

# ***INTERCHANGE MODIFICATION STUDY***



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**December 2001**

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## CHAPTER 1

### Introduction

#### A. Purpose of Study

The purpose of this study is to evaluate the existing interchange at Interstate 75 and U.S. 11 (SR-2) Lee Highway, and to request approval for the modification of this interchange. This segment of Interstate 75 is currently under design to be widened to an eight-lane facility within the vicinity of the U.S. 11 (SR-2) Lee Highway interchange. This study was conducted to:

- Determine any operational deficiencies in the current (planned improvements under design) interchange.
- Develop the needed interchange improvements to provide the desired level of service for the design year.
- Evaluate operational characteristics of the recommended improvements for the current conditions (2005) and the design year (2025).
- Develop construction cost estimates and evaluate the land use impacts of the construction.

This Study was initiated at the request of the Tennessee Department of Transportation's Region II survey and design office.

#### B. Project Location and Description of the Area

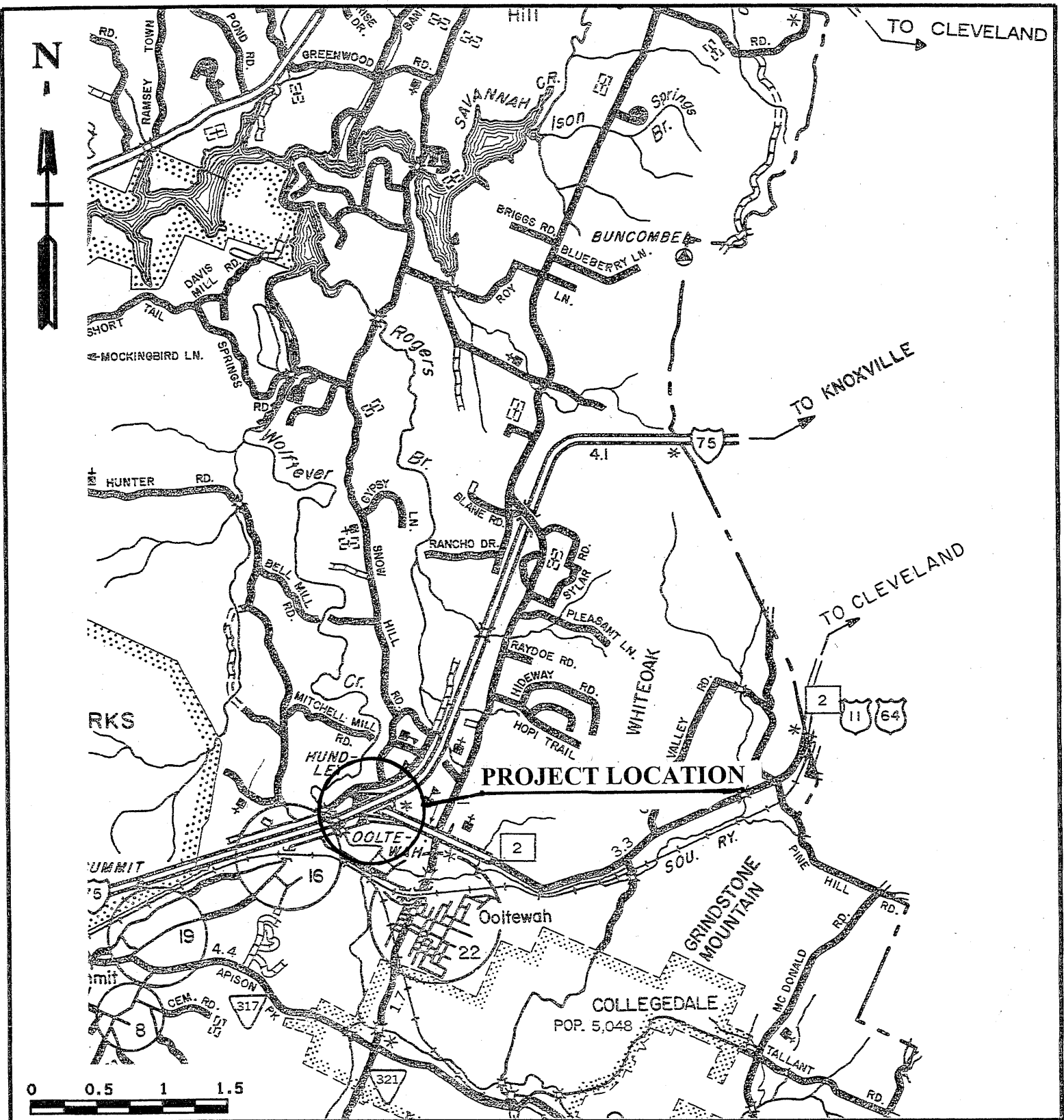
The I-75 & U.S. 11 (SR-2) interchange is located approximately five miles northeast of the Chattanooga Urbanized Area, as shown in Figure 1. The interchange is located along I-75 approximately 2.5 miles north of the recently approved Volunteer Ordnance Access Road interchange and 9.0 miles south of the I-75 and SR-311 (Cleveland, Tennessee) interchange.

This section of I-75 is currently a four-lane median-divided facility with minimal shoulders. As stated previously, this segment of I-75 is currently in the design phase of being widened to eight travel lanes with some minor improvements to the U.S.11 (SR-2) Lee Highway interchange. Construction for these improvements is currently scheduled to begin in the spring of 2002.

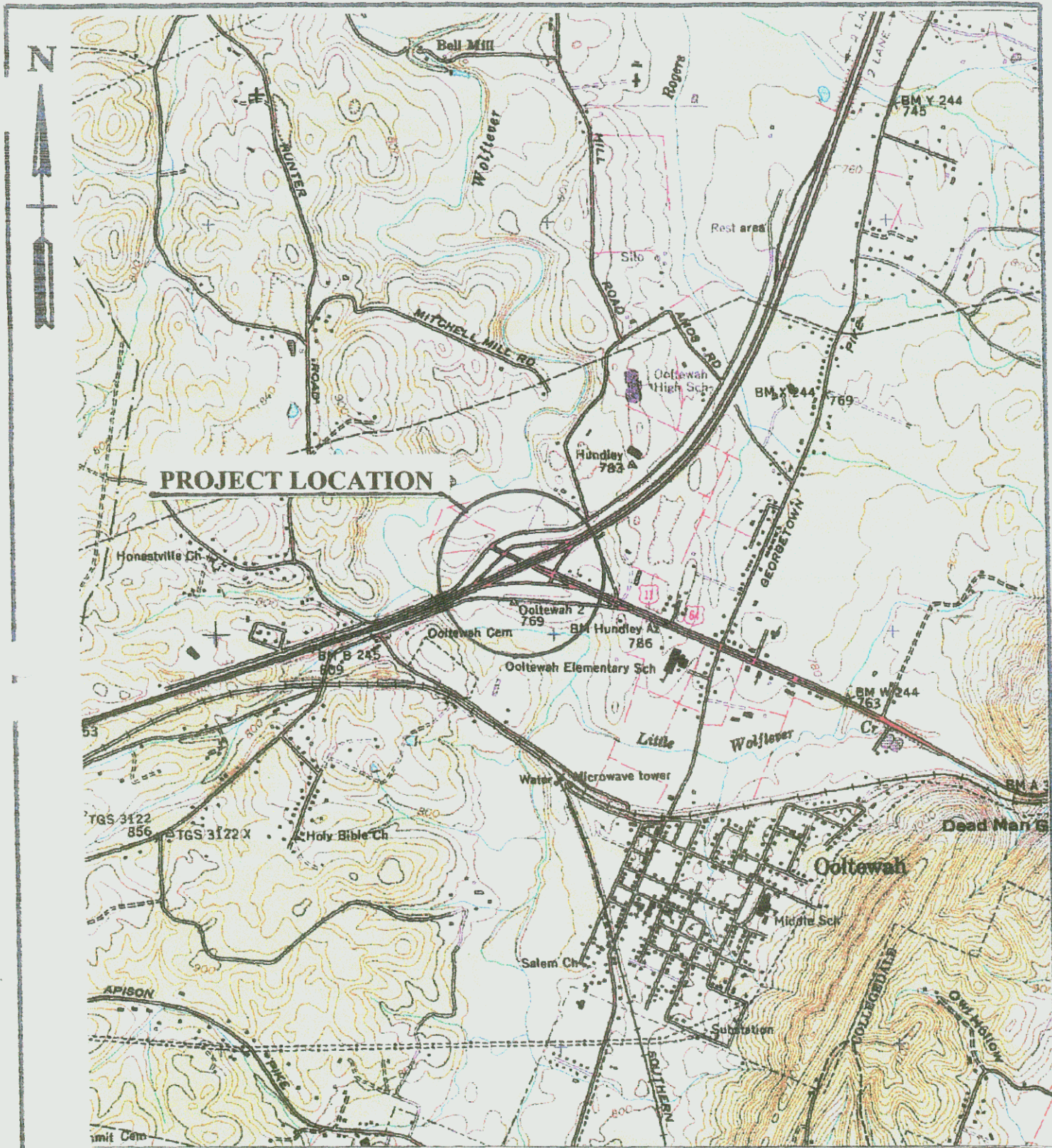
There are several other key roadways within the study area and they are as follows:

##### **Interstate 75 (I-75)**

I-75 is a four-lane interstate highway serving as a major north-south route stretching from Florida to Canada and connecting local cities such as Chattanooga and Knoxville, Tennessee.



**I-75 & S.R. 2**  
**INTERCHANGE MODIFICATION STUDY**  
**CHATTANOOGA, HAMILTON COUNTY, TENNESSEE**  
**SCALE 1" = 1 MILE**



**PROJECT LOCATION**

**I-75 AND S.R.2  
HAMILTON COUNTY**

**USGS "OOLTEWAH" QUAD  
SCALE 1" = 2000'**

### U.S. 11 (SR-2) Lee Highway

Lee Highway is a state route serving the community of Ooltewah (towards the east) and continuing to the city of Cleveland, Tennessee. The typical section for this roadway is comprised of a four-lane depressed median section towards the east. Lee Highway terminates just to the west of the I-75 interchange at the Hunter Road and Mountain View Road intersection. The posted speed limit of this roadway is 45 miles per hour.

### Hunter Road

Hunter Road is a two-lane local road that parallels the west side I-75 that extends towards the south from SR-2 (Lee Highway). The posted speed limit is 35 miles per hour. The photo below shows the commercial development towards the west of I-75 and Hunter Road.



Photo 1: Hunter Road Approach to Lee Highway

### Mountain View Road

Mountain View Road is a two-lane local road that parallels the west side I-75 and extends north from SR-2 (Lee Highway). Two schools are in the area and are served by this roadway, as well as several residential neighborhoods. The posted speed limit along this route is 35 miles per hour.

The photo below shows the approach along Lee Highway traveling towards the west to the existing Hunter Road and Mountain View Road intersection. As shown in Photo 2, intersection spacing between the ramp termini on the west side of I-75 and the Hunter Road/Mountain View Road intersection is extremely short with only 240 feet between stop bars.



Photo 2: Intersection of Lee Highway and Hunter Rd/Mountain View Rd

### C. Relationship to Other Highway Improvement Programs and Plans

I-75 is currently a four-lane facility on the National Highway System. A project is currently in the design phase to widen this roadway to an eight-lane facility within the study area. This project has a tentative construction letting date for the spring of 2002. The development of the various improvement alternatives from this study for this interchange will be compatible with the future design plans for this section of Interstate 75.

The 2015 Long Range Transportation Plan for the Chattanooga Urbanized Area contains the widening of I-75 within the project vicinity as well as minor improvements to the associated ramps and U.S. 11 (SR-2) Lee Highway. The Long Range Plan was also amended on December 21, 1998 by the Executive



Board of Chattanooga Metropolitan Planning Organization (MPO) to include the new access point located 2.5 miles south of the subject interchange. As stated previously, this new access point (Volunteer Ordnance Access Road interchange) has recently received approval from the Federal Highway Administration (FHWA).

## CHAPTER 2

Preliminary Planning Data

## A. Land Use

The land use in the vicinity of the interchange is a mixture of various commercial and residential developments. It includes hotels, gas stations, fast food restaurants and other types of development historically associated around interstate interchanges. Photo 3 and 4 shows the typical development found along the east and west side of I-75 along SR-2 (Lee Highway).



Photo 3: East side of I-75 along U.S. 11 (SR-2) Lee Highway



Photo 4: West side of I-75 at Hunter Road & Mountain View Road

## **B. Traffic Served**

The traffic data for this study was supplied by the Tennessee Department of Transportation (TDOT) and was based on proposed land use and existing conditions. The Design Hourly Volumes (DHV) for the years 2005 and 2025 are shown in Appendix A.

The 2005 traffic along Interstate 75 in the study area is 85,200 vehicles per day. The design year (2025) volumes on I-75 are projected to be 136,500 vehicles per day. The majority of the traffic traveling along I-75 from SR-2 occurs southbound in the morning (towards the city of Chattanooga) and northbound in the afternoon.

Traffic along U.S. 11 (SR-2) Lee Highway is evenly distributed with 27,000 vehicles per day utilizing the east and west side of Lee Highway in the base year, with 48,000 vehicles per day in the design year. The heaviest ramp movements, as alluded to earlier, are the I-75 northbound exit ramp and the I-75 southbound entrance ramp. The figures in Appendix A provide a complete breakdown of traffic volumes for the subject interchange for the base year (2005) and the design year (2025).

### C. Improvements Under Design

As stated previously, plans are underway to widen I-75 in the study area as well as provide some improvements to the interchange. The mainline of the interstate will be widened to four-travel lanes in the northbound and southbound direction with two lane exit and entrance ramps provided on the south side of Lee Highway. The existing I-75 bridge over SR-2 will be widened to accommodate one additional travel lane in each direction as well as the required shoulder widths.

During the development of this interchange modification study, the Tennessee Department of Transportation chose to include the some of recommendations within this study, as part of the on-going design project. These improvements include relocating the existing frontage roads (Mountain View Road & Hunter Road) east of I-75. These improvements will provide additional storage capacity and safety for motorists traveling through this area, as well as provide for the future interchange improvements recommended. At the time of this report, the department has revised the right-of-way plans for the project and acquired the necessary land towards the east of I-75 to realign the frontage roads.

#### U.S. 11 (SR-2) Lee Highway (East)

Minimal improvements to Lee Highway on the east side of I-75 are planned in the current design project. The northbound I-75 exit ramp will be modified at the intersection with Lee Highway and will be comprised of two (2) left turn lanes and two (2) right turn lanes under signalized control. The existing free-flow right turn lane towards the east on Lee Highway will be eliminated. Due to the pier locations and structure design for the existing bridge on I-75 over Lee Highway, clearance is not sufficient for more than three (3) travel lanes in each direction.

#### U.S. 11 (SR-2) Lee Highway (West)

In order to facilitate turning movements and operation of the signalized intersections of the ramp terminals/Hunter Road/Mountain View Road and Lee Highway along the west side of interstate, additional right turn lanes and left turn lanes towards the I-75 southbound entrance ramp are being added. The existing spacing (240') between the two signalized intersections is not being addressed with this current design project.



Photo 5: Aerial view of I-75 at Hunter Road & Mountain View Road

#### D. Discussion of Alternatives & Recommended Improvements

As part of this study, an evaluation of the improvements under design was completed then various alternatives for deficiencies that were not addressed in the design plans were investigated. As part of the analysis, it was determined that operational problems would occur primarily at the ramp terminals of I-75 and SR-2 (Lee Highway). It also became evident that the intersection spacing between the I-75 ramp terminals on the west side of I-75 and the Hunter Road & Mountain View Road intersection would cause substantial queues and obstruct the traffic flow to/from the I-75 ramps. The following outlines three (3) alternatives that were developed to improve the operation and safety of the interchange:

##### Alternate A (Single-Point Diamond Interchange)

After reviewing the traffic volumes provided by the Tennessee Department of Transportation, it became obvious that the I-75 northbound exit ramp and the I-75 southbound entrance ramp were handling the majority of the traffic to and from the interstate. Therefore, it also became necessary to evaluate the intersection spacing and associated queue lengths. Alternate A would eliminate the two ramp terminal traffic signals on Lee Highway and control traffic under one new signal. With this new configuration, a new structure over Lee Highway on I-75 would be required to provide adequate clearance for all the turning movements associated with a single-point urban diamond interchange. Several shortcomings of this alternative were determined after further investigation. The new structure over Lee Highway would have been costly as well as difficult to construct while maintaining traffic on this congested section on interstate. With this option, ramp storage for the I-75 northbound exiting vehicles would have

been reduced which could have resulted in back-ups on the interstate. With all these factors taken into account, the alternative was eliminated.

#### Alternate B (Northeast Quadrant Loop)

A second alternative would have modified the existing I-75 northbound exit ramp as a loop ramp located in the northeast quadrant of the interchange. With this loop ramp, the vehicles currently turning left from the exit ramp towards westbound Lee Highway would be added as right turns, thus removing these movements from signalized control. As with the first alternate, the existing structure would have to be replaced in order to add the loop ramp traffic as a free-flow movement. When reviewing the traffic volumes for this ramp as well as the associated analysis, it also appeared that there may be some delay and queues on this loop ramp which could cause congestion to the mainline of I-75. Alternate B would also require costly right-of-way acquisitions including three (3) commercial establishments.

#### Alternate C (Northwest Quadrant Loop)

The final alternative was developed to attempt to separate the heavy volumes from the left turns on Lee Highway towards I-75 southbound and the right turns from eastbound Lee Highway (Hunter/Mountain View Road) to I-75 southbound. In order to accomplish this separation and to provide better operation of the entire west side of the interchange area, a loop entrance ramp from westbound Lee Highway to southbound I-75 was recommended. Along with these improvements, the extension of Lee Highway towards the west would provide additional intersection spacing and storage for the large volumes of turning movements in this congested area.

This alternative was considered the best to further develop design options for the improvements to I-75 and SR-2 (Lee Highway).

### **Recommended Improvements**

Alternate C was selected as the alternate to carry to the next phase of development. This option would not change the plans currently under design for the east side of I-75. Both the mainline of SR-2 (Lee Highway) and the I-75 northbound exit ramp and I-75 northbound entrance ramps would remain as designed. With the addition of double left and right turns on the northbound exit ramp terminal with SR-2, operation of this segment of Lee Highway will operate satisfactorily.

The major focus of this alternate is the proposed loop ramp to be added for those motorists traveling from Lee Highway to I-75 southbound as well as the extension of Lee Highway towards the west a distance of 600 feet. This extension will provide the necessary storage lengths and laneage along both Hunter and Mountain View Roads and Lee Highway for the heavy turn movements that occur between these two intersections.

Both of these frontage roads located on the west side of I-75 will be relocated with one business acquisition (Waffle House). Two other commercial establishments (Super 8 & Exxon station) would be impacted with the proposed right-of-way needed.

The recommended improvements of this option would:

- Provide the needed separation between the ramp terminal signal and the Hunter Road and Mountain View Road intersections.
- Separate the heavy turning movements from westbound Lee Highway to I-75 southbound via the loop ramp and the turning vehicles from eastbound Lee Highway to I-75 southbound.
- Leave the existing bridge on I-75 over Lee Highway, but require an additional widening of twelve (12) feet, based on the current design plans.

The functional layout sheets for these recommended improvements are included in Appendix I of this report.

Late in the development of this study, a parcel adjacent to the interchange on the north (west) side was purchased by a local Chattanooga hospital (Memorial Hospital). The proposed site for this outpatient services building and medical office complex will be located along Relocated Mountain View Road. The department is coordinating the proposed improvements to the interchange with the needs of the hospital to provide safe and reasonable access to this portion of the I-75 and US-11 (SR-2) interchange area.

#### **E. Environmental Concerns**

While detailed environmental technical studies were not conducted for this phase of the interchange study, preliminary investigations were done to identify site specific environmentally sensitive areas for historic, archeological and ecological considerations. At the current time, the recommended improvements do not appear to impact any areas of environmental or historical significance.

## CHAPTER 3

Engineering Investigations**A. Traffic Operations**

An analysis was conducted to determine what impacts the recommended improvements would have on traffic operations along this section of I-75 and on the associated ramps and cross road (SR-2). The traffic operations analysis includes basic freeway segments, merge/diverge sections and signalized intersections.

Appendix B contains figures summarizing the levels-of-service for the improvements under design and the recommended improvements for base year (2005) and design year (2025) traffic. The levels-of-service were determined using the peak hour volumes which represent the worst case condition for each location.

**IMPROVEMENTS UNDER DESIGN**

For the purpose of this study, the improvements currently under design were considered to be the existing conditions. The capacity analysis of the ramp junctions within the study area are summarized below in Table 1 for the base year and design year (2025), with service lives shown.

TABLE 1

**CAPACITY ANALYSES OF RAMP JUNCTIONS WITHIN THE STUDY AREA**

<b>Ramp Junctions</b>	<b>Year 2005</b>	<b>Year 2025</b>	<b>Service Life</b>
Northbound I-75 exit to US-11 (SR-2) (AM)	A	B	2025
Northbound I-75 exit to US-11 (SR-2) (PM)	B	F	2019
Northbound I-75 entrance from US-11 (SR-2) (AM)	B	C	2025
Northbound I-75 entrance from US-11 (SR-2) (PM)	C	F	2018
Southbound I-75 exit to US-11 (SR-2) (AM)	C	F	2018
Southbound I-75 exit to US-11 (SR-2) (PM)	B	D	2025

*Note: Some ramp junctions within the study area result in a lane addition or lane drop. Analyses for these locations are shown in table below.*

In addition to the ramp junctions shown in Table 1, one location within the study area includes an interchange ramp that is associated with a lane addition on I-75. This location is as follows:



- **Southbound I-75 entrance ramp from U.S. 11 (SR-2).** The current design plans widen this existing ramp to two travel lanes. These lanes are developed as a lane addition to I-75, before tapering to one lane south of the interchange area.

The Highway Capacity Manual (HCM) states the following about lane additions and lane drops:

“Sometimes on-ramps are associated with lane additions and off-ramps with lane drops. Where a ramp results in a lane addition or deletion, the capacity of the ramp is governed by its geometry, as indicated in Table 5-6.”

The information in Table 5-6 of the HCM indicates that for a free-flow ramp speed of 41-50 mph, a two-lane ramp has a capacity of 4,100 vehicles per hour. Table 2 includes the projected traffic volumes on the ramp, which results in a lane addition on I-75 at the subject interchange.

**TABLE 2**  
**CAPACITY ANALYSES AT RAMP JUNCTIONS**  
**WHICH RESULT IN A LANE ADDITION OR LANE DROP**

<b>Ramp Junctions</b>	<b># of lanes</b>	<b>capacity (vph)</b>	<b>Year 2005</b>	<b>Year 2025</b>
Southbound I-75 entrance from US-11 (SR-2) (AM)	2	4,100	1,550	2,470
Southbound I-75 entrance form US-11 (SR-2) (PM)	2	4,100	1,030	1,670

The results of these analyses indicate that the current plans for the southbound I-75 entrance ramp provide adequate capacity and operation as a two lane ramp.

The results of the capacity analyses for the freeway segments within the study area are shown in Table 3. These results indicate the following freeway segments are projected to operate at acceptable LOS in the Year 2005, based on the planned roadway network:

**TABLE 3**  
**CAPACITY ANALYSES OF FREEWAY SEGMENTS**  
**WITHIN THE STUDY AREA**

Freeway Segments	Year 2005	Year 2025	Service Life
Northbound I-75 south of US-11 (SR-2) (AM)	B	D	2025
Northbound I-75 south of US-11 (SR-2) (PM)	C	F	2018
Southbound I-75 south of US-11 (SR-2) (AM)	C	E	2025
Southbound I-75 south of US-11 (SR-2) (PM)	B	C	2025
Northbound I-75 north of US-11 (SR-2) (AM)	C	D	2025
Northbound I-75 north of US-11 (SR-2) (PM)	D	F	2017
Southbound I-75 north of US-11 (SR-2) (AM)	D	F	2017
Southbound I-75 north of US-11 (SR-2) (PM)	C	D	2025

Capacity analyses were conducted for the three signalized intersections along Lee Highway based on the current plans for improvement. The results of this analyses are shown in Table 4. The analyses shows that all three intersections will operate at acceptable LOS during the AM and PM peak hours in the Year 2005, but will fail before the design year (2025).

**TABLE 4**  
**CAPACITY ANALYSES OF SURFACE STREET INTERSECTIONS**  
**WITHIN THE STUDY AREA**

INTERSECTION	Year 2005	Year 2025
Intersection of Hunter Rd/Mountain View Rd & US-11 (SR-2) (AM)	D	F
Intersection of Hunter Rd/Mountain View Rd & US-11 (SR-2) (PM)	F	F
Intersection of I-75 Southbound exit and US-11 (SR-2) (AM)	D	F
Intersection of I-75 Southbound exit and US-11 (SR-2) (PM)	D	F
Intersection of I-75 Northbound exit and US-11 (SR-2) (AM)	C	F
Intersection of I-75 Northbound exit and US-11 (SR-2) (PM)	C	F

### **RECOMMENDED IMPROVEMENTS**

The results of the capacity analyses conducted for the proposed improvements are shown in the following tables. As shown in Table 5, all of the ramp junctions (excluding add or drop lanes) within the study area, are projected to operate at poor LOS in the year 2025. However, these ramps will provide a service life of at least 13 years. It is important to note that these ramp junction failures could be eliminated with the addition of one mainline lane in each direction along I-75.

Also, as with the existing roadway network, several locations within the study area will include an interchange ramp that is associated with a lane addition or a lane drop on I-75. These locations are as follows:

- **Southbound I-75 entrance ramp from eastbound U.S. 11 (SR-2).** The current design plans widen this existing ramp to two travel lanes. The recommended improvements would revise this to a one-lane ramp addition to I-75 with a design speed of 41-50 mph.
- **Southbound I-75 entrance ramp from westbound U.S. 11 (SR-2).** This one-lane loop ramp would be added to the I-75 southbound mainline and be designed with 30 mph design speed.

The information in Table 5-6 of the HCM indicates that for a free-flow ramp speed of 41-50 mph, a single-lane ramp has a capacity of 2,100 vehicles per hour. The information in Table 5-6 of the HCM also indicates that for a free-flow ramp speed of 21-30 mph, a single-lane ramp has a capacity of 1,900 vehicles per hour. Table 6 includes the projected traffic volumes on each of these two ramps, which will result in a lane addition at the subject interchange. The results of these analyses indicate that the traffic projected to use the ramps will have adequate capacity to accommodate the volumes projected on the proposed roadway network in the years 2005 and 2025.

**TABLE 5**

#### **CAPACITY ANALYSES OF RAMP JUNCTIONS WITHIN THE STUDY AREA**

<b>Ramp Junctions</b>	<b>Year 2005</b>	<b>Year 2025</b>	<b>Service Life</b>
Northbound I-75 exit to US-11 (SR-2) (AM)	A	B	2025
Northbound I-75 exit to US-11 (SR-2) (PM)	B	F	2019
Northbound I-75 entrance from US-11 (SR-2) (AM)	B	C	2025
Northbound I-75 entrance from US-11 (SR-2) (PM)	C	F	2018
Southbound I-75 exit to US-11 (SR-2) (AM)	C	F	2018
Southbound I-75 exit to US-11 (SR-2) (PM)	B	D	2025

*Note: Some ramp junctions within the study area result in a lane addition or lane drop. Analyses for these locations are shown in Table 6.*

TABLE 6

**CAPACITY ANALYSES AT RAMP JUNCTIONS  
WHICH RESULT IN A LANE ADDITION OR LANE DROP**

<b>Ramp Junctions</b>	<b># of lanes</b>	<b>capacity (vph)</b>	<b>Year 2005</b>	<b>Year 2025</b>
Southbound I-75 entrance from US-11 (SR-2) (AM)	1	2,100	810	1,220
Southbound I-75 entrance form US-11 (SR-2) (PM)	1	2,100	540	810
Proposed Loop Ramp to I-75 (AM)	1	1,900	740	1,250
Proposed Loop Ramp to I-75 (PM)	1	1,900	490	860

The results of the capacity analyses for the freeway segments within the study area are shown in Table 7. These results indicate that in the morning (AM), I-75 southbound will operate at a poor level of service. The reciprocal movement in the evening (PM), I-75 northbound will also operate at a poor level of service in the design year (2025).

Table 7 also shows that the service life for the freeway segments varies from thirteen (13) to twenty-five (25) years. As stated previously, in order for the mainline of I-75 to operate at acceptable level of service for both peak hour periods would require one additional travel lane in each direction above what is currently being designed.

TABLE 7

**CAPACITY ANALYSES OF FREEWAY SEGMENTS  
WITHIN THE STUDY AREA**

<b>Freeway Segments</b>	<b>Year 2005</b>	<b>Year 2025</b>	<b>Service Life</b>
Northbound I-75 south of US-11 (SR-2) (AM)	B	D	2025
Northbound I-75 south of US-11 (SR-2) (PM)	C	F	2018
Southbound I-75 south of US-11 (SR-2) (AM)	C	E	2025
Southbound I-75 south of US-11 (SR-2) (PM)	B	C	2025
Northbound I-75 north of US-11 (SR-2) (AM)	C	D	2025
Northbound I-75 north of US-11 (SR-2) (PM)	D	F	2017
Southbound I-75 north of US-11 (SR-2) (AM)	D	F	2017
Southbound I-75 north of US-11 (SR-2) (PM)	C	D	2025

TABLE 8

**CAPACITY ANALYSES AT SURFACE STREET INTERSECTIONS  
WITHIN THE STUDY AREA**

<b>INTERSECTION</b>	<b>Year 2005</b>	<b>Year 2025</b>
Hunter Rd/Mountain View Rd & US-11 (SR-2) (AM)	B	D
Hunter Rd/Mountain View Rd & US-11 (SR-2) (PM)	B	D
I-75 Southbound exit and US-11 (SR-2) (AM)	B	D
I-75 Southbound exit and US-11 (SR-2) (PM)	B	C
I-75 Northbound exit and US-11 (SR-2) (AM)	C	F
I-75 Northbound exit and US-11 (SR-2) (PM)	C	F

Table 8 above, shows the operation of the three signalized intersections along SR-2 (Lee Highway) based upon the recommended improvements. The signals along the west side of I-75 will operate at an acceptable level of service in the design year while the I-75 northbound exit ramp intersection will fail in 2025, due to the lack of sufficient through lanes on the mainline of Lee Highway.

#### **B. Access Analysis**

This study has been undertaken in accordance with the Federal Highway Administration's (FHWA) policy for granting new or revised interchange access. The FHWA policy, as described in FHWA Docket 98-3460, "Additional Interchanges to the Interstate System (Federal Register 63, No. 28, February 11, 1998) is provided in the following paragraphs accompanied by comments for consideration.

***"It is in the national interest to maintain the Interstate System to provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing such service. Therefore, new or revised access points to the existing Interstate System should meet the following requirements."***

- 1. The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design year traffic demands while at the same time providing the access intended by the proposal.***

With the continual increase in traffic volumes along I-75 within the project area, the capacity and merge/diverge movements will continue to diminish the operation of the interstate system in the project area. This degradation will result in increased motorists delay, reduced traveler safety, and reduced air quality within the city of Chattanooga's Urbanized Area. Operation of the ramp terminal intersections will continue to degrade with potential queues extending onto the interstate facility.

No minor interchange improvements can be made (other than the recommended configuration) to eliminate the major problems outlined previously in this report.

2. ***All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.***

There were several different design options developed and assessed in this study to improve the operation of the I-75 and U.S. 11 (SR-2) Lee Highway interchange. However, the proposed design is the only one that produced the desired level of service and operational/safety characteristics for the interchange and the associated ramps and cross road.

The improvements needed for operation and safety cannot be adequately addressed through transportation demand management, strategies such as: ramp metering, mass transit or park and ride lots. As stated previously, I-75 is currently being designed to be widened to an eight-lane facility; however, HOV lanes are not planned as part of this improvement nor are they recommended in Chattanooga's Long Range Transportation Plan.

3. ***The proposed access point does not have a significant adverse impact on the safety and operation of the interstate facility based upon an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of interstate to an including at least the first adjacent existing or proposed interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access points.***

The recommended improvements developed in this study will not have any adverse impact on the safety and operation of the interstate facility. Improvement in operation and safety will be realized, especially at the signalized intersections of U.S. 11 (SR-2) Lee Highway and the ramp terminals.

4. ***The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purpose access for transit vehicles, for HOV's, or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed current standards for Federal-Aid projects on the Interstate System.***

The proposal is a modification of the existing interchange at Interstate 75 and U.S. 11 (Lee Highway). The proposed modification is a "full interchange" and will meet or exceed the American Association of State Highway and Transportation Officials (AASHTO) criteria.

5. ***The proposal considers and is consistent with local and regional land use and transportation plans. Prior to final approval, all requests for new or revised access must be consistent with the metropolitan and/or statewide transportation plan, as appropriate, the applicable provisions of 23 CFR part 450 and the transportation conformity requirements of 40 CFR parts 51 and 93.***

The study was coordinated with the Tennessee Department of Transportation and the local office of the FHWA and is consistent with all local, regional, and statewide land use and transportation plans.

6. ***In areas where the potential exists for future multiple interchange additions, all requests for new or revised access are supported by a comprehensive interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan.***

There are no long-range plans for any additional interchanges in this area other than the approved Volunteer Ordnance Access Road interchange to be located 2.5 miles south of the SR-2 (Lee Highway) interchange. The existing interchange provides adequate access to the study area.

7. ***The request for a new or revised access generated by a new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements***

The request is not generated by new or expanded development within the vicinity of the interchange. This interchange modification is intended to correct operational inadequacies of the existing/planned interchange configuration and its' associated ramp terminal intersections.

8. ***The request for a new or revised access contains information relative to the planning requirements and the status of environmental processing of the proposal.***

As stated previously, the preliminary site assessment did not reveal the presence of any environmentally sensitive areas for historic, archeological and ecological considerations. The proposed modifications recommended in this study will be submitted to the TDOT Environmental Department to begin environmental studies at the time this report is submitted to the FHWA.

**C. Proposed Interchange Cost**

The total cost for the recommended improvements to the interchange area is anticipated to be \$ 8,778,000. This cost estimate is above and beyond the projected cost for the planned improvements currently under design for the study area. For a detailed break-down of this estimate, see the "Cost Data Sheet" located in Appendix F.



