Component Total				$1,293,002.05

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	28,265.60	SY	$6.00	$169,593.60
285-710	OPTIONAL BASE,BASE GROUP 10	15,841.58	SY	$51.75	$819,801.76
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	2,543.90	TN	$128.25	$326,255.18
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	616.70	TN	$129.60	$79,924.32

Pavement Marking Subcomponent

Description	Value
Solid Stripe No. of Stripes	2
Solid Stripe No. of Applications	2
Skip Stripe No. of Stripes	1
Skip Stripe No. of Applications	2
Top Layer Thermoplastic	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	148.00	EA	$4.78	$707.44
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.19	NM	$1,164.77	$2,550.85
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.10	GM	$402.72	$442.99
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	2.19	NM	$3,741.79	$8,194.52
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.10	GM	$1,202.83	$1,323.11
	Roadway Component Total				$1,408,793.78

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-706	OPTIONAL BASE,BASE GROUP 06	9,417.58	SY	$25.00	$235,439.50
334-1-24	SUPERPAVE ASPH CONC, TRAF D, PG76-22	989.30	TN	$128.25	$126,877.72
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22	359.74	TN	$129.60	$46,622.30
570-1-2	PERFORMANCE TURF, SOD	3,854.40	SY	$2.00	$7,708.80

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-2	SYNTHETIC BALES	1,156.32	LF	$9.53	$11,019.73
104-11	FLOATING TURBIDITY BARRIER	273.75	LF	$9.48	$2,595.15
104-12	STAKED TURBIDITY BARRIER	273.75	LF	$5.06	$1,385.18
104-13-1	STAKED SILT FENCE, TYPE III	11,563.20	LF	$0.89	$10,291.25
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$2,018.80	$4,037.60
	Shoulder Component Total				$445,977.24

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	19.71	CY	$1,300.00	$25,623.00
430-174-101	PIPE CULV, OPT MATL, ROUND,0-24"SD	880.00	LF	$55.56	$48,892.80

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	44.00 EA	$1,317.51	$57,970.44

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-102	PIPE CULV, OPT MATL, ROUND, 25-36"S/CD	184.00 LF	$70.38	$12,949.92
570-1-2	PERFORMANCE TURF, SOD	770.88 SY	$2.00	$1,541.76
	Drainage Component Total			$146,977.92

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00 AS	$282.34	$847.02
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	22.00 AS	$923.06	$20,307.32
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	3.00 AS	$4,089.43	$12,268.29
	Signing Component Total			$33,422.63

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	2.50
Component Detail	N
Landscaping Component Total	$50,043.72

Sequence 18 Total $3,378,217.34

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FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 201277-1-22-01 **Letting Date:** 01/2099

