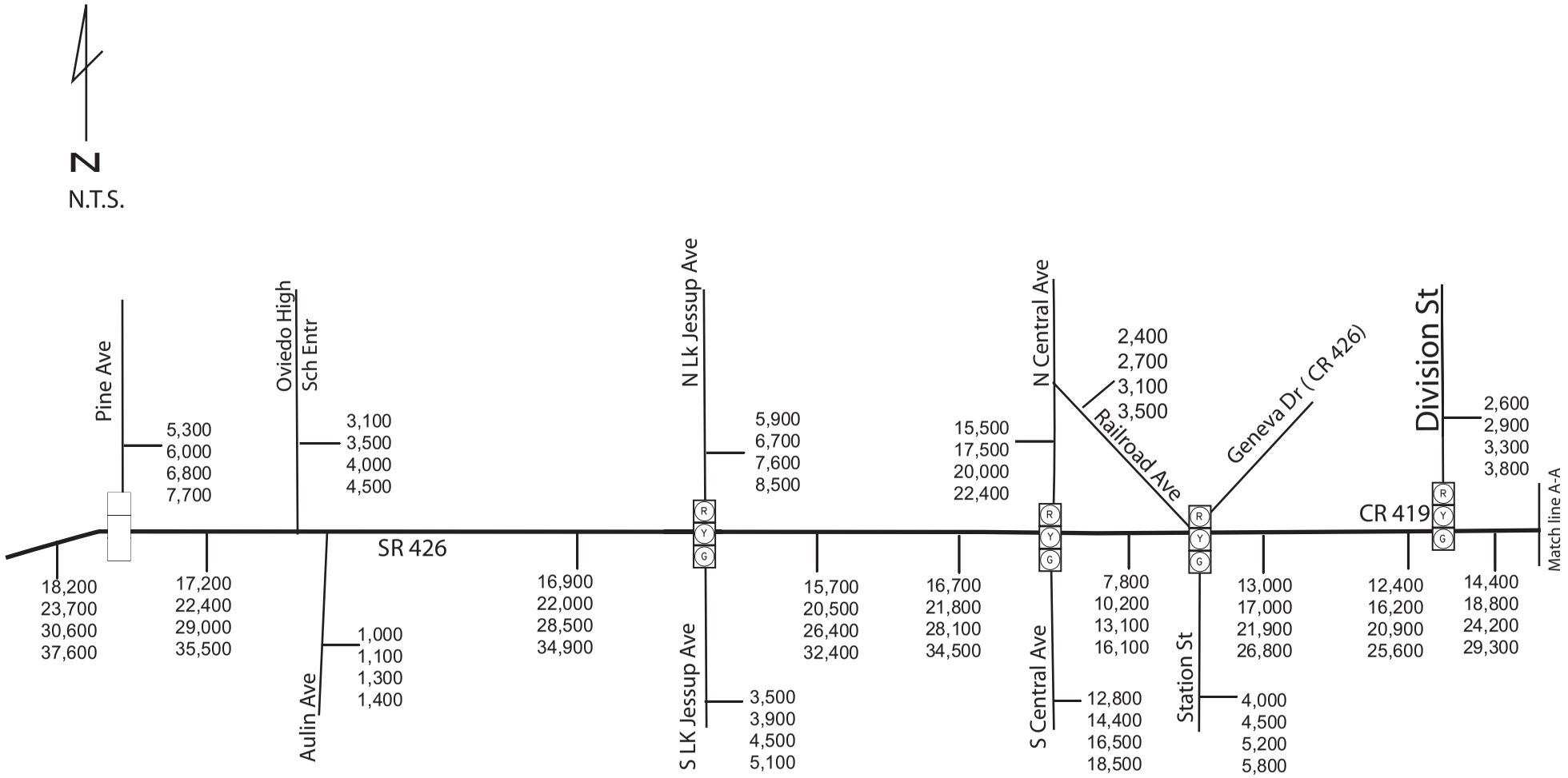
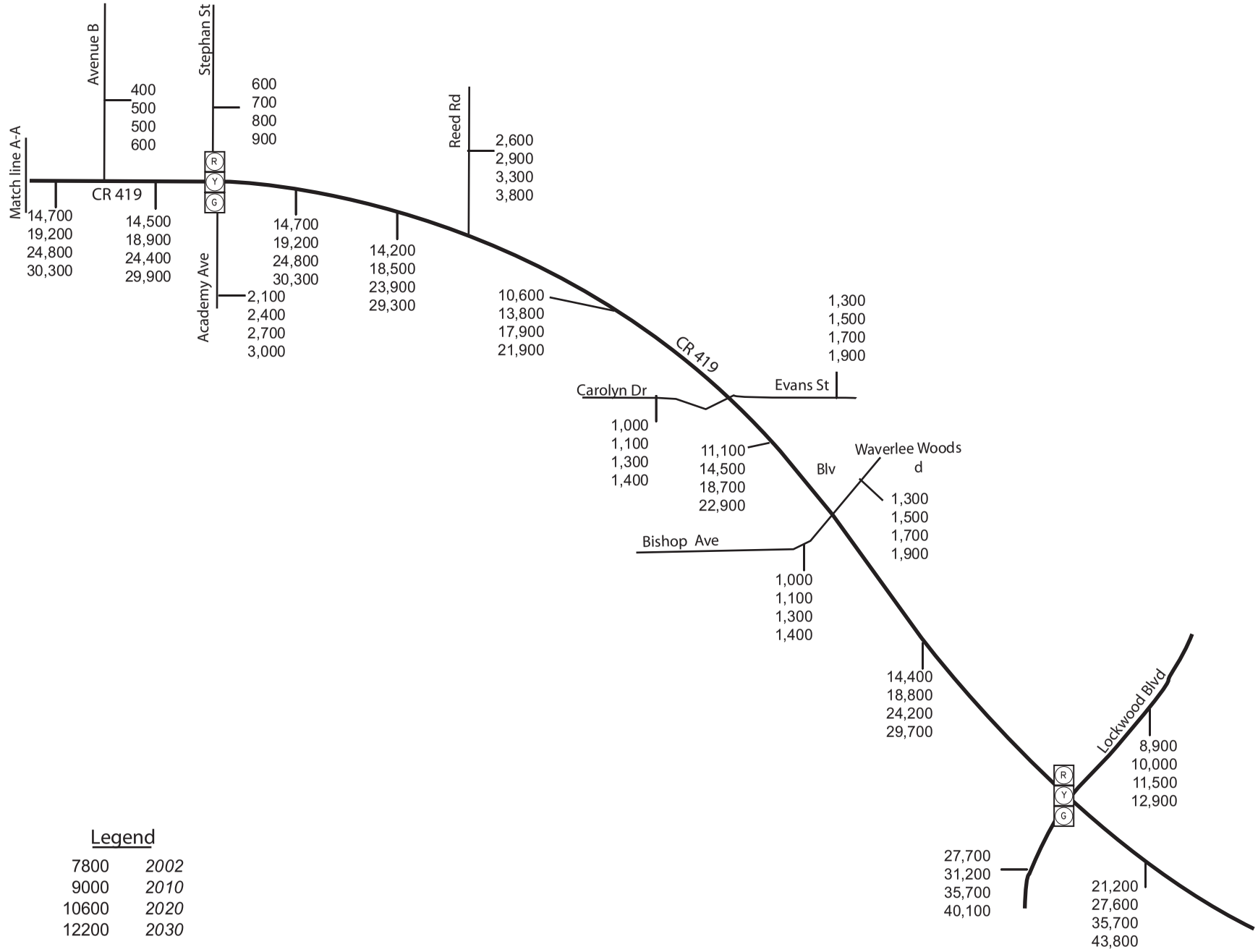
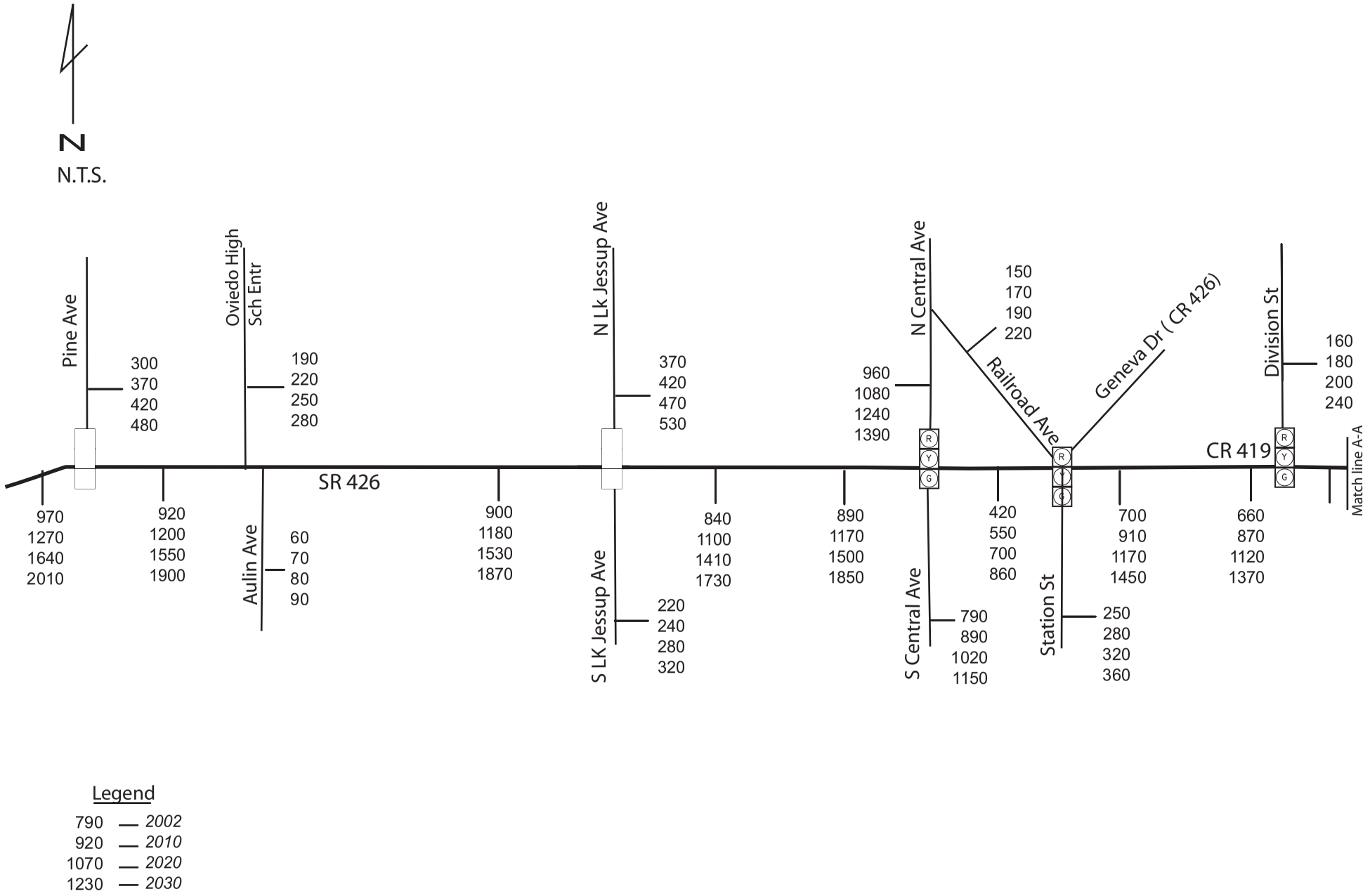