**CHAPTER 4****Summary of Findings and Conclusions**

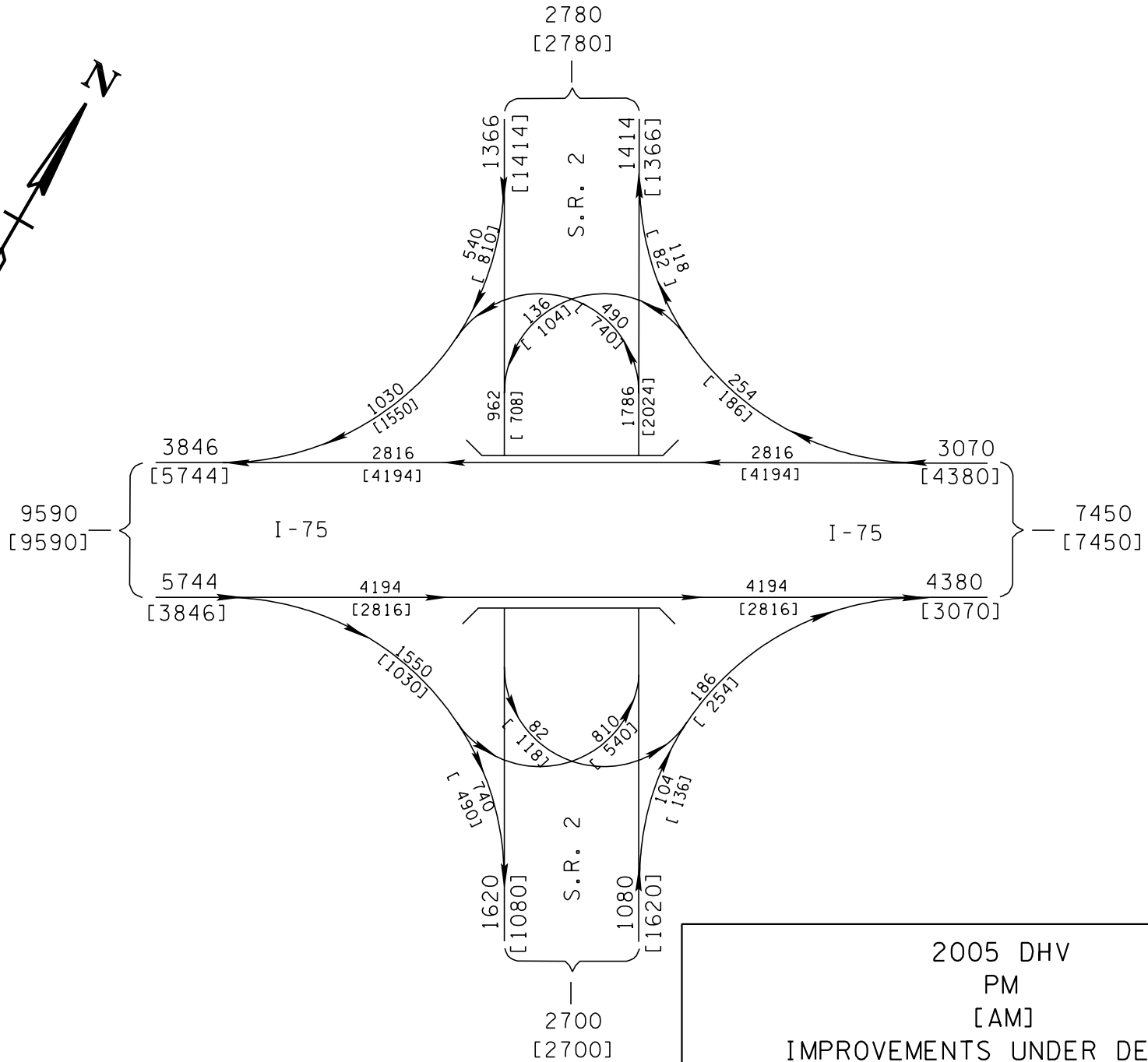
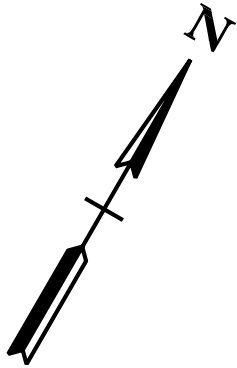
The purpose of this study was to evaluate the planned interchange/interstate improvements currently under design for Interstate 75 and U.S. 11 (SR-2) Lee Highway. As part of this study, develop any recommended improvements for deficiencies not addressed within the design plans. Once these deficiencies are determined and cost calculated, incorporate them into the design process. As stated previously, various improvements to the local roadway system have now been incorporated into the current design project underway and will provide for the recommended improvements contained in this study.

The traffic analysis indicates that the planned interchange ramps along the east side of I-75 are sufficient to handle the current and design year traffic volumes. However, due to the close proximity of signal spacing on Lee Highway at the I-75 southbound entrance ramp terminal and the intersection of Hunter Road and Mountain View Road, operation and safety problems will continue to exist if not addressed.

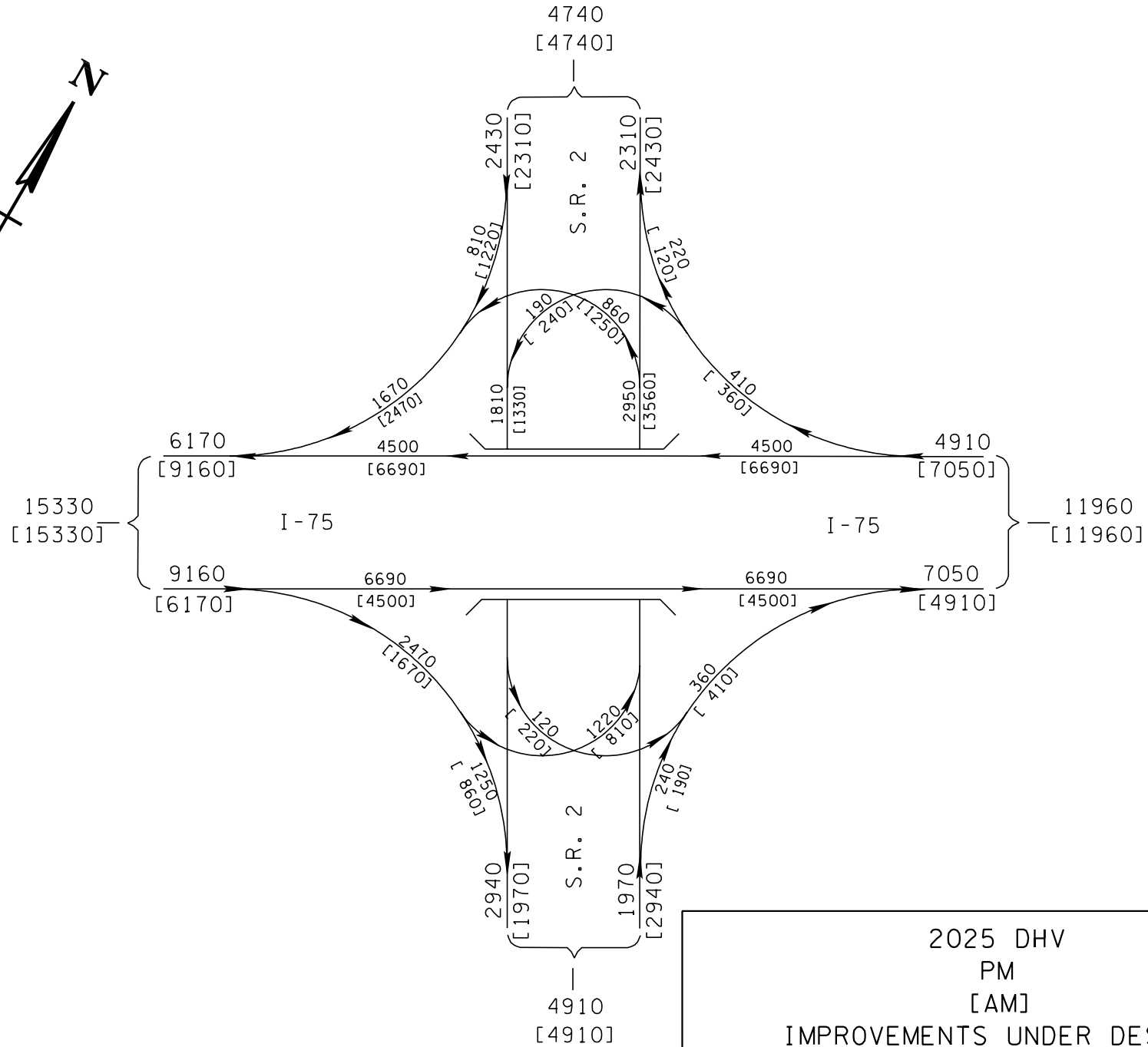
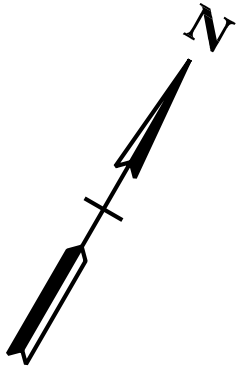
The recommended improvements along I-75 and U.S. 11 (SR-2) Lee Highway will greatly improve the safety of motorists traveling through this area as well as facilitate the large heavy turning movements and heavy trucks that presently use this roadway network. Traffic operations will be improved with most movements operating at a desirable level of service.

**APPENDIX A**

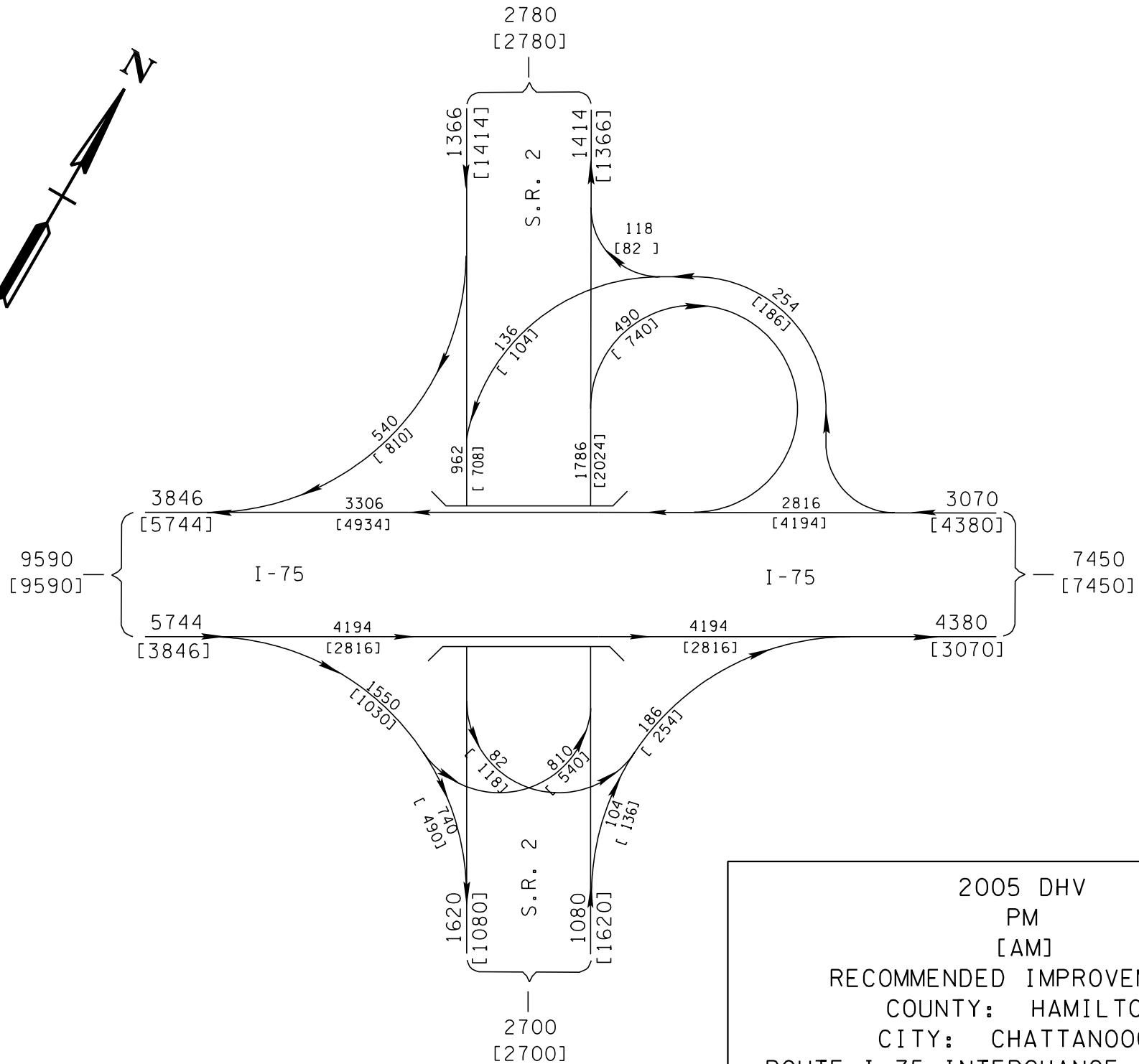
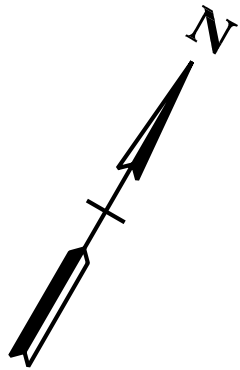
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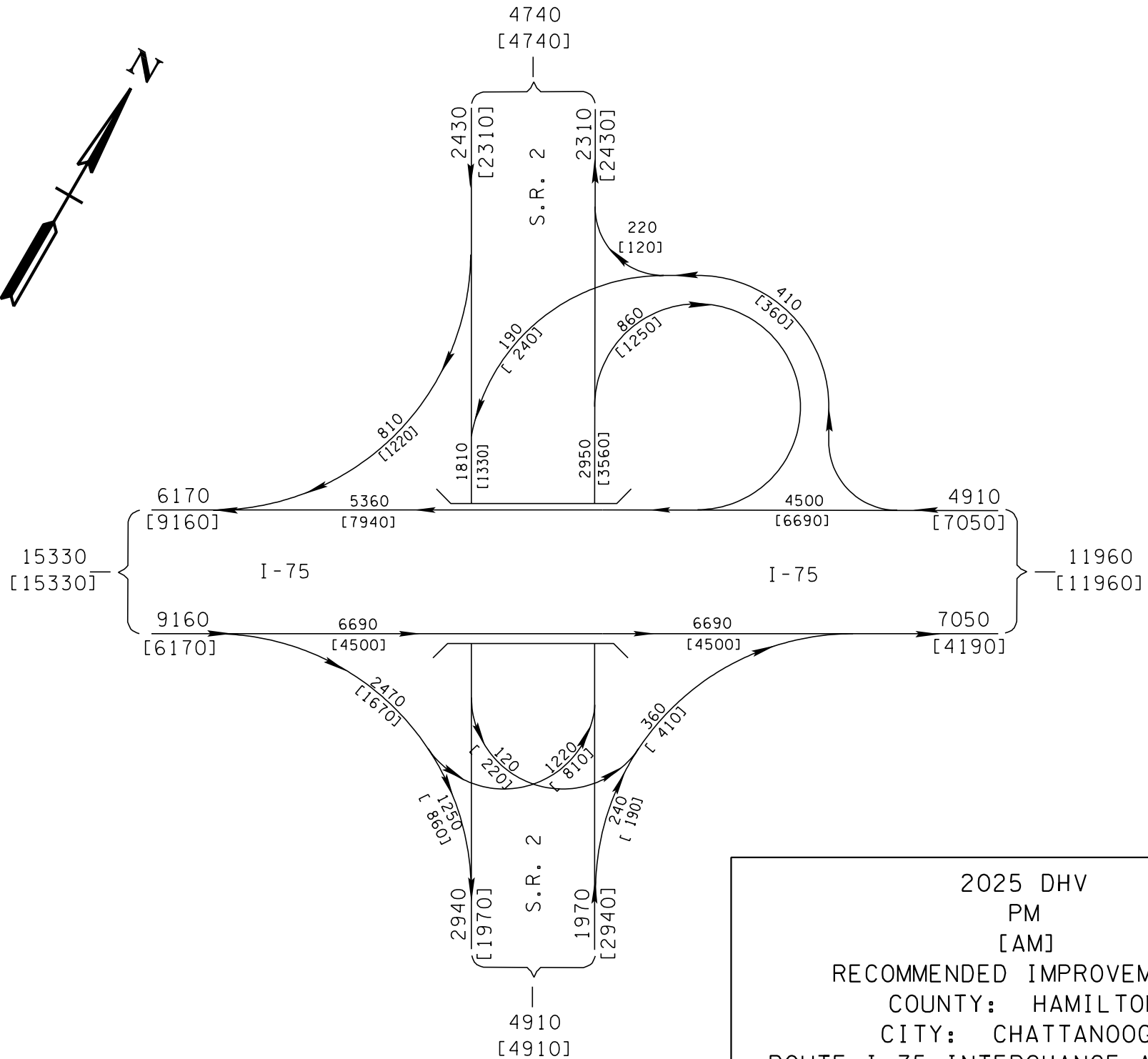
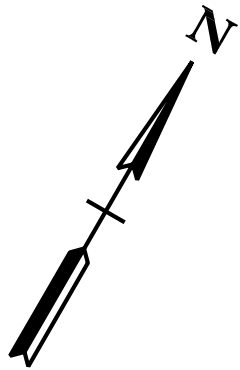


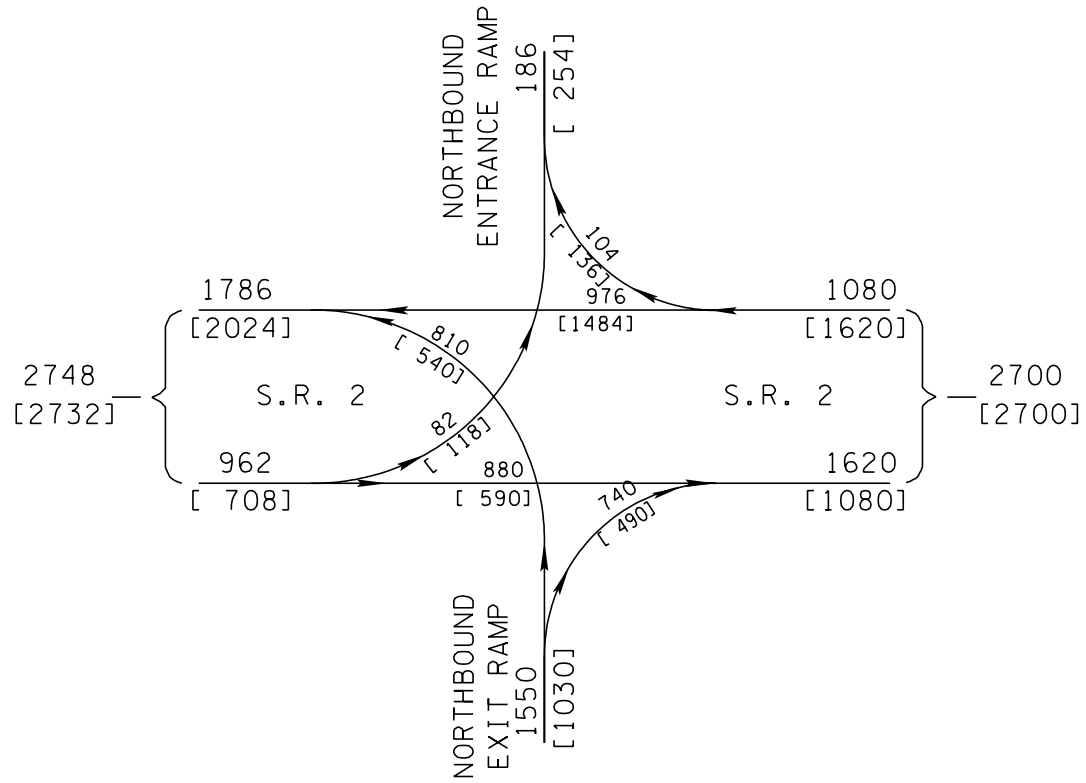
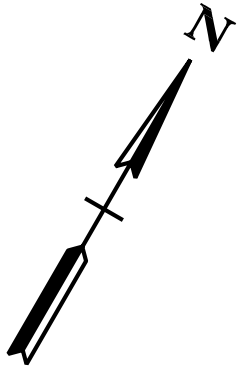
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COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2



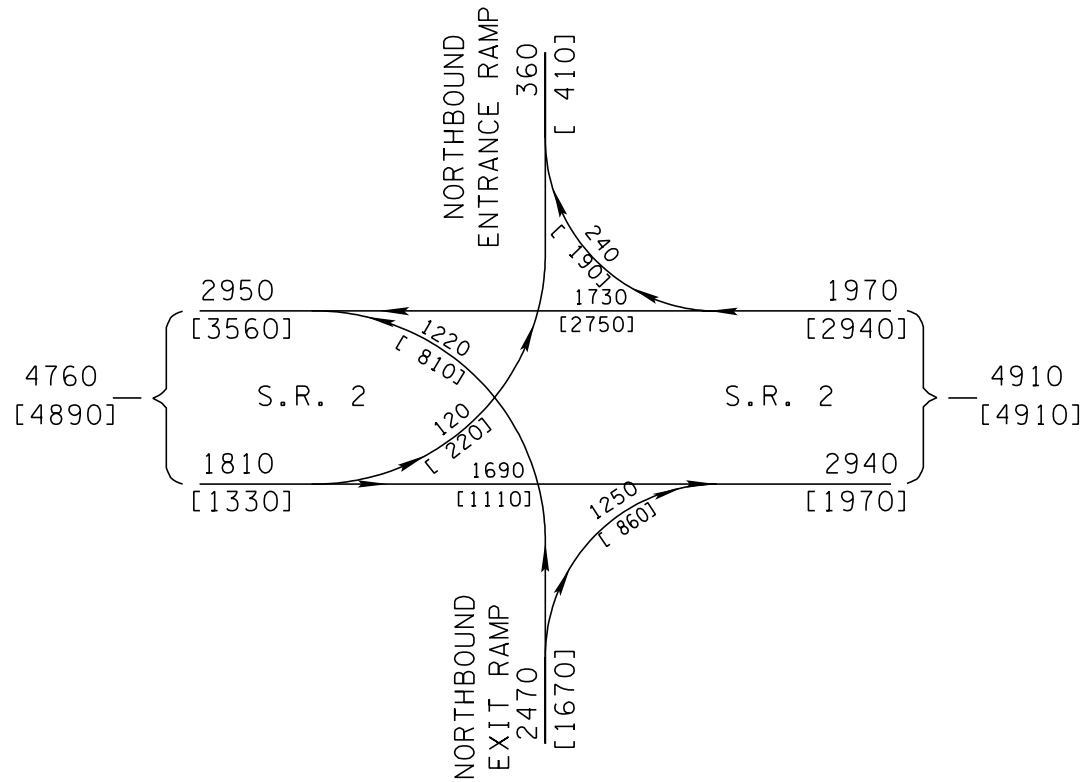
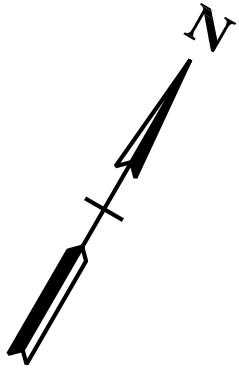
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COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2





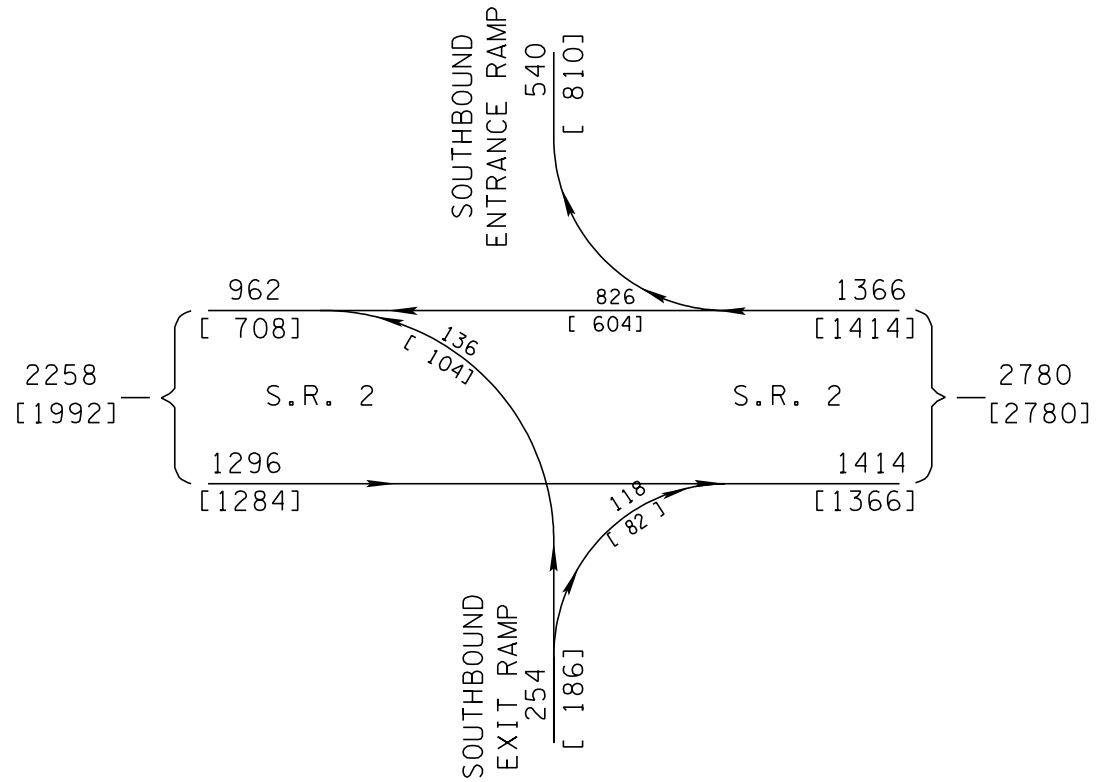
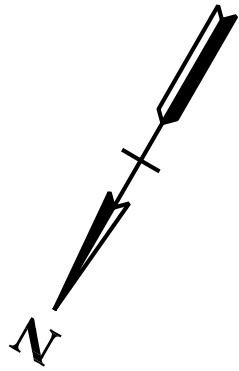


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CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2

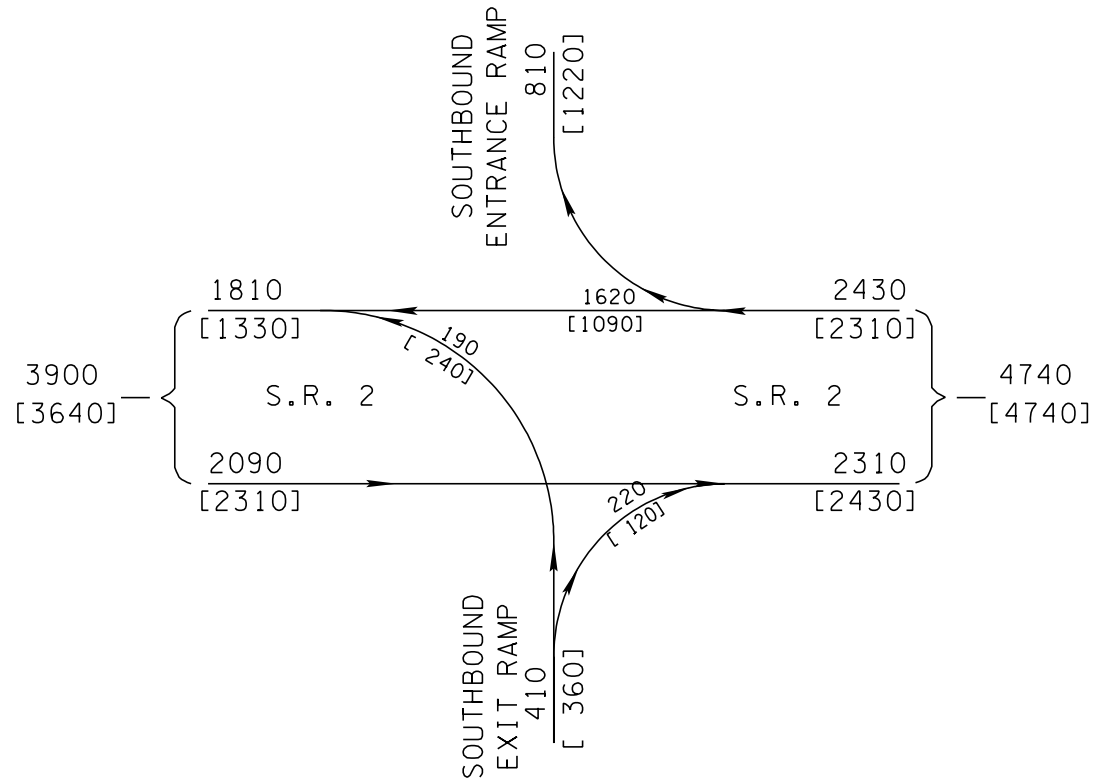
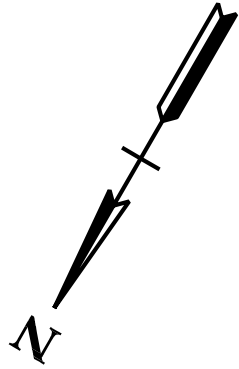


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COUNTY: HAMILTON  
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ROUTE I-75 INTERCHANGE AT S.R. 2

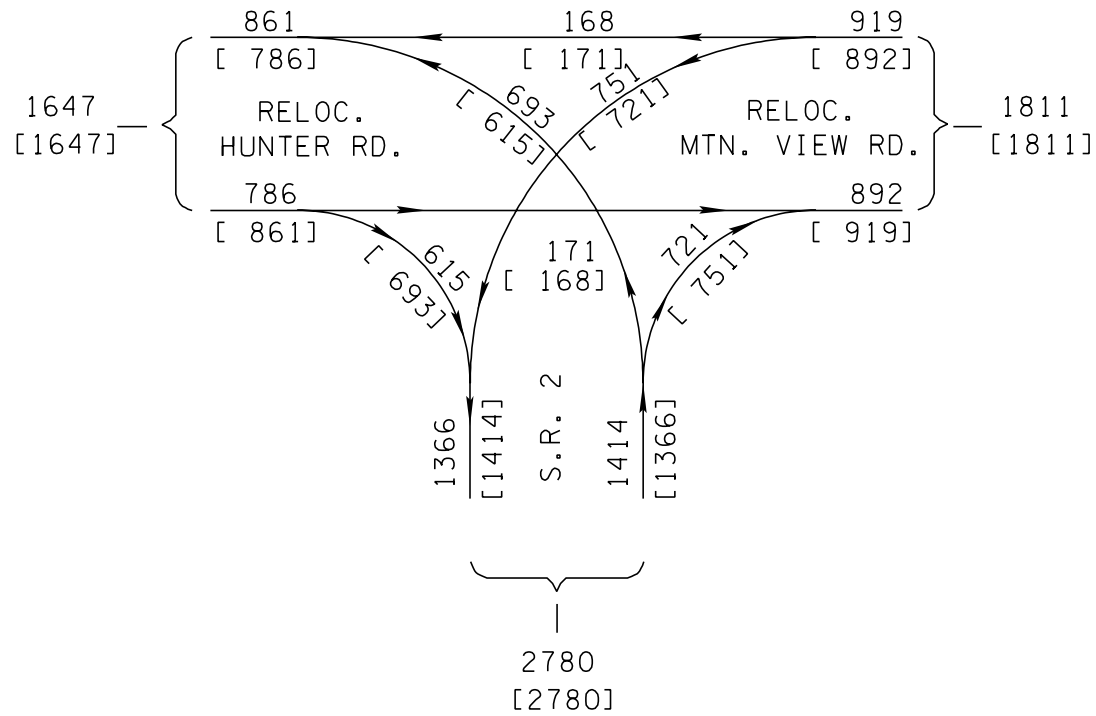
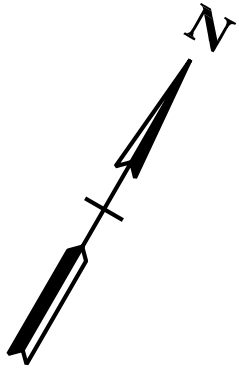




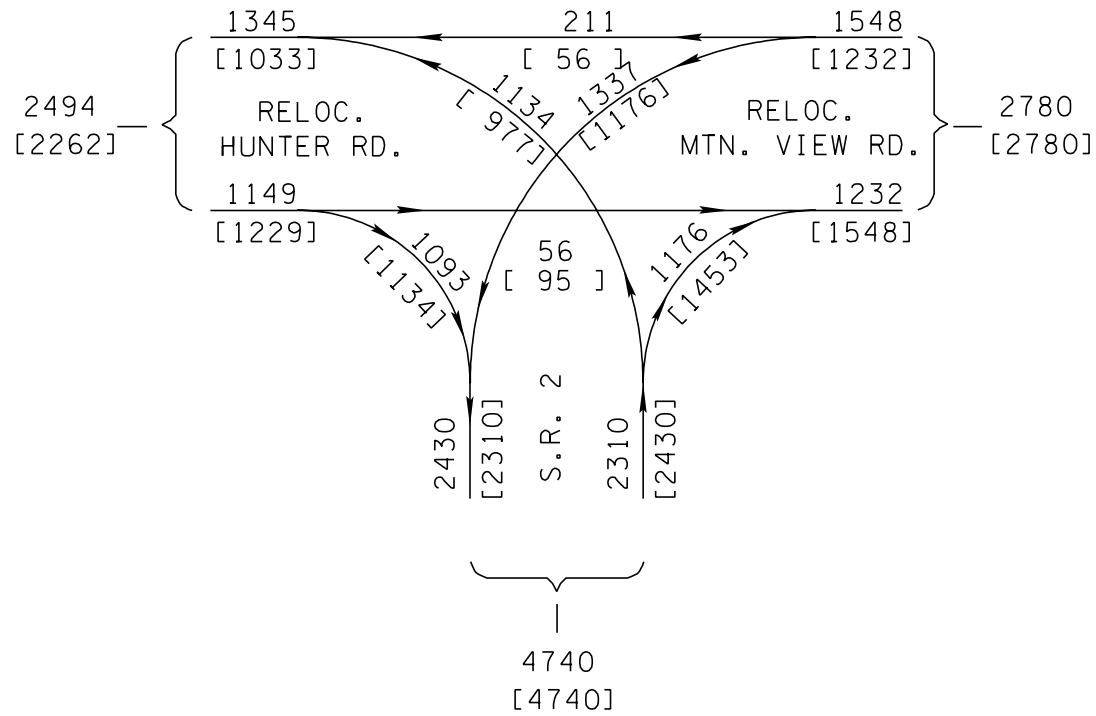
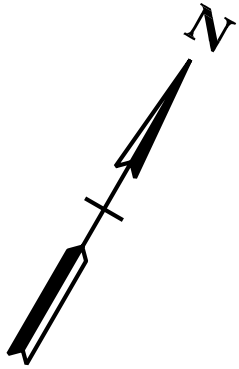
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ROUTE I-75 INTERCHANGE AT S.R. 2