Description: I-75 FROM SR 681 TO UNIVERSITY PARKWAY

District: 01 **County:** 17 SARASOTA **Market Area:** 10 **Units:** English

Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 13.770 MI

Project Manager: MGR-RLC-MJB

Version 64 Project Grand Total **$156,023,574.11**

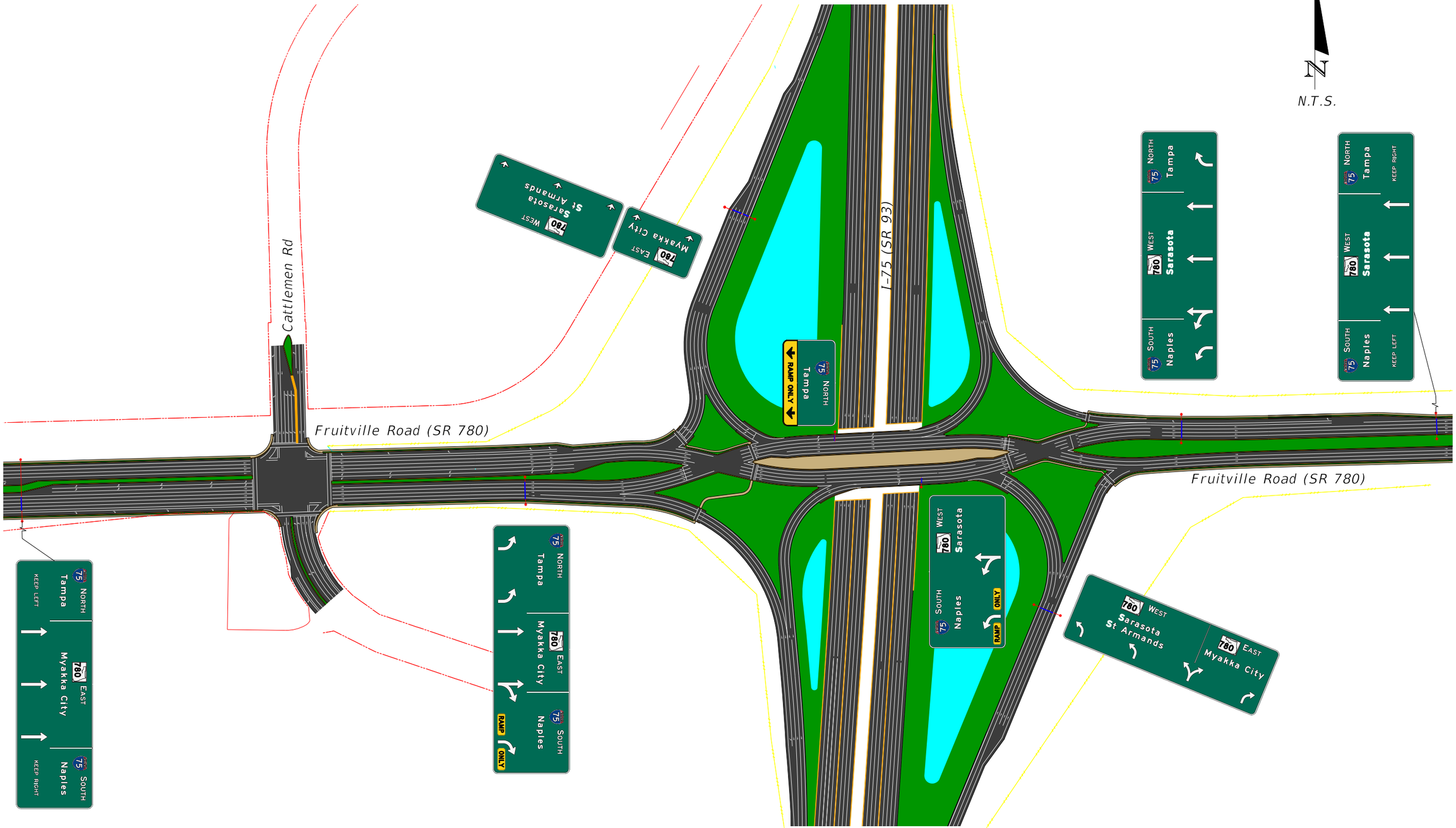
Description: FRUITVILLE INTERCHANGE CB - Unit Cost Update April 2009 - (From Version 50)

Project Sequences Subtotal			**$103,056,908.50**
102-1	Maintenance of Traffic	10.00 %	$10,305,690.85
101-1	Mobilization	10.00 %	$11,336,259.94
Project Sequences Total			**$124,698,859.29**
Project Unknowns		25.00 %	$31,174,714.82
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 64 Project Grand Total					**$156,023,574.11**

Appendix J: CONCEPTUAL SIGNING PLAN



REVISIONS				INTERCHANGE MODIFICATION REPORT	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MASTER SIGNING PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					I-75	SARASOTA	420613-2-52-01		

ghernandez 1/29/2016 5:31:27 PM F:\Projects\42061325201\signing\old files\dsgnMASTERPLAN_DDI.dgn