	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Build Annual Average Daily Traffic (AADT)	Figure 6-10



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Build Annual Average Daily Traffic (AADT)	Figure 6-10 con't



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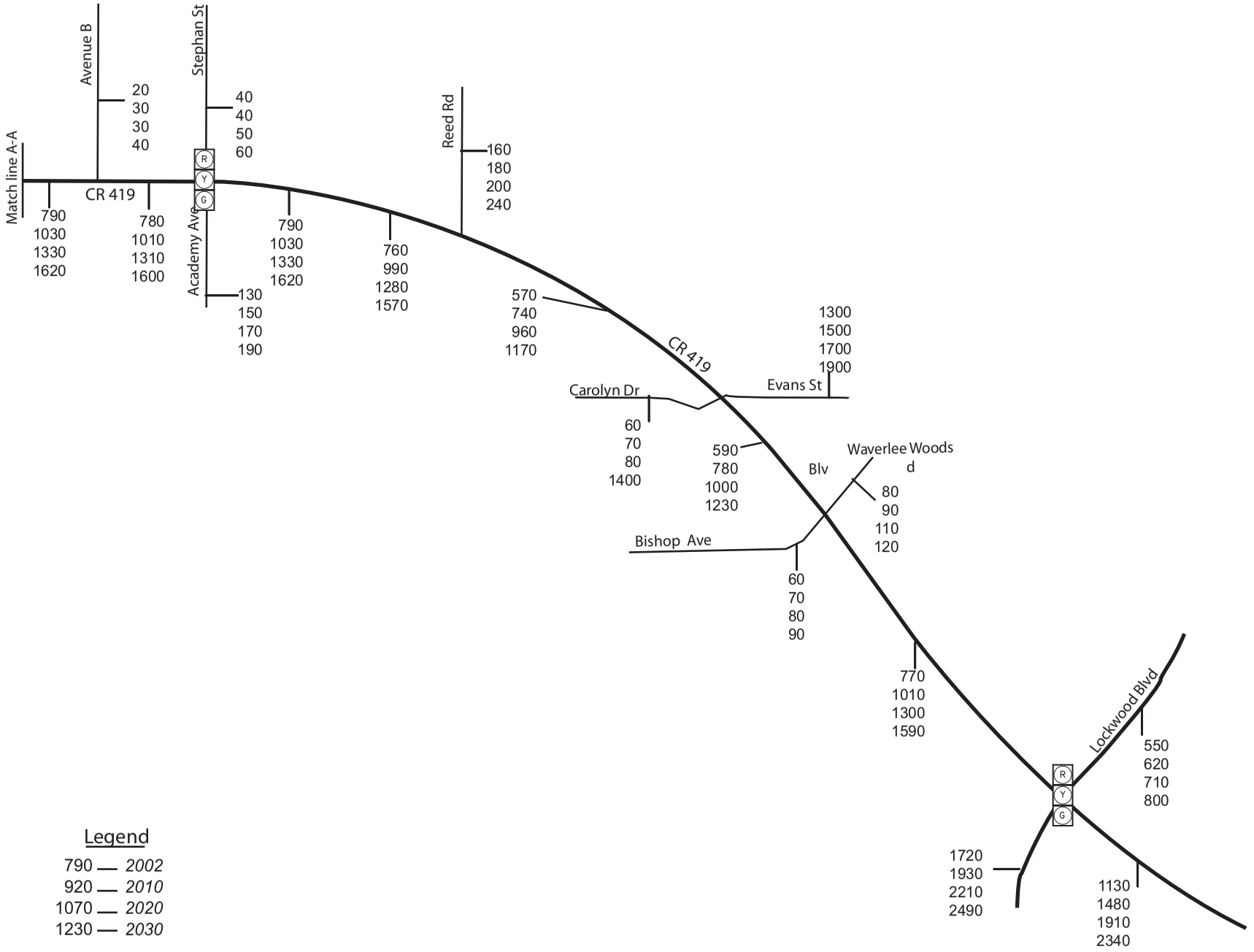
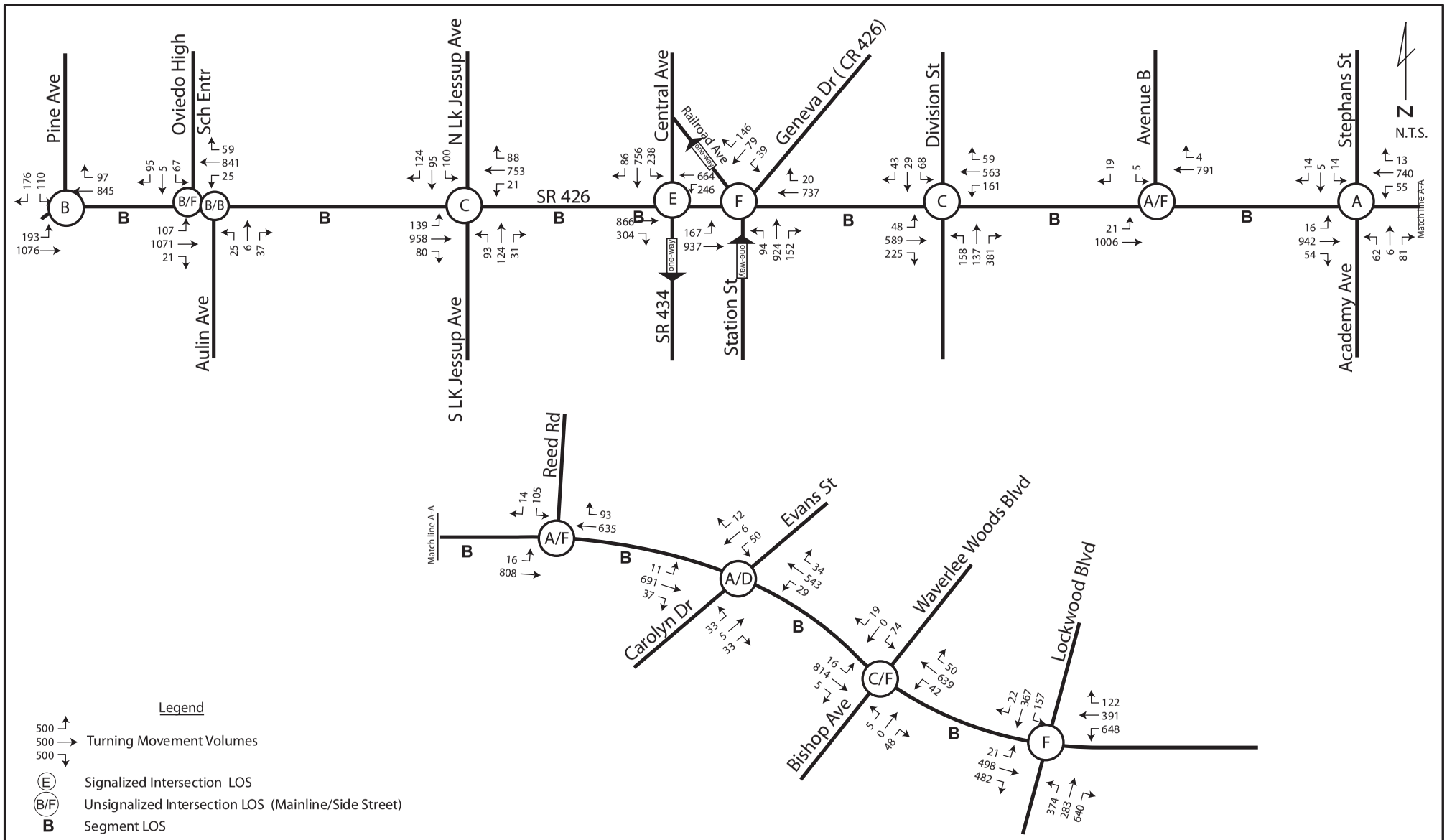
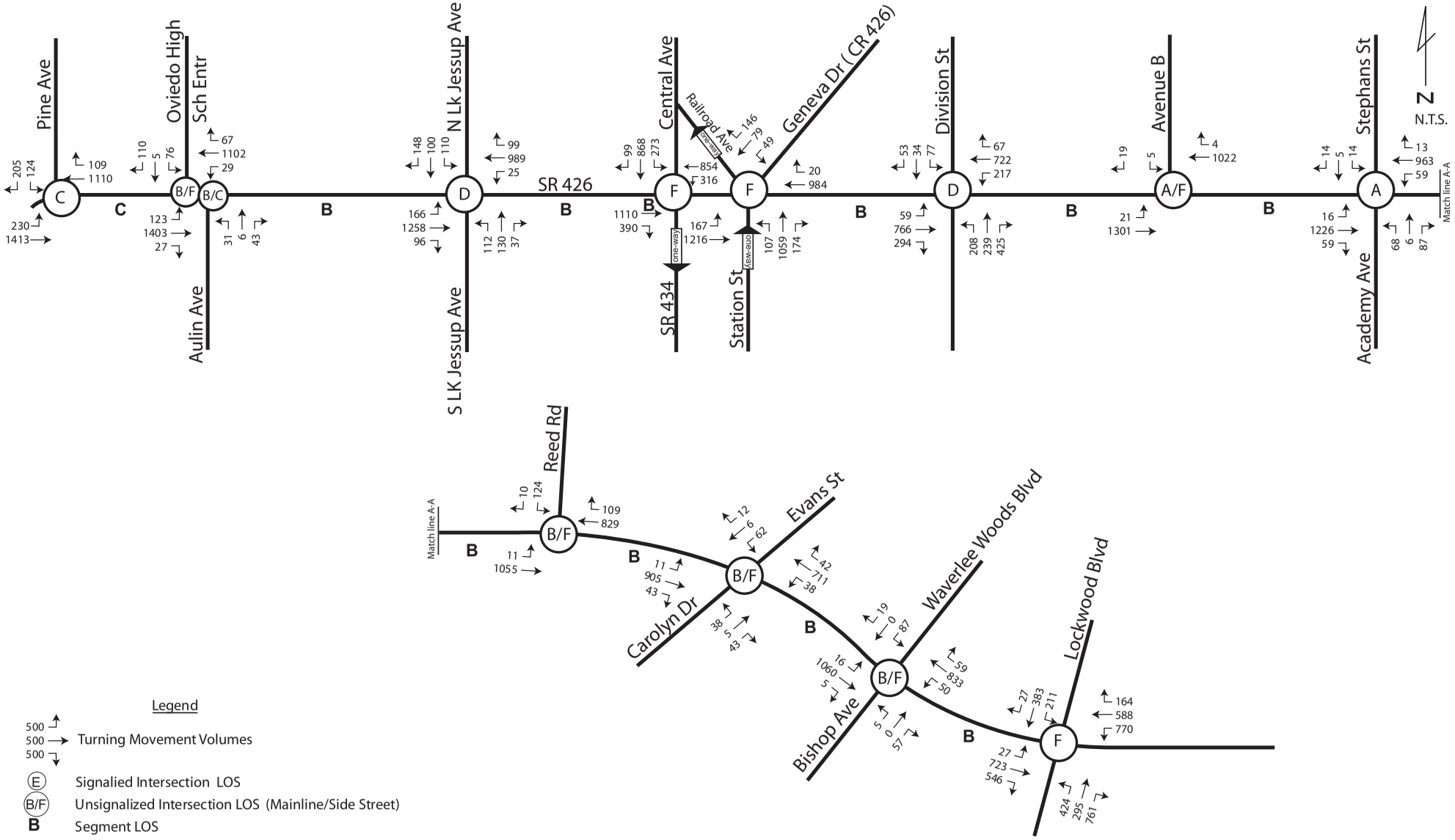
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Build Directional Design Hour Volumes (DDHV)	Figure 6-11