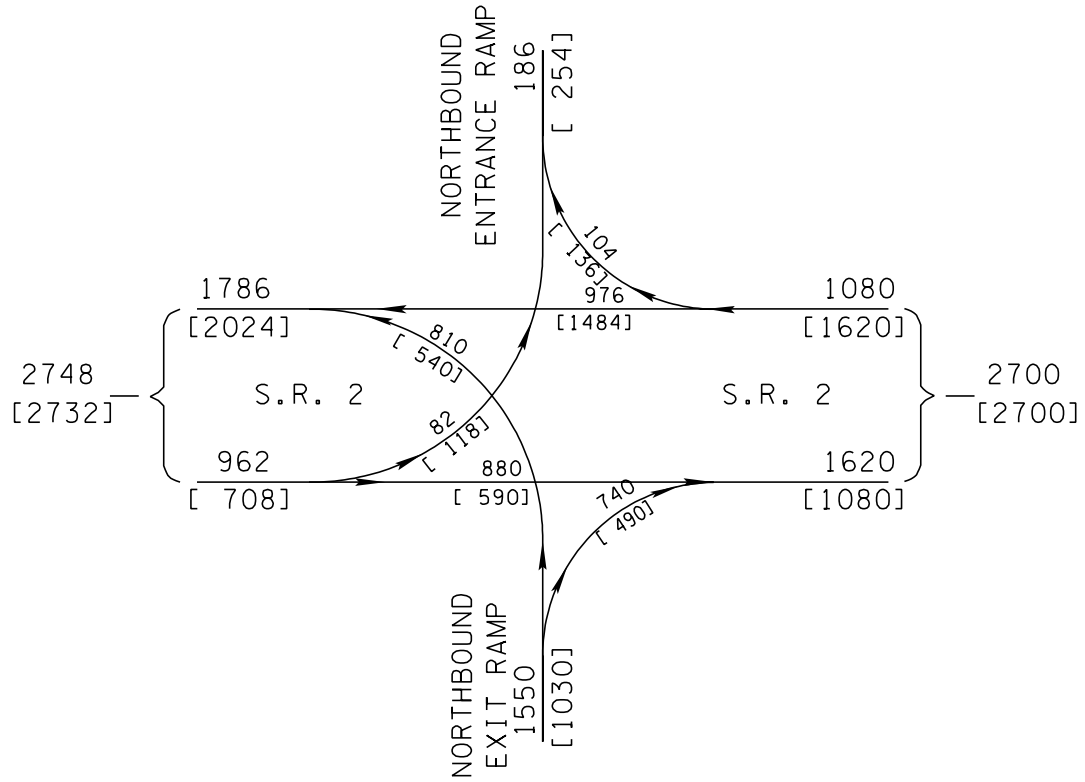
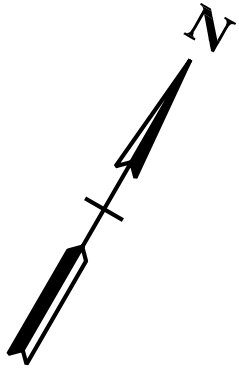
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COUNTY: HAMILTON  
CITY: CHATTANOOGA  
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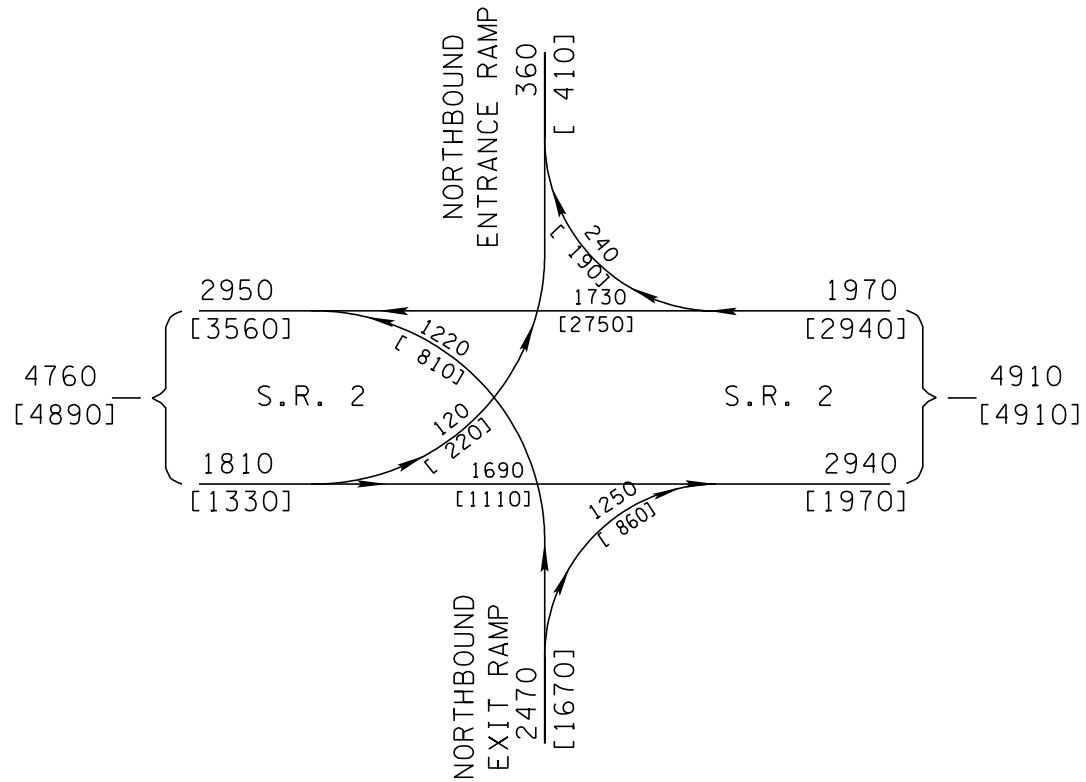
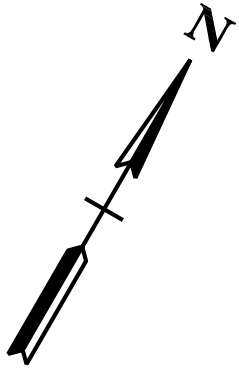
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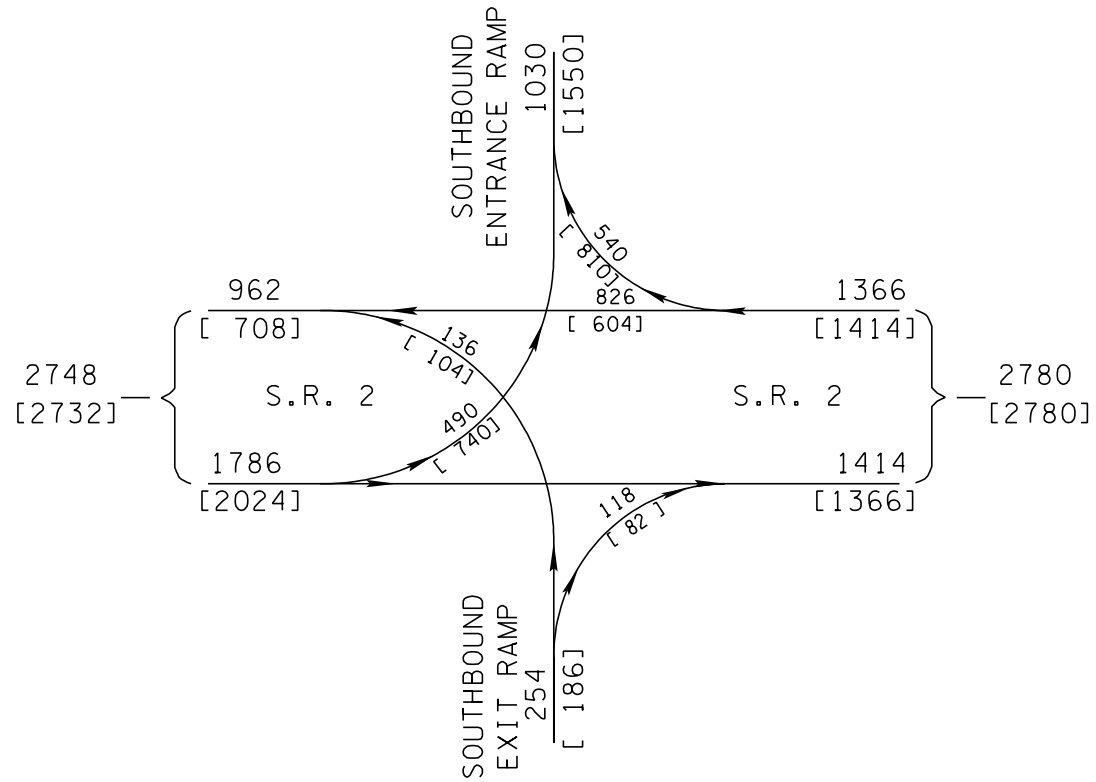
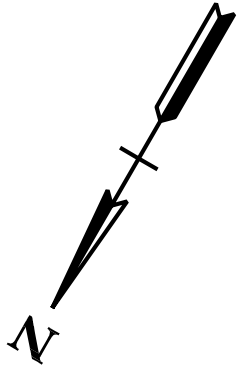
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CITY: CHATTANOOGA  
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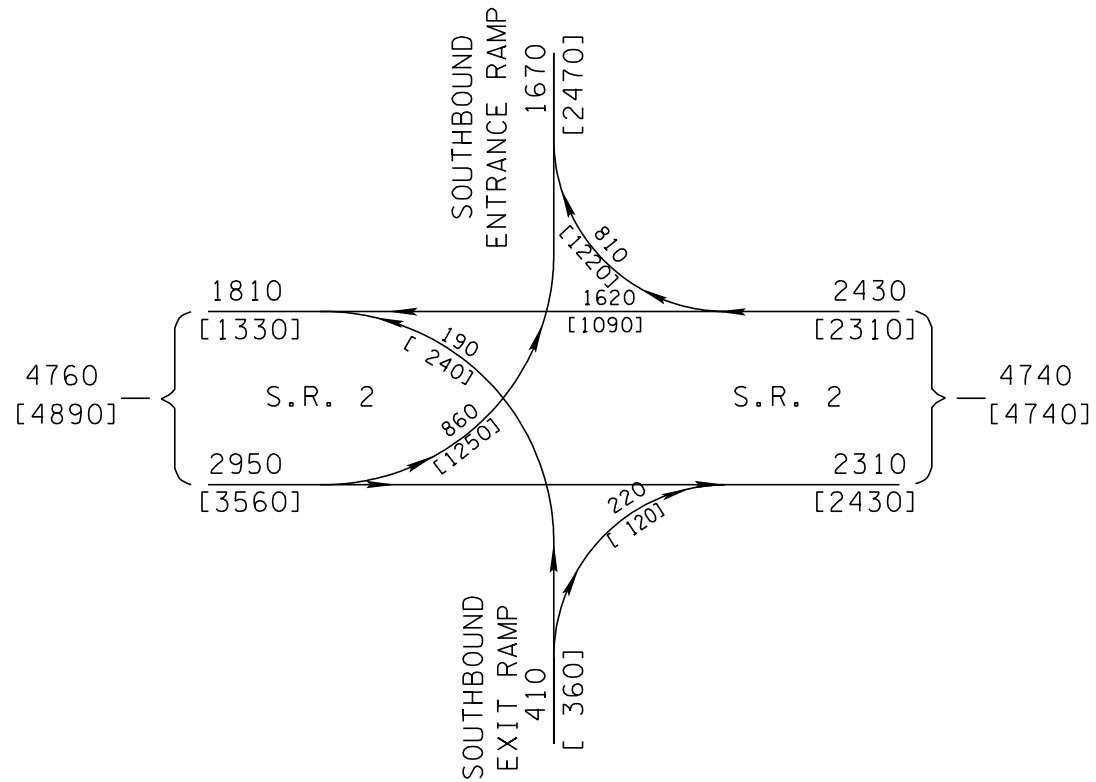
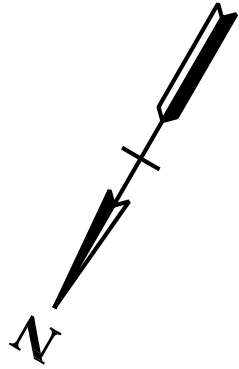
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COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2



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CITY: CHATTANOOGA  
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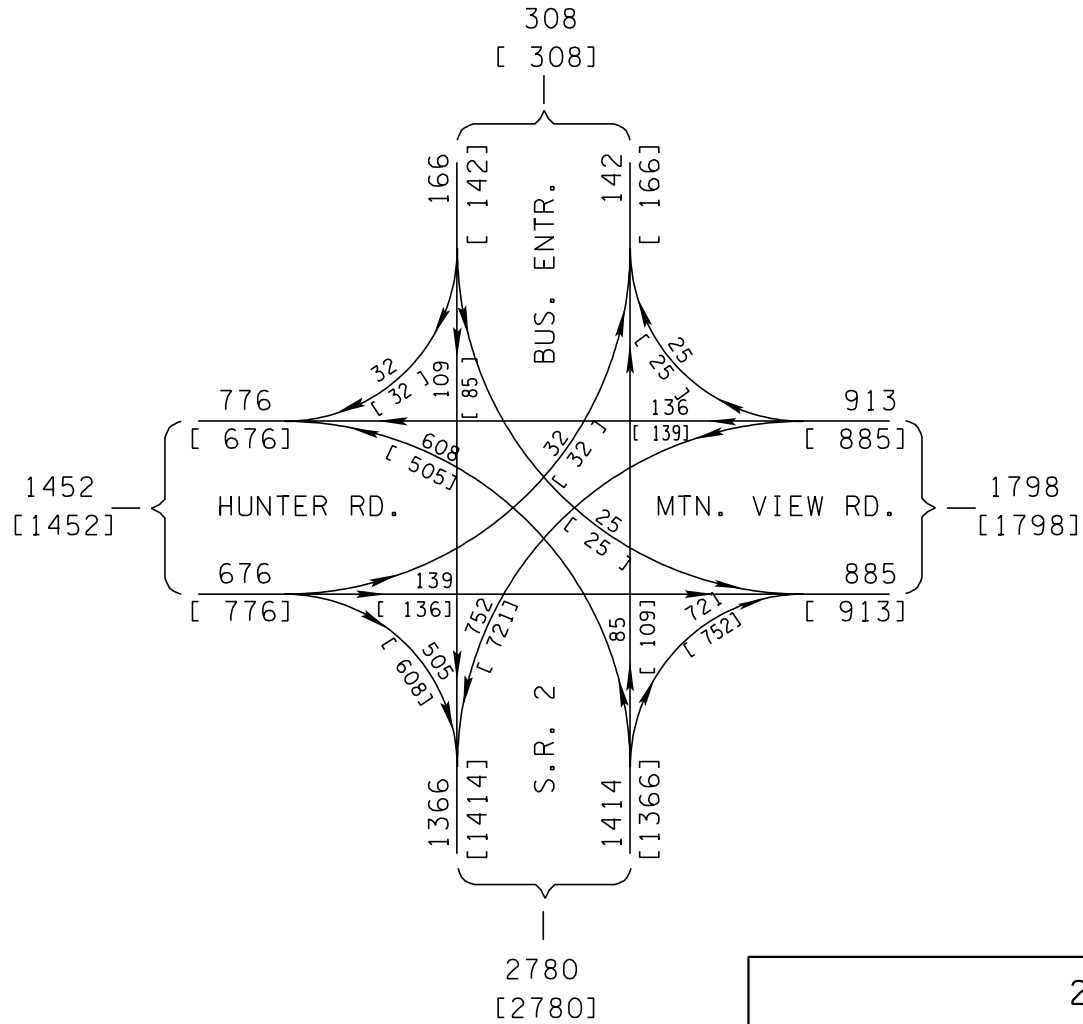
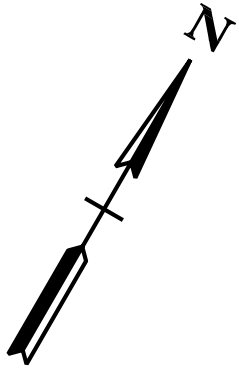


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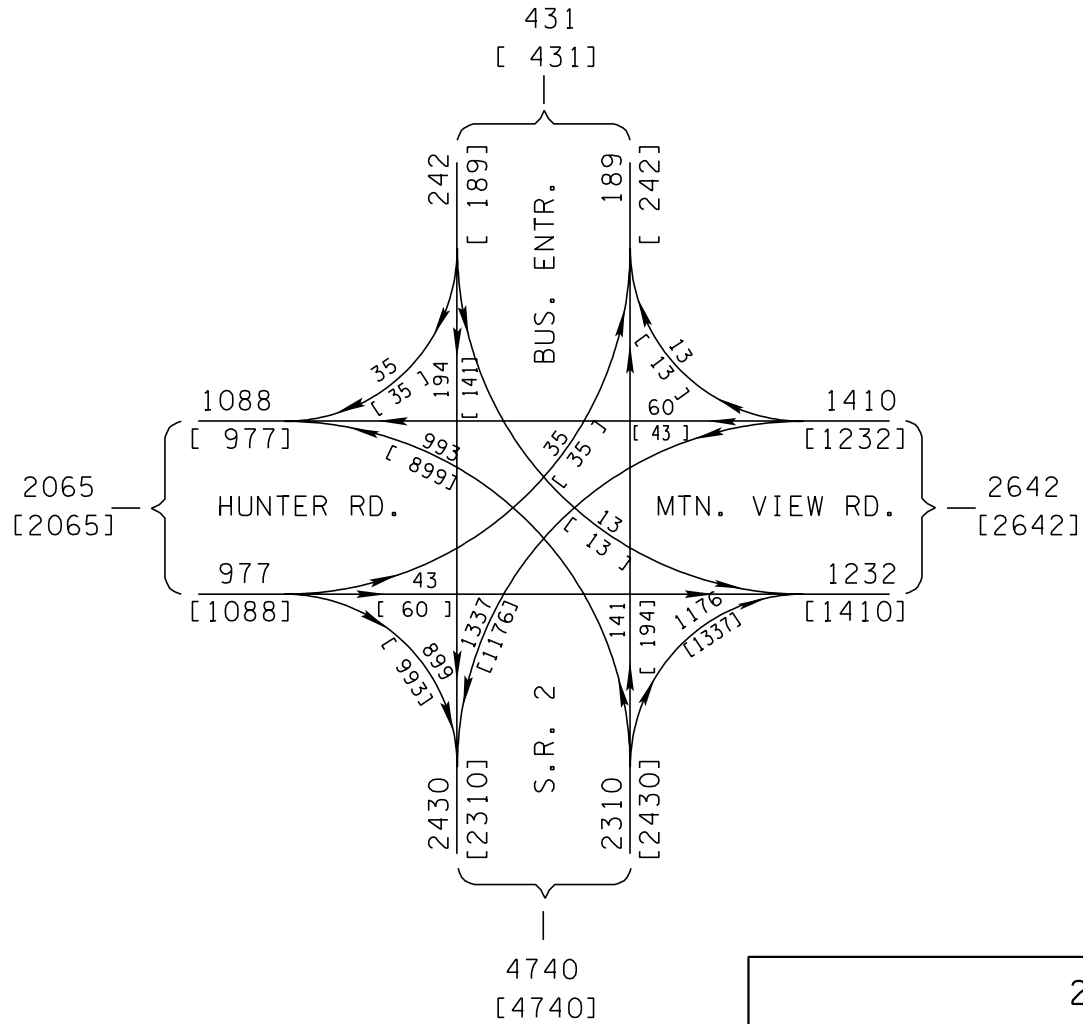
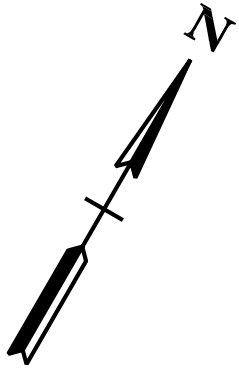


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CITY: CHATTANOOGA  
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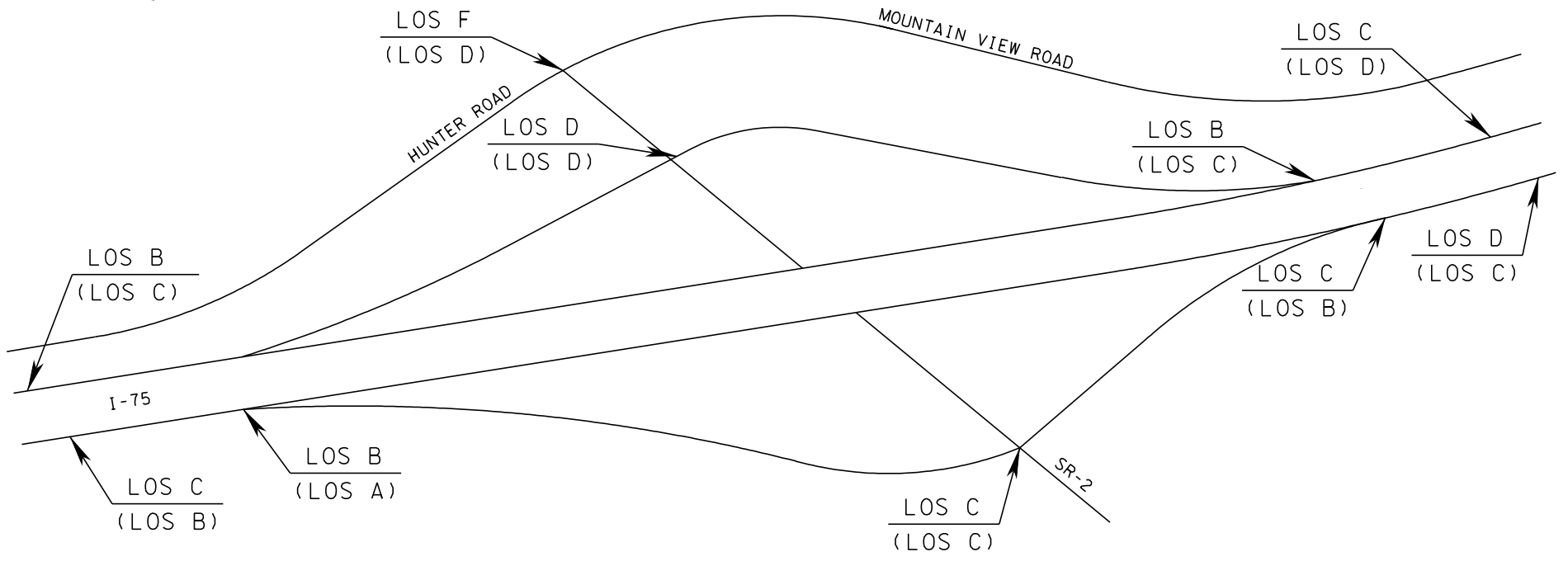
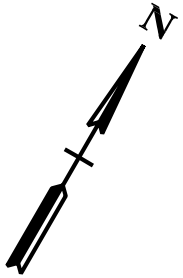
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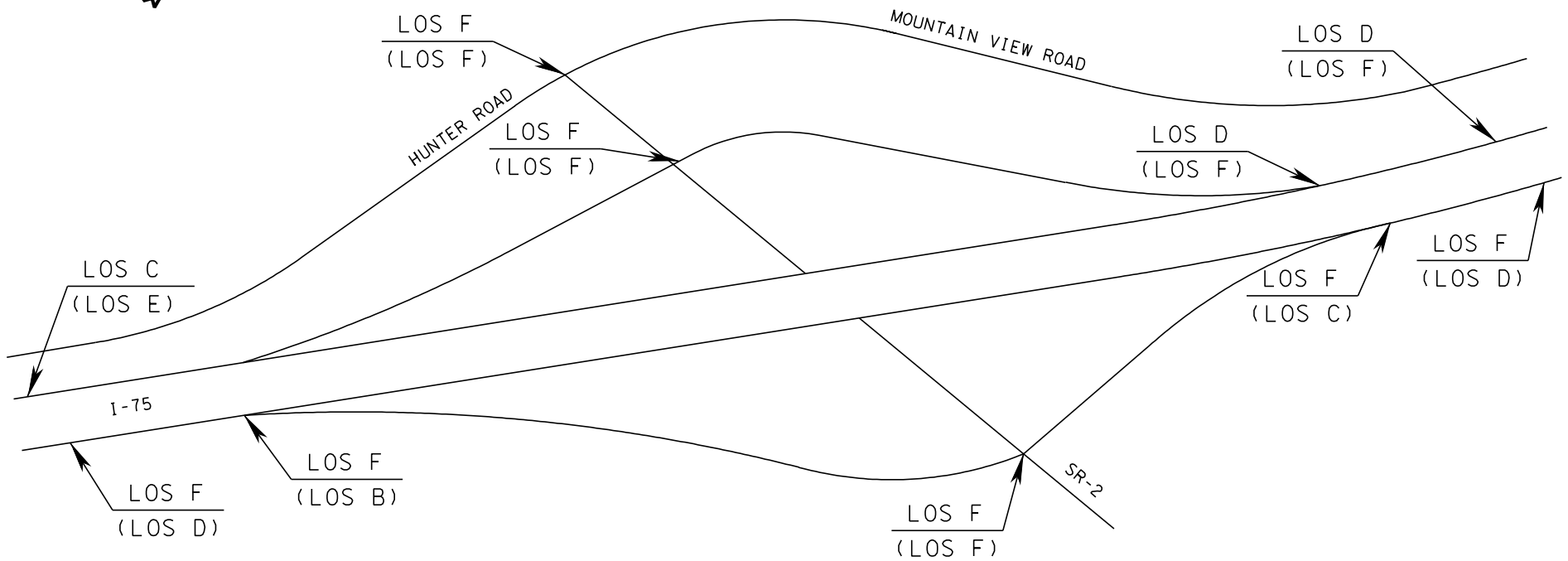
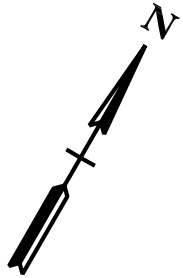
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 COUNTY: HAMILTON  
 CITY: CHATTANOOGA  
 ROUTE I-75 INTERCHANGE AT S.R. 2

**APPENDIX B**

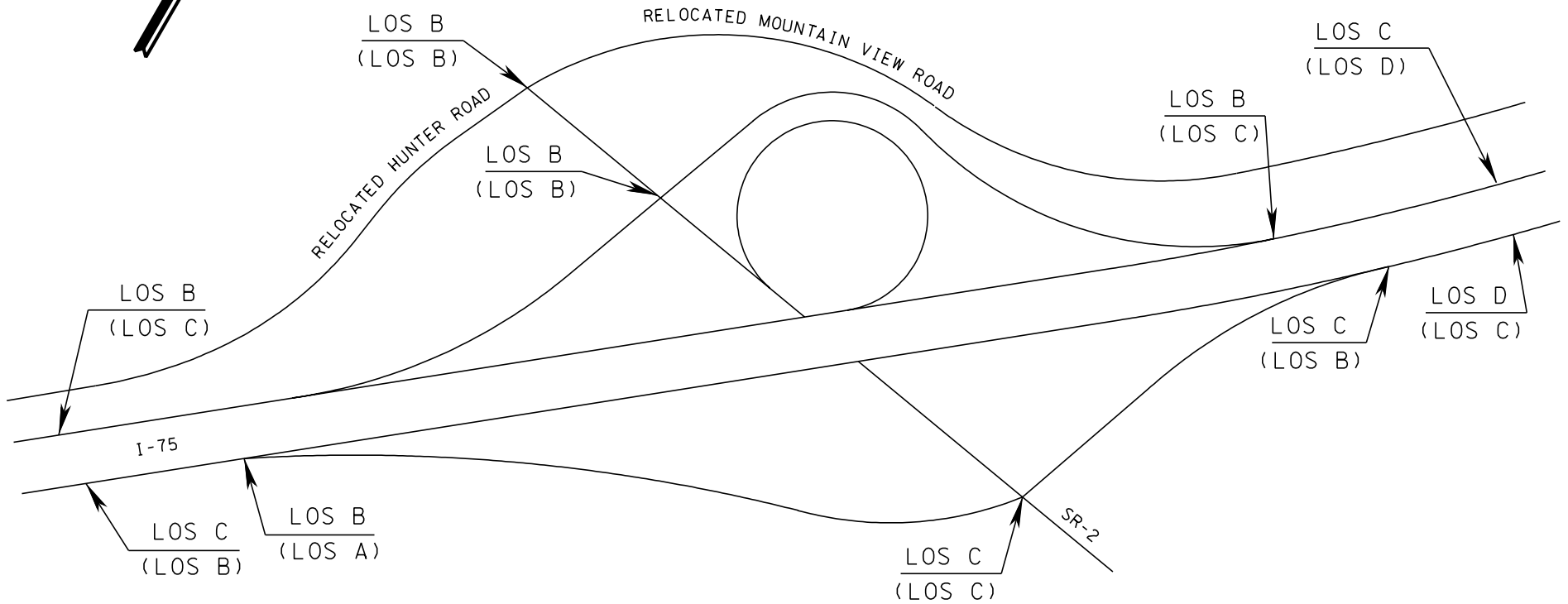
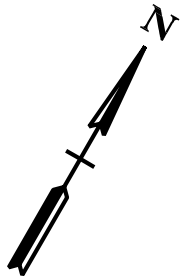
**LEVEL OF SERVICE: IMPROVEMENTS UNDER DESIGN & RECOMMENDED  
IMPROVEMENTS**



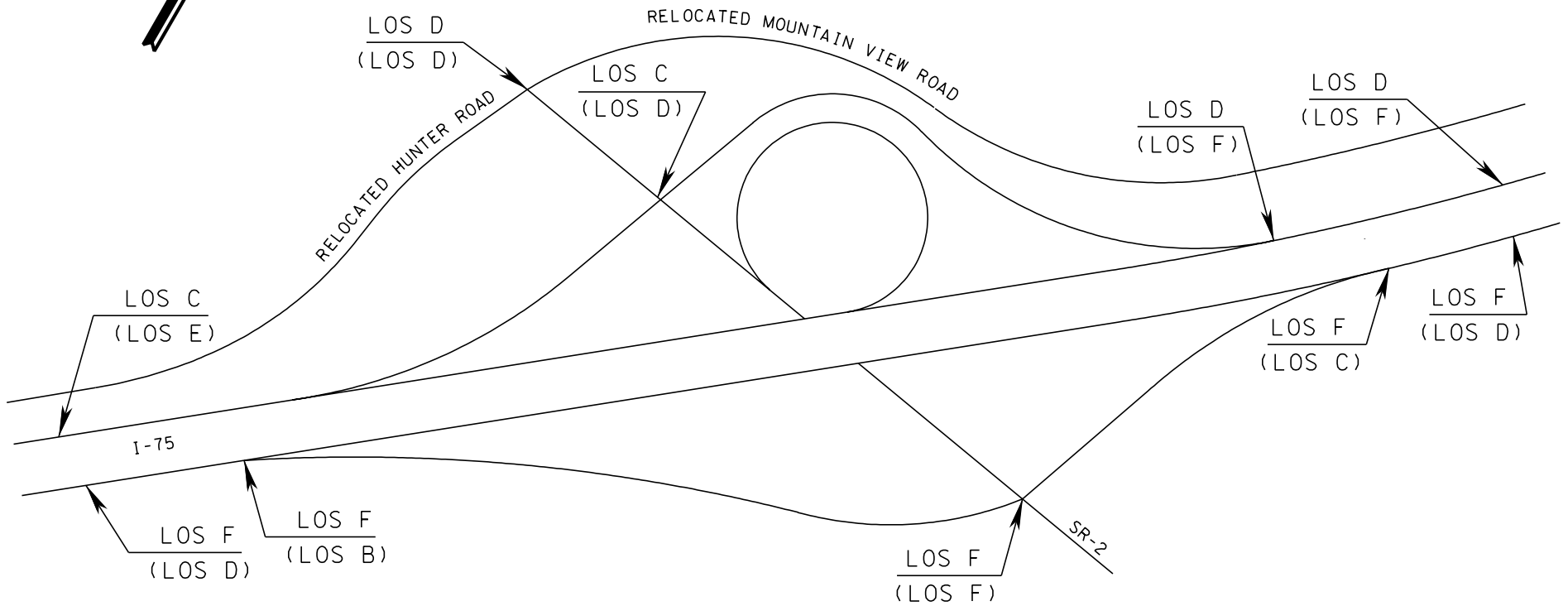
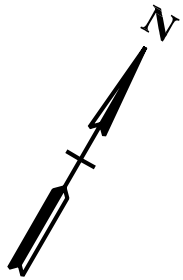
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(AM)  
LEVEL OF SERVICE (LOS)  
IMPROVEMENTS UNDER DESIGN  
COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2



2025 DHV  
PM  
(AM)  
LEVEL OF SERVICE (LOS)  
IMPROVEMENTS UNDER DESIGN  
COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2



2005 DHV  
PM  
(AM)  
LEVEL OF SERVICE (LOS)  
RECOMMENDED IMPROVEMENTS  
COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2



2025 DHV  
PM  
(AM)  
LEVEL OF SERVICE (LOS)  
RECOMMENDED IMPROVEMENTS  
COUNTY: HAMILTON  
CITY: CHATTANOOGA  
ROUTE I-75 INTERCHANGE AT S.R. 2

## **APPENDIX C**

### **CAPACITY ANALYSIS: IMPROVEMENTS UNDER DESIGN**



## **FREEWAY SEGMENTS**

=====  
 Center For Microcomputers In Transportation  
 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 1AM2025.HC3  
 Location..... 1 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	9160	6170
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	5	4
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00	
Dir 2	1.50		0.922	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	2092	1762
Level of Service (LOS)	E	D
Projected Speed at Flow Rate (mph)	58.4	63.3
Density (pc/mi/ln)	35.82	27.82
Density (veh/mi/ln)	33.01	25.64
Speed of prevailing traffic (mph)	58.4	63.3

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 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 1PM2025.HC3  
 Location..... 1 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	9160	6170
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	4	5
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00	
Dir 2	1.50		0.922	1.00	1.00	

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	* 2615	1409
Level of Service (LOS)	*F	C
Projected Speed at Flow Rate (mph)		65.0
Density (pc/mi/ln)		21.68
Density (veh/mi/ln)		19.98
Speed of prevailing traffic (mph)		65.0

\* Speed and density are highly variable for LOS F

\* Maximum Service Flow must not be greater than 2300 for 4 lanes.

=====  
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 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 5AM2025.HC3  
 Location..... 5 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4910	7050
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1869	* 2684
Level of Service (LOS)	D	*F
Projected Speed at Flow Rate (mph)	62.2	
Density (pc/mi/ln)	30.04	
Density (veh/mi/ln)	27.69	
Speed of prevailing traffic (mph)	62.2	

\* Speed and density are highly variable for LOS F

\* Maximum Service Flow must not be greater than 2300 for 3 lanes.

=====  
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 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 1AM2005.HC3  
 Location..... 1 2005  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	5744	3846
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	5	4
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1312	1098
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	65.0	65.0
Density (pc/mi/ln)	20.18	16.89
Density (veh/mi/ln)	18.60	15.57
Speed of prevailing traffic (mph)	65.0	65.0

## RAMP JUNCTIONS

=====  
 Center For Microcomputers In Transportation  
 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 2DPM2025.HC5  
 Location..... 2 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2025 pM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	9160	2470	360
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====

File Name ..... 2DPM2025.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	9160	65	4	12.0	1.00	0.948	1.00	10172
Ramp	OFF 2470	45	1	12.0	1.00	0.948	1.00	2743
Upstream	ON 360			12.0	0.86	0.948	1.00	465

Estimation of V12:

-----

PFD = 0.436 Using Equation: 10 V12 = 5982

Capacity Checks:

-----

VFO+VR = 10172 V12 = 5982

LOS, Speed, and Density:

-----

Level of Service (LOS) F

Computed Density (pc/mi/ln) \*

Computed Speed (mph) \*

\*Unstable flow



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=====
Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-2083
Ph: (904) 392-0378
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File Name ..... 4DIV2025.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2025 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....
    