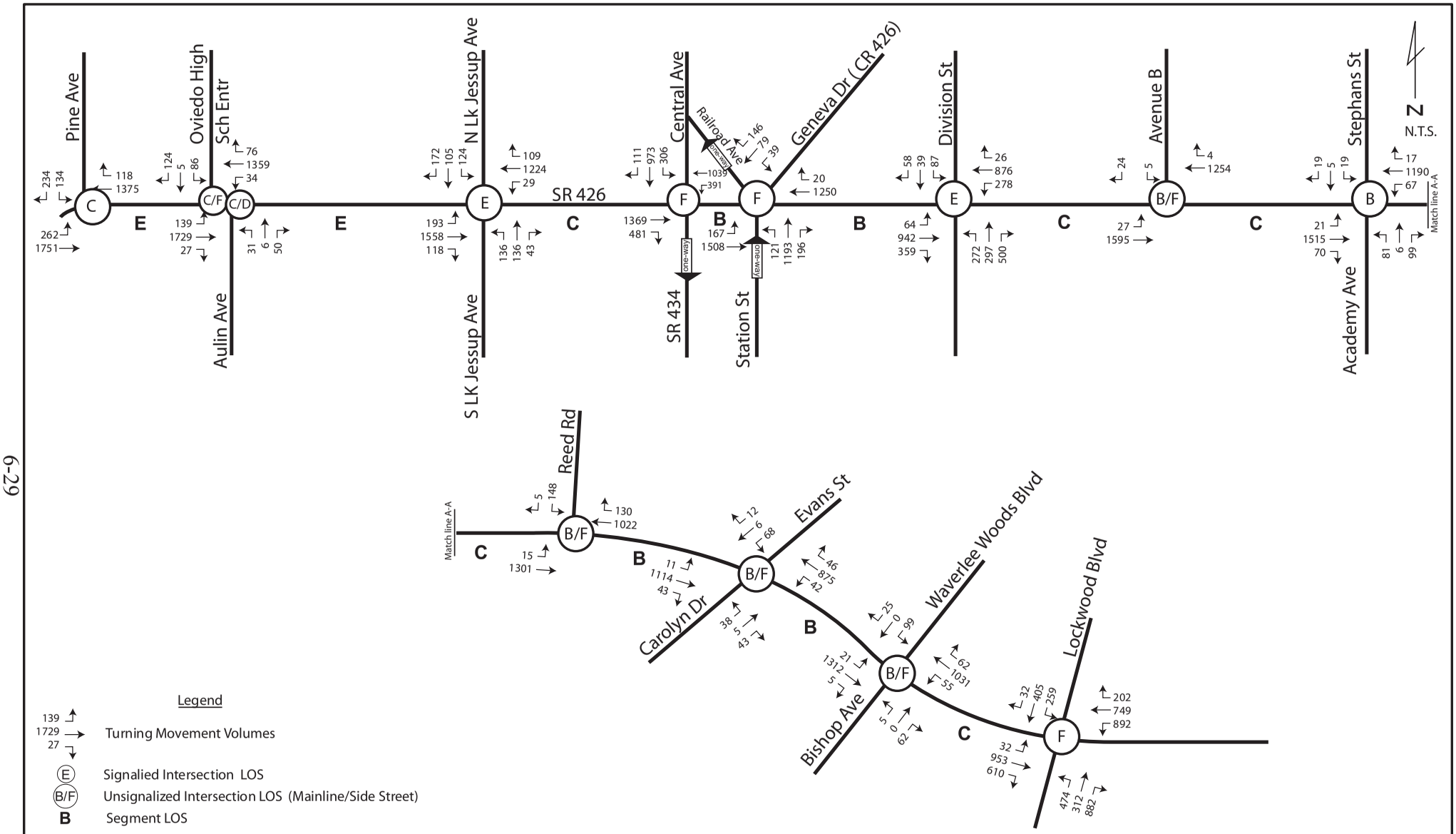
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Build Directional Design Hour Volumes (DDHV)	Figure 6-11 con't



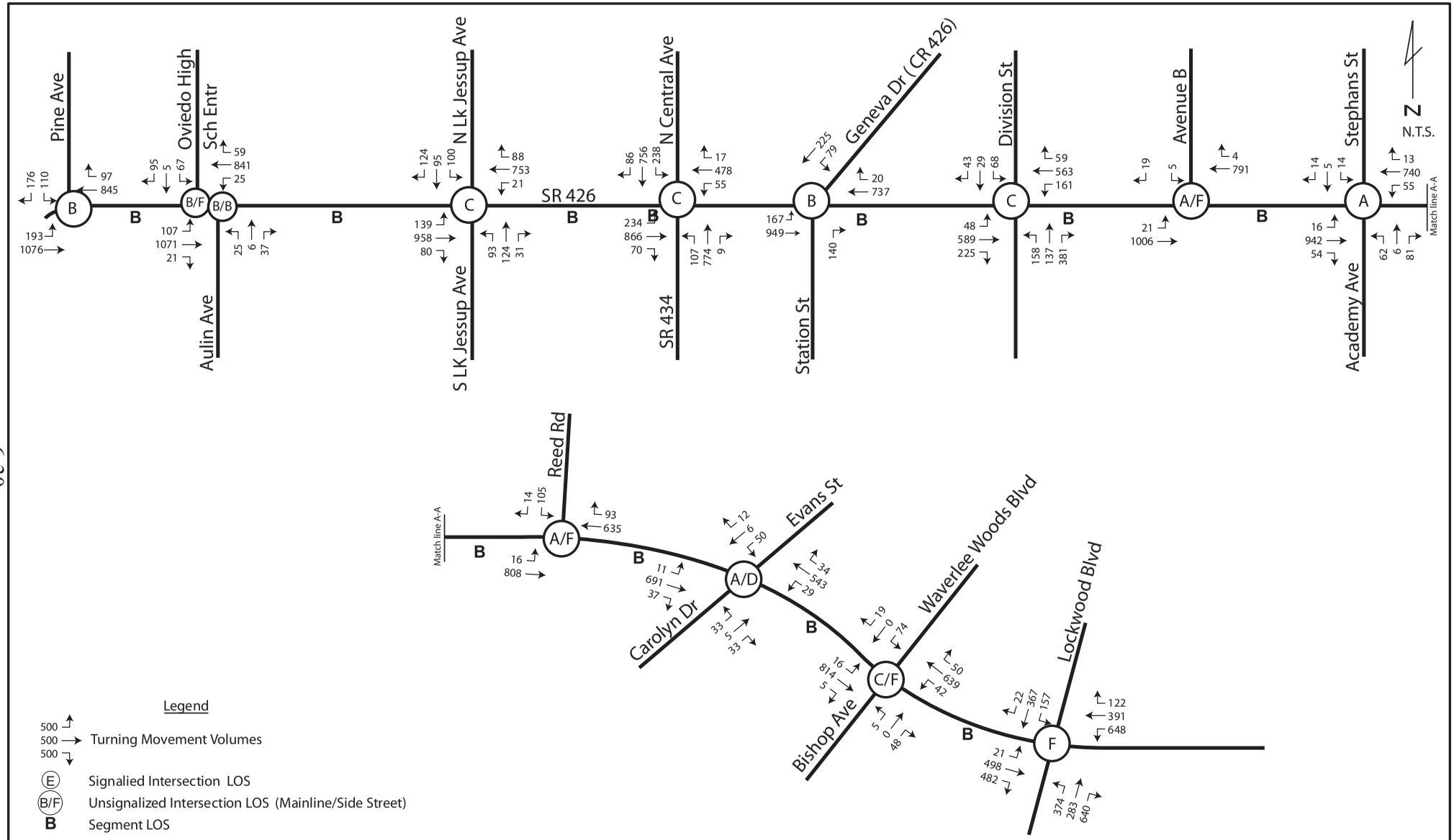
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2010 (Build) Design Hour Volumes & Intersection LOS Scenario 2A	Figure 6-12



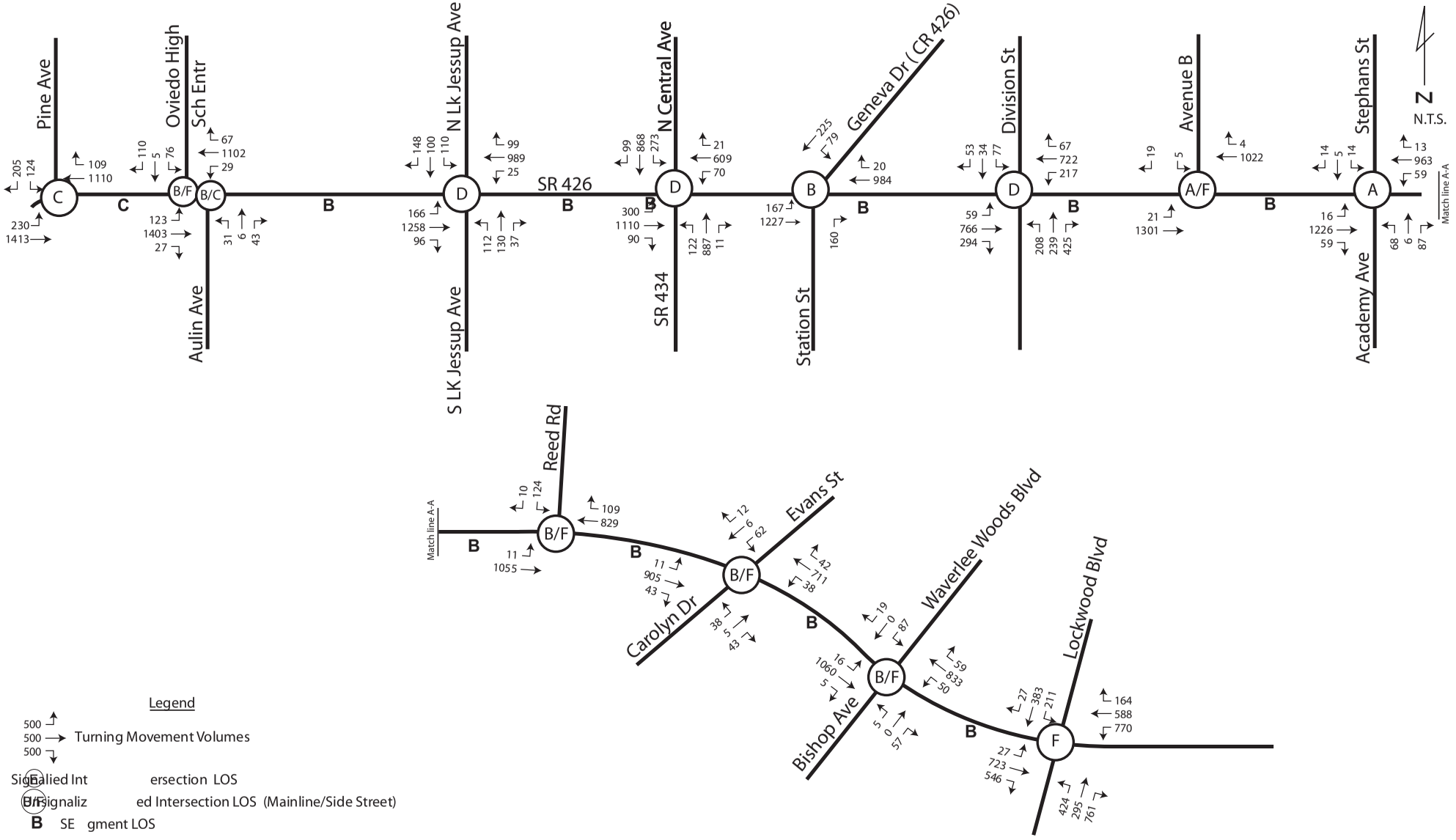
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2020 (Build) Design Hour Volumes & Intersection LOS Scenario 2A	Figure 6-13



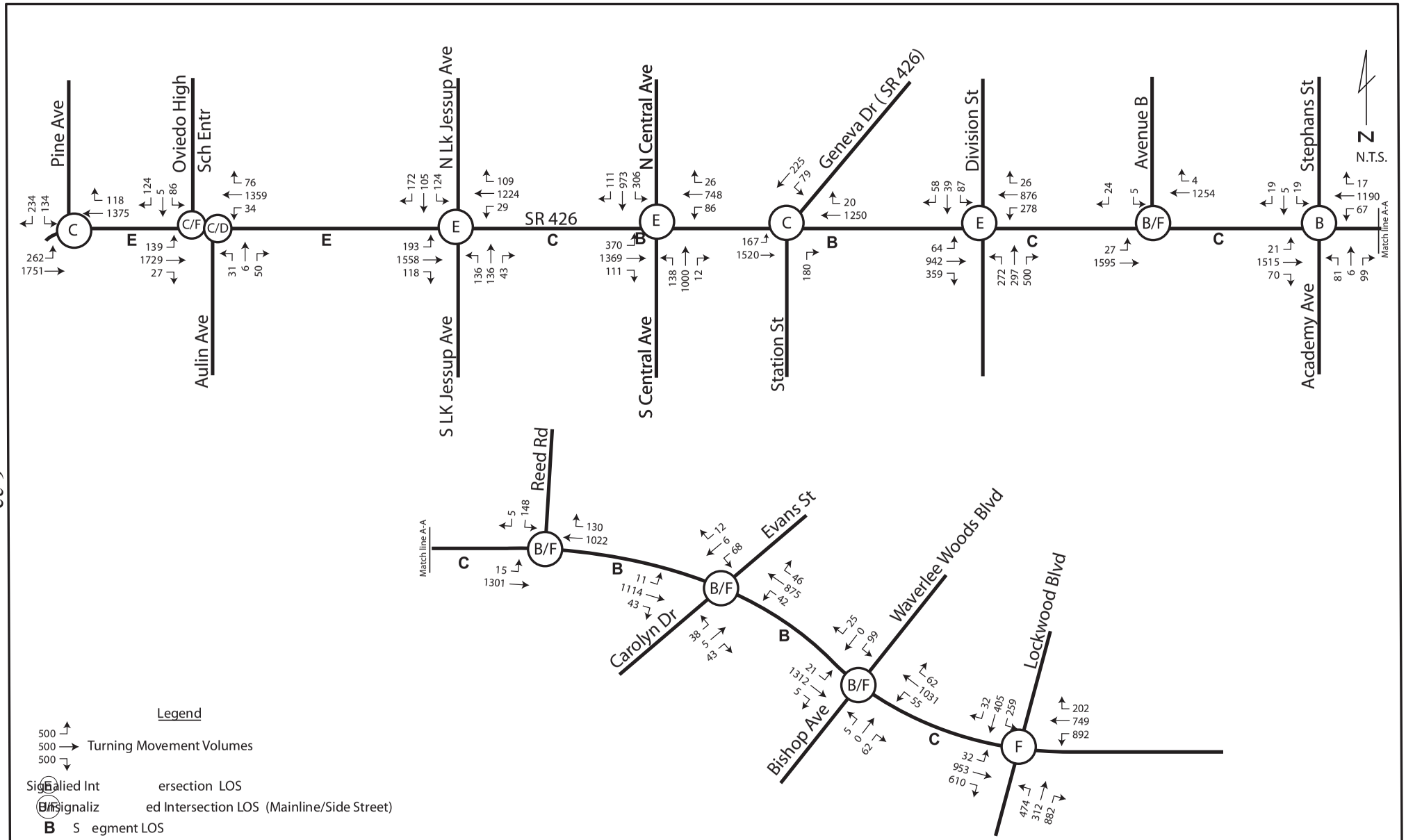
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2030 (Build) Design Hour Volumes & Intersection LOS Scenario 2A	Figure 6-14