```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	7050	360	2470
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	16.0	16.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIV2025.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.948	1.00	1.00
Ramp	1.50		0.948	1.00	1.00
Upstrm	1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	7050	65	3	12.0	1.00	0.948	1.00	7829
Ramp OFF	360	45	1	16.0	1.00	0.948	1.00	400
Upstream ON	2470			16.0	0.86	0.948	1.00	3190

Estimation of V12:

-----  
 PFD = 0.546 Using Equation: 7 V12 = 4455

Capacity Checks:

-----  
 VFO+VR = 7829 V12 = 4455

LOS, Speed, and Density:

-----  
 Level of Service (LOS) F  
 Computed Density (pc/mi/ln) \*  
 Computed Speed (mph) \*

\*Unstable flow

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 =====

File Name ..... 4DIVPM2025.HC5  
 Location..... 4 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2025 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	4910	410	1670
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	16.0	16.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIVPM2025.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4910	65 3	12.0	1.00	0.948	1.00	5453
Ramp	OFF 410	45 1	16.0	1.00	0.948	1.00	455
Upstream	ON 1670		16.0	0.86	0.948	1.00	2156

Estimation of V12:

-----  
 PFD = 0.603 Using Equation: 7 V12 = 3468

Capacity Checks:

-----  
 VFO+VR = 5453 V12 = 3468

LOS, Speed, and Density:

-----  
 Level of Service (LOS) D  
 Computed Density (pc/mi/ln) 29  
 Computed Speed (mph) 57

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=====

File Name ..... 4PM22025.HC5  
 Location..... 4dpm2025  
 Analyst..... tc  
 Time of Analysis..... pm  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	7050	360	2470
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.

=====  
 File Name ..... 4PM22025.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.948	1.00	1.00
Ramp	1.50		0.948	1.00	1.00
Dnstrm	1.50		0.948	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	7050	65	3	12.0	1.00	0.948	1.00	7829
Ramp ON	360	50	1	12.0	1.00	0.948	1.00	400
Downstream OFF	2470			12.0	1.00	0.948	1.00	2743

Estimation of V12:

-----  
 PFM = 0.619 Using Equation: 2 V12 = 4850

Capacity Checks:

-----  
 VFO = 8229 VR12 = 5250

LOS, Speed, and Density:

-----  
 Level of Service (LOS) F  
 Computed Density (pc/mi/ln) \*  
 Computed Speed (mph) \*

\*Unstable flow

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File Name ..... 4AMM2025.HC5  
 Location..... 4dam2025  
 Analyst..... tc  
 Time of Analysis..... am  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	4910	410	1670
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.

=====  
 File Name ..... 4AMM2025.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.948	1.00	1.00
Ramp	1.50		0.948	1.00	1.00
Dnstrm	1.50		0.948	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4910	65	3	12.0	1.00	0.948	1.00	5453
Ramp ON	410	50	1	12.0	1.00	0.948	1.00	455
Downstream OFF	1670			12.0	1.00	0.948	1.00	1855

Estimation of V12:

-----  
 PFM = 0.619 Using Equation: 2 V12 = 3378

Capacity Checks:

-----  
 VFO = 5908 VR12 = 3833

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 26  
 Computed Speed (mph) 57



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File Name ..... 2DPM2005.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2005 pM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	5744	1550	186
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====

File Name ..... 2DPM2005.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	5744	65 4	12.0	1.00	0.948	1.00	6379
Ramp	OFF 1550	45 2	12.0	1.00	0.948	1.00	1721
Upstream	ON 186		12.0	0.86	0.948	1.00	240

Estimation of V12:

-----

PFD = 0.260 Using Equation: Special App. V12 = 2932

Capacity Checks:

-----

VFO+VR = 6379 V12 = 2932

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	11
Computed Speed (mph)	55

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File Name ..... 4AMM2005.HC5
Location..... 4dam2005
Analyst..... tc
Time of Analysis..... am
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....
    
```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3070	254	1030
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.



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File Name ..... 4PM22005.HC5
Location..... 4dpm2005
Analyst..... tc
Time of Analysis..... pm
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	4380	186	1550
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.



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File Name ..... 4DIV2005.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2005 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	4380	186	1550
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIV2005.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.948	1.00	1.00
Ramp	1.50		0.948	1.00	1.00
Upstrm	1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4380	65 3	12.0	1.00	0.948	1.00	4864
Ramp OFF	186	45 1	12.0	1.00	0.948	1.00	207
Upstream ON	1550		12.0	0.86	0.948	1.00	2002

Estimation of V12:

-----  
 PFD = 0.629 Using Equation: 7 V12 = 3136

Capacity Checks:

-----  
 VFO+VR = 4864 V12 = 3136

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 26  
 Computed Speed (mph) 58



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File Name ..... 4DIV05PM.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2005 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	3070	254	1030
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
File Name ..... 4DIV05PM.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.948	1.00	1.00
Ramp	1.50		0.948	1.00	1.00
Upstrm	1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3070	65	3	12.0	1.00	0.948	1.00	3409
Ramp OFF	254	45	1	12.0	1.00	0.948	1.00	282
Upstream ON	1030			12.0	0.86	0.948	1.00	1330

Estimation of V12:

-----  
PFD = 0.662      Using Equation: 7      V12 = 2351

Capacity Checks:

-----  
VFO+VR = 3409      V12 = 2351

LOS, Speed, and Density:

-----  
Level of Service (LOS)                      B  
Computed Density (pc/mi/ln)                19  
Computed Speed (mph)                        58

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File Name ..... 2DAM2025.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2025 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	6170	1670	410
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 2DAM2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	6170	65 4	12.0	1.00	0.948	1.00	6852
Ramp	OFF 1670	45 2	12.0	1.00	0.948	1.00	1855
Upstream	ON 410		12.0	0.86	0.948	1.00	529

Estimation of V12:

-----  
 PFD = 0.260 Using Equation: Special App. V12 = 3154

Capacity Checks:

-----  
 VFO+VR = 6852 V12 = 3154

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 13  
 Computed Speed (mph) 54

=====

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=====

File Name ..... 2DAM05.HC5  
 Location..... 2 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2005 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	3846	1030	254
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====

File Name ..... 2DAM05.HC5

B. Adjustment Factors

Terrain Type		E	E	F	F	F
		T	R	HV	W	P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3846	65 4	12.0	1.00	0.948	1.00	4271
Ramp	OFF 1030	45 2	12.0	1.00	0.948	1.00	1144
Upstream	ON 254		12.0	0.86	0.948	1.00	328

Estimation of V12:

-----

PFD = 0.260      Using Equation: Special App.      V12 = 1957

Capacity Checks:

-----

VFO+VR = 4271      V12 = 1957

LOS, Speed, and Density:

-----

Level of Service (LOS)	A
Computed Density (pc/mi/ln)	3
Computed Speed (mph)	56

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AAM05IM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: IMP UNDER DESIGN

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	25	85	32	505	109	752	32	136	608	721	139	25
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		25.0A	5.0A		Green	25.0A	20.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	87 secs Phase combination order: #1 #2 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Delay	LOS	
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	102	1770	0.206	0.057	25.4	D	62.5	F
	LTR	106	1839	0.956	0.057	80.0	F		
	R	91	1583	0.297	0.057	25.9	D		
WB	L	509	1770	1.046	0.287	64.2	F	48.7	E
	T	535	1863	0.215	0.287	15.2	C		
	R	455	1583	0.932	0.287	38.3	D		
NB	L	710	1770	0.048	0.552	5.9	B	10.5	B
	T	428	1863	0.334	0.230	18.2	C		
	R	874	1583	0.516	0.552	8.3	B		
SB	L	741	1770	1.024	0.552	42.4	E	38.0	D
	TR	419	1821	0.411	0.230	18.8	C		

Intersection Delay = 37.2 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 1.035

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AAM05IM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: IMP UNDER DESIGN

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	25	85	32	505	109	752	32	136	608	721	139	25
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Grade			0			0			0			0
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	N		N	N		N	N		N		N	
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type	3	3	3	3	3	3	3	3	3	3	3	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share	20		20									
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
NB Right			*		EB Right			
SB Right					WB Right			
Green		25.0A	5.0A		Green	25.0A	20.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	87 secs Phase combination order: #1 #2 #5 #6							

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Delay	LOS
	Mvmts	Cap	Flow	Ratio	Ratio				
EB	L	102	1770	0.206	0.057	25.4	D	62.5	F
	LTR	106	1839	0.956	0.057	80.0	F		
	R	91	1583	0.297	0.057	25.9	D		
WB	L	509	1770	1.046	0.287	64.2	F	48.7	E
	T	535	1863	0.215	0.287	15.2	C		
	R	455	1583	0.932	0.287	38.3	D		
NB	L	710	1770	0.048	0.552	5.9	B	10.5	B
	T	428	1863	0.334	0.230	18.2	C		
	R	874	1583	0.516	0.552	8.3	B		



SB	L	741	1770	1.024	0.552	42.4	E	38.0	D
	TR	419	1821	0.411	0.230	18.8	C		

Intersection Delay = 37.2 sec/veh Intersection LOS = D  
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 1.035

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 Streets: (E-W) SR-2      (N-S) HUNTER/MT VIEW RD  
 Analyst: TC      File Name: AAM05IM.HC9  
 Area Type: Other      2-7-1 2005 AM  
 Comment: IMP UNDER DESIGN  
 =====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	No. Ln	Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Left	25	0.95	26	L	21	1	1.000	1.000	21	1.00	0.00
Thru	85	0.95	89	LTR	101	1	1.000	1.000	101	0.05	0.07
Right	32	0.95	34	R	27	1	1.000	1.000	27	0.00	1.00
WB											
Left	505	0.95	532	L	532	1	1.000	1.000	532	1.00	0.00
Thru	109	0.95	115	T	115	1	1.000	1.000	115	0.00	0.00
Right	752	0.95	424	R	424	1	1.000	1.000	424	0.00	1.00
NB											
Left	32	0.95	34	L	34	1	1.000	1.000	34	1.00	0.00
Thru	136	0.95	143	T	143	1	1.000	1.000	143	0.00	0.00
Right	608	0.95	451	R	451	1	1.000	1.000	451	0.00	1.00
SB											
Left	721	0.95	759	L	759	1	1.000	1.000	759	1.00	0.00
Thru	139	0.95	146	TR	172	1	1.000	1.000	172	0.00	0.15
Right	25	0.95	26								

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
LTR	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1839
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1863
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
NB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1863
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
SB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
TR	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.98	1.00	1821

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD
Analyst: TC File Name: AAM05IM.HC9
Area Type: Other 2-7-1 2005 AM
Comment: IMP UNDER DESIGN
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Supplemental Permitted LT Worksheet

APPROACH	NB
Cycle Length, C	87
Actual Green Time for Lane Group, G	48
Effective Green Time for Lane Group, g	23
Opposing Effective Green Time, go	20
Number of Opposing Lanes, No	1
Number of Lanes in Lane Group, N	1
Adjusted Left-Turn Flow Rate, Vlt	34
Proportion of Left Turns in Lane Group, Plt	1.00
Left Turns per Cycle: LTC=Vlt*C/3600	0.82
Adjusted Opposing Flow Rate, Vo	172
Opposing Flow per Lane, Per Cycle: Volc=VoC/3600No	4.16
Opposing Platoon Ratio, Rpo	1
Lost time per phase, t1	0
gf=Gexp(-0.882*LTC^0.717)-t1	0.00
Opposing Queue Ratio: qro=1-Rpo(go/C)	0.77
gq = Volc * qro / (.5 - Volc * (1 - qro) / go)-t1	7.08
gu=g-gq (or g-gf)	15.92
fs=(875-0.625Vo)/1000	0.77
Pl=Plt[1+{(N-1)g/(fs*gu+4.5)}]	1.00
Ell	1.69
fmin	0.17
fm, (min=fmin;max=1.00)	0.41
flt=[fm+0.91(N-1)]/N	0.41

APPROACH	SB
Cycle Length, C	87
Actual Green Time for Lane Group, G	48
Effective Green Time for Lane Group, g	23
Opposing Effective Green Time, go	20
Number of Opposing Lanes, No	1
Number of Lanes in Lane Group, N	1
Adjusted Left-Turn Flow Rate, Vlt	759
Proportion of Left Turns in Lane Group, Plt	1.00
Left Turns per Cycle: LTC=Vlt*C/3600	18.34
Adjusted Opposing Flow Rate, Vo	143
Opposing Flow per Lane, Per Cycle: Volc=VoC/3600No	3.46
Opposing Platoon Ratio, Rpo	1
Lost time per phase, t1	0
gf=Gexp(-0.882*LTC^0.717)-t1	0.00
Opposing Queue Ratio: qro=1-Rpo(go/C)	0.77
gq = Volc * qro / (.5 - Volc * (1 - qro) / go)-t1	5.78
gu=g-gq (or g-gf)	17.22
fs=(875-0.625Vo)/1000	0.79
Pl=Plt[1+{(N-1)g/(fs*gu+4.5)}]	1.00

HCS: Signalized Intersection Version 2.4g 03-07-2001 4  
 Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AAM05IM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: IMP UNDER DESIGN

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
L	21	1770	0.012	0.057	102	0.206
LTR	101	1839	0.055	0.057	106	0.953 *
R	27	1583	0.017	0.057	91	0.297
WB						
L	532	1770	0.301	0.287	509	1.045 *
T	115	1863	0.062	0.287	535	0.215
R	424	1583	0.268	0.287	455	0.932
NB						
Lsec.	0	761	0.000	0.264	201	0.000
Lpri.	34	1770	0.019	0.287	509	0.067
Ltot.	34				710	0.048
T	143	1863	0.077	0.230	428	0.334
R	451	1583	0.285	0.552	874	0.516
SB						
Lsec.	250	879	0.284	0.264	232	1.078 *
Lpri.	509	1770	0.288	0.287	509	1.000 *
Ltot.	759				741	1.024
TR	172	1821	0.094	0.230	419	0.411
				Sum (v/s) critical = 0.928		
Lost Time/Cycle, L = 9.0 sec				Critical v/c(x) = 1.035		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
L	0.206	0.057	29.7	0.850	102	16	0.1	25.4	D	62.5	F
LTR	0.956	0.057	31.1	0.850	106	16	53.5	80.0	F		
R	0.297	0.057	29.9	0.850	91	16	0.6	25.9	D		
WB											
L	1.046	0.287	23.6	0.850	509	16	44.2	64.2	F	48.7	E
T	0.215	0.287	17.9	0.850	535	16	0.0	15.2	C		
R	0.932	0.287	22.9	0.850	455	16	18.8	38.3	D		
NB											
L	0.048	0.552	7.0	0.850	710	16	0.0	5.9	B	10.5	B
T	0.334	0.230	21.2	0.850	428	16	0.2	18.2	C		
R	0.516	0.552	9.3	0.850	874	16	0.4	8.3	B		
SB											

L	1.024	0.552	12.5	0.850	741	16	31.8	42.4	E	38.0	D
TR	0.411	0.230	21.7	0.850	419	16	0.4	18.8	C		

Intersection Delay = 37.2 sec/veh Intersection LOS = D

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM05IM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: IMP UNDER DESIGN

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	25	109	32	608	85	721	32	139	505	752	136	25
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	
								Delay	LOS
EB	L	88	1770	0.203	0.050	29.6	D	*	*
	LTR	92	1836	1.449	0.050	*	*		
	R	79	1583	0.303	0.050	30.3	D		
WB	L	478	1770	1.339	0.270	*	*	*	*
	T	503	1863	0.177	0.270	18.1	C		
	R	428	1583	0.915	0.270	40.0	D		
NB	L	778	1770	0.044	0.590	5.7	B	10.7	B
	T	447	1863	0.327	0.240	20.4	C		
	R	934	1583	0.367	0.590	7.0	B		
SB	L	803	1770	0.986	0.590	31.9	D	30.0	D
	TR	437	1820	0.387	0.240	20.9	C		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM05IM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: IMP UNDER DESIGN

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	25	109	32	608	85	721	32	139	505	752	136	25
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Grade			0			0			0			0
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	N		N	N		N		N		N		N
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type	3	3	3	3	3	3	3	3	3	3	3	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share	30		30									
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		88	1770	0.203	0.050	29.6	D	*	*
	LTR		92	1836	1.449	0.050	*	*		
	R		79	1583	0.303	0.050	30.3	D		
WB	L		478	1770	1.339	0.270	*	*	*	*
	T		503	1863	0.177	0.270	18.1	C		
	R		428	1583	0.915	0.270	40.0	D		
NB	L		778	1770	0.044	0.590	5.7	B	10.7	B
	T		447	1863	0.327	0.240	20.4	C		
	R		934	1583	0.367	0.590	7.0	B		

SB	L	803	1770	0.986	0.590	31.9	D	30.0	D
	TR	437	1820	0.387	0.240	20.9	C		

Intersection Delay = \* (sec/veh)      Intersection LOS = \*  
(g/C) \* (V/c) is greater than one. Calculation of D1 is infeasible.

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM05IM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: IMP UNDER DESIGN

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	25	109	32	608	85	721	32	139	505	752	136	25
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Grade		0			0			0			0	
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	N		N	N		N	N		N		N	
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type	3	3	3	3	3	3	3	3	3	3	3	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru	*	*	
Right		*			Right	*	*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru	*	*	
Right		*			Right	*	*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	

Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM05IM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: IMP UNDER DESIGN

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp No.	Lane No. Ln	Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Left	25	0.95	26	L	18	1	1.000	1.000	18	1.00	0.00
Thru	109	0.95	115	LTR	133	1	1.000	1.000	133	0.06	0.08
Right	32	0.95	34	R	24	1	1.000	1.000	24	0.00	1.00
WB											
Left	608	0.95	640	L	640	1	1.000	1.000	640	1.00	0.00
Thru	85	0.95	89	T	89	1	1.000	1.000	89	0.00	0.00
Right	721	0.95	391	R	391	1	1.000	1.000	391	0.00	1.00
NB											
Left	32	0.95	34	L	34	1	1.000	1.000	34	1.00	0.00
Thru	139	0.95	146	T	146	1	1.000	1.000	146	0.00	0.00
Right	505	0.95	343	R	343	1	1.000	1.000	343	0.00	1.00
SB											
Left	752	0.95	792	L	792	1	1.000	1.000	792	1.00	0.00
Thru	136	0.95	143	TR	169	1	1.000	1.000	169	0.00	0.15
Right	25	0.95	26								

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
LTR	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1836
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1863
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
NB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1863
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583
SB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
TR	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.98	1.00	1820

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM05IM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: IMP UNDER DESIGN

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
L	18	1770	0.010	0.050	88	0.205
LTR	133	1836	0.072	0.050	92	1.446 *
R	24	1583	0.015	0.050	79	0.304
WB						
L	640	1770	0.362	0.270	478	1.339 *
T	89	1863	0.048	0.270	503	0.177
R	391	1583	0.247	0.270	428	0.914
NB						
Lsec.	0	784	0.000	0.270	212	0.000
Lpri.	34	1770	0.019	0.320	566	0.060
Ltot.	34				778	0.044
T	146	1863	0.078	0.240	447	0.327
R	343	1583	0.217	0.590	934	0.367
SB						
Lsec.	226	876	0.258	0.270	237	0.954 *
Lpri.	566	1770	0.320	0.320	566	1.000 *
Ltot.	792				803	0.986
TR	169	1820	0.093	0.240	437	0.387
				Sum (v/s) critical =	1.012	
Lost Time/Cycle, L = 9.0 sec				Critical v/c(x) =	1.112	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
L	0.203	0.050	34.6	0.850	88	16	0.2	29.6	D	*	*
LTR	1.449	0.050	*	0.850	92	16	*	*	*		
R	0.303	0.050	34.8	0.850	79	16	0.7	30.3	D		
WB											
L	1.339	0.270	*	0.850	478	16	*	*	*	*	*
T	0.177	0.270	21.3	0.850	503	16	0.0	18.1	C		
R	0.915	0.270	26.9	0.850	428	16	17.1	40.0	D		
NB											
L	0.044	0.590	6.8	0.850	778	16	0.0	5.7	B	10.7	B
T	0.327	0.240	23.8	0.850	447	16	0.2	20.4	C		
R	0.367	0.590	8.2	0.850	934	16	0.1	7.0	B		
SB											

L	0.986	0.590	12.3	0.850	803	16	21.4	31.9	D	30.0	D
TR	0.387	0.240	24.2	0.850	437	16	0.3	20.9	C		

Intersection Delay = \* (sec/veh)      Intersection LOS = \*

\* Delay and LOS not meaningful when any v/c is greater than 1.2 or 1/PHF

-----

=====  
 Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AAM25IM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: IMP UNDER DESIGN  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	13	141	35	899	141	1337	35	60	993	1176	43	13
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	88	1770	0.113	0.050	29.3	D	*	*
	LTR	92	1842	1.770	0.050	*	*		
	R	79	1583	0.328	0.050	30.5	D		
WB	L	478	1770	1.980	0.270	*	*	*	*
	T	503	1863	0.294	0.270	18.8	C		
	R	428	1583	2.430	0.270	*	*		
NB	L	962	1770	0.038	0.590	5.5	B	20.8	C
	T	447	1863	0.141	0.240	19.3	C		
	R	934	1583	0.916	0.590	21.5	C		
SB	L	957	1770	1.294	0.590	*	*	*	*
	TR	431	1796	0.137	0.240	19.3	C		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

=====  
 Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AAM25IM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: IMP UNDER DESIGN  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	13	141	35	899	141	1337	35	60	993	1176	43	13
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Grade			0			0			0			0
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	N		N	N		N		N		N		N
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type	3	3	3	3	3	3	3	3	3	3	3	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share	30		30									
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Mvmts	Cap	Flow
EB	L	88	1770	0.113	0.050	29.3	D	*	*
	LTR	92	1842	1.770	0.050	*	*		
	R	79	1583	0.328	0.050	30.5	D		
WB	L	478	1770	1.980	0.270	*	*	*	*
	T	503	1863	0.294	0.270	18.8	C		
	R	428	1583	2.430	0.270	*	*		
NB	L	962	1770	0.038	0.590	5.5	B	20.8	C
	T	447	1863	0.141	0.240	19.3	C		
	R	934	1583	0.916	0.590	21.5	C		

SB	L	957	1770	1.294	0.590	*	*	*	*
	TR	431	1796	0.137	0.240	19.3	C		

Intersection Delay = \* (sec/veh)      Intersection LOS = \*  
(g/C) \* (V/c) is greater than one. Calculation of D1 is infeasible.

-----

=====  
 Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM25IM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: IMP UNDER DESIGN  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	13	194	35	993	141	1176	35	43	899	1337	60	13
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*	*	
Thru			*		Thru		*	
Right				*	Right		*	
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Mvmts	Cap
EB	L		88	1770	0.113	0.050	29.3	D	* *
	LTR		92	1847	2.371	0.050	*	*	
	R		79	1583	0.328	0.050	30.5	D	
WB	L		478	1770	2.187	0.270	*	*	* *
	T		503	1863	0.294	0.270	18.8	C	
	R		428	1583	2.035	0.270	*	*	
NB	L		895	1770	0.041	0.590	5.6	B	14.1 B
	T		447	1863	0.101	0.240	19.1	C	
	R		934	1583	0.810	0.590	14.2	B	
SB	L		979	1770	1.437	0.590	*	*	* *
	TR		435	1812	0.177	0.240	19.5	C	

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/c)\*(V/c) is greater than one. Calculation of D1 is infeasible.



HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: APM25IM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: IMP UNDER DESIGN

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	< 1	1	1	1	1	1	1	1	1	< 0
Volumes	13	194	35	993	141	1176	35	43	899	1337	60	13
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane W (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Grade			0			0			0			0
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	N		N	N		N	N		N		N	
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type	3	3	3	3	3	3	3	3	3	3	3	
RTOR Vols			0			350			180			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share	30		30									
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left		*			SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right		*	*		EB Right			
SB Right					WB Right			
Green		27.0A	5.0A		Green	32.0A	24.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length: 100 secs Phase combination order: #1 #2 #5 #6								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Mvmts	Cap
EB	L		88	1770	0.113	0.050	29.3	D	* *
	LTR		92	1847	2.371	0.050	*	*	
	R		79	1583	0.328	0.050	30.5	D	
WB	L		478	1770	2.187	0.270	*	*	* *
	T		503	1863	0.294	0.270	18.8	C	
	R		428	1583	2.035	0.270	*	*	
NB	L		895	1770	0.041	0.590	5.6	B	14.1 B
	T		447	1863	0.101	0.240	19.1	C	
	R		934	1583	0.810	0.590	14.2	B	

SB	L	979	1770	1.437	0.590	*	*	*	*
	TR	435	1812	0.177	0.240	19.5	C		

Intersection Delay = \* (sec/veh)    Intersection LOS = \*  
(g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

---

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM05IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2005)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		604	860	740	1284					104		82
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*						
Right		*						
Peds								
WB Left			*					
Thru			*					
Right								
Peds								
NB Right								
SB Right								
Green		20.0A	33.0A			5.0A	5.0A	
Yellow/AR		3.0	3.0			3.0	3.0	
Cycle Length:	75 secs	Phase combination order: #1 #2 #5 #6						

Intersection Performance Summary

Lane	Group:	Mvmts	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Cap	Flow
EB	T	993	3725	0.672	0.267	17.1	C	30.7	D
	R	844	3167	0.999	0.267	41.5	E		
WB	L	779	1770	1.000	0.440	38.5	D	24.0	C
	T	1639	3725	0.866	0.440	16.0	C		
SB	L	282	1626	0.387	0.173	18.2	C	30.8	D
	R	106	1583	0.815	0.067	46.7	E		

Intersection Delay = 26.9 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.879

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM05IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2005)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		604	860	740	1284					104		82
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		20.0A	33.0A		Green	5.0A	5.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	75 secs	Phase combination order: #1 #2 #5 #6						

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	T		993	3725	0.672	0.267	17.1	C	30.7	D
	R		844	3167	0.999	0.267	41.5	E		
WB	L		779	1770	1.000	0.440	38.5	D	24.0	C
	T		1639	3725	0.866	0.440	16.0	C		
SB	L		282	1626	0.387	0.173	18.2	C	30.8	D
	R		106	1583	0.815	0.067	46.7	E		

Intersection Delay = 26.9 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.879

Center For Microcomputers In Transportation  
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Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM05IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2005)

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		604	860	740	1284					104		82
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0A	33.0A			Green	5.0A	5.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 75 secs Phase combination order: #1 #2 #5 #6

HCS: Signalized Intersection Version 2.4g 03-07-2001 2

=====  
Streets: (E-W) Sr-2 (N-S) SB Exit  
Analyst: Tc File Name: BAM05IM.HC9  
Area Type: Other 1-17-1 am  
Comment: Imp Under Design (2005)  
=====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Thru	604	0.95	636	T	636	2	1.050	1.000	668	0.00	0.00
Right	860	0.95	747	R	747	2	1.130	1.000	844	0.00	1.00
WB											
Left	740	0.95	779	L	779	1	1.000	1.000	779	1.00	0.00
Thru	1284	0.95	1352	T	1352	2	1.050	1.000	1420	0.00	0.00
SB											
Left	104	0.95	109	L	109	1	1.000	1.000	109	1.00	0.00
Right	82	0.95	86	R	86	1	1.000	1.000	86	0.00	1.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
SB											
L	1900	1	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.95	1626
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM05IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2005)

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	668	3725	0.179	0.267	993	0.673
R	844	3167	0.267	0.267	844	1.000 *
WB						
L	779	1770	0.440	0.440	779	1.000 *
T	1420	3725	0.381	0.440	1639	0.866
NB						
SB						
L	109	1626	0.067	0.173	282	0.387 *
R	86	1583	0.054	0.067	106	0.811
				Sum (v/s) critical = 0.774		
Lost Time/Cycle, L = 9.0 sec				Critical v/c(x) = 0.879		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.672	0.267	18.7	0.850	993	16	1.3	17.1	C	30.7	D
R	0.999	0.267	20.9	0.850	844	16	23.7	41.5	E		
WB											
L	1.000	0.440	16.0	0.850	779	16	24.9	38.5	D	24.0	C
T	0.866	0.440	14.4	0.850	1639	16	3.7	16.0	C		
NB											
SB											
L	0.387	0.173	20.9	0.850	282	16	0.5	18.2	C	30.8	D
R	0.815	0.067	26.3	0.850	106	16	24.3	46.7	E		
Intersection Delay = 26.9 sec/veh						Intersection LOS = D					

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM05IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2005)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		826	540	460	1296					136		118
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*				Thru			
Right	*				Right			
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0A	25.0A			Green	5.0A	5.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	
Cycle Length:	67 secs	Phase combination order: #1 #2 #5 #6						

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Mvmts	Cap	Flow
EB	T	1112	3725	0.820	0.299	17.6	C	16.0	C
	R	945	3167	0.490	0.299	12.8	B		
WB	L	660	1770	0.733	0.373	14.6	B	33.5	D
	T	1390	3725	1.030	0.373	39.8	D		
SB	L	316	1626	0.453	0.194	16.1	C	56.0	E
	R	118	1583	1.049	0.075	101.9	F		

Intersection Delay = 28.4 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.828



Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM05IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2005)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		826	540	460	1296					136		118
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		20.0A	25.0A		Green	5.0A	5.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	67 secs	Phase combination order: #1 #2 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	1112	3725	0.820	0.299	17.6	C	16.0	C
	R	945	3167	0.490	0.299	12.8	B		
WB	L	660	1770	0.733	0.373	14.6	B	33.5	D
	T	1390	3725	1.030	0.373	39.8	D		
SB	L	316	1626	0.453	0.194	16.1	C	56.0	E
	R	118	1583	1.049	0.075	101.9	F		

Intersection Delay = 28.4 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.828

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Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM05IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2005)

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		826	540	460	1296					136		118
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*				Thru			
Right	*				Right			
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0A	25.0A			Green	5.0A	5.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 67 secs Phase combination order: #1 #2 #5 #6

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Streets: (E-W) Sr-2 (N-S) SB Exit
Analyst: Tc File Name: BPM05IM.HC9
Area Type: Other 1-17-1 PM
Comment: Imp Under Design (2005)
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Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Thru	826	0.95	869	T	869	2	1.050	1.000	912	0.00	0.00
Right	540	0.95	410	R	410	2	1.130	1.000	463	0.00	1.00
WB											
Left	460	0.95	484	L	484	1	1.000	1.000	484	1.00	0.00
Thru	1296	0.95	1364	T	1364	2	1.050	1.000	1432	0.00	0.00
SB											
Left	136	0.95	143	L	143	1	1.000	1.000	143	1.00	0.00
Right	118	0.95	124	R	124	1	1.000	1.000	124	0.00	1.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
SB											
L	1900	1	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.95	1626
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM05IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2005)

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	912	3725	0.245	0.299	1112	0.820 *
R	463	3167	0.146	0.299	945	0.490
WB						
L	484	1770	0.274	0.373	660	0.733
T	1432	3725	0.384	0.373	1390	1.030 *
NB						
SB						
L	143	1626	0.088	0.194	316	0.453 *
R	124	1583	0.078	0.075	118	1.051
				Sum (v/s) critical =	0.717	
Lost Time/Cycle, L =		9.0 sec	Critical v/c(x)		= 0.828	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.820	0.299	16.6	0.850	1112	16	3.5	17.6	C	16.0	C
R	0.490	0.299	14.7	0.850	945	16	0.3	12.8	B		
WB											
L	0.733	0.373	13.8	0.850	660	16	2.9	14.6	B	33.5	D
T	1.030	0.373	16.0	0.850	1390	16	26.3	39.8	D		
NB											
SB											
L	0.453	0.194	18.1	0.850	316	16	0.7	16.1	C	56.0	E
R	1.049	0.075	23.6	0.850	118	16	81.9	101.9	F		
Intersection Delay =						28.4 sec/veh		Intersection LOS = D			

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM25IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2025)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1090	1220	1250	1700					240		120
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		20.0A	33.0A		Green	5.0A	5.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	75 secs	Phase combination order: #1 #2 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Mvmts	Cap	Flow
EB	T	993	3725	1.212	0.267	*	*	*	*
	R	844	3167	1.506	0.267	*	*	*	*
WB	L	779	1770	1.690	0.440	*	*	*	*
	T	1639	3725	1.146	0.440	*	*	*	*
SB	L	282	1626	0.898	0.173	39.9	D	*	*
	R	106	1583	1.194	0.067	*	*	*	*

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/c)\*(V/c) is greater than one. Calculation of D1 is infeasible.