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2010 (Build) Design Hour Volumes & Intersection LOS Scenario 2B	Figure 6-15



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2020 (Build) Design Hour Volumes & Intersection LOS Scenario 2B	Figure 6-16



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	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2030 (Build) Design Hour Volumes & Intersection LOS Scenario 2B	Figure 6-17

Table 6-8 Segment Level of Service

Segments	Scenario 2A LOS			Scenario 2B LOS		
	2010	2020	2030	2010	2020	2030
Pine Avenue to Aulin Avenue	B	C	E	B	C	E
Aulin Avenue to Lake Jessup Avenue	B	B	E	B	B	E
Lake Jessup Avenue to Central Avenue (SR 434)	B	B	C	B	B	C
Central Avenue (SR434) to Station Street	B	B	B	B	B	B
Station Street to Division Street	B	B	B	B	B	B
Division Street to Avenue B	B	B	C	B	B	C
Avenue B to Stephan Street/Academy Avenue	B	B	C	B	B	C
Stephan Street/Academy Avenue to Reed Road	B	B	C	B	B	C
Reed Road to Carolyn Drive/Evans Street	B	B	B	B	B	B
Carolyn Drive/Evans Street to Waverlee Woods Blvd.	B	B	B	B	B	B
Waverlee Woods Blvd. to Lockwood Blvd.	B	B	C	B	B	C

Table 6-9 Intersection Level of Service

Intersection	Scenario 2A LOS			Scenario 2B LOS		
	2010	2020	2030	2010	2020	2030
Pine Avenue and SR 426	B	C	C	B	C	C
Aulin Avenue and SR 426 (W) Aulin Avenue and SR 426 (E)	B/F B/B	B/F B/C	C/F C/D	B/F B/B	B/F B/C	C/F C/D
Lake Jessup Avenue SR 426	C	D	E	C	D	E
Central Avenue (SR434) and SR 426	E	**F**	**F**	**C**	**D**	**E**
Station Street and CR 419	**F**	**F**	**F**	B	B	C
Division Street and CR 419 B	C	D	E	C	D	E
Avenue B and CR 419.	A/F	A/F	B/F	A/F	A/F	B/F
Stephan Street/Academy Avenue and CR 419	A	A	B	A	A	B
Reed Road and CR 419	A/F	B/F	B/F	A/F	B/F	B/F
Carolyn Drive/Evans Street and CR 419	A/D	B/F	B/F	A/D	B/F	B/F
Waverlee Woods Boulevard and CR 419	C/F	B/F	B/F	C/F	B/F	B/F

The downtown Oviedo intersections of SR 434 at SR 426, and Station Street at CR 419 failed in the mid-design year for Scenario 2A. The following is a list of possible recommended improvements to the 2A and 2B scenarios.

Under Scenario 2A, the recommended improvement is to widen SR 434 to three lanes at SR 426, two through lanes and one left turn lane; from Railroad Avenue to Garden Street. This geometric improvement will improve this intersection during the opening and mid-design year although it is projected to fail by the design year. There are no possible improvements to Station Street at CR 419 because of limited right-of-way along Railroad Avenue and CR 426. This intersection fails during the mid-design year and design year.

Under Scenario 2B, the recommended improvement is to widen SR 434 to five lanes at SR 426, 2 lanes northbound and 2 lanes southbound with a separate left turn lane. Station Street will be considered only as a right in and right out at CR 419. This recommendation will improve SR 434 and SR 426 greatly with acceptable level of service beyond the design year.

The recommended geometry shown in Figure 6-18 represents the maximum efficient geometry to sustain through traffic flow within the SR 426/CR 419 corridor. Table 10 provides a summary of ideal storage length requirements for the signalized intersections evaluated for the project. It should be noted that the specific lengths do not include the taper or deceleration distance. (Refer to FDOT Index 301 to determine the appropriate specific taper and deceleration length). These storage lengths are recommended at locations where these lengths can be achieved. Implementation of the storage length requirements will be a function of the design and the physical practicality of their construction.

Year 2030 (Build) Recommended Geometry

Project Development & Environment Study
SR 426 /CR 419
From Pine Avenue to Lockwood Boulevard

Figure 6-18

Table 6-10 Recommended Storage Lengths

YEAR 2030 (BUILD) SCENARIO 2B WITH IMPROVEMENTS TO SR 434
Broadway Avenue SR 426 / CR 419

Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:			Pine Avenue (PM)							
EB	Left	262	0.690	102.0	1	262	7.2%	2.0	123.3	125
EB	Thru	1715	0.690	102.0	2	1715	7.2%	2.0	403.7	425
EB	Right									
WB	Left									
WB	Thru	1495	0.490	102.0	2	748	2.0%	2.0	550.9	575
WB	Right									
NB										
NB										
NB										
SB	Left	134	0.200	102.0	1	134	2.0%	2.0	154.9	175
SB	Thru	234	0.200	102.0	2	117	2.0%	2.0	135.3	150
SB	Right									
Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:			Lake Jessup Avenue							
EB	Left	193	0.650	113.0	1	193	7.2%	2.0	113.6	125
EB	Thru	1676	0.530	113.0	2	838	7.2%	2.0	662.6	675
EB	Right									
WB	Left	29	0.650	113.0	1	29	7.2%	2.0	17.1	50
WB	Thru	1333	0.530	113.0	2	667	7.2%	2.0	527.0	550
WB	Right									
NB	Left				1					
NB	Thru	315	0.270	113.0	2	158	2.0%	2.0	184.1	200
NB	Right									
SB	Left									
SB	Thru	1390	0.300	113.0	2	695	2.0%	2.0	778.8	800
SB	Right									
Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:			Central Avenue (SR 434)							
EB	Left	370	0.490	100.0	2		7.2%	1.5	105.4	125
EB	Thru	1480	0.430	100.0	2	740	7.2%	1.5	471.0	475
EB	Right							1.5		
WB	Left	86	0.300	100.0	1	86	7.2%	1.5	67.2	75
WB	Thru	774	0.260	100.0	2	387	7.2%	1.5	319.8	325
WB	Right									
NB	Left	138	0.320	100.0	1	138	7.2%		0.0	50
NB	Thru	1012	0.270	100.0	2	506	7.2%	1.5	412.5	425
NB	Right									
SB	Left	306	0.430	100.0	1	306	7.2%	1.5	194.8	200
SB	Thru	1084	0.340	100.0	2	542	7.2%	1.5	399.5	400
SB	Right									
Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:			Station Street & CR 426							
EB	Left	167	0.580	60.0	1	167	7.2%	2.0	62.7	75
EB	Thru	1520	0.580	60.0	2	760	7.2%	2.0	285.2	300
EB	Right									

TABLE 10 (continue)
RECOMMENDED STORAGE LENGTH OF APPROACH LANES
YEAR 2030 (BUILD) SCENARIO 2B WITH IMPROVEMENTS TO SR434
Broadway Avenue SR 426 / CR 419

Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:		Division Street (PM)								
EB	Left	64	0.580	83.0	1	64	7.2%	2.0	33.2	50
EB	Thru	1301	0.470	83.0	2	1715	7.2%	2.0	426.1	450
EB	Right									
WB	Left	278	0.580	83.0	1	278	7.2%	2.0	144.3	150
WB	Thru	952	0.470	83.0	2	476	7.2%	2.0	311.8	325
WB	Right									
NB	Left	272	0.320	83.0	1	272	2.0%	2.0	217.5	225
NB	Thru	297	0.230	83.0	1	297	2.0%	2.0	268.9	275
NB	Right	500	0.230	83.0	1	500	2.0%	2.0	452.7	475
SB	Left	87	0.320	83.0	1	87	2.0%	2.0	69.6	75
SB	Thru	97	0.230	83.0	1	97	2.0%	2.0	87.8	100
SB	Right									

Turning Movement		Turning Volume (Veh/Hr)	G/C	Cycle Length (Sec)	Number of Lanes	Per-Lane Volume (VPHPL)	Percent Trucks	Arrival Factor	Lane Length (Ft)	Lane Length (Ft)
INTERSECTION:		Academy Avenue & Stephan Street								
EB	Left	21	0.670	90.0	1	21	7.2%	2.0	9.3	50
EB	Thru	1585	0.670	90.0	2	793	7.2%	2.0	350.4	375
EB	Right									
WB	Left	67	0.670	90.0	1	67	7.2%	2.0	29.6	50
WB	Thru	1207	0.670	90.0	2	604	7.2%	2.0	266.9	275
WB	Right									
NB	Left									
NB	Thru	186	0.220	90.0	1	186	2.0%	2.0	185.0	200
NB	Right									
SB	Left									
SB	Thru	43	0.220	90.0	1	43	2.0%	2.0	42.8	50
SB	Right									

7.0 CORRIDOR ANALYSIS

The SR 426/CR 419 (Broadway Street) PD&E Study was conducted to develop and evaluate alternatives to increase capacity and improve mobility and safety within the existing SR 426/CR 419 (Broadway Street)) corridor. Existing and projected traffic operational characteristics and access management requirements on the existing alignment were evaluated in order to develop transportation solutions that addressed congestion management in this urbanized corridor. Due to the need to address operational deficiencies along the existing corridor, alternative corridors were not considered during this study. As documented in Section 3.0, this segment of SR 426/CR 419 represents a "missing link" in systems continuity therefore, improvements to alternative corridors would not satisfy the purpose and need of the proposed action.

8.0 ALTERNATIVE ANALYSIS

Several alternatives were developed and evaluated to identify the most appropriate level of improvement within the existing SR 426/CR 419 corridor from Pine Avenue to west of Lockwood Boulevard. These alternatives included the no-build, or do-nothing alternative, and several build alternatives. These are discussed in the following Section.

8.1 No-Build Alternative

The no-build alternative involves maintaining the existing two-lane facility. Under this alternative, no improvement would be made to increase capacity or enhance mobility and safety along SR 426/CR 419 (Broadway Street) from Pine Avenue to west of Lockwood Boulevard. Intersection improvements, median modifications, access management strategies, and bicycle and pedestrian facility improvements would not be implemented. There would be no improvement to alleviate stormwater management and water quality concerns.

By the Year 2030, if traffic volumes continue to increase as predicted, operating conditions and levels of service at intersections and along roadway links would continue to deteriorate under the no-build alternative. This will result in increased air pollution resulting from increased congestion and longer trips and peak periods, and increased traffic on adjacent roadway networks as motorists seek alternative routes to avoid heavily congested sections of SR 426/CR 419 (Broadway Street).

Advantages

There are certain advantages of the no-build alternative, as follows:

- No cost to prepare roadway design plans;
- No right-of-way acquisition costs;
- No roadway construction;
- No utility relocation costs;
- No drainage system improvement costs;
- No business damages;
- No residential relocations;
- No natural or biological impacts;
- No noise abatement measures; and,
- No temporary inconveniences during construction.

Based on these advantages and the financial benefits of the no-build alternative, this alternative was considered a viable alternative during the PD&E Study.

Disadvantages

Although the advantages of the no-build alternative are significant, the disadvantages must also be considered. If improvements are not made along SR 426/CR 419 (Broadway Street), by the Year 2030, traffic volumes will continue to increase and the existing facility will not be able to handle the travel demand. As a result, level of service and operating conditions will continue to deteriorate. In addition to a decreased level of service along SR 426/CR 419 (Broadway Street), the adjacent roadway network will experience more congestion as motorists will seek alternatives whenever possible. In some cases, this condition may contribute to increased "cut-through" traffic in nearby residential neighborhoods and public schools.

Motorists at signalized intersections will continue to experience trip delays and SR 426/CR 419 (Broadway Street) will continue to fail to meet the minimum level of service standards for the segment between Pine Street and Lockwood Boulevard. Crash rates on SR 426/CR 419 (Broadway Street), which are high in the existing condition in certain sections, would likely continue to increase as traffic volumes increase. Existing deficiencies in pedestrian and bicycle facilities will not be improved.

With no improvements, impacts to air quality will increase as congestion worsens on this section of SR 426/CR 419 (Broadway Street). Increased road user costs will occur due to the increasing congestion, slower speeds and longer periods of stopped conditions which result in longer periods of engine idling, increased fuel consumption and increased build-up of hydro-carbon emission into the atmosphere.

The no-build alternative is not consistent with the MPO's current adopted long range transportation plan and it is not consistent with the Comprehensive Land Use Plans for the City of Oviedo and Seminole County.

8.2 Transportation System Management

Transportation System Management (TSM) strategies include alternatives to roadway widening. TSM measures are typically short-term improvements which attempt to maximize the efficiency of the existing roadway system. TSM alternatives to major capacity improvements are usually recommended in highly urbanized or constrained corridors and usually only provide short-term relief. TSM alternatives may include the addition of turn lanes and traffic signal modifications at intersections, the addition of park and ride lots, ride sharing programs such as car pooling, van pooling and commuter assistance programs, and increased surface transit operations. Many of these features have already been considered for the SR 426/CR 419 (Broadway Street) corridors as part of the regional long range transportation planning process or in the development of local

government comprehensive plans. The only improvement options which would substantially improve capacity and enhance mobility and safety along the study segment of SR 426/CR 419 (Broadway Street) would involve additional through travel lanes which require right-of-way acquisition. Several TSM-type measures such as intersection improvements, access management, and enhanced bicycle and pedestrian facilities were actually incorporated into the development of the build alternatives, which are discussed below.

8.3 Build Alternatives

The evaluation of alternative transportation improvements along the SR 426/CR 419 (Broadway Street) corridor involved several conceptual design elements. These included the development and consideration of alternative typical sections, median modifications, drainage system improvements, utilization of parallel "off system" facilities, bicycle and pedestrian facility improvements and highway beautification. The alternatives analysis conducted for the SR 426/CR 419 (Broadway Street) PD&E Study, beginning with the development and consideration of alternative typical sections which would accommodate future travel demand along the corridor, is presented in the following sections.