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM25IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2025)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1090	1220	1250	1700					240		120
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N		N	N		N				N		N
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*				Thru			
Right	*				Right			
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0A	33.0A			Green	5.0A	5.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	
Cycle Length:	75 secs Phase combination order: #1 #2 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat		v/c	g/C	Delay	LOS	Approach:	
		Cap	Flow					Delay	LOS
EB	T	993	3725	1.212	0.267	*	*	*	*
	R	844	3167	1.506	0.267	*	*		
WB	L	779	1770	1.690	0.440	*	*	*	*
	T	1639	3725	1.146	0.440	*	*		
SB	L	282	1626	0.898	0.173	39.9	D	*	*
	R	106	1583	1.194	0.067	*	*		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

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 =====

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM25IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2025)  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1090	1220	1250	1700					240		120
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3	3	3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left				
Thru	*				Thru				
Right	*				Right				
Peds					Peds				
WB Left		*			SB Left	*	*		
Thru		*			Thru				
Right					Right	*			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	20.0A	33.0A			Green	5.0A	5.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0		

Cycle Length: 75 secs Phase combination order: #1 #2 #5 #6

HCS: Signalized Intersection      Version 2.4g      03-07-2001 2  
 =====  
 Streets: (E-W) Sr-2      (N-S) SB Exit  
 Analyst: Tc      File Name: BAM25IM.HC9  
 Area Type: Other      1-17-1 am  
 Comment: Imp Under Design (2025)  
 =====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Thru	1090	0.95	1147	T	1147	2	1.050	1.000	1204	0.00	0.00
Right	1220	0.95	1126	R	1126	2	1.130	1.000	1272	0.00	1.00
WB											
Left	1250	0.95	1316	L	1316	1	1.000	1.000	1316	1.00	0.00
Thru	1700	0.95	1789	T	1789	2	1.050	1.000	1878	0.00	0.00
SB											
Left	240	0.95	253	L	253	1	1.000	1.000	253	1.00	0.00
Right	120	0.95	126	R	126	1	1.000	1.000	126	0.00	1.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
SB											
L	1900	1	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.95	1626
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583



Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BAM25IM.HC9  
 Area Type: Other 1-17-1 am  
 Comment: Imp Under Design (2025)

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	1204	3725	0.323	0.267	993	1.212
R	1272	3167	0.402	0.267	844	1.507 *
WB						
L	1316	1770	0.744	0.440	779	1.689 *
T	1878	3725	0.504	0.440	1639	1.146
NB						
SB						
L	253	1626	0.156	0.173	282	0.897 *
R	126	1583	0.080	0.067	106	1.189
				Sum (v/s) critical = 1.301		
Lost Time/Cycle, L = 9.0 sec				Critical v/c(x) = 1.478		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	1.212	0.267	*	0.850	993	16	*	*	*	*	*
R	1.506	0.267	*	0.850	844	16	*	*	*	*	*
WB											
L	1.690	0.440	*	0.850	779	16	*	*	*	*	*
T	1.146	0.440	*	0.850	1639	16	*	*	*	*	*
NB											
SB											
L	0.898	0.173	23.1	0.850	282	16	20.3	39.9	D	*	*
R	1.194	0.067	*	0.850	106	16	*	*	*	*	*

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 \* Delay and LOS not meaningful when any v/c is greater than 1.2 or 1/PHF

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM25IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2025)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1620	810	860	2090					190		220
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
RTOR Vols			150			0						0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		20.0A	25.0A		Green	5.0A	5.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	67 secs Phase combination order: #1 #2 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:
Mvmts	Cap	Flow	Ratio	Ratio	Delay LOS Delay LOS
EB	T	1112	3725	1.610	0.299 * * * *
	R	945	3167	0.830	0.299 18.6 C * *
WB	L	660	1770	1.371	0.373 * * * *
	T	1390	3725	1.662	0.373 * * * *
SB	L	316	1626	0.634	0.194 18.9 C * *
	R	118	1583	1.963	0.075 * * * *

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

=====  
 Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM25IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2025)  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1620	810	860	2090					190		220
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade			0			0						0
% Heavy Veh			2	2	2	2				11		2
Parking	N		N		N	N				N		N
Bus Stops				0			0					0
Con. Peds				0			0		0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type			3	3	3	3				3		3
RTOR Vols				150			0					0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
WB Left			*		SB Left	*	*	
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		20.0A	25.0A		Green	5.0A	5.0A	
Yellow/AR		3.0	3.0		Yellow/AR	3.0	3.0	
Cycle Length:	67 secs Phase combination order: #1 #2 #5 #6							

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	T		1112	3725	1.610	0.299	*	*	*	*
	R		945	3167	0.830	0.299	18.6	C		
WB	L		660	1770	1.371	0.373	*	*	*	*
	T		1390	3725	1.662	0.373	*	*		
SB	L		316	1626	0.634	0.194	18.9	C	*	*
	R		118	1583	1.963	0.075	*	*		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

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 University of Florida  
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 Gainesville, FL 32611-2083 (904) 392-0378

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM25IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2025)

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	1	2	0	0	0	0	1	0	1
Volumes		1620	810	860	2090					190		220
PHF or PK15		0.95	0.95	0.95	0.95					0.95		0.95
Lane W (ft)		12.0	12.0	12.0	12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2	2	2					11		2
Parking	N		N	N		N				N		N
Bus Stops									0			0
Con. Peds									0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type			3	3	3	3				3		3
RTOR Vols				150					0			0
Lost Time		3.00	3.00	3.00	3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*				Thru			
Right	*				Right			
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0A	25.0A			Green	5.0A	5.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 67 secs Phase combination order: #1 #2 #5 #6

=====  
 Streets: (E-W) Sr-2      (N-S) SB Exit  
 Analyst: Tc      File Name: BPM25IM.HC9  
 Area Type: Other      1-17-1 PM  
 Comment: Imp Under Design (2025)  
 =====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Thru	1620	0.95	1705	T	1705	2	1.050	1.000	1790	0.00	0.00
Right	810	0.95	695	R	695	2	1.130	1.000	785	0.00	1.00
WB											
Left	860	0.95	905	L	905	1	1.000	1.000	905	1.00	0.00
Thru	2090	0.95	2200	T	2200	2	1.050	1.000	2310	0.00	0.00
SB											
Left	190	0.95	200	L	200	1	1.000	1.000	200	1.00	0.00
Right	220	0.95	232	R	232	1	1.000	1.000	232	0.00	1.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
WB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
SB											
L	1900	1	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.95	1626
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583

Streets: (E-W) Sr-2 (N-S) SB Exit  
 Analyst: Tc File Name: BPM25IM.HC9  
 Area Type: Other 1-17-1 PM  
 Comment: Imp Under Design (2025)

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	1790	3725	0.480	0.299	1112	1.610 *
R	785	3167	0.248	0.299	945	0.831
WB						
L	905	1770	0.511	0.373	660	1.371
T	2310	3725	0.620	0.373	1390	1.662 *
NB						
SB						
L	200	1626	0.123	0.194	316	0.633 *
R	232	1583	0.147	0.075	118	1.966
				Sum (v/s) critical = 1.224		
Lost Time/Cycle, L =		9.0 sec	Critical v/c(x)		= 1.413	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	1.610	0.299	*	0.850	1112	16	*	*	*	*	*
R	0.830	0.299	16.7	0.850	945	16	4.5	18.6	C		
WB											
L	1.371	0.373	*	0.850	660	16	*	*	*	*	*
T	1.662	0.373	*	0.850	1390	16	*	*	*		
NB											
SB											
L	0.634	0.194	18.9	0.850	316	16	2.9	18.9	C	*	*
R	1.963	0.075	*	0.850	118	16	*	*	*		

Intersection Delay = \* (sec/veh) Intersection LOS = \*

\* Delay and LOS not meaningful when any v/c is greater than 1.2 or 1/PHF

## SIGNALIZED INTERSECTIONS

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	540			490			1484 136			118 590		
Lane W (ft)	12.0			12.0			12.0			12.0 12.0		
RTOR Vols				0						0		
Lost Time	3.00			3.00			3.00 3.00			3.00 3.00		

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru						*		
Right		*				*		
Peds								
WB Left						*	*	
Thru						*		
Right								
Peds								
NB Right							*	
SB Right								
Green	15.0A				45.0A	5.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	74 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	583	2875	1.004	0.203	48.7	E	32.9	D
	R	800	2573	0.729	0.311	17.0	C		
NB	TR	1817	2988	0.985	0.608	22.5	C	22.5	C
SB	L	238	1438	0.521	0.716	16.7	C	6.6	B
	T	1841	3027	0.354	0.608	4.7	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.914



=====  
 Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	540		490					1484	136	118	590	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade		0						0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N) N						(Y/N) N			(Y/N) N		
Arr Type	3		3					3		3	3	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share												
Prop. Prot.												

-----  
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	15.0A				45.0A	5.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	74 secs Phase combination order: #1 #5 #6							

-----  
 Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmnts	Cap	Flow	Ratio	Ratio					
EB	L	583	2875	1.004	0.203	48.7	E	32.9	D
	R	800	2573	0.729	0.311	17.0	C		
NB	TR	1817	2988	0.985	0.608	22.5	C	22.5	C
SB	L	238	1438	0.521	0.716	16.7	C	6.6	B
	T	1841	3027	0.354	0.608	4.7	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.914  
 -----

=====  
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 =====

Streets: (E-W) SR-2      (N-S) NB Exit Ramp  
 Analyst: TC      File Name: INTC05AM.HC9  
 Area Type: CBD      1-30-1 AM  
 Comment: 2005  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	0	1	2	0
Volumes	540		490					1484	136	118	590	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade			0					0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3		3	3	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*							
	Thru								
	Right	*							
	Peds								
WB	Left								
	Thru								
	Right								
	Peds								
NB	Right								
SB	Right								
	Left					*	*		
	Thru					*			
	Right								
	Peds								
	Right						*		
	Right								
Green		15.0A				45.0A	5.0A		
Yellow/AR		3.0				3.0	3.0		

Cycle Length: 74 secs    Phase combination order: #1 #5 #6





Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
L	585	2875	0.203	0.203	583	1.003 *
R	583	2573	0.227	0.311	800	0.729
WB						
NB						
TR	1790	2988	0.599	0.608	1817	0.985
SB Lsec.	82	135	0.607	0.608	82	1.000 *
Lpri.	42	1438	0.029	0.108	155	0.271 *
Ltot.	124				238	0.521
T	652	3027	0.215	0.608	1841	0.354
				Sum (v/s) critical = 0.840		
Lost Time/Cycle, L = 6.0 sec				Critical v/c(x) = 0.914		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
L	1.004	0.203	22.4	0.850	583	16	29.6	48.7	E	32.9	D
R	0.729	0.311	17.3	0.850	800	16	2.4	17.0	C		
WB											
NB											
TR	0.985	0.608	10.8	0.850	1817	16	13.3	22.5	C	22.5	C
SB											
L	0.521	0.716	17.6	0.850	238	16	1.7	16.7	C	6.6	B
T	0.354	0.608	5.5	0.850	1841	16	0.1	4.7	A		
				Intersection Delay = 22.4 sec/veh Intersection LOS = C							

=====  
Streets: (E-W) SR-2      (N-S) NB Exit Ramp  
Analyst: TC      File Name: INTC05AM.HC9  
Area Type: CBD      1-30-1 AM  
Comment: 2005  
=====

Supplemental Uniform Delay Worksheet

Approach	Southbound
Adj. LT Vol (v)	124
v/c ratio (x)	0.52
Primary phase effective green	8.00
gq from Supplemental LT Worksheet	25.68
gu from Supplemental LT Worksheet	19.32
Red time (r)	21.00
Arrivals $q_a = v / (3600 (\max(x, 1)))$	0.03
Primary Ph. Departures $Sp = s / 3600$	0.40
Secondary Ph. Departures $Ss = S(Gq + Gu) / (Gu * 3600)$	0.09
Xperm	1.35
XProt	N/A
Case	5
Queue at beginning of green arrow (Qa)	0.59
Queue at beginning of unsaturated green (Qu)	1.61
Residual queue (Qr)	0.00
Uniform Delay	17.65

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	810		740					976	104	82	880	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru						*		
Right		*				*		
Peds								
WB Left						*	*	
Thru						*		
Right								
Peds								
NB Right							*	
SB Right								
Green	25.0A				35.0A	5.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	74 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	971	2875	0.905	0.338	23.6	C	18.5	C
	R	1147	2573	0.767	0.446	13.4	B		
NB	TR	1411	2983	0.846	0.473	14.6	B	14.6	B
SB	L	237	1438	0.363	0.581	13.7	B	11.0	B
	T	1432	3027	0.679	0.473	10.7	B		

Intersection Delay = 15.3 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.888

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	810		740					976	104	82	880	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade		0						0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N) N						(Y/N) N			(Y/N) N		
Arr Type	3		3					3		3	3	
RTOR Vols			0							0		0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	35.0A	5.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	74 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	971	2875	0.905	0.338	23.6	C	18.5	C
	R	1147	2573	0.767	0.446	13.4	B		
NB	TR	1411	2983	0.846	0.473	14.6	B	14.6	B
SB	L	237	1438	0.363	0.581	13.7	B	11.0	B
	T	1432	3027	0.679	0.473	10.7	B		

Intersection Delay = 15.3 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.888



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Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	810		740					976	104	82	880	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade			0					0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3		3	3	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left				
	Thru						Thru	*			
	Right	*					Right	*			
	Peds						Peds				
WB	Left					SB	Left	*	*		
	Thru						Thru	*			
	Right						Right				
	Peds						Peds				
NB	Right					EB	Right		*		
SB	Right					WB	Right				
Green		25.0A				Green		35.0A	5.0A		
Yellow/AR		3.0				Yellow/AR		3.0	3.0		

Cycle Length: 74 secs Phase combination order: #1 #5 #6



```

=====
Streets: (E-W) SR-2                                (N-S) NB Exit Ramp
Analyst: TC                                        File Name: INTC05PM.HC9
Area Type: CBD                                    1-30-1 PM
Comment: 2005
=====

```

Supplemental Permitted LT Worksheet

APPROACH	SB
Cycle Length, C	74
Actual Green Time for Lane Group, G	43
Effective Green Time for Lane Group, g	35
Opposing Effective Green Time, go	35
Number of Opposing Lanes, No	2
Number of Lanes in Lane Group, N	1
Adjusted Left-Turn Flow Rate, Vlt	86
Proportion of Left Turns in Lane Group, Plt	1.00
Left Turns per Cycle: LTC=Vlt*C/3600	1.77
Adjusted Opposing Flow Rate, Vo	1193
Opposing Flow per Lane, Per Cycle: Volc=VoC/3600No	12.26
Opposing Platoon Ratio, Rpo	1
Lost time per phase, tl	3
gf=Gexp(-0.882*LTC^0.717) -tl	0.00
Opposing Queue Ratio: qro=1-Rpo(go/C)	0.53
gq = Volc * qro / (.5 - Volc * (1 - qro) / go) -tl	16.33
gu=g-gq (or g-gf)	18.67
fs=(875-0.625Vo)/1000	0.13
Pl=Plt[1+{(N-1)g/(fs*gu+4.5)}]	1.00
El1	8.20
fmin	0.11
fm, (min=fmin;max=1.00)	0.11
flt=[fm+0.91(N-1)]/N	0.11



```

=====
Streets: (E-W) SR-2      (N-S) NB Exit Ramp
Analyst: TC      File Name: INTC05PM.HC9
Area Type: CBD      1-30-1 PM
Comment: 2005
=====

```

Supplemental Uniform Delay Worksheet

Approach	Southbound
Adj. LT Vol (v)	86
v/c ratio (x)	0.36
Primary phase effective green	8.00
gq from Supplemental LT Worksheet	16.33
gu from Supplemental LT Worksheet	18.67
Red time (r)	31.00
Arrivals $q_a = v / (3600(\max(x, 1)))$	0.02
Primary Ph. Departures $S_p = s / 3600$	0.40
Secondary Ph. Departures $S_s = S(G_q + G_u) / (G_u * 3600)$	0.09
Xperm	0.94
XProt	N/A
Case	4
Queue at beginning of green arrow (Qa)	0.00
Queue at beginning of unsaturated green (Qu)	1.13
Residual queue (Qr)	0.00
Uniform Delay	15.65

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru						*		
Right		*				*		
Peds								
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green		25.0A			Green	40.0A	6.0A	
Yellow/AR		3.0			Yellow/AR	3.0	3.0	
Cycle Length:	80 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C) \* (V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0					0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share									0			
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru						*		
Right	*					*		
Peds								
WB Left						*		
Thru						*		
Right								
Peds								
NB Right							*	
SB Right								
Green	25.0A				40.0A	6.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmnts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

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Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0			0
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N					N	N	N	N	
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	40.0A	6.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 80 secs Phase combination order: #1 #5 #6





```
=====  
Streets: (E-W) SR-2      (N-S) NB Exit Ramp  
Analyst: TC      File Name: INTC25AM.HC9  
Area Type: CBD      1-30-1 AM  
Comment: 2025  
=====
```

Supplemental Permitted LT Worksheet

APPROACH	SB
Cycle Length, C	80
Actual Green Time for Lane Group, G	49
Effective Green Time for Lane Group, g	40
Opposing Effective Green Time, go	40
Number of Opposing Lanes, No	2
Number of Lanes in Lane Group, N	1
Adjusted Left-Turn Flow Rate, Vlt	232
Proportion of Left Turns in Lane Group, Plt	1.00
Left Turns per Cycle: LTC=Vlt*C/3600	5.16
Adjusted Opposing Flow Rate, Vo	3040
Opposing Flow per Lane, Per Cycle: Volc=VoC/3600No	33.78
Opposing Platoon Ratio, Rpo	1
Lost time per phase, tl	3
$gf=Gexp(-0.882*LTC^{0.717})-tl$	0.00
Opposing Queue Ratio: $qro=1-Rpo(go/C)$	0.50
$gq = Volc * qro / (.5 - Volc * (1 - qro) / go) - tl$	40.00
$gu=g-gq$ (or $g-gf$ )	0.00
$fs=(875-0.625Vo)/1000$	0.00
$Pl=Plt[1+\{(N-1)g/(fs*gu+4.5)\}]$	1.00
El1	8.20
fmin	0.10
fm, (min=fmin;max=1.00)	0.10
$flt=[fm+0.91(N-1)]/N$	0.10

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
L	879	2875	0.306	0.313	898	0.979 *
R	1023	2573	0.398	0.425	1094	0.935
WB						
NB						
TR	3040	3027	1.004	0.500	1514	2.008 *
R	95	1286	0.074	0.500	643	0.148
SB Lsec.	76	151	0.503	0.500	76	1.000
Lpri.	156	1438	0.108	0.112	162	0.963 *
Ltot.	232				237	0.979
T	1226	3027	0.405	0.500	1514	0.810
				Sum (v/s) critical = 1.419		
Lost Time/Cycle, L = 6.0 sec				Critical v/c(x) = 1.534		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
L	0.978	0.313	20.7	0.850	898	16	18.6	36.2	D	30.0	D
R	0.936	0.425	16.7	0.850	1094	16	10.5	24.6	C		
WB											
NB											
TR	2.009	0.500	*	0.850	1514	16	*	*	*	*	*
R	0.148	0.500	8.2	0.850	643	16	0.0	7.0	B		
SB											
L	0.979	0.613	25.3	0.850	237	16	39.3	60.8	F	20.8	C
T	0.810	0.500	12.8	0.850	1514	16	2.4	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*

\* Delay and LOS not meaningful when any v/c is greater than 1.2 or 1/PHF

```

=====
Streets: (E-W) SR-2                                                      (N-S) NB Exit Ramp
Analyst: TC                                                                      File Name: INTC25AM.HC9
Area Type: CBD                                                                      1-30-1 AM
Comment: 2025
=====

```

Supplemental Uniform Delay Worksheet

Approach	Southbound
Adj. LT Vol (v)	232
v/c ratio (x)	0.98
Primary phase effective green	9.00
gq from Supplemental LT Worksheet	36.00
gu from Supplemental LT Worksheet	4.00
Red time (r)	31.00
Arrivals $q_a = v / (3600 (\max(x, 1)))$	0.06
Primary Ph. Departures $S_p = s / 3600$	0.40
Secondary Ph. Departures $S_s = S (G_q + G_u) / (G_u * 3600)$	0.42
Xperm	2.73
XProt	N/A
Case	5
Queue at begining of green arrow (Qa)	2.90
Queue at beginning of unsaturated green (Qu)	4.32
Residual queue (Qr)	0.00
Uniform Delay	25.30

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25PM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru						*		
Right	*					*		
Peds								
WB Left						*	*	
Thru						*		
Right								
Peds								
NB Right							*	
SB Right								
Green	25.0A				40.0A	6.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) NB Exit Ramp  
 Analyst: TC File Name: INTC25PM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0			0
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N) N						(Y/N) N			(Y/N) N		
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share									0			
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	40.0A	6.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C) \* (V/c) is greater than one. Calculation of D1 is infeasible.

=====  
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 =====

Streets: (E-W) SR-2      (N-S) NB Exit Ramp  
 Analyst: TC      File Name: INTC25PM.HC9  
 Area Type: CBD      1-30-1 AM  
 Comment: 2025  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0			0
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N					N	N	N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left				
	Thru						Thru	*			
	Right	*					Right	*			
	Peds						Peds				
WB	Left					SB	Left	*	*		
	Thru						Thru	*			
	Right						Right				
	Peds						Peds				
NB	Right					EB	Right		*		
SB	Right					WB	Right				
Green		25.0A				Green		40.0A	6.0A		
Yellow/AR		3.0				Yellow/AR		3.0	3.0		

Cycle Length: 80 secs    Phase combination order: #1 #5 #6







Streets: (E-W) SR-2      (N-S) NB Exit Ramp  
 Analyst: TC      File Name: INTC25PM.HC9  
 Area Type: CBD      1-30-1 AM  
 Comment: 2025

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
L	879	2875	0.306	0.313	898	0.979 *
R	1023	2573	0.398	0.425	1094	0.935
WB						
NB						
TR	3040	3027	1.004	0.500	1514	2.008 *
R	95	1286	0.074	0.500	643	0.148
SB Lsec.	76	151	0.503	0.500	76	1.000
Lpri.	156	1438	0.108	0.112	162	0.963 *
Ltot.	232				237	0.979
T	1226	3027	0.405	0.500	1514	0.810
				Sum (v/s) critical = 1.419		
Lost Time/Cycle, L = 6.0 sec				Critical v/c(x) = 1.534		

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
L	0.978	0.313	20.7	0.850	898	16	18.6	36.2	D	30.0	D
R	0.936	0.425	16.7	0.850	1094	16	10.5	24.6	C		
WB											
NB											
TR	2.009	0.500	*	0.850	1514	16	*	*	*	*	*
R	0.148	0.500	8.2	0.850	643	16	0.0	7.0	B		
SB											
L	0.979	0.613	25.3	0.850	237	16	39.3	60.8	F	20.8	C
T	0.810	0.500	12.8	0.850	1514	16	2.4	13.3	B		
Intersection Delay = * (sec/veh)      Intersection LOS = *											
* Delay and LOS not meaningful when any v/c is greater than 1.2 or 1/PHF											

```

=====
Streets: (E-W) SR-2      (N-S) NB Exit Ramp
Analyst: TC      File Name: INTC25PM.HC9
Area Type: CBD      1-30-1 AM
Comment: 2025
=====

```

Supplemental Uniform Delay Worksheet

Approach	Southbound
Adj. LT Vol (v)	232
v/c ratio (x)	0.98
Primary phase effective green	9.00
gq from Supplemental LT Worksheet	36.00
gu from Supplemental LT Worksheet	4.00
Red time (r)	31.00
Arrivals $q_a = v / (3600 (\max(x, 1)))$	0.06
Primary Ph. Departures $S_p = s / 3600$	0.40
Secondary Ph. Departures $S_s = S (G_q + G_u) / (G_u * 3600)$	0.42
Xperm	2.73
XProt	N/A
Case	5
Queue at begining of green arrow (Qa)	2.90
Queue at beginning of unsaturated green (Qu)	4.32
Residual queue (Qr)	0.00
Uniform Delay	25.30

## **APPENDIX D**

### **CAPACITY ANALYSIS: RECOMMENDED IMPROVEMENTS**

## **FREEWAY SEGMENTS**

=====  
 Center For Microcomputers In Transportation  
 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083  
 Ph: (904) 392-0378  
 =====

File Name ..... 1AM2025.HC3  
 Location..... 1 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	9160	6170
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	5	4
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	2092	1762
Level of Service (LOS)	E	D
Projected Speed at Flow Rate (mph)	58.4	63.3
Density (pc/mi/ln)	35.82	27.82
Density (veh/mi/ln)	33.01	25.64
Speed of prevailing traffic (mph)	58.4	63.3

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File Name ..... 1PM2025.HC3  
 Location..... 1 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	9160	6170
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	4	5
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	* 2615	1409
Level of Service (LOS)	*F	C
Projected Speed at Flow Rate (mph)		65.0
Density (pc/mi/ln)		21.68
Density (veh/mi/ln)		19.98
Speed of prevailing traffic (mph)		65.0

\* Speed and density are highly variable for LOS F

\* Maximum Service Flow must not be greater than 2300 for 4 lanes.

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File Name ..... 5AM2025.HC3  
 Location..... 5 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4910	7050
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1869	* 2684
Level of Service (LOS)	D	*F
Projected Speed at Flow Rate (mph)	62.2	
Density (pc/mi/ln)	30.04	
Density (veh/mi/ln)	27.69	
Speed of prevailing traffic (mph)	62.2	

\* Speed and density are highly variable for LOS F

\* Maximum Service Flow must not be greater than 2300 for 3 lanes.



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File Name ..... 1AM2005.HC3  
 Location..... 1 2005  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	5744	3846
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	5	4
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1312	1098
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	65.0	65.0
Density (pc/mi/ln)	20.18	16.89
Density (veh/mi/ln)	18.60	15.57
Speed of prevailing traffic (mph)	65.0	65.0

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File Name ..... 5AM2005.HC3  
 Location..... 5 2005  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3070	4380
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1169	1667
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	65.0	64.1
Density (pc/mi/ln)	17.98	26.00
Density (veh/mi/ln)	16.58	23.96
Speed of prevailing traffic (mph)	65.0	64.1

## **RAMP JUNCTIONS**

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```

File Name ..... 2DPM2025.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2025 pM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	9160	2470	360
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 2DPM2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	9160	65	4	12.0	1.00	0.948	1.00	10172
Ramp	2470	45	1	12.0	1.00	0.948	1.00	2743
Upstream	360			12.0	0.86	0.948	1.00	465

Estimation of V12:

-----  
 PFD = 0.436      Using Equation: 10      V12 = 5982

Capacity Checks:

-----  
 VFO+VR = 10172      V12 = 5982

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      F  
 Computed Density (pc/mi/ln)      \*  
 Computed Speed (mph)      \*

\*Unstable flow

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File Name ..... 4DIV2025.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2025 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	7050	360	2470
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	16.0	16.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
Length of deceleration lane is 600 ft.  
Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIV2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	7050	65	3	12.0	1.00	0.948	1.00	7829
Ramp	OFF 360	45	1	16.0	1.00	0.948	1.00	400
Upstream	ON 2470			16.0	0.86	0.948	1.00	3190

Estimation of V12:

-----  
 PFD = 0.546      Using Equation: 7      V12 = 4455

Capacity Checks:

-----  
 VFO+VR = 7829      V12 = 4455

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      F  
 Computed Density (pc/mi/ln)      \*  
 Computed Speed (mph)      \*

\*Unstable flow

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File Name ..... 4DIVPM2025.HC5  
 Location..... 4 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2025 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	4910	410	1670
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	16.0	16.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.



=====  
 File Name ..... 4DIVPM2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4910	65	3	12.0	1.00	0.948	1.00	5453
Ramp	OFF 410	45	1	16.0	1.00	0.948	1.00	455
Upstream	ON 1670			16.0	0.86	0.948	1.00	2156

Estimation of V12:

-----  
 PFD = 0.603      Using Equation: 7      V12 = 3468

Capacity Checks:

-----  
 VFO+VR = 5453      V12 = 3468

LOS, Speed, and Density:

-----

Level of Service (LOS)	D
Computed Density (pc/mi/ln)	29
Computed Speed (mph)	57

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File Name ..... 4PM22025.HC5  
 Location..... 4dpm2025  
 Analyst..... tc  
 Time of Analysis..... pm  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	7050	360	2470
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.



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File Name ..... 4AMM2025.HC5
Location..... 4dam2025
Analyst..... tc
Time of Analysis..... am
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	4910	410	1670
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
Length of acceleration lane is 1500 ft.  
Distance to downstream ramp is 2200 ft.

=====  
 File Name ..... 4AMM2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Dnstrm		1.50		0.948	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4910	65 3	12.0	1.00	0.948	1.00	5453
Ramp	ON 410	50 1	12.0	1.00	0.948	1.00	455
Downstream	OFF 1670		12.0	1.00	0.948	1.00	1855

Estimation of V12:

-----  
 PFM = 0.619      Using Equation:    2      V12 = 3378

Capacity Checks:

-----  
 VFO = 5908      VR12 = 3833

LOS, Speed, and Density:

-----

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	26
Computed Speed (mph)	57

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File Name ..... 2DPM2005.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2005 pM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	5744	1550	186
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 2DPM2005.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	5744	65	4	12.0	1.00	0.948	1.00	6379
Ramp	OFF 1550	45	2	12.0	1.00	0.948	1.00	1721
Upstream	ON 186			12.0	0.86	0.948	1.00	240

Estimation of V12:

-----  
 PFD = 0.260 Using Equation: Special App. V12 = 2932

Capacity Checks:

-----  
 VFO+VR = 6379 V12 = 2932

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	11
Computed Speed (mph)	55

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File Name ..... 4AMM2005.HC5
Location..... 4dam2005
Analyst..... tc
Time of Analysis..... am
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....
```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3070	254	1030
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.



=====  
 File Name ..... 4AMM2005.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Dnstrm		1.50		0.948	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3070	65 3	12.0	1.00	0.948	1.00	3409
Ramp ON	254	50 1	12.0	1.00	0.948	1.00	282
Downstream OFF	1030		12.0	1.00	0.948	1.00	1144

Estimation of V12:

-----  
 PFM = 0.619      Using Equation:    2      V12 = 2112

Capacity Checks:

-----  
 VFO = 3691      VR12 = 2394

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	15
Computed Speed (mph)	60

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File Name ..... 4PM22005.HC5
Location..... 4dpm2005
Analyst..... tc
Time of Analysis..... pm
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	4380	186	1550
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		ON	OFF

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1500 ft.  
 Distance to downstream ramp is 2200 ft.

File Name ..... 4PM22005.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Dnstrm		1.50		0.948	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4380	65	3	12.0	1.00	0.948	1.00	4864
Ramp	ON 186	50	1	12.0	1.00	0.948	1.00	207
Downstream	OFF 1550			12.0	1.00	0.948	1.00	1721

Estimation of V12:

PFM = 0.619 Using Equation: 2 V12 = 3013

Capacity Checks:

VFO = 5071 VR12 = 3220

LOS, Speed, and Density:

Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 21  
 Computed Speed (mph) 59

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File Name ..... 4DIV2005.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2005 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	4380	186	1550
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
Length of deceleration lane is 600 ft.  
Distance to upstream ramp is 2200 ft.

=====

File Name ..... 4DIV2005.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F	
	T	R	HV	W	P	
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4380	65 3	12.0	1.00	0.948	1.00	4864
Ramp	OFF 186	45 1	12.0	1.00	0.948	1.00	207
Upstream	ON 1550		12.0	0.86	0.948	1.00	2002

Estimation of V12:

-----

PFD = 0.629            Using Equation:    7            V12 = 3136

Capacity Checks:

-----

VFO+VR = 4864            V12 = 3136

LOS, Speed, and Density:

-----

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	26
Computed Speed (mph)	58

=====  
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File Name ..... 4DIV05PM.HC5  
 Location..... 4 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2005 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	3070	254	1030
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIV05PM.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3070	65 3	12.0	1.00	0.948	1.00	3409
Ramp	OFF 254	45 1	12.0	1.00	0.948	1.00	282
Upstream	ON 1030		12.0	0.86	0.948	1.00	1330

Estimation of V12:

-----  
 PFD = 0.662      Using Equation: 7      V12 = 2351

Capacity Checks:

-----  
 VFO+VR = 3409      V12 = 2351

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	19
Computed Speed (mph)	58

=====  
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File Name ..... 2DAM2025.HC5  
 Location..... 2 Diverge  
 Analyst..... tc  
 Time of Analysis..... 2025 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 1/17/1  
 Other Information.....

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	6170	1670	410
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.



=====  
 File Name ..... 2DAM2025.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	6170	65	4	12.0	1.00	0.948	1.00	6852
Ramp	1670	45	2	12.0	1.00	0.948	1.00	1855
Upstream	410			12.0	0.86	0.948	1.00	529

Estimation of V12:

-----  
 PFD = 0.260      Using Equation: Special App.      V12 = 3154

Capacity Checks:

-----  
 VFO+VR = 6852      V12 = 3154

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	13
Computed Speed (mph)	54

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File Name ..... 2DAM05.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2005 AM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	3846	1030	254
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
Length of deceleration lane is 2000 ft.  
Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 2DAM05.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3846	65 4	12.0	1.00	0.948	1.00	4271
Ramp	OFF 1030	45 2	12.0	1.00	0.948	1.00	1144
Upstream	ON 254		12.0	0.86	0.948	1.00	328

Estimation of V12:

-----  
 PFD = 0.260 Using Equation: Special App. V12 = 1957

Capacity Checks:

-----  
 VFO+VR = 4271 V12 = 1957

LOS, Speed, and Density:

-----  
 Level of Service (LOS) A  
 Computed Density (pc/mi/ln) 3  
 Computed Speed (mph) 56

## **SIGNALIZED INTERSECTIONS**

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05AM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				615		751	168	693		721	171	
Lane W (ft)				12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols						350			180			0
Lost Time				3.00		3.00	3.00	3.00		3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*		
Thru					Thru	*		
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A 20.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		
Cycle Length:	69 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Mvmts	Cap	Flow
WB	L	1282	3539	0.519	0.362	11.5	B	11.2	B
	LR	688	1900	0.000	0.362	0.0	A		
	R	1147	3167	0.417	0.362	10.8	B		
NB	TR	1080	3725	0.172	0.290	11.8	B	14.4	B
	R	918	3167	0.665	0.290	15.2	C		
SB	L	769	3539	0.623	0.217	16.9	C	17.0	C
	LT	786	3614	0.634	0.217	17.0	C		

Intersection Delay = 14.0 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.596

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05AM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				615		751		168	693	721	171	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade						0			0			0
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N		N	N		N
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	
Prop. Share				0		0			0		39	
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A 20.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		
Cycle Length:	69 secs				Phase combination order:	#1 #5 #6		

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
WB	L	1282	3539	0.519	0.362	11.5	B	11.2	B
	LR	688	1900	0.000	0.362	0.0	A		
	R	1147	3167	0.417	0.362	10.8	B		
NB	TR	1080	3725	0.172	0.290	11.8	B	14.4	B
	R	918	3167	0.665	0.290	15.2	C		
SB	L	769	3539	0.623	0.217	16.9	C	17.0	C
	LT	786	3614	0.634	0.217	17.0	C		

Intersection Delay = 14.0 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.596

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05AM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				615		751		168	693	721	171	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade						0			0			0
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N		N	N		N
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 69 secs Phase combination order: #1 #5 #6

=====  
 Streets: (E-W) SR-2      (N-S) HUNTER/MT VIEW RD  
 Analyst: TC      File Name: AREC05AM.HC9  
 Area Type: Other      2-7-1 2005 AM  
 Comment: recommended  
 =====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
WB											
Left	615	0.95	647	L	647	2	1.030	1.000	666	1.00	0.00
Thru	0	0.95	0	LR	0	1	1.000	1.000	0	0.00	0.00
Right	751	0.95	423	R	423	2	1.130	1.000	478	0.00	1.00
NB											
Thru	168	0.95	177	TR	177	2	1.050	1.000	186	0.00	0.00
Right	693	0.95	540	R	540	2	1.130	1.000	610	0.00	1.00
SB											
Left	721	0.95	759	L	465	2	1.030	1.000	479	1.00	0.00
Thru	171	0.95	180	LT	474	2	1.050	1.000	498	0.62	0.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
WB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LR	1900	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1900
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
NB											
TR	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
SB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LT	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.97	3614



Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05AM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
WB						
L	666	3539	0.188	0.362	1282	0.520 *
LR	0	1900	0.000	0.362	688	0.000
R	478	3167	0.151	0.362	1147	0.417
NB						
TR	186	3725	0.050	0.290	1080	0.172
R	610	3167	0.193	0.290	918	0.664 *
SB						
L	479	3539	0.135	0.217	769	0.623
LT	498	3614	0.138	0.217	786	0.634 *
				Sum (v/s) critical =	0.519	
Lost Time/Cycle, L =		9.0 sec	Critical v/c(x)		= 0.596	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
WB											
L	0.519	0.362	13.1	0.850	1282	16	0.3	11.5	B	11.2	B
LR	0.000	0.362	0.0	0.850	688	0	0.0	0.0	A		
R	0.417	0.362	12.6	0.850	1147	16	0.1	10.8	B		
NB											
TR	0.172	0.290	13.9	0.850	1080	16	0.0	11.8	B	14.4	B
R	0.665	0.290	16.4	0.850	918	16	1.3	15.2	C		
SB											
L	0.623	0.217	18.6	0.850	769	16	1.1	16.9	C	17.0	C
LT	0.634	0.217	18.6	0.850	786	16	1.2	17.0	C		
Intersection Delay =						14.0 sec/veh	Intersection		LOS = B		

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				693		721		171	615	751	168	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination 1	2	3	4	5	6	7	8
EB Left				NB Left			
Thru				Thru		*	
Right				Right		*	
Peds				Peds			
WB Left	*			SB Left	*		
Thru				Thru	*		
Right	*			Right			
Peds				Peds			
NB Right				EB Right			
SB Right				WB Right			
Green	25.0A			Green	15.0A 20.0A		
Yellow/AR	3.0			Yellow/AR	3.0 3.0		
Cycle Length: 69 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:
Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay LOS
WB	L	1282	3539	0.468	0.362	11.1	B 10.8 B
	LR	632	1744	0.354	0.362	10.5	B
	R	1147	3167	0.309	0.362	10.3	B
NB	TR	1025	3536	0.279	0.290	12.3	B 12.8 B
	R	918	3167	0.451	0.290	13.2	B
SB	L	769	3539	0.646	0.217	17.2	C 17.2 C
	LT	785	3611	0.648	0.217	17.2	C

Intersection Delay = 13.5 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.507

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				693		721		171	615	751	168	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade						0			0			0
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N		N	N		N
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	
Prop. Share				20		20			20		39	
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		25.0A			Green	15.0A	20.0A	
Yellow/AR		3.0			Yellow/AR	3.0	3.0	
Cycle Length:	69 secs				Phase combination order:	#1 #5 #6		

Intersection Performance Summary

Lane Group:	Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	Delay	LOS
WB L	1282		3539	0.468	0.362	11.1	B		10.8	B
LR	632		1744	0.354	0.362	10.5	B			
R	1147		3167	0.309	0.362	10.3	B			
NB TR	1025		3536	0.279	0.290	12.3	B		12.8	B
R	918		3167	0.451	0.290	13.2	B			
SB L	769		3539	0.646	0.217	17.2	C		17.2	C
LT	785		3611	0.648	0.217	17.2	C			

Intersection Delay = 13.5 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.507

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				693		721		171	615	751	168	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade					0			0			0	
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N		N	N		
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 69 secs Phase combination order: #1 #5 #6

=====  
 Streets: (E-W) SR-2      (N-S) HUNTER/MT VIEW RD  
 Analyst: TC      File Name: AREC05PM.HC9  
 Area Type: Other      2-7-1 2005 PM  
 Comment: recommended  
 =====

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
WB											
Left	693	0.95	729	L	583	2	1.030	1.000	600	1.00	0.00
Thru	0	0.95	0	LR	224	1	1.000	1.000	224	0.65	0.35
Right	721	0.95	391	R	313	2	1.130	1.000	354	0.00	1.00
NB											
Thru	171	0.95	180	TR	272	2	1.050	1.000	286	0.00	0.34
Right	615	0.95	458	R	366	2	1.130	1.000	414	0.00	1.00
SB											
Left	751	0.95	791	L	483	2	1.030	1.000	497	1.00	0.00
Thru	168	0.95	177	LT	485	2	1.050	1.000	509	0.64	0.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
WB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LR	1900	1	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.97	1744
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
NB											
TR	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.95	1.00	3536
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
SB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LT	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.97	3611

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=====
Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD
Analyst: TC File Name: AREC05PM.HC9
Area Type: Other 2-7-1 2005 PM
Comment: recommended
=====
    
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Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
WB						
L	600	3539	0.170	0.362	1282	0.468 *
LR	224	1744	0.128	0.362	632	0.354
R	354	3167	0.112	0.362	1147	0.309
NB						
TR	286	3536	0.081	0.290	1025	0.279
R	414	3167	0.131	0.290	918	0.451 *
SB						
L	497	3539	0.140	0.217	769	0.646
LT	509	3611	0.141	0.217	785	0.648 *
				Sum (v/s) critical =	0.441	
Lost Time/Cycle, L =	9.0 sec		Critical v/c(x) =		0.507	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
WB											
L	0.468	0.362	12.8	0.850	1282	16	0.2	11.1	B	10.8	B
LR	0.354	0.362	12.2	0.850	632	16	0.2	10.5	B		
R	0.309	0.362	12.0	0.850	1147	16	0.1	10.3	B		
NB											
TR	0.279	0.290	14.4	0.850	1025	16	0.0	12.3	B	12.8	B
R	0.451	0.290	15.2	0.850	918	16	0.3	13.2	B		
SB											
L	0.646	0.217	18.7	0.850	769	16	1.3	17.2	C	17.2	C
LT	0.648	0.217	18.7	0.850	785	16	1.3	17.2	C		
Intersection Delay =						13.5 sec/veh	Intersection LOS =		B		

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				977		1453		95	1134	1176	56	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	69 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

	Lane Group:	Mvmts	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Cap	Flow
WB	L	1282	3539	0.661	0.362	12.8	B	17.2	C
	LR	619	1709	0.707	0.362	14.8	B		
	R	1147	3167	0.915	0.362	21.7	C		
NB	TR	972	3352	0.325	0.290	12.5	B	30.3	D
	R	918	3167	0.990	0.290	36.5	D		
SB	L	769	3539	1.011	0.217	45.1	E	34.0	D
	LT	775	3567	0.734	0.217	18.8	C		

Intersection Delay = 25.1 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.964

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				977		1453		95	1134	1176		56
PHF or PK15				0.95		0.95		0.95	0.95	0.95		0.95
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade						0			0			0
% Heavy Veh				2		2		2	2	2		2
Parking				N		N		N		N		N
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	
Prop. Share				20		20			20		39	
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A 20.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		
Cycle Length:	69 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
WB	L	1282	3539	0.661	0.362	12.8	B	17.2	C
	LR	619	1709	0.707	0.362	14.8	B		
	R	1147	3167	0.915	0.362	21.7	C		
NB	TR	972	3352	0.325	0.290	12.5	B	30.3	D
	R	918	3167	0.990	0.290	36.5	D		
SB	L	769	3539	1.011	0.217	45.1	E	34.0	D
	LT	775	3567	0.734	0.217	18.8	C		

Intersection Delay = 25.1 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.964



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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				977		1453		95	1134	1176	56	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade					0			0			0	
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N	N		N	N	
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						350			180			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*		
Thru					Thru	*		
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 69 secs Phase combination order: #1 #5 #6



Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
WB						
L	847	3539	0.239	0.362	1282	0.661
LR	438	1709	0.256	0.362	619	0.708
R	1050	3167	0.332	0.362	1147	0.915 *
NB						
TR	316	3352	0.094	0.290	972	0.325
R	909	3167	0.287	0.290	918	0.990 *
SB						
L	778	3539	0.220	0.217	769	1.012 *
LT	569	3567	0.160	0.217	775	0.734
				Sum (v/s) critical =	0.838	
Lost Time/Cycle, L =		9.0 sec	Critical v/c(x) =		0.964	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
WB											
L	0.661	0.362	14.0	0.850	1282	16	0.9	12.8	B	17.2	C
LR	0.707	0.362	14.3	0.850	619	16	2.6	14.8	B		
R	0.915	0.362	16.0	0.850	1147	16	8.2	21.7	C		
NB											
TR	0.325	0.290	14.6	0.850	972	16	0.1	12.5	B	30.3	D
R	0.990	0.290	18.5	0.850	918	16	20.7	36.5	D		
SB											
L	1.011	0.217	20.5	0.850	769	16	27.7	45.1	E	34.0	D
LT	0.734	0.217	19.1	0.850	775	16	2.5	18.8	C		
			Intersection Delay = 25.1 sec/veh Intersection LOS = D								

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				1134		1176		56	1093	1337	211	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
RTOR Vols						300			125			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*		
Thru					Thru	*		
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	22.0A				Green	18.0A 21.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		
Cycle Length:	70 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
WB L	1112	3539	0.885	0.314	21.0	C	19.8	C	
LR	543	1727	0.779	0.314	19.0	C			
R	995	3167	0.838	0.314	19.0	C			
NB TR	988	3292	0.279	0.300	12.1	B	27.4	D	
R	950	3167	0.969	0.300	32.0	D			
SB L	910	3539	1.035	0.257	49.1	E	36.0	D	
LT	926	3601	0.810	0.257	19.6	C			

Intersection Delay = 27.0 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.958

Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				1134		1176		56	1093	1337		211
PHF or PK15				0.95		0.95		0.95	0.95	0.95		0.95
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade						0			0			0
% Heavy Veh				2		2		2	2	2		2
Parking				N		N	N		N	N		N
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						300			125			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	
Prop. Share				20		20			20		35	
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	22.0A				Green	18.0A	21.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	70 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
WB	L	1112	3539	0.885	0.314	21.0	C	19.8	C
	LR	543	1727	0.779	0.314	19.0	C		
	R	995	3167	0.838	0.314	19.0	C		
NB	TR	988	3292	0.279	0.300	12.1	B	27.4	D
	R	950	3167	0.969	0.300	32.0	D		
SB	L	910	3539	1.035	0.257	49.1	E	36.0	D
	LT	926	3601	0.810	0.257	19.6	C		

Intersection Delay = 27.0 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.958

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Streets: (E-W) SR-2 (N-S) HUNTER/MT VIEW RD  
 Analyst: TC File Name: AREC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	> 0	< 2	0	2	< 2	2	> 2	0
Volumes				1134		1176		56	1093	1337	211	
PHF or PK15				0.95		0.95		0.95	0.95	0.95	0.95	
Lane W (ft)				12.0	12.0	12.0		12.0	12.0	12.0	12.0	
Grade					0			0			0	
% Heavy Veh				2		2		2	2	2	2	
Parking				N		N	N		N		N	
Bus Stops						0			0			0
Con. Peds			0			0			0			0
Ped Button				(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type				3	3	3		3	3	3	3	
RTOR Vols						300			125			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left		*			SB Left	*		
Thru					Thru	*		
Right		*			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	22.0A				Green	18.0A	21.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 70 secs Phase combination order: #1 #5 #6

Streets: (E-W) SR-2      (N-S) HUNTER/MT VIEW RD  
 Analyst: TC      File Name: AREC25PM.HC9  
 Area Type: Other      2-7-1 2025 PM  
 Comment: recommended

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
WB											
Left	1134	0.95	1194	L	955	2	1.030	1.000	984	1.00	0.00
Thru	0	0.95	0	LR	423	1	1.000	1.000	423	0.56	0.43
Right	1176	0.95	922	R	738	2	1.130	1.000	834	0.00	1.00
NB											
Thru	56	0.95	59	TR	263	2	1.050	1.000	276	0.00	0.78
Right	1093	0.95	1019	R	815	2	1.130	1.000	921	0.00	1.00
SB											
Left	1337	0.95	1407	L	915	2	1.030	1.000	942	1.00	0.00
Thru	211	0.95	222	LT	714	2	1.050	1.000	750	0.69	0.00

Saturation Flow Adjustment Worksheet

Direction / LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
WB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LR	1900	1	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.97	1727
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
NB											
TR	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.88	1.00	3292
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
SB											
L	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	3539
LT	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.97	3601

Streets: (E-W) SR-2      (N-S) HUNTER/MT VIEW RD  
 Analyst: TC      File Name: AREC25PM.HC9  
 Area Type: Other      2-7-1 2025 PM  
 Comment: recommended

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
WB						
L	984	3539	0.278	0.314	1112	0.885 *
LR	423	1727	0.245	0.314	543	0.779
R	834	3167	0.263	0.314	995	0.838
NB						
TR	276	3292	0.084	0.300	988	0.279
R	921	3167	0.291	0.300	950	0.969 *
SB						
L	942	3539	0.266	0.257	910	1.035 *
LT	750	3601	0.208	0.257	926	0.810
				Sum (v/s) critical = 0.835		
Lost Time/Cycle, L =		9.0 sec	Critical v/c(x)		= 0.958	

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
WB											
L	0.885	0.314	17.3	0.850	1112	16	6.2	21.0	C	19.8	C
LR	0.779	0.314	16.6	0.850	543	16	4.9	19.0	C		
R	0.838	0.314	17.0	0.850	995	16	4.5	19.0	C		
NB											
TR	0.279	0.300	14.2	0.850	988	16	0.0	12.1	B	27.4	D
R	0.969	0.300	18.4	0.850	950	16	16.4	32.0	D		
SB											
L	1.035	0.257	19.8	0.850	910	16	32.3	49.1	E	36.0	D
LT	0.810	0.257	18.5	0.850	926	16	3.8	19.6	C		
Intersection Delay =						27.0 sec/veh					
										Intersection LOS = D	



HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRECO5PM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		604	810		1284					104		82
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
RTOR Vols			0			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*	*		Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right			*		WB Right			
Green		15.0A	25.0A		Green	10.0A		
Yellow/AR		3.0	3.0		Yellow/AR	3.0		
Cycle Length:	59 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane Group:	Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	
								Delay	LOS
EB T		947	3725	0.705	0.254	14.6	B	6.0	B
EB R		3006	3167	0.321	0.949	0.1	A		
WB T		2368	5588	0.628	0.424	9.0	B	9.0	B
SB L		300	1770	0.363	0.169	14.4	B	9.1	B
SB R		1020	1583	0.084	0.644	2.6	A		

Intersection Delay = 7.6 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.598

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

=====  
 Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRECO5PM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		604	810		1284					104		82
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N		N	N		N				N		N
Bus Stops			0			0						0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			0			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*	*		Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right			*		WB Right			
Green		15.0A	25.0A		Green	10.0A		
Yellow/AR		3.0	3.0		Yellow/AR	3.0		
Cycle Length:	59 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	947	3725	0.705	0.254	14.6	B	6.0	B
	R	3006	3167	0.321	0.949	0.1	A		
WB	T	2368	5588	0.628	0.424	9.0	B	9.0	B
SB	L	300	1770	0.363	0.169	14.4	B	9.1	B
	R	1020	1583	0.084	0.644	2.6	A		

Intersection Delay = 7.6 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.598

Center For Microcomputers In Transportation  
 University of Florida  
 512 Weil Hall  
 Gainesville, FL 32611-2083 (904) 392-0378

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRECO5PM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		604	810		1284					104		82
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N		N	N		N				N		N
Bus Stops			0			0						0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			0			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*			Thru			
Right		*	*		Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right			*		WB Right			
Green	15.0A	25.0A			Green	10.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0		

Cycle Length: 59 secs Phase combination order: #1 #2 #5

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRECO5PM.HC9  
 Area Type: Other 2-7-1 2005 AM  
 Comment: recommended

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Thru	604	0.95	636	T	636	2	1.050	1.000	668	0.00	0.00
Right	810	0.95	853	R	853	2	1.130	1.000	964	0.00	1.00
WB											
Thru	1284	0.95	1352	T	1352	3	1.100	1.000	1487	0.00	0.00
SB											
Left	104	0.95	109	L	109	1	1.000	1.000	109	1.00	0.00
Right	82	0.95	86	R	86	1	1.000	1.000	86	0.00	1.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
T	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	3725
R	1900	2	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	3167
WB											
T	1900	3	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	5588
SB											
L	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.95	1770
R	1900	1	1.00	0.98	1.00	1.00	1.00	1.00	0.85	1.00	1583

HCS: Signalized Intersection      Version 2.4g      03-07-2001 3  
 =====  
 Streets: (E-W) SR-2      (N-S) I-75 SB Exit  
 Analyst: TC      File Name: BRECO5PM.HC9  
 Area Type: Other      2-7-1 2005 AM  
 Comment: recommended  
 =====

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	668	3725	0.179	0.254	947	0.705 *
R	964	3167	0.304	0.949	3006	0.321
WB						
T	1487	5588	0.266	0.424	2368	0.628 *
NB						
SB						
L	109	1770	0.062	0.169	300	0.363 *
R	86	1583	0.054	0.644	1020	0.084
			Sum (v/s) critical = 0.507			
Lost Time/Cycle, L = 9.0 sec			Critical v/c(x) = 0.598			

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.705	0.254	15.2	0.850	947	16	1.7	14.6	B	6.0	B
R	0.321	0.949	0.1	0.850	3006	16	0.0	0.1	A		
WB											
T	0.628	0.424	10.1	0.850	2368	16	0.4	9.0	B	9.0	B
NB											
SB											
L	0.363	0.169	16.5	0.850	300	16	0.3	14.4	B	9.1	B
R	0.084	0.644	3.0	0.850	1020	16	0.0	2.6	A		
			Intersection Delay = 7.6 sec/veh Intersection LOS = B								

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		826	540		1296					136		118
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
RTOR Vols			0			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*						
Right		*	*					
Peds								
WB Left								
Thru			*					
Right								
Peds								
NB Right								
SB Right			*					
Green		15.0A	25.0A			10.0A		
Yellow/AR		3.0	3.0			3.0		
Cycle Length:	59 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	947	3725	0.963	0.254	29.4	D	17.3	C
	R	3006	3167	0.214	0.949	0.1	A		
WB	T	2368	5588	0.633	0.424	9.1	B	9.1	B
SB	L	300	1770	0.477	0.169	15.2	C	9.4	B
	R	1020	1583	0.122	0.644	2.6	A		

Intersection Delay = 12.9 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.701

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		826	540		1296					136		118
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade			0			0						0
% Heavy Veh			2			2				2		2
Parking	N		N	N		N				N		N
Bus Stops						0						0
Con. Peds						0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type			3			3				3		3
RTOR Vols						0						0
Lost Time		3.00	3.00		3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*						
Right		*	*					
Peds								
WB Left								
Thru			*					
Right								
Peds								
NB Right								
SB Right			*					
Green		15.0A	25.0A					
Yellow/AR		3.0	3.0					
Cycle Length:		59 secs						
Phase combination order:		#1 #2 #5						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	947	3725	0.963	0.254	29.4	D	17.3	C
	R	3006	3167	0.214	0.949	0.1	A		
WB	T	2368	5588	0.633	0.424	9.1	B	9.1	B
SB	L	300	1770	0.477	0.169	15.2	C	9.4	B
	R	1020	1583	0.122	0.644	2.6	A		

Intersection Delay = 12.9 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.701

Center For Microcomputers In Transportation  
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Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC05PM.HC9  
 Area Type: Other 2-7-1 2005 PM  
 Comment: recommended

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		826	540		1296					136		118
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			0			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*				Thru			
Right	*	*			Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right			*		WB Right			
Green	15.0A	25.0A			Green	10.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0		

Cycle Length: 59 secs Phase combination order: #1 #2 #5





Streets: (E-W) SR-2      (N-S) I-75 SB Exit  
 Analyst: TC      File Name: BRC05PM.HC9  
 Area Type: Other      2-7-1 2005 PM  
 Comment: recommended

Capacity Analysis Worksheet

Direction / LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	912	3725	0.245	0.254	947	0.963 *
R	642	3167	0.203	0.949	3006	0.214
WB						
T	1500	5588	0.268	0.424	2368	0.633 *
NB						
SB						
L	143	1770	0.081	0.169	300	0.477 *
R	124	1583	0.078	0.644	1020	0.122
			Sum (v/s) critical = 0.594			
Lost Time/Cycle, L = 9.0 sec			Critical v/c(x) = 0.701			

Level of Service Worksheet

Direction / LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.963	0.254	16.5	0.850	947	16	15.4	29.4	D	17.3	C
R	0.214	0.949	0.1	0.850	3006	16	0.0	0.1	A		
WB											
T	0.633	0.424	10.2	0.850	2368	16	0.4	9.1	B	9.1	B
NB											
SB											
L	0.477	0.169	16.8	0.850	300	16	0.9	15.2	C	9.4	B
R	0.122	0.644	3.1	0.850	1020	16	0.0	2.6	A		
			Intersection Delay = 12.9 sec/veh      Intersection LOS = B								

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1090	1220		2310					240		120
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
RTOR Vols			650			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*	*					
Right		*	*					
Peds								
WB Left								
Thru			*					
Right								
Peds								
NB Right								
SB Right		*	*					
Green		22.0A	41.0A			18.0A		
Yellow/AR		3.0	3.0			3.0		
Cycle Length:	90 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2732	0.441	0.733	3.1	A		2.0	A
	R	3061	0.221	0.967	0.0	A			
WB	T	2546	1.051	0.456	43.8	E		43.8	E
SB	L	354	0.715	0.200	26.3	D		17.6	C
	R	1531	0.082	0.967	0.0	A			

Intersection Delay = 25.9 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.499

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1090	1220		2310					240		120
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade			0			0						0
% Heavy Veh			2			2				2		2
Parking	N		N	N		N				N		N
Bus Stops						0						0
Con. Peds						0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type			3			3				3		3
RTOR Vols						650			0			0
Lost Time			3.00			3.00				3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*	*			Thru			
Right	*	*			Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right	*	*			WB Right			
Green	22.0A	41.0A			Green	18.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0		
Cycle Length:	90 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2732	3725	0.441	0.733	3.1	A	2.0	A
	R	3061	3167	0.221	0.967	0.0	A		
WB	T	2546	5588	1.051	0.456	43.8	E	43.8	E
SB	L	354	1770	0.715	0.200	26.3	D	17.6	C
	R	1531	1583	0.082	0.967	0.0	A		

Intersection Delay = 25.9 sec/veh Intersection LOS = D  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.499

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Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BREC25AM.HC9  
 Area Type: Other 2-7-1 2025 AM  
 Comment: recommended  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1090	1220		2310					240		120
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			650			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination		1	2	3	4	5		6	7	8
EB	Left					NB	Left			
	Thru	*	*				Thru			
	Right	*	*				Right			
	Peds						Peds			
WB	Left					SB	Left	*		
	Thru		*				Thru			
	Right						Right	*		
	Peds						Peds			
NB	Right					EB	Right	*		
SB	Right	*	*			WB	Right			
Green		22.0A	41.0A			Green	18.0A			
Yellow/AR		3.0	3.0			Yellow/AR	3.0			

Cycle Length: 90 secs Phase combination order: #1 #2 #5



Streets: (E-W) SR-2      (N-S) I-75 SB Exit  
 Analyst: TC      File Name: BREC25AM.HC9  
 Area Type: Other      2-7-1 2025 AM  
 Comment: recommended

Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	1204	3725	0.323	0.733	2732	0.441 *
R	678	3167	0.214	0.967	3061	0.221
WB						
T	2675	5588	0.479	0.456	2546	1.051
NB						
SB						
L	253	1770	0.143	0.200	354	0.715 *
R	126	1583	0.080	0.967	1531	0.082
Lost Time/Cycle, L = 6.0 sec			Sum (v/s) critical = 0.466			
			Critical v/c(x) = 0.499			

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.441	0.733	3.6	0.850	2732	16	0.1	3.1	A	2.0	A
R	0.221	0.967	0.0	0.850	3061	16	0.0	0.0	A		
WB											
T	1.051	0.456	18.6	0.850	2546	16	28.0	43.8	E	43.8	E
NB											
SB											
L	0.715	0.200	25.5	0.850	354	16	4.6	26.3	D	17.6	C
R	0.082	0.967	0.0	0.850	1531	16	0.0	0.0	A		
Intersection Delay = 25.9 sec/veh			Intersection LOS = D								

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1620	810		2090					190		220
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
RTOR Vols			150			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*	*					
Right		*	*					
Peds								
WB Left								
Thru			*					
Right								
Peds								
NB Right								
SB Right			*					
Green		27.0A	35.0A					
Yellow/AR		3.0	3.0					
Cycle Length:	85 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Mvmts	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Cap	Flow
EB	T	2849	3725	0.628	0.765	3.2	A	2.3	A
	R	3055	3167	0.257	0.965	0.1	A		
WB	T	2301	5588	1.052	0.412	45.2	E	45.2	E
SB	L	291	1770	0.686	0.165	26.1	D	14.7	B
	R	969	1583	0.240	0.612	4.9	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.639



HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1620	810		2090					190		220
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0		0				0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru		*	*					
Right		*	*					
Peds								
WB Left								
Thru			*					
Right								
Peds								
NB Right								
SB Right			*					
Green		27.0A	35.0A			14.0A		
Yellow/AR		3.0	3.0			3.0		
Cycle Length:	85 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2849	3725	0.628	0.765	3.2	A	2.3	A
	R	3055	3167	0.257	0.965	0.1	A		
WB	T	2301	5588	1.052	0.412	45.2	E	45.2	E
SB	L	291	1770	0.686	0.165	26.1	D	14.7	B
	R	969	1583	0.240	0.612	4.9	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.639

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Streets: (E-W) SR-2 (N-S) I-75 SB Exit  
 Analyst: TC File Name: BRC25PM.HC9  
 Area Type: Other 2-7-1 2025 PM  
 Comment: recommended  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	2	0	3	0	0	0	0	1	0	1
Volumes		1620	810		2090					190		220
PHF or PK15		0.95	0.95		0.95					0.95		0.95
Lane W (ft)		12.0	12.0		12.0					12.0		12.0
Grade		0			0						0	
% Heavy Veh		2	2		2					2		2
Parking	N	N		N	N					N	N	
Bus Stops			0			0						0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N					(Y/N)	N	
Arr Type		3	3		3					3		3
RTOR Vols			150			0						0
Lost Time		3.00	3.00		3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*	*			Thru			
Right	*	*			Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right	*		
SB Right			*		WB Right			
Green	27.0A	35.0A			Green	14.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0		

Cycle Length: 85 secs Phase combination order: #1 #2 #5



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=====
Streets: (E-W) SR-2 (N-S) I-75 SB Exit
Analyst: TC File Name: BRC25PM.HC9
Area Type: Other 2-7-1 2025 PM
Comment: recommended
=====
  
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Capacity Analysis Worksheet

Direction /LnGrp	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	Lane Group Capacity (c)	v/c Ratio
EB						
T	1790	3725	0.480	0.765	2849	0.628 *
R	785	3167	0.248	0.965	3055	0.257
WB						
T	2420	5588	0.433	0.412	2301	1.052
NB						
SB						
L	200	1770	0.113	0.165	291	0.687 *
R	232	1583	0.147	0.612	969	0.239
			Sum (v/s) critical = 0.593			
Lost Time/Cycle, L = 6.0 sec			Critical v/c(x) = 0.639			

Level of Service Worksheet

Direction /LnGrp	v/c Ratio	g/C Ratio	Delay d 1	Del Adj Fact	Lane Group Cap	Calib d 2	Delay d 2	Lane Grp Del	Lane Grp LOS	Delay By App	LOS By App
EB											
T	0.628	0.765	3.4	0.850	2849	16	0.3	3.2	A	2.3	A
R	0.257	0.965	0.1	0.850	3055	16	0.0	0.1	A		
WB											
T	1.052	0.412	19.0	0.850	2301	16	29.0	45.2	E	45.2	E
NB											
SB											
L	0.686	0.165	25.4	0.850	291	16	4.5	26.1	D	14.7	B
R	0.240	0.612	5.7	0.850	969	16	0.0	4.9	A		
			Intersection Delay = 22.4 sec/veh Intersection LOS = C								

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	540		490					1484	136	118	590	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	15.0A				Green	45.0A	5.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	74 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	583	2875	1.004	0.203	48.7	E	32.9	D
	R	800	2573	0.729	0.311	17.0	C		
NB	TR	1817	2988	0.985	0.608	22.5	C	22.5	C
SB	L	238	1438	0.521	0.716	16.7	C	6.6	B
	T	1841	3027	0.354	0.608	4.7	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.914

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	540		490					1484	136	118	590	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade			0					0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3		3	3	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	15.0A				Green	45.0A	5.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	74 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	583	2875	1.004	0.203	48.7	E	32.9	D
	R	800	2573	0.729	0.311	17.0	C		
NB	TR	1817	2988	0.985	0.608	22.5	C	22.5	C
SB	L	238	1438	0.521	0.716	16.7	C	6.6	B
	T	1841	3027	0.354	0.608	4.7	A		

Intersection Delay = 22.4 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.914

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Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2005  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	540		490					1484	136	118	590	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade		0						0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3		3	3	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	15.0A				Green	45.0A	5.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 74 secs Phase combination order: #1 #5 #6





=====  
 Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	810		740					976	104	82	880	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru					*			
Right	*				*			
Peds								
WB Left						*		
Thru					*			
Right								
Peds								
NB Right							*	
SB Right								
Green	25.0A				35.0A	5.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	74 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane Group:	Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	Delay	LOS
EB L	971		2875	0.905	0.338	23.6	C		18.5	C
R	1147		2573	0.767	0.446	13.4	B			
NB TR	1411		2983	0.846	0.473	14.6	B		14.6	B
SB L	237		1438	0.363	0.581	13.7	B		11.0	B
T	1432		3027	0.679	0.473	10.7	B			

Intersection Delay = 15.3 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.888

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005

	Eastbound			Westbound			Northbound			Southbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
No. Lanes	2	0	2	0	0	0	0	2	<	0	1	2	0
Volumes	810		740					976	104		82	880	
PHF or PK15	0.95		0.95					0.95	0.95		0.95	0.95	
Lane W (ft)	12.0		12.0					12.0			12.0	12.0	
Grade			0					0				0	
% Heavy Veh	13		13					13	13		13	13	
Parking	N		N				N	N		N	N		
Bus Stops			0						0			0	
Con. Peds			0			0			0			0	
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N		
Arr Type	3		3					3			3	3	
RTOR Vols			0						0			0	
Lost Time	3.00		3.00					3.00	3.00		3.00	3.00	
Prop. Share													
Prop. Prot.													

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*						
Thru						*		
Right		*				*		
Peds								
WB Left						*	*	
Thru						*		
Right								
Peds								
NB Right							*	
SB Right								*
Green		25.0A				35.0A	5.0A	
Yellow/AR		3.0				3.0	3.0	
Cycle Length:	74 secs Phase combination order: #1 #5 #6							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	971	2875	0.905	0.338	23.6	C	18.5	C
	R	1147	2573	0.767	0.446	13.4	B		
NB	TR	1411	2983	0.846	0.473	14.6	B	14.6	B
SB	L	237	1438	0.363	0.581	13.7	B	11.0	B
	T	1432	3027	0.679	0.473	10.7	B		

Intersection Delay = 15.3 sec/veh Intersection LOS = C  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.888

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Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 0	1	2	0
Volumes	810		740					976	104	82	880	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0		12.0	12.0	
Grade		0						0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3		3	3	
RTOR Vols			0							0		0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	35.0A	5.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 74 secs Phase combination order: #1 #5 #6

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC05PM.HC9  
 Area Type: CBD 1-30-1 PM  
 Comment: 2005

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	No. Ln	Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Left	810	0.95	853	L	853	2	1.030	1.000	879	1.00	0.00
Right	740	0.95	779	R	779	2	1.130	1.000	880	0.00	1.00
NB											
Thru	976	0.95	1027	TR	1136	2	1.050	1.000	1193	0.00	0.10
Right	104	0.95	109								
SB											
Left	82	0.95	86	L	86	1	1.000	1.000	86	1.00	0.00
Thru	880	0.95	926	T	926	2	1.050	1.000	972	0.00	0.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
L	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	2875
R	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	0.85	1.00	2573
NB											
TR	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	0.99	1.00	2983
SB											
L	1900	1	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	1438
T	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	1.00	3027

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	40.0A	6.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0		0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0						0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share									0			
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	25.0A				40.0A	6.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		898	2875	0.978	0.313	36.2	D	30.0	D
	R		1094	2573	0.936	0.425	24.6	C		
NB	TR		1514	3027	2.009	0.500	*	*	*	*
	R		643	1286	0.148	0.500	7.0	B		
SB	L		237	1438	0.979	0.613	60.8	F	20.8	C
	T		1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

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Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade		0						0			0	
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	40.0A	6.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 80 secs Phase combination order: #1 #5 #6

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25AM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Lane Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Left	810	0.95	853	L	853	2	1.030	1.000	879	1.00	0.00
Right	860	0.95	905	R	905	2	1.130	1.000	1023	0.00	1.00
NB											
Thru	2750	0.95	2895	TR	2895	2	1.050	1.000	3040	0.00	0.00
Right	190	0.95	95	R	95	1	1.000	1.000	95	0.00	1.00
SB											
Left	220	0.95	232	L	232	1	1.000	1.000	232	1.00	0.00
Thru	1110	0.95	1168	T	1168	2	1.050	1.000	1226	0.00	0.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
L	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	2875
R	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	0.85	1.00	2573
NB											
TR	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	1.00	3027
R	1900	1	1.00	0.88	1.00	1.00	1.00	0.90	0.85	1.00	1286
SB											
L	1900	1	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	1438
T	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	1.00	3027



HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25PM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru					*			
Right	*				*			
Peds								
WB Left						*	*	
Thru					*			
Right								
Peds								
NB Right							*	
SB Right								
Green	25.0A				40.0A	6.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Delay	LOS	
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	898	2875	0.978	0.313	36.2	D	30.0	D
	R	1094	2573	0.936	0.425	24.6	C		
NB	TR	1514	3027	2.009	0.500	*	*	*	*
	R	643	1286	0.148	0.500	7.0	B		
SB	L	237	1438	0.979	0.613	60.8	F	20.8	C
	T	1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 03-07-2001  
 Center For Microcomputers In Transportation

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25PM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0			0
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N	N		N	N	
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	
Prop. Share										0		
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	25.0A				40.0A	6.0A		
Yellow/AR	3.0				3.0	3.0		
Cycle Length:	80 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		898	2875	0.978	0.313	36.2	D	30.0	D
	R		1094	2573	0.936	0.425	24.6	C		
NB	TR		1514	3027	2.009	0.500	*	*	*	*
	R		643	1286	0.148	0.500	7.0	B		
SB	L		237	1438	0.979	0.613	60.8	F	20.8	C
	T		1514	3027	0.810	0.500	13.3	B		

Intersection Delay = \* (sec/veh) Intersection LOS = \*  
 (g/C)\*(V/c) is greater than one. Calculation of D1 is infeasible.

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 =====

Streets: (E-W) SR-2 (N-S) Exit Ramp  
 Analyst: TC File Name: INTC25PM.HC9  
 Area Type: CBD 1-30-1 AM  
 Comment: 2025  
 =====

Traffic and Roadway Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	2	0	0	0	0	2	< 1	1	2	0
Volumes	810		860					2750	190	220	1110	
PHF or PK15	0.95		0.95					0.95	0.95	0.95	0.95	
Lane W (ft)	12.0		12.0					12.0	12.0	12.0	12.0	
Grade			0						0			0
% Heavy Veh	13		13					13	13	13	13	
Parking	N		N				N		N	N		N
Bus Stops			0							0		0
Con. Peds			0			0				0		0
Ped Button	(Y/N)	N					(Y/N)	N		(Y/N)	N	
Arr Type	3		3					3	3	3	3	
RTOR Vols			0						100			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left	*	*	
Thru					Thru	*		
Right					Right			
Peds					Peds			
NB Right					EB Right		*	
SB Right					WB Right			
Green	25.0A				Green	40.0A	6.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 80 secs Phase combination order: #1 #5 #6

Streets: (E-W) SR-2      (N-S) Exit Ramp  
 Analyst: TC      File Name: INTC25PM.HC9  
 Area Type: CBD      1-30-1 AM  
 Comment: 2025

Volume Adjustment Worksheet

Direction/ Mvt	Mvt Vol	PHF	Adj Vol	Lane Grp	Lane Grp Vol	Lane No. Ln	Util Fact	Growth Fact	Adj Grp Vol	Prop LT	Prop RT
EB											
Left	810	0.95	853	L	853	2	1.030	1.000	879	1.00	0.00
Right	860	0.95	905	R	905	2	1.130	1.000	1023	0.00	1.00
NB											
Thru	2750	0.95	2895	TR	2895	2	1.050	1.000	3040	0.00	0.00
Right	190	0.95	95	R	95	1	1.000	1.000	95	0.00	1.00
SB											
Left	220	0.95	232	L	232	1	1.000	1.000	232	1.00	0.00
Thru	1110	0.95	1168	T	1168	2	1.050	1.000	1226	0.00	0.00

Saturation Flow Adjustment Worksheet

Direction /LnGrp	Ideal Sat Flow	No. Lns	f W	f HV	f G	f p	f BB	f A	f RT	f LT	Adj Sat Flow
EB											
L	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	2875
R	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	0.85	1.00	2573
NB											
TR	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	1.00	3027
R	1900	1	1.00	0.88	1.00	1.00	1.00	0.90	0.85	1.00	1286
SB											
L	1900	1	1.00	0.88	1.00	1.00	1.00	0.90	1.00	0.95	1438
T	1900	2	1.00	0.88	1.00	1.00	1.00	0.90	1.00	1.00	3027

**APPENDIX E**

**CAPACITY ANALYSIS: SERVICE LIFE**

=====  
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 Ph: (904) 392-0378  
 =====

File Name ..... 5AM2017.HC3  
 Location..... 5 2025  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	5988	4174
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	2280	1589
Level of Service (LOS)	E	D
Projected Speed at Flow Rate (mph)	53.7	64.6
Density (pc/mi/ln)	42.48	24.60
Density (veh/mi/ln)	39.16	22.67
Speed of prevailing traffic (mph)	53.7	64.6

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 Gainesville, FL 32611-2083  
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 =====

File Name ..... 1AM2018.HC3  
 Location..... 1 2018  
 From/To.....  
 Analyst..... tc  
 Time of Analysis..... am  
 Date of Analysis..... 01/17/01  
 Other Information....

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	7967	5354
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	17.0	17.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	4	5
Free-Flow Speed (mph)	65.0	65.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.922	1.00	1.00
Dir 2	1.50		0.922	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	2275	1223
Level of Service (LOS)	E	C
Projected Speed at Flow Rate (mph)	53.8	65.0
Density (pc/mi/ln)	42.26	18.82
Density (veh/mi/ln)	38.95	17.34
Speed of prevailing traffic (mph)	53.8	65.0

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Gainesville, FL 32611-2083
Ph: (904) 392-0378
=====

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File Name ..... 2DPM19.HC5
Location..... 2 Diverge
Analyst..... tc
Time of Analysis..... 2019 PM
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	8138	2194	312
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	4	2	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 2000 ft.  
 Distance to upstream ramp is 2200 ft.



=====  
 File Name ..... 2DPM19.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	8138	65	4	12.0	1.00	0.948	1.00	9037
Ramp	2194	45	2	12.0	1.00	0.948	1.00	2436
Upstream	312			12.0	0.86	0.948	1.00	403

Estimation of V12:

-----  
 PFD = 0.260      Using Equation: Special App.      V12 = 4152

Capacity Checks:

-----  
 VFO+VR = 9037      V12 = 4152

LOS, Speed, and Density:

-----

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	22
Computed Speed (mph)	53

```
=====
Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-2083
Ph: (904) 392-0378
=====
```

```
File Name ..... 4DIV2018.HC5
Location..... 4 Diverge
Analyst..... tc
Time of Analysis..... 2018 am
Driver Population Factor..... 1.00
Date of Analysis..... 1/17/1
Other Information.....
```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Upstream Ramp
Traffic Volume	6122	299	2148
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	11.0	11.0	11.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	65	45	
Obstructions	0	0	2
Distance from Edge (ft)			0.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 600 ft.  
 Distance to upstream ramp is 2200 ft.

=====  
 File Name ..... 4DIV2018.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.948	1.00	1.00
Ramp		1.50		0.948	1.00	1.00
Upstrm		1.50		0.948	0.86	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS (mph)	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	6122	65	3	12.0	1.00	0.948	1.00	6799
Ramp	299	45	1	12.0	1.00	0.948	1.00	332
Upstream	2148			12.0	0.86	0.948	1.00	2774

Estimation of V12:

-----  
 PFD = 0.575      Using Equation: 7      V12 = 4049

Capacity Checks:

-----  
 VFO+VR = 6799      V12 = 4049

LOS, Speed, and Density:

-----

Level of Service (LOS)	D
Computed Density (pc/mi/ln)	34
Computed Speed (mph)	57

**APPENDIX F**

**COST ESTIMATES & D-S-1 FORMS**

## COST DATA SHEET

PROJECT: I-75 & U.S. 11 (SR-2) Interchange Modification Study  
 LOCATION: Hamilton County, Tennessee  
 LENGTH: N/A  
 CROSS SECTION: Varies

### RIGHT-OF-WAY

# Land, Improvements & Damages	(# Acres	12.00 )	4,000,000
Incidentals	(# Tracts	10 )	\$25,000
Relocation Payments	(Residences	0 )	\$0
	(Businesses	1 )	\$200,000
	(Non-Profits	0 )	
<b>Total Right-Of-Way Cost</b>			<b>\$4,225,000</b>

### UTILITY RELOCATION

Reimbursable	\$497,000
Non-Reimbursable	\$1,022,000
<b>Total Utility Adjustment Cost</b>	
	<b>\$1,519,000</b>

### CONSTRUCTION

Clear and Grubbing	\$20,000	
Earthwork	\$310,000	
Pavement Removal	\$25,000	
Drainage (Erosion Control =	\$82,000 )	\$300,000
Structures (Preserv'n/Demol'n =	\$35,000 )	\$360,000
Railroad Crossing	\$0	
Paving	\$787,000	
Retaining Walls	\$0	
Maintenance of Traffic	\$100,000	
Topsoil	\$25,000	
Seeding	\$15,000	
Sodding	\$25,000	
Signing	\$50,000	
Signalization	\$100,000	
Fence	\$30,000	
Guardrail	\$45,000	
Rip-rap or Slope Protection	\$50,000	
Other Construction Items (8.5%)	\$160,000	
Mobilization	<b>\$126,000</b>	
10% Engineering and Contingencies	\$253,000	
<b>Total Construction Cost</b>		<b>\$2,781,000</b>
<b>Preliminary Engineering (10% of Constr.)</b>		<b>\$253,000</b>

<b>TOTAL COST FOR INTERCHANGE MODIFICATION</b>	<b>\$8,778,000</b>
--	--------------------

	<u>Area (ac)</u>	<u>Cost/Acre</u>	<u>Total Cost</u>
<b>Clearing &amp; Grubbing</b>	10.5	\$2,000	<b>\$21,000</b>

<b>Earthwork</b>	<u>Length (ft)</u>	<u>Factor</u>	<u>Total (yd<sup>3</sup>)</u>	<u>Cost / yd<sup>3</sup></u>	
Hunter Rd.	1,000	21.86	21,860		
	1,000	3.45	3,450	25,310	
Mt. View Rd.	1,400	21.86	30,604		
	450	12.59	5,666	36,270	
Loop Ramp	1,400	33.33	46,662		
	800	11.11	8,888	55,550	
Exit, Ent., Taper	1,600	11.11	17,776		
	500	11.11	5,555		
	1,400	8	11,200	34,531	
Access Rd.	450	8.44	3,798	3,798	
			Total: <span style="border: 1px solid black;">155,459</span>		
				\$2.0	<b>\$310,917</b>

<b>Pavement Removal</b>		<u>Total (Lf)</u>	<u>Cost/Lf</u>	
Hunter Rd.		1,650		
Mt. View Rd.		1,500		
Exxon Prop.		300		
		3,450	\$7.25	<b>\$25,013</b>

<b>Drainage</b>		<u>Cost</u>	<u>Total Cost</u>
Lee Hwy.		<b>\$75,000</b>	
I-75 Ramps, Relocated Hunter/Mountainview Road		<b>\$120,000</b>	
Curb & Gutter	1800 ft @ \$12.50 /ft	<b>\$22,500</b>	
			<b>\$217,500</b>

**Erosion Control** **\$82,000**

<b>Structures</b>						
	Bridges					
		<u>Width</u>	<u>Length</u>	<u>Area</u>	<u>Cost/sf</u>	<u>Total Cost</u>
New Hunter Rd.	Additional	12	175	2,100	\$60	<b>\$126,000</b>
New I-75 Widening	Additional	12	228	2,734	\$60	<b>\$164,045</b>
	Demolition					
		<u>Width</u>	<u>Length</u>	<u>Area</u>	<u>Cost/sf</u>	<u>Total Cost</u>
	Hunter Rd.	40	175	7,000	\$5	<b>\$35,000</b>
				Total Demolition Cost:		<b>\$35,000</b>
				Total Structure Cost:		<b>\$325,045</b>

<b>Fence</b>	<u>Length</u>	<u>Cost</u>	<b>\$30,000</b>
	3,000	\$10	

<b>Paving</b>		<u>Cost</u>	<u>Length</u>	<u>Total Cost</u>
Lee Hwy.		\$290	400	<b>\$116,000</b>

Hunter Rd.	\$15	1,000	\$15,000
	\$130	1,000	\$130,000
Mt. View Rd.	\$125	1,400	\$175,000
	\$80	1,500	\$120,000
Loop Ramp	\$80	1,400	\$112,000
	\$60	800	\$48,000
Exit & Ent. Ramps & Tapers	\$80	600	\$48,000
Access Rd. to Krystal	\$38	600	\$22,800

Total Paving Cost: **\$786,800**

**Maintenance of Traffic**

**\$100,000**

		<u>Length</u>	<u>Factor</u>		<u>Cost per</u>	
<b>Topsoil</b>	Hunter, Mountain View Rds.	7,200	0.283	2038		<b>\$26,018</b>
	Loop Ramp	4,400	0.565	2486		
	Exit, Ent. Ramp, Taper	7,000	0.283	1981		
				6505	\$4.00	

		<u>Length</u>	<u>Factor</u>		<u>Cost per</u>	
<b>Seeding</b>	Hunter, Mountain View Rds.	7,800	0.030	234		<b>\$15,092</b>
	Loop Ramp	4,600	0.061	281		
	Exit, Ent. Ramp, Taper	8,000	0.030	240		
				755	\$20.00	

<b>Sodding</b>	<u>Area (yd<sup>2</sup>)</u>	<u>Cost per</u>		
	5,000	\$5.00		
			Total Sod	<b>\$25,000</b>

**Signing** **\$50,000**

**Signalization** Modification of two (2) signals **\$100,000**

**Barrier Rail** (275' @ \$25/ft) **\$6,875**

<b>Guardrail</b>		<u>Number of Terminals</u>	<u>Cost</u>	<u>Total Cost</u>
	Length of rail <b>2,100</b> ft	<b>6</b>	\$2,000	\$12,000
	Length of Median Barrier 250 feet		\$10	\$21,000
			Total Guardrai & Median Barrier:	<b>\$45,000</b>

**Rip-Rap** Tons 800 Cost Per \$54.00 **\$50,075**

STATE OF TENNESSEE-DEPARTMENT OF HIGHWAY

UTILITY REPORT FOR LOCATION STUDY

ROUTE NO. I-75&U.S. 11(S.R.2) ALTERNATE \_\_\_\_\_  
 PROJECT NO. \_\_\_\_\_ COUNTY Hamilton  
 FROM Relocated Hunter Road/Mtn. View Road  
 TO: \_\_\_\_\_

<u>UTILITY</u>	<u>TOTAL COST OF ADJUSTMENT</u>	<u>REIMBURSEABLE BY STATE</u>
<u>Electric Power Board of Chatt.</u>	\$ <u>77,500</u>	\$ <u>3,800</u>
<u>Century Telephone Company</u>	\$ <u>279,200</u>	\$ <u>16,000</u>
<u>Eastside Utility District (water)</u>	\$ <u>342,700</u>	\$ <u>17,000</u>
<u>Hamilton Co. Wastewater Authority</u>	\$ <u>600,500</u>	\$ <u>378,000</u>
<u>Atlanta Light &amp; Gas CO.</u>	\$ <u>131,800</u>	\$ <u>6,500</u>
<u>Duke Energy (E,T.N.G.)</u>	\$ <u>75,000</u>	\$ <u>75,000</u>
<u>Comcast CATV</u>	\$ <u>12,000</u>	\$ <u>0</u>
	\$ _____	\$ _____
<u>TOTAL</u>	\$ <u>1,518,700</u>	\$ <u>496,300</u>

RAILROAD YES  NO

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PREPARED BY: James C. Justice

DATE: 04-12-01

APPROVED BY \_\_\_\_\_

DATE \_\_\_\_\_




RIGHT-OF-WAY REPORT FOR LOCATION STUDY

STATE PROJ. I 75 - US 11 (S.R. 2) COUNTY Hamilton  
 FEDERAL PROJ. Interchange Modification PROJ. DESC. \_\_\_\_\_

ESTIMATED RIGHT-OF-WAY COSTS

COST ITEMS	ALT. EST. COST	ALT. EST. COST	ALT. EST. COST	ALT. EST. COST	ALT. EST. COST
LAND REQUIRED	\$ 1,200,000	\$	\$	\$	\$
ACRES	12 +/-				
IMPROVEMENTS	\$ 300,000	\$	\$	\$	\$
NUMBER	1				
DAMAGES	\$ 2,500,000	\$	\$	\$	\$
INCIDENTALS	\$ 25,000	\$	\$	\$	\$
RESIDENTIAL REL.	\$ -0-	\$	\$	\$	\$
NUMBER	-0-				
BUS. & FARM REL.	\$ 200,000	\$	\$	\$	\$
NUMBER	3				
TOTAL EST. COST OF ROW	\$4,225,000	\$	\$	\$	\$

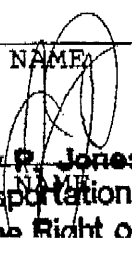
REMARKS: This assumes a slight shift toward the Golden Gallon (Exxon) to reduce damages to the Motel. Thus, Golden Gallon and Krystal are both heavily damaged.

  
JERRY P. JONES  
 NAME

PREPARED BY

4-12-01  
 DATE

RECOMMENDED

  
Jerry P. Jones  
 NAME  
 Transportation Specialist  
 for the Right of Way Dept.

APPROVED

DATE  
4-12-01  
 DATE

**TDOT DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE**

ROUTE: Relocated Hunter Road ALTERNATE: \_\_\_\_\_ SECTION: \_\_\_\_\_  
 REGION: II COUNTY: Hamilton PROJECT NO.: \_\_\_\_\_  
 LOCATION FROM: \_\_\_\_\_  
 TO: \_\_\_\_\_

PRESENT ADT (2005)	14,520
FUTURE ADT (2025)	20,650
PERCENT TRUCKS	13% (ADT) 11% (DHV)
DHV (2025)	2,065
FUNCTIONAL CLASSIFICATION	Local
MINIMUM DESIGN SPEED	35 mph
ACCESS CONTROL	None
MAXIMUM CURVE	16 00' (0.06 Max S.E.)
MAXIMUM GRADE	9%
MINIMUM STOPPING SIGHT DISTANCE	250'
SURFACE WIDTH	*
NUMBER OF LANES	*
USABLE SHOULDER WIDTH	*
MEDIAN WIDTH	0
MINIMUM RIGHT OF WAY	112' **
SIGNALIZATION	Yes ***

REMARKS: \* Varies ( See Plans for details)  
 \*\* Easements may be required outside of the Proposed Right-of-Way limits  
 \*\*\* Signalized intersection with SR-2 and Relocated Mountain View Road

**TDOT DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE**

ROUTE: Relocated Mt View Road ALTERNATE: \_\_\_\_\_ SECTION: \_\_\_\_\_  
 REGION: II COUNTY: Hamilton PROJECT NO.: \_\_\_\_\_  
 LOCATION FROM: \_\_\_\_\_  
 TO: \_\_\_\_\_

PRESENT ADT (2005)	17,980
FUTURE ADT (2025)	26,420
PERCENT TRUCKS	13% (ADT) 11% (DHV)
DHV (2025)	2,642
FUNCTIONAL CLASSIFICATION	Local
MINIMUM DESIGN SPEED	35 mph
ACCESS CONTROL	None
MAXIMUM CURVE	16 00' (0.06 Max S.E.)
MAXIMUM GRADE	9%
MINIMUM STOPPING SIGHT DISTANCE	250'
SURFACE WIDTH	*
NUMBER OF LANES	*
USABLE SHOULDER WIDTH	*
MEDIAN WIDTH	0
MINIMUM RIGHT OF WAY	112' **
SIGNALIZATION	Yes ***

REMARKS: \* Varies ( See Plans for details)  
 \*\* Easements may be required outside of the Proposed Right-of-Way limits  
 \*\*\* Signalized intersection with SR-2 and Relocated Hunter Road

**APPENDIX G**  
**IMPROVEMENTS UNDER DESIGN**

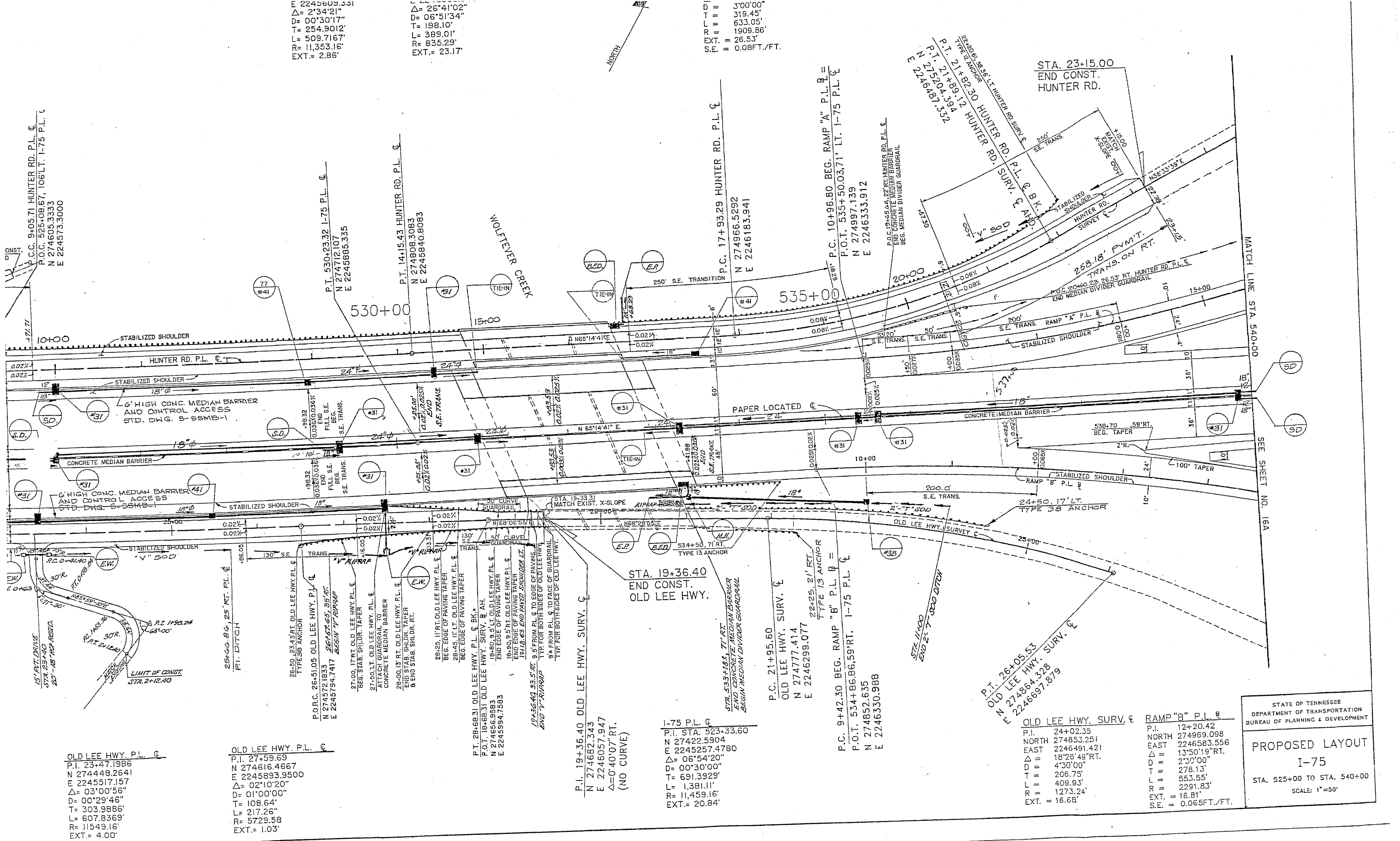
# I-75 & SR-2 INTERCHANGE MODIFICATION STUDY (I.M.S.) IMPROVEMENTS UNDER DESIGN



E 2245609.331  
 Δ = 2°34'21"  
 D = 00°30'17"  
 T = 254.9012'  
 L = 509.7167'  
 R = 11,353.16'  
 EXT = 2.86'

Δ = 26°41'02"  
 D = 06°51'34"  
 T = 198.10'  
 L = 389.01'  
 R = 835.29'  
 EXT = 23.17'

D = 3°00'00"  
 T = 319.45'  
 L = 633.05'  
 R = 1909.86'  
 EXT = 26.53'  
 S.F. = 0.08FT./FT.



C.C. 9+05.71 HUNTER RD. P.L. &  
 P.O.C. 525+08.67, 106LT. 1-75 P.L. &  
 N 274605.3333  
 E 224573.3000

P.T. 530+23.32 1-75 P.L. &  
 N 274712.107  
 E 2245885.335

P.T. 14+15.43 HUNTER RD. P.L. &  
 N 274808.3083  
 E 2245840.8083

P.C. 17+93.29 HUNTER RD. P.L. &  
 N 274966.5292  
 E 2246183.941

P.C. 10+96.80 BEG. RAMP "A" P.L. &  
 P.O.T. 535+50.03, 71' LT. 1-75 P.L. &  
 N 274997.139  
 E 2246333.912

P.T. 21+82.30 HUNTER RD. SURV. & B.K. &  
 P.T. 21+89.12 HUNTER RD. SURV. & B.K. &  
 N 275204.394  
 E 2246487.352

STA. 23+15.00  
 END CONST.  
 HUNTER RD.

MATCH LINE STA. 540+00  
 SEE SHEET NO. 16A

OLD LEE HWY. P.L. &  
 P.I. 23+47.1986  
 N 274448.2641  
 E 2245517.157  
 Δ = 03°00'56"  
 D = 00°29'46"  
 T = 303.9886'  
 L = 607.8369'  
 R = 11549.16'  
 EXT = 4.00'

OLD LEE HWY. P.L. &  
 P.I. 27+59.69  
 N 274616.4667  
 E 2245893.9500  
 Δ = 02°10'20"  
 D = 01°00'00"  
 T = 108.64'  
 L = 217.26'  
 R = 5729.58  
 EXT = 1.03'

P.I. 19+36.40 OLD LEE HWY. SURV. &  
 N 274682.343  
 E 2246057.947  
 Δ = 0°40'07" RT.  
 (NO CURVE)

1-75 P.L. &  
 P.I. STA. 523+33.60  
 N 27422.5904  
 E 2245257.4780  
 Δ = 06°54'20"  
 D = 00°30'00"  
 T = 691.3929'  
 L = 1,381.11'  
 R = 11,459.16'  
 EXT = 20.84'

P.C. 21+95.60  
 OLD LEE HWY. SURV. &  
 N 274777.414  
 E 2246299.077

P.C. 9+42.30 BEG. RAMP "B" P.L. &  
 P.O.T. 534+86.86, 59' RT. 1-75 P.L. &  
 N 274852.635  
 E 2246330.988

P.T. 26+05.53  
 OLD LEE HWY. SURV. &  
 N 274864.328  
 E 2246697.879

OLD LEE HWY. SURV. &  
 P.I. 24+02.35  
 NORTH 274853.251  
 EAST 2246491.421  
 Δ = 18°26'49" RT.  
 D = 4°30'00"  
 T = 206.75'  
 L = 409.93'  
 R = 1273.24'  
 EXT = 16.68'

RAMP "B" P.L. &  
 P.I. 12+20.42  
 NORTH 274969.098  
 EAST 2246583.556  
 Δ = 13°50'19" RT.  
 D = 2°30'00"  
 T = 278.13'  
 L = 553.55'  
 R = 2291.83'  
 EXT = 16.81'  
 S.E. = 0.065FT./FT.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING & DEVELOPMENT

**PROPOSED LAYOUT**  
 I-75  
 STA. 525+00 TO STA. 540+00  
 SCALE: 1"=50'

TH 275529.892	NORTH 275834.048	NORTH 275641.522	NORTH 276649.909	NORTH 276646.732	NORTH 276653.087	NORTH 275705.419	NORTH 275976.149
T 2247042.707	EAST 2246989.273	EAST 2247167.589	EAST 2250087.732	EAST 2250054.572	EAST 2250120.892	EAST 2247817.368	EAST 2248456.226
10'06"41"LT.	Δ = 49'21"55"RT.	Δ = 38'07"50"RT.	Δ = 44'57"06"LT.	Δ = 44'57"06"LT.	Δ = 44'57"06"LT.	Δ = 17'20"58"LT.	Δ = 11'20'37"LT.
2'30'00"	D = 7'30'00"	D = 18'00'00"	D = 1'00'00"	D = 1'00'00"	D = 0'59'13"	D = 5'00'00"	D = 1'16'24"
202.76'	T = 351.09'	T = 110.01'	T = 2370.44'	T = 2338.99'	T = 2401.88'	T = 174.83'	L = 890.92'
404.46'	L = 658.20'	L = 211.84'	L = 4495.17'	L = 4435.54'	L = 4554.79'	L = 346.99'	R = 4500.00'
2291.83'	R = 763.94'	R = 318.31'	R = 5729.58'	R = 5653.58'	R = 5605.58'	R = 1145.92'	EXT. = 22.14'
= 8.95'	EXT. = 76.82'	EXT. = 18.47'	EXT. = 470.99'	EXT. = 464.74'	EXT. = 477.24'	EXT. = 13.26'	S.E. = 0.036FT./FT.
		S.E. = 0.054FT./FT.	S.E. = 0.036FT./FT.	S.E. = 0.036FT./FT.	S.E. = 0.076FT./FT.	S.E. = 0.076FT./FT.	T = 446.92'

D.C. 02 HUNTER RD. SURV. C BK. =  
D.C. 71.02 MOUNTAIN VIEW RD. SURV. C AHD. =  
D.T. 4+33.29 LEE HWY. SURV. C  
275652.297  
2246858.016

P.T. 33+01.47 MOUNTAIN VIEW RD. SURV. C  
N 275846.753  
E 2247340.138

P.O.T. 16+26.05 RAMP "C" SURV. B BK. =  
P.C. 16+26.05, RAMP "C" P.L. B AHD. =  
N 275688.309  
E 2247643.374

C. 26+43.27 HUNTER RD. SURV. C  
275559.511  
2246770.420

P.O.C. 6+55.85 LEE HWY. SURV. C =  
P.O.T. 19+97.74, RAMP "A" P.L. B  
N 275537.038  
E 2247048.308

P.O.C. 6+63.20 LEE HWY. SURV. C =  
P.O.T. 10+00.00, RAMP "C" SURV. B  
N 275533.545  
E 2247054.782

P.T. 12+57.98 RAMP "C" SURV. B  
N 275652.288  
E 2247277.069

P.C. 10+46.15 RAMP "C" SURV. B  
N 275565.454  
E 2247088.118

P.T. 8+56.56 LEE HWY. SURV. C  
N 275449.293  
E 2247228.755

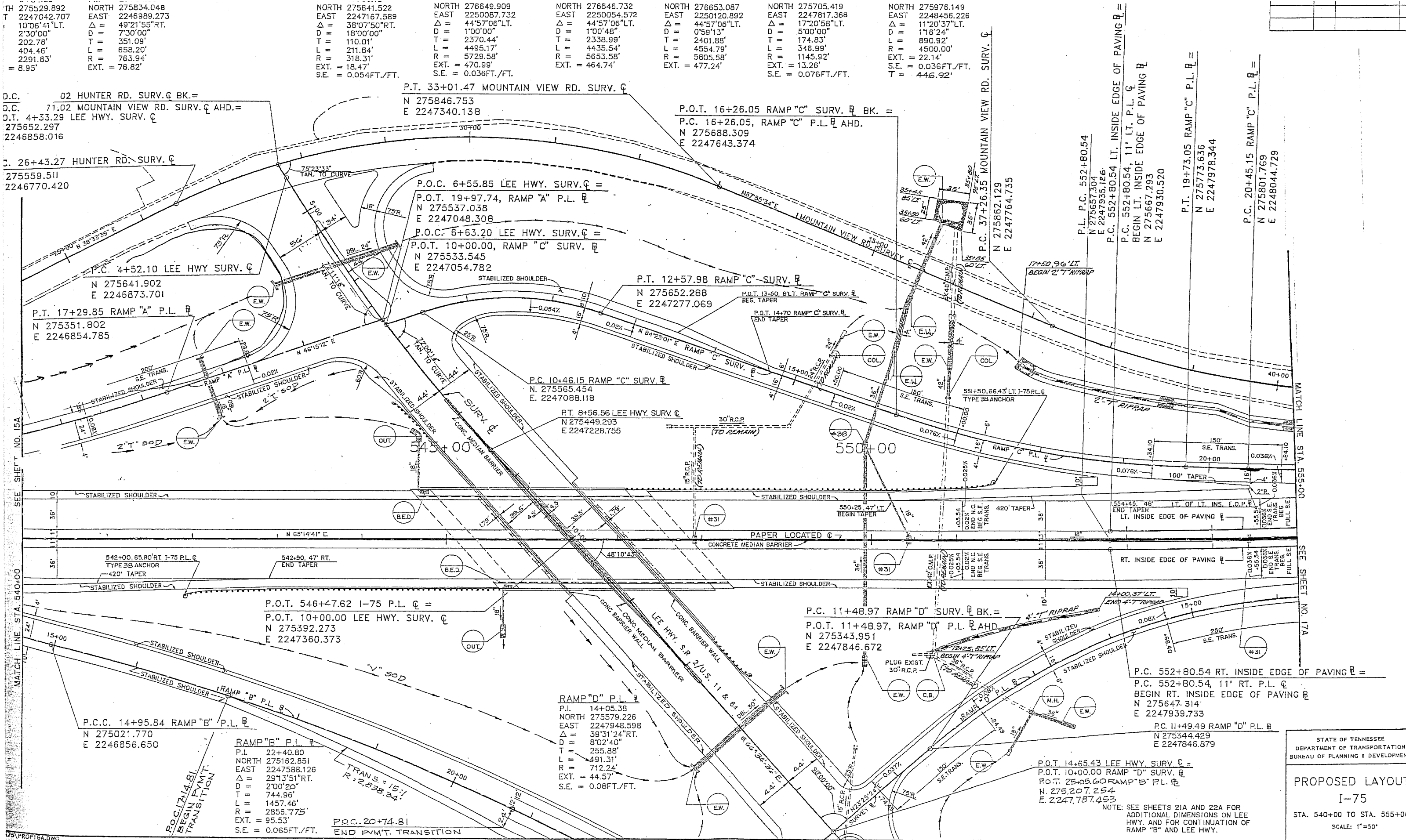
P.C. 11+48.97 RAMP "D" SURV. B BK. =  
P.O.T. 11+48.97, RAMP "D" P.L. B AHD. =  
N 275343.951  
E 2247846.672

P.C. 552+80.54 RT. INSIDE EDGE OF PAVING B =  
P.C. 552+80.54, 11' RT. P.L. C  
BEGIN RT. INSIDE EDGE OF PAVING B  
N 275647.314  
E 2247939.733

P.C. 11+49.49 RAMP "D" P.L. B  
N 275344.429  
E 2247846.879

P.O.T. 14+65.43 LEE HWY. SURV. C =  
P.O.T. 10+00.00 RAMP "D" SURV. B  
P.O.T. 25+05.60 RAMP "B" P.L. B  
N 275207.254  
E 2247787.453

NOTE: SEE SHEETS 21A AND 22A FOR  
ADDITIONAL DIMENSIONS ON LEE  
HWY. AND FOR CONTINUATION OF  
RAMP "B" AND LEE HWY.



SEE SHEET NO. 15A

MATCH LINE STA. 540+00

MATCH LINE STA. 555+00

SEE SHEET NO. 17A

PROP16A.DWG  
1-11-84

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED LAYOUT  
I-75  
STA. 540+00 TO STA. 555+00  
SCALE: 1"=50'

HUNTER RD. /  
MOUNTAIN VIEW RD. SURV. C  
P.I. 29+94.36  
N 275834.048  
E 2246989.273  
Δ = 49°21'55" RT.  
D = 30'00"  
T = 11.09'  
L = 358.20'  
R = 763.94'  
EXT. = 76.82'

RAMP "C" SURV. B  
P.I. 11+56.15  
N 275641.522  
E 2247167.589  
Δ = 38°07'50" RT.  
D = 18'00'00"  
T = 110.01'  
L = 211.84'  
R = 318.31'  
EXT. = 18.47'  
S.E. = 0.054 FT./FT.

RAMP "C" P.L. B  
P.I. 18+00.89  
N 275705.419  
E 2247817.368  
Δ = 17°20'58" LT.  
D = 5'00'00"  
T = 174.83'  
L = 346.99'  
R = 1145.92'  
EXT. = 13.26'  
S.E. = 0.076 FT./FT.

LEE HWY. SURV. C  
P.I. 6+54.86  
N 275529.892  
E 2247042.707  
Δ = 10°06'41" LT.  
D = 2'30'00"  
T = 202.76'  
L = 404.46'  
R = 2291.83'  
EXT. = 8.95'  
S.E. = N.C.]

RAMP "D" P.L. B  
P.I. 14+05.38  
N 275579.226  
E 2247948.598  
Δ = 39°31'24" RT.  
D = 8°02'40"  
T = 255.88'  
L = 491.31'  
R = 712.24'  
EXT. = 44.57'  
S.E. = 0.08 FT./FT.

P.O.T. 4+33.29 LEE HWY. SURV. C =  
P.O.C. 27+71.02 HUNTER RD. SURV. C =  
P.O.C. 27+71.02 MOUNTAIN VIEW RD. SURV. C  
N 275652.297  
E 2246858.016

P.C. 4+52.10 LEE HWY. SURV. C  
N 275641.902  
E 2246873.701

STA. 4+65  
BEGIN CONST.  
LEE HIGHWAY

6+43.27 HUNTER RD. SURV. C  
N 27559.511  
E 2246770.420

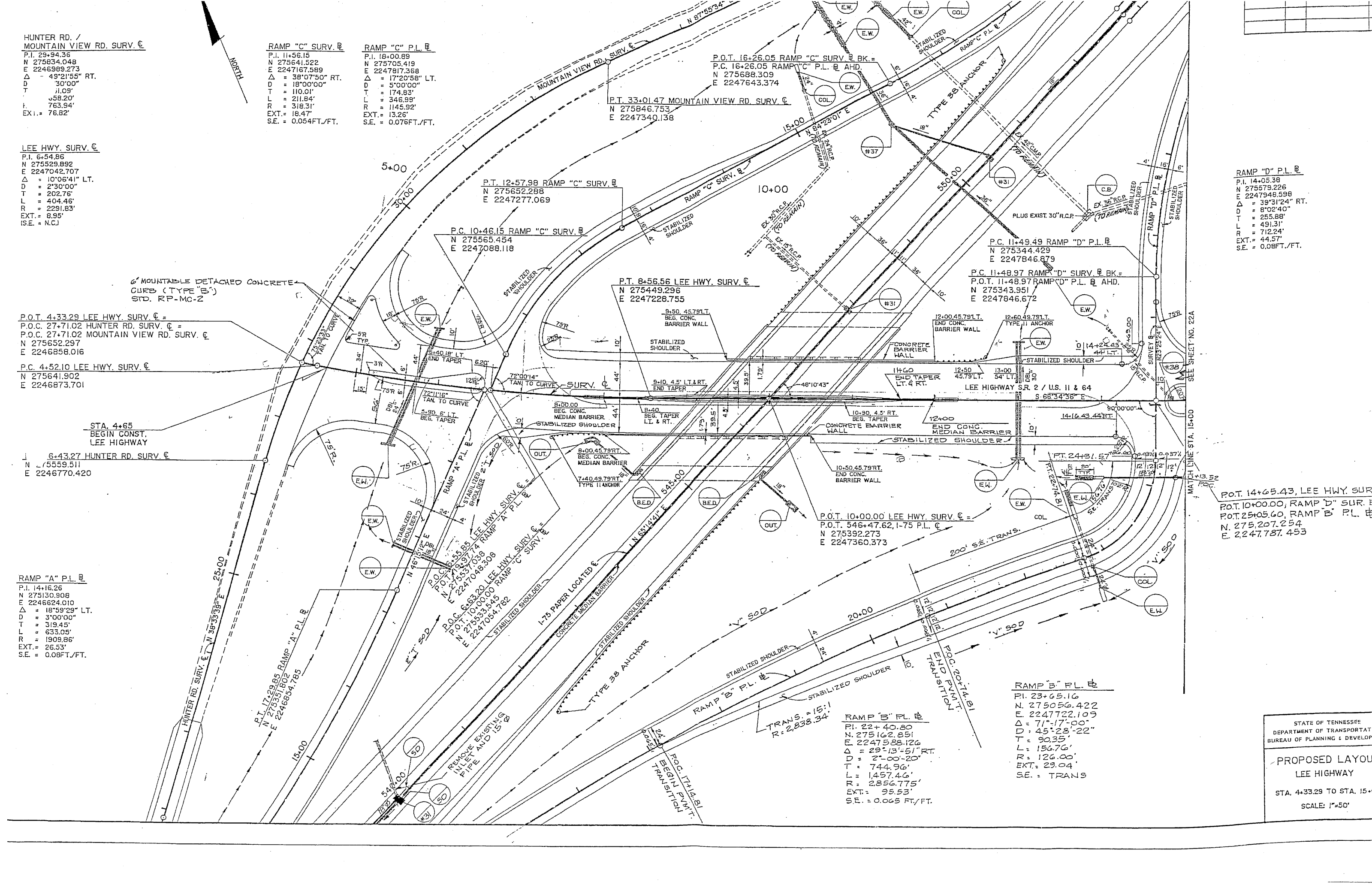
RAMP "A" P.L. B  
P.I. 14+16.26  
N 275130.908  
E 2246624.010  
Δ = 18°59'29" LT.  
D = 3'00'00"  
T = 319.45'  
L = 633.05'  
R = 1909.86'  
EXT. = 26.53'  
S.E. = 0.08 FT./FT.

RAMP "B" P.L. B  
P.I. 22+40.80  
N 275162.851  
E 2247588.126  
Δ = 29°13'51" RT.  
D = 2'00'20"  
T = 744.96'  
L = 1457.46'  
R = 2856.775'  
EXT. = 95.53'  
S.E. = 0.065 FT./FT.

RAMP "B" P.L. B  
P.I. 23+65.16  
N 275056.422  
E 2247722.109  
Δ = 71°17'00"  
D = 45'28'22"  
T = 90.35'  
L = 156.76'  
R = 126.00'  
EXT. = 23.04'  
S.E. = TRANS

P.O.T. 14+65.43, LEE HWY. SURV. C  
P.O.T. 10+00.00, RAMP "D" SURV. B  
P.O.T. 25+05.60, RAMP "B" P.L. B  
N 275207.254  
E 2247787.453

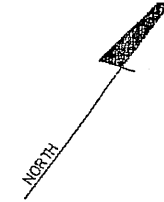
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING & DEVELOPMENT  
PROPOSED LAYOUT  
LEE HIGHWAY  
STA. 4+33.29 TO STA. 15+00  
SCALE: 1"=50'

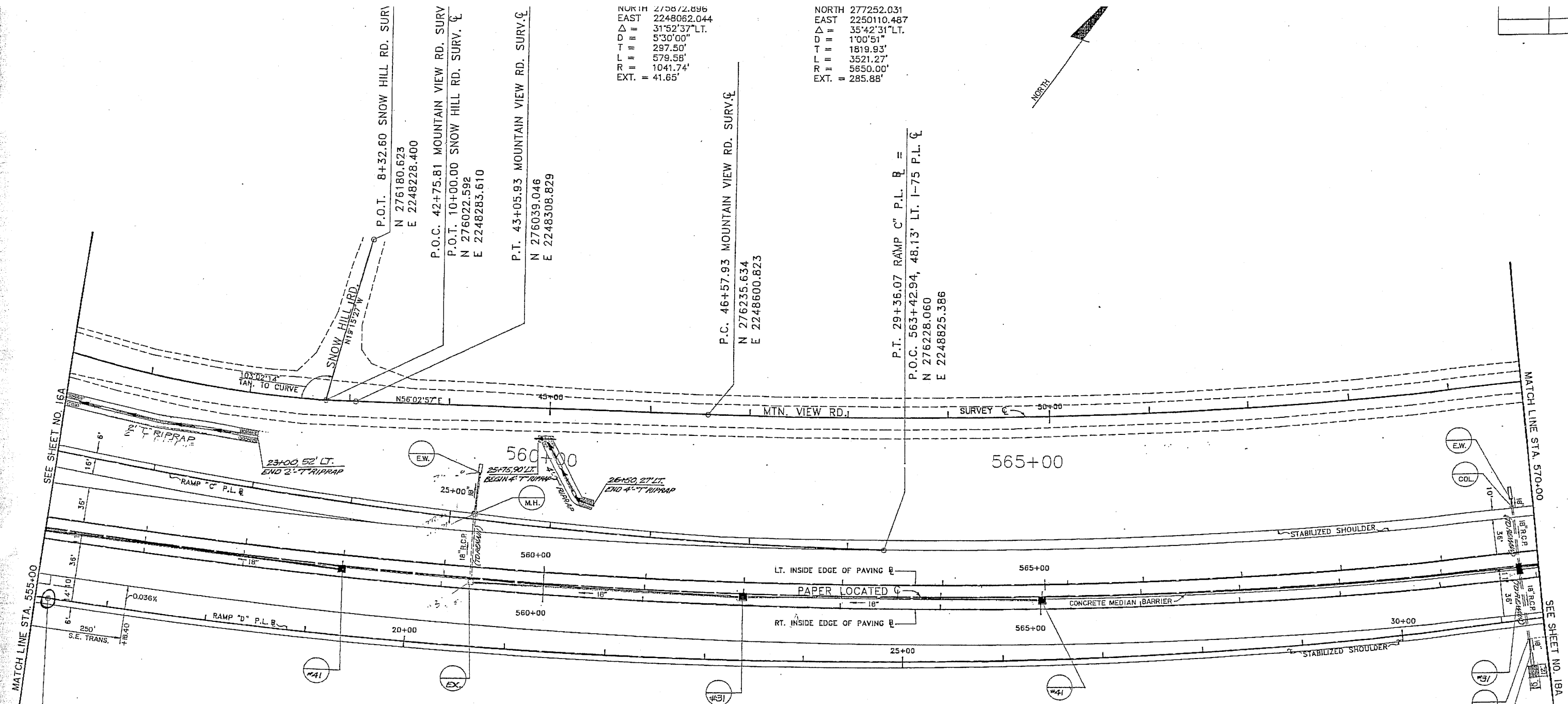




NORTH 275872.896  
 EAST 2248062.044  
 $\Delta = 31^{\circ}52'37"$  LT.  
 D = 5'30"00"  
 T = 297.50'  
 L = 579.58'  
 R = 1041.74'  
 EXT. = 41.65'

NORTH 277252.031  
 EAST 2250110.487  
 $\Delta = 35^{\circ}42'31"$  LT.  
 D = 1'00"51"  
 T = 1819.93'  
 L = 3521.27'  
 R = 5850.00'  
 EXT. = 285.88'



MATCH LINE STA. 555+00  
 P.R.C. 16+40.81 RAMP "D" P.L. =  
 P.L. P.O.C. 555+12.94, 71.05' RT.  
 N 275695.608  
 E 2248176.483

I-75 P.L. =  
 P.I. 576+50.98  
 NORTH 276649.909  
 EAST 2250087.732  
 $\Delta = 44^{\circ}57'06"$  LT.  
 D = 1'00"00"  
 T = 2370.44'  
 L = 4495.17'  
 R = 5729.58'  
 EXT. = 470.99'  
 S.E. = 0.036 FT./FT.

LT. INSIDE EDGE OF PAVING =  
 P.I. 576+19.53  
 NORTH 276646.732  
 EAST 2250054.572  
 $\Delta = 44^{\circ}57'06"$  LT.  
 D = 1'00"48"  
 T = 2338.99'  
 L = 4435.54'  
 R = 5653.58'  
 EXT. = 464.74'

RT. INSIDE EDGE OF PAVING =  
 P.I. 576+82.42  
 NORTH 276653.087  
 EAST 2250120.892  
 $\Delta = 44^{\circ}57'06"$  LT.  
 D = 0'59"13"  
 T = 2401.88'  
 L = 4554.79'  
 R = 5805.58'  
 EXT. = 477.24'

RAMP "C" P.L. =  
 P.I. 24+92.07  
 NORTH 275976.149  
 EAST 2248456.226  
 $\Delta = 11^{\circ}20'37"$  LT.  
 D = 1'16"24"  
 T = 446.92'  
 L = 890.92'  
 R = 4500.00'  
 EXT. = 22.14'  
 S.E. = 0.036 FT./FT.

RAMP "D" P.L. =  
 P.I. 24+97.46  
 NORTH 276085.234  
 EAST 2248939.405  
 $\Delta = 18^{\circ}13'26"$  LT.  
 D = 1'04"22"  
 T = 856.65'  
 L = 1698.84'  
 R = 5341.18'  
 EXT. = 68.26'  
 S.E. = 0.036 FT./FT.

L=1680

STATE OF TENN  
 DEPARTMENT OF TRAN  
 BUREAU OF PLANNING &

PROPOSED  
 I-75  
 STA. 555+00 TO 570+00  
 SCALE: 1" = 40'

**APPENDIX H**  
**ALTERNATIVES FOR IMPROVEMENTS CONSIDERED**

# I-75 & SR-2 INTERCHANGE MODIFICATION STUDY (I.M.S.) SINGLE-LINE SKETCHES ALTERNATE A



# I-75 & SR-2 INTERCHANGE MODIFICATION STUDY (I.M.S.) SINGLE-LINE SKETCHES ALTERNATE B



# I-75 & SR-2 INTERCHANGE MODIFICATION STUDY (I.M.S.) SINGLE-LINE SKETCHES ALTERNATE C



**APPENDIX I**  
**FUNCTIONAL PLANS**

TENNESSEE D.O.T. DESIGN DIVISION

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2,2A	TYPICAL SECTIONS
3-5	PROPOSED LAYOUT SHEET

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

---

HAMILTON COUNTY

TENN.	YEAR	SHEET NO.
	2001	1
FED. AID PROJ. NO.		
STATE PROJ. NO.		

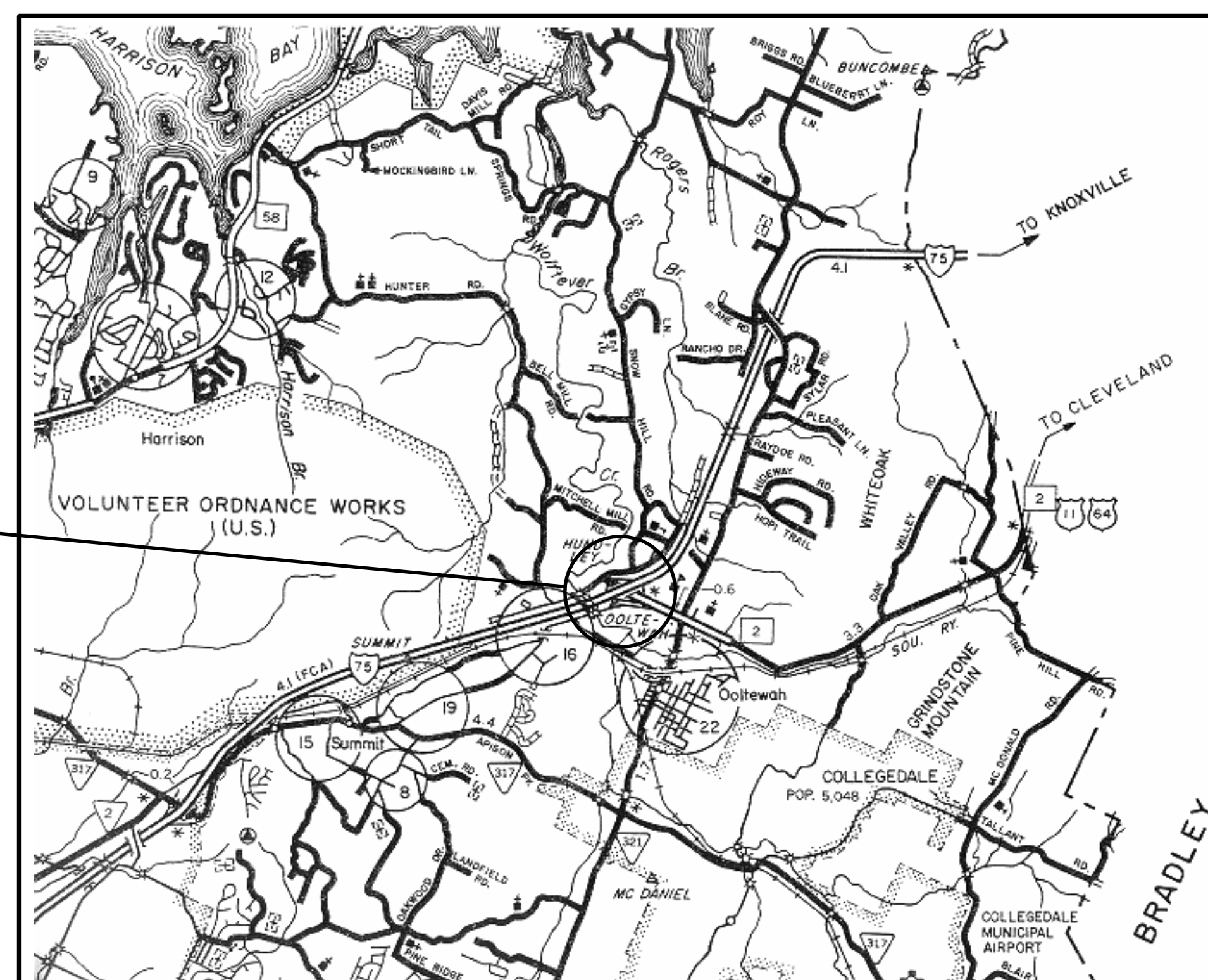


PROJECT LOCATION

INTERSTATE 75 & SR-2 (LEE HIGHWAY)

STATE HIGHWAY NO.      F.A.H.S. NO.

PROJECT LOCATION



SCALE: 1" = 1 MILE

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

DESIGNED BY THOMAS & MILLER, LLC

DESIGNER THOMAS M. CLINARD, P.E. CHECKED BY \_\_\_\_\_

P.E. NO. \_\_\_\_\_

APPROVED: \_\_\_\_\_  
DIRECTOR, DESIGN DIVISION

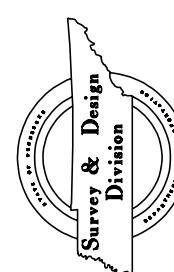
DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_  
COMMISSIONER

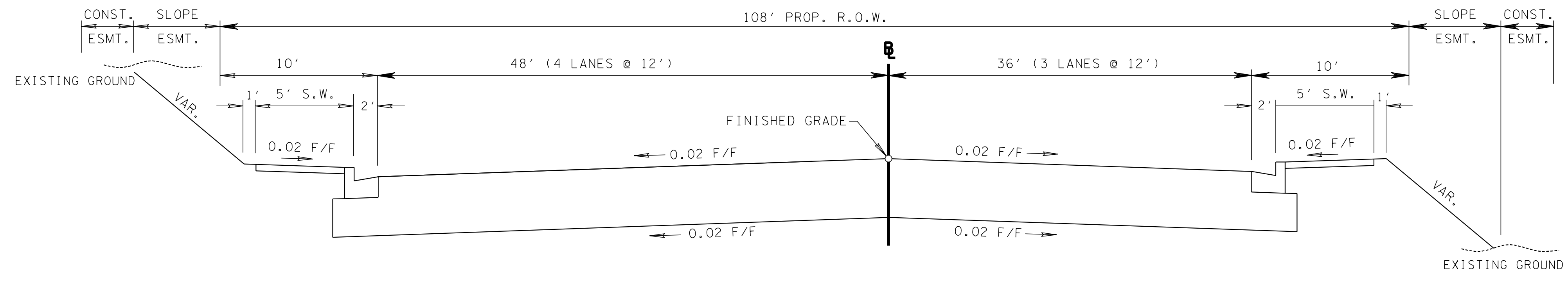
TRAFFIC DATA	
ADT (2005)	85,200
ADT (2025)	136,500
DHV (2025)	13,650
D	60 - 40
T (ADT)	17 %
T (DHV)	10 %
V	70 MPH

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

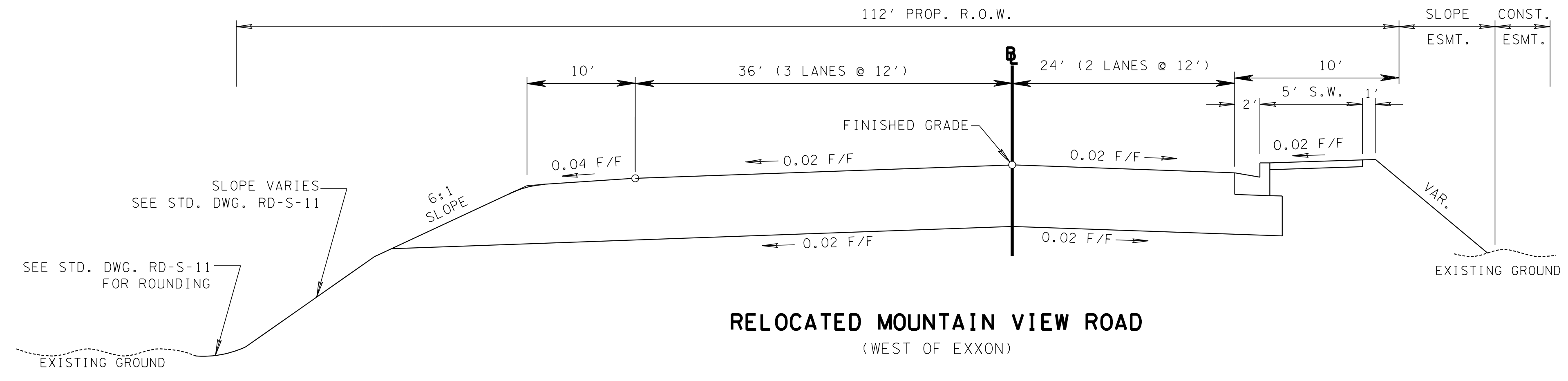
APPROVED: \_\_\_\_\_  
DIVISION ADMINISTRATOR      DATE



TYPE	YEAR	PROJECT NO.	SHEET NO.
A.P.R.	2001	I-75/U.S.11	2



**SR-2 (LEE HIGHWAY)**  
(FROM RAMP TERMINI TO RELOCATED HUNTER RD./MOUNTAIN VIEW RD.)

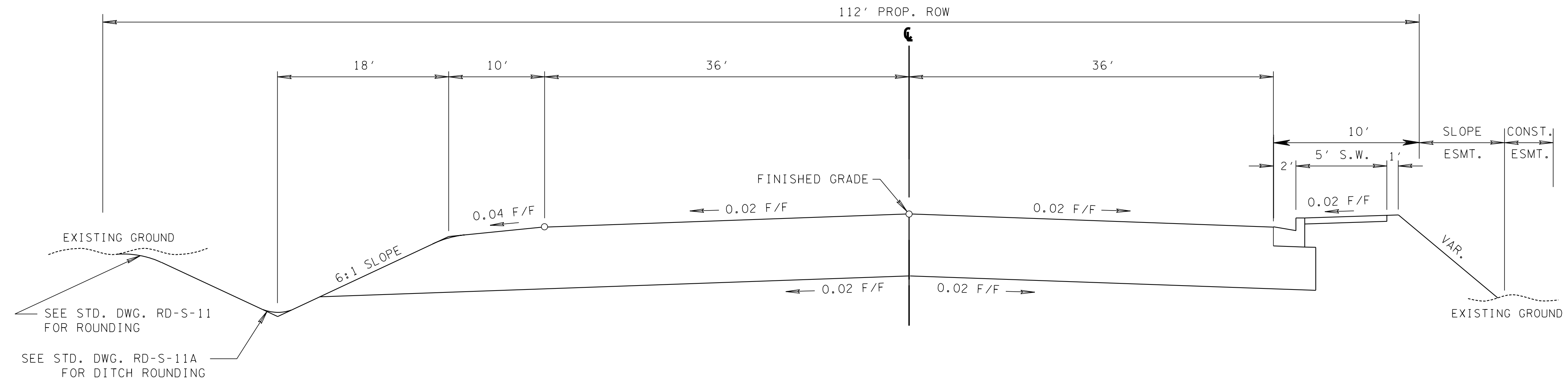


**RELOCATED MOUNTAIN VIEW ROAD**  
(WEST OF EXXON)

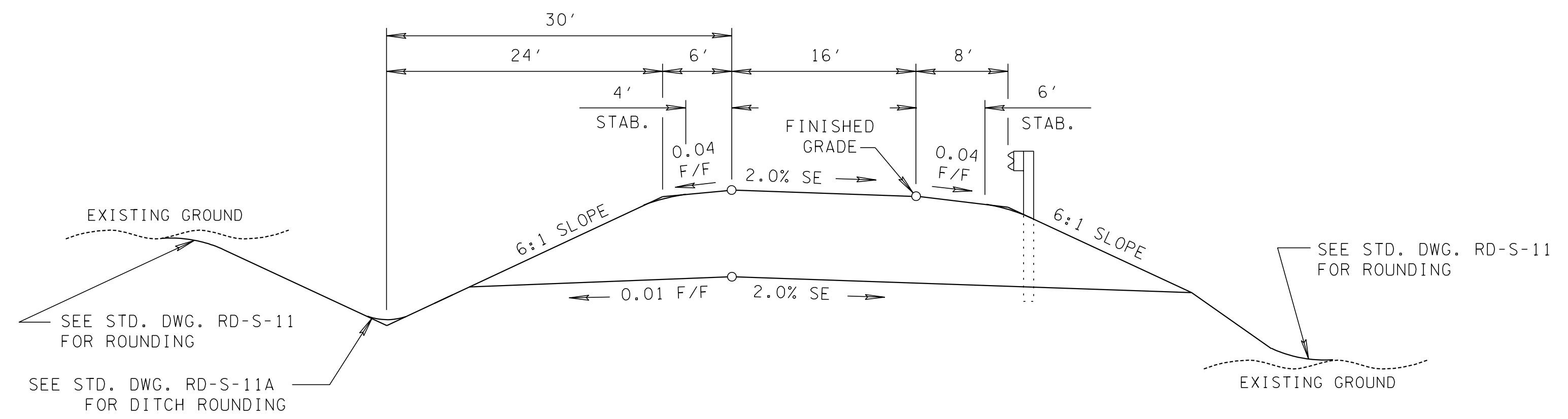


TYPE	YEAR	PROJECT NO.	SHEET NO.
A.P.R.	2001	I-75/U.S.11	2A

TENNESSEE D.O.T.  
 DESIGN DIVISION  
 FILE NO.



**RELOCATED HUNTER ROAD**  
 (FROM SR-2 TO ACCESS ROAD)

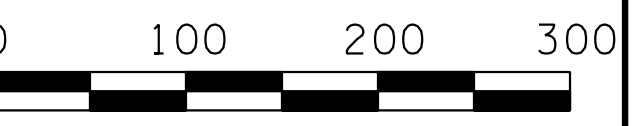
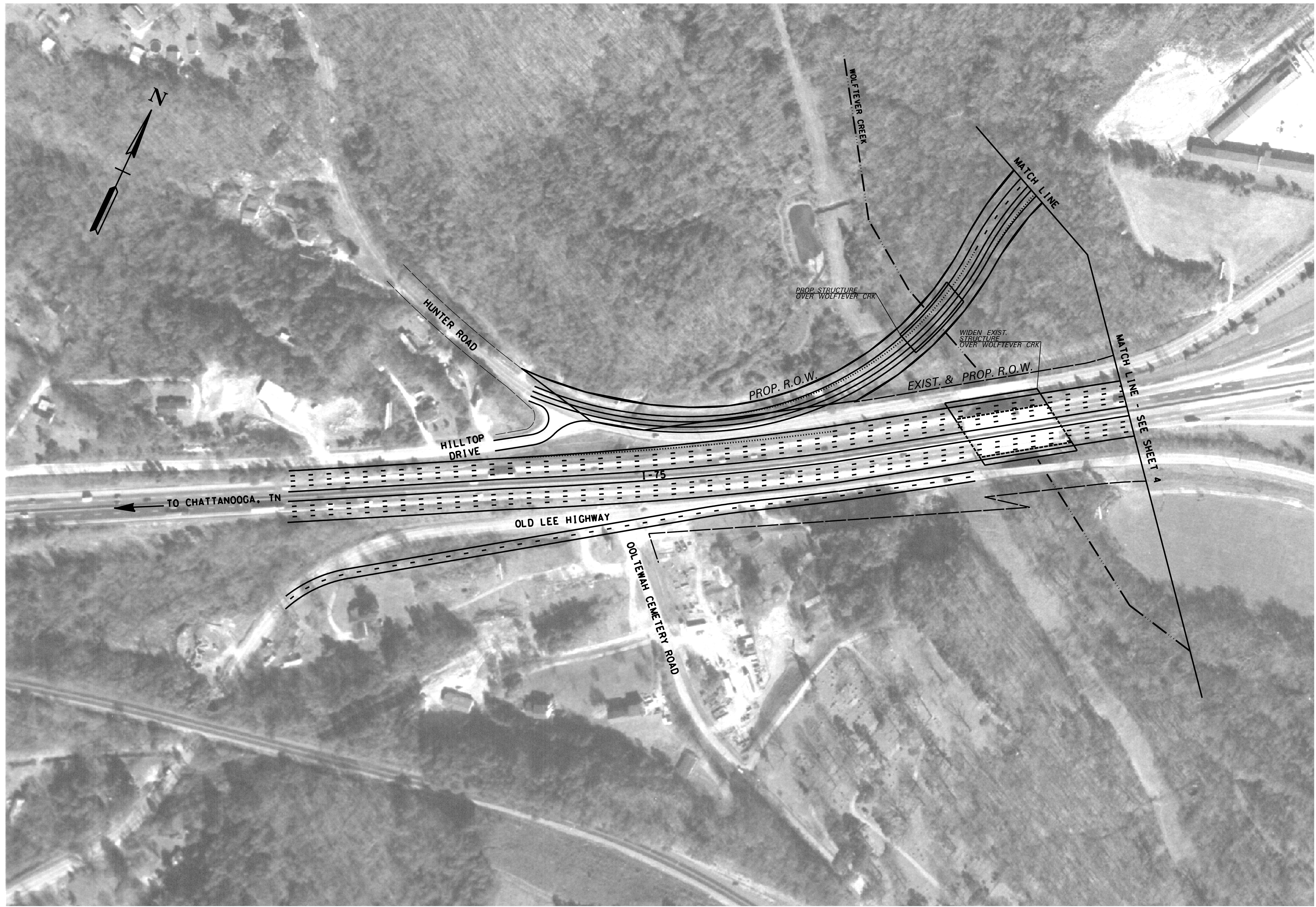


**ONE-LANE LOOP RAMP**  
 (FROM WB SR-2 TO SB I-75)

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING & DEVELOPMENT

TYPICAL  
 SECTIONS

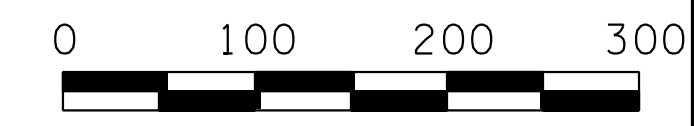
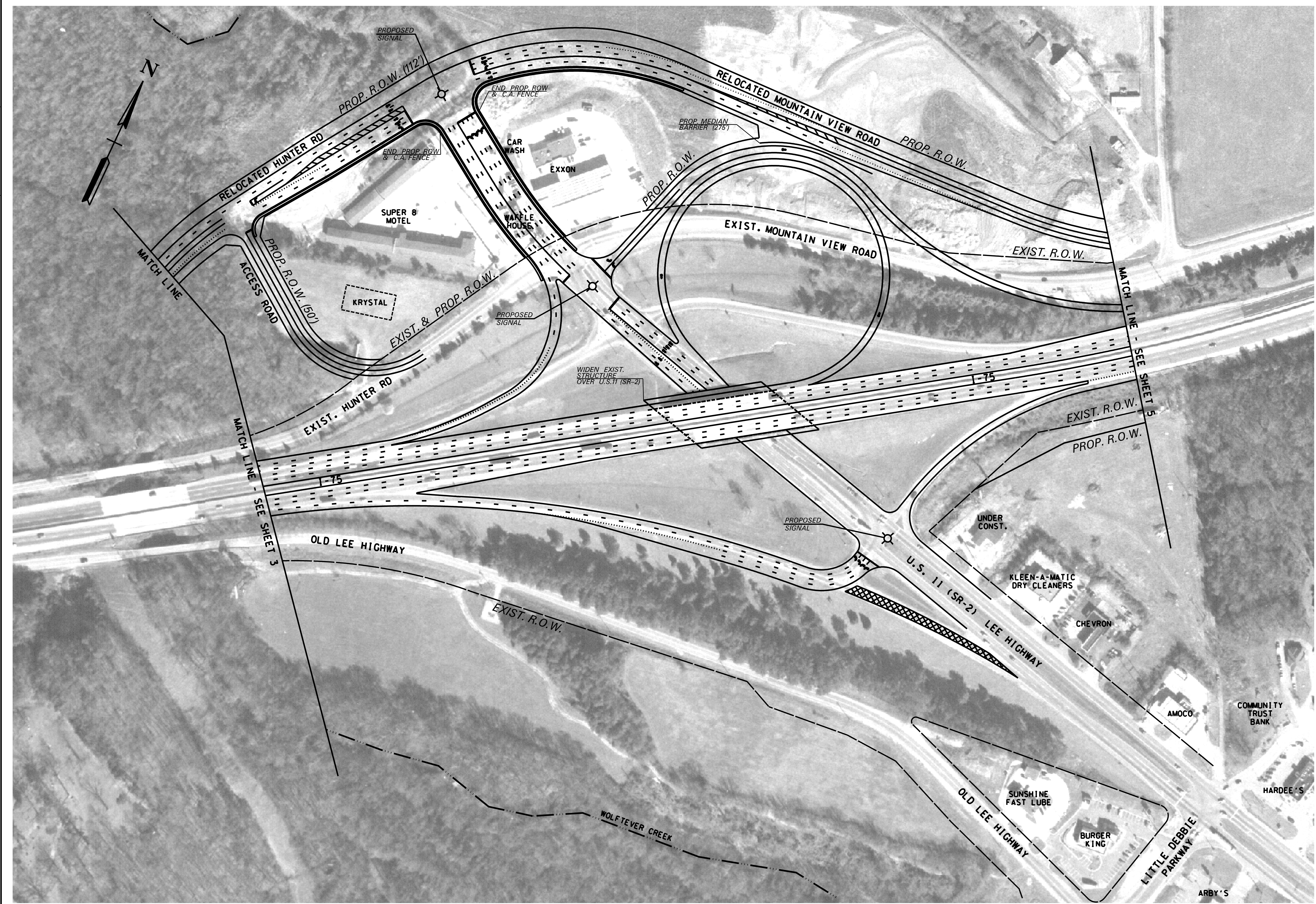
TYPE	YEAR	PROJECT NO.	SHEET NO.
A.P.R.	2001	I-75/U.S. 11	3



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING & DEVELOPMENT

**I-75 & U.S. 11  
INTERCHANGE  
MODIFICATION STUDY  
CHATTANOOGA, TN  
HAMILTON CO.**

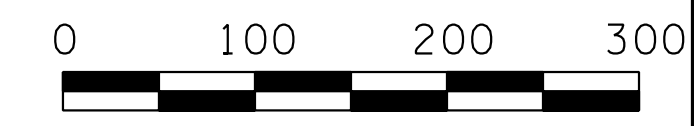
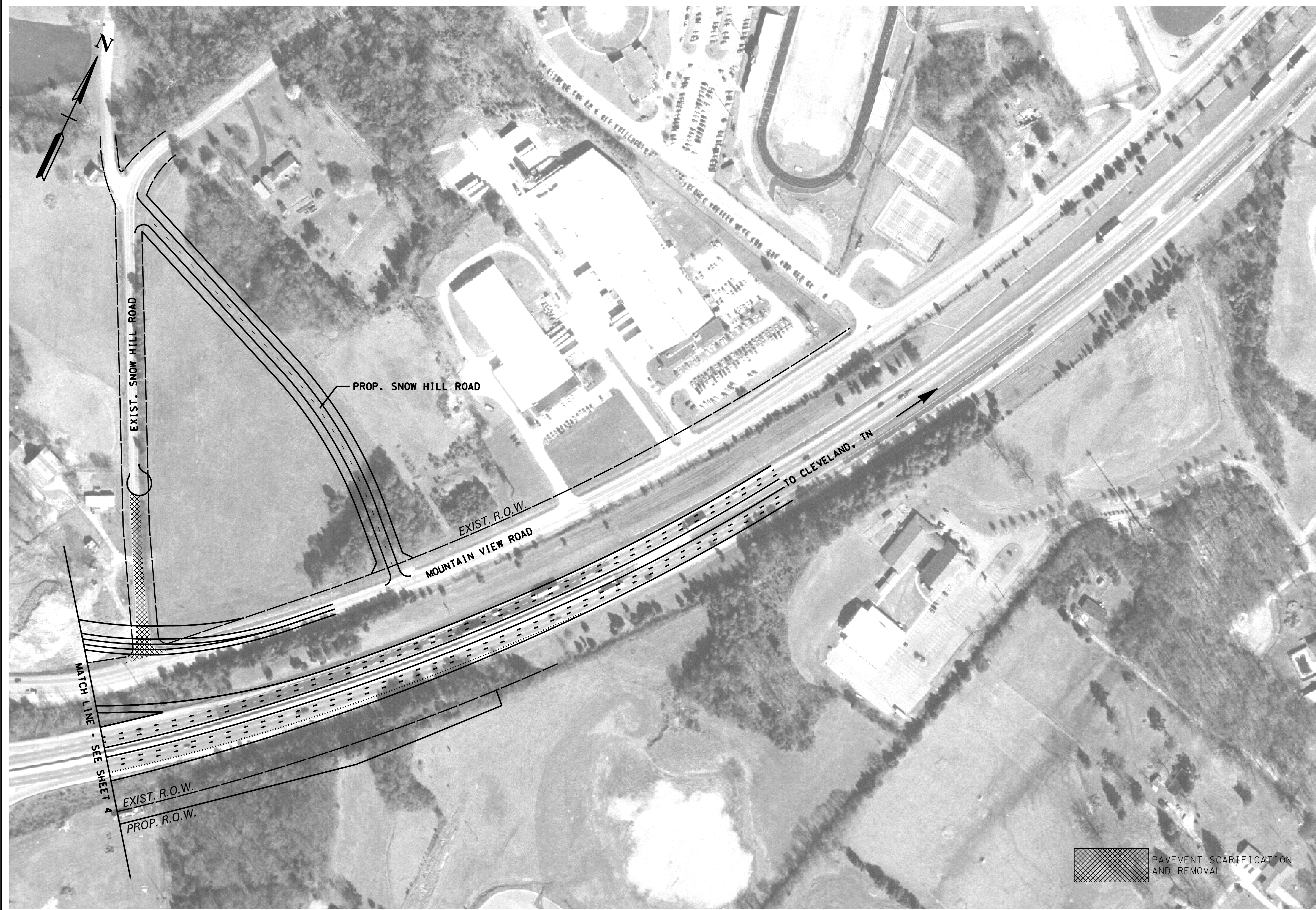
TYPE	YEAR	PROJECT NO.	SHEET NO.
A.P.R.	2001	I-75/U.S.11	4



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING & DEVELOPMENT

**I-75 & U.S. 11  
INTERCHANGE  
MODIFICATION STUDY  
CHATTANOOGA, TN  
HAMILTON CO.**

TYPE	YEAR	PROJECT NO.	SHEET NO.
A.P.R.	2001	I-75/U.S. 11	5



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING & DEVELOPMENT

**I-75 & U.S. 11  
 INTERCHANGE  
 MODIFICATION STUDY  
 CHATTANOOGA, TN  
 HAMILTON CO.**

 PAVEMENT SCARIFICATION  
 AND REMOVAL