Typical Section Development

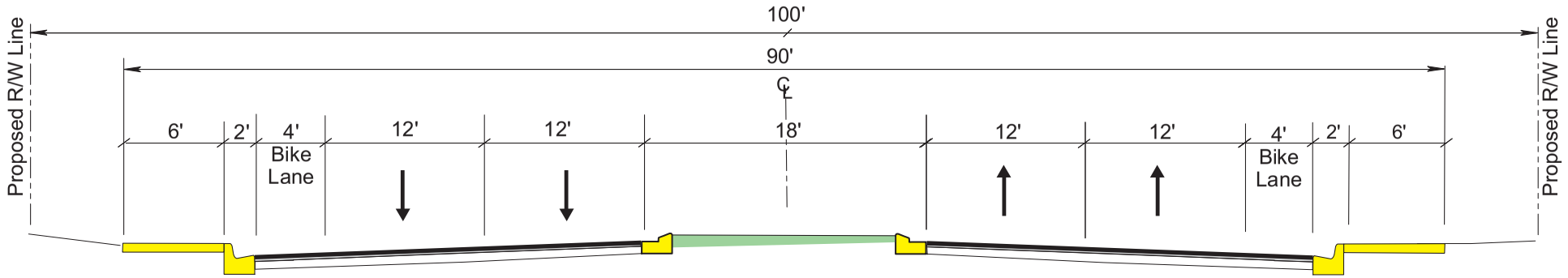
Typical Section #1

As shown in Figure 8-1, Typical Section #1 is a four-lane urban (raised median) concept that would have an 18-foot wide median. A curb and gutter system would be introduced along the inside and outside edge of pavement. Travel lanes would be 12-feet wide and a four-foot wide bicycle lane adjacent to the outside edge of pavement would be provided in both directions. A six-foot wide sidewalk would be provided along both sides adjacent to the curb and gutter. These improvements would be accommodated within a 100-foot wide right-of-way corridor.

Future improvements may be accommodated within this typical section by either widening to the inside or the outside to provide left turn or right turn lanes. This typical section is also considered consistent with the existing and future functional classification of the roadway and is consistent with the existing and proposed land use characteristics.

Typical Section #2

Also shown on Figure 8-1, Typical Section #2 is a four-lane urban (raised median) concept with an 18-foot wide median. A curb and gutter system would be introduced along both the inside and outside edge of pavement. Travel lanes would be 12-feet wide and a four-foot wide bicycle lane adjacent to the outside edge of pavement would be provided in both directions. On both sides, a five-foot wide sidewalk would be located adjacent to a three-foot wide grass strip which provides separation between pedestrians and vehicles. These improvements would be accommodated within a 100-foot wide right-of-way corridor.

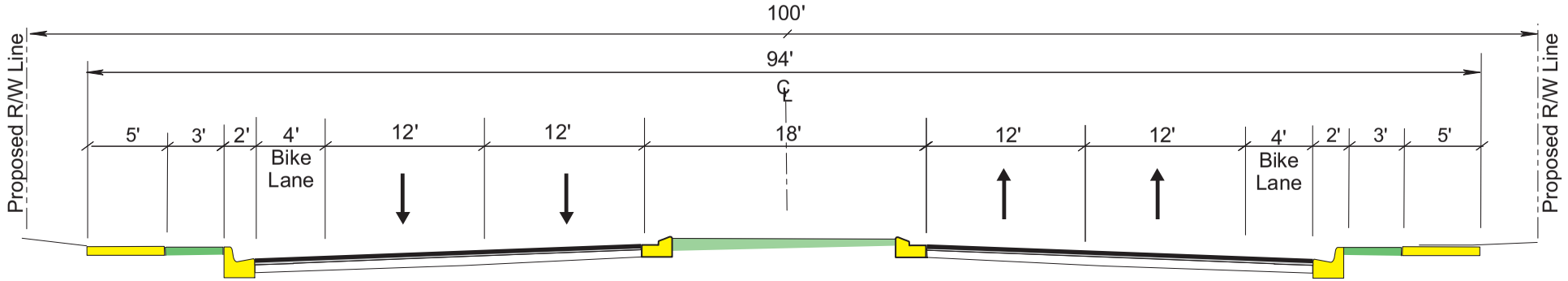


Four-Lane Urban Typical Section (Raised Median)

Posted Speed: 35 mph

Design Speed: 40 mph

Alternative Typical Section # 1



Four-Lane Urban Typical Section (Raised Median)

Posted Speed: 35 mph

Design Speed: 40 mph

Alternative Typical Section # 2

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

Figure 8-1

Future improvements may be accommodated within this typical section by either widening to the inside or the outside to provide left turn or right turn lanes. Although this urban typical section is also considered consistent with the existing and future functional classification of the roadway and the existing and proposed land uses, the additional width in the typical as compared to Typical Section #1, reduces the area available for a construction easement.

Typical Section #3

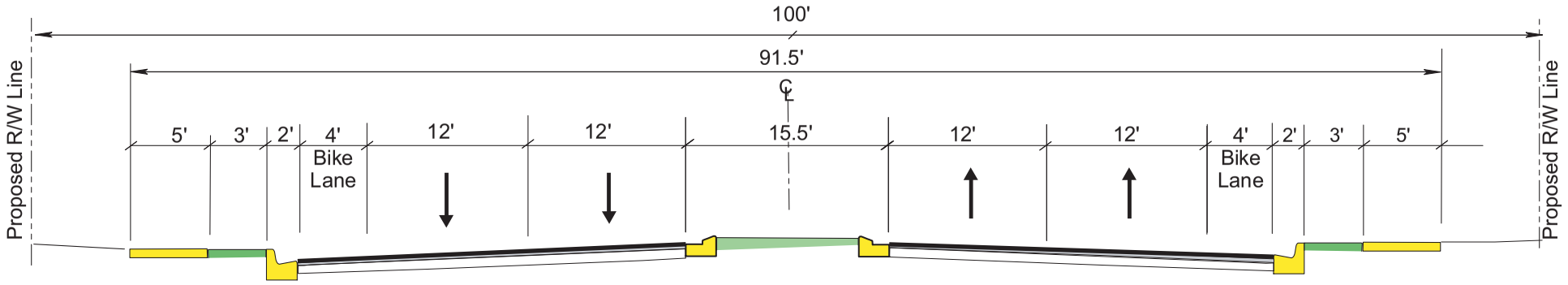
As shown in Figure 8-2, Typical Section #3 is a four-lane urban (raised median) concept that would have a 15.5-foot median. A curb and gutter system would be introduced along both the inside and outside edge of pavement. Travel lanes would be 12-feet wide and a four-foot wide bicycle lane adjacent to the outside edge of pavement would be provided in both directions. A five-foot wide sidewalk would be provided along both sides adjacent to a three-foot wide grass strip which provides separation between pedestrians and vehicles. These improvements would be accommodated within a 100-foot wide right-of-way corridor. Future improvements may be accommodated within this typical section by either widening to the inside or the outside to provide left turn or right turn lanes.

This urban typical section is also considered consistent with the existing and future functional classification of the roadway as well as with existing and proposed land uses characteristics; unlike Typical Section #2 this typical section "footprint" increases the area available for the construction easement, thereby improving the constructability of the roadway.

Typical Section #4

Also shown on Figure 8-2, Typical Section #4 is a five-lane urban concept that would have a 12-foot wide flush, or painted, median. A curb and gutter system would be introduced along the outside edge of pavement. Travel lanes would be 12-feet wide and a four-foot wide bicycle lane adjacent to the outside edge of pavement would be provided in both directions. A six-foot wide sidewalk would be provided along both sides adjacent to the curb and gutter system. These improvements would be accommodated within a100-foot wide right-of-way corridor. Future improvements may be accommodated within this typical by widening to the outside for right turn lanes.

Although this urban typical section is also considered consistent with the existing and future functional classification of the roadway and the existing and proposed land uses, it is not considered consistent with the proposed City of Oviedo Downtown Redevelopment Master Plan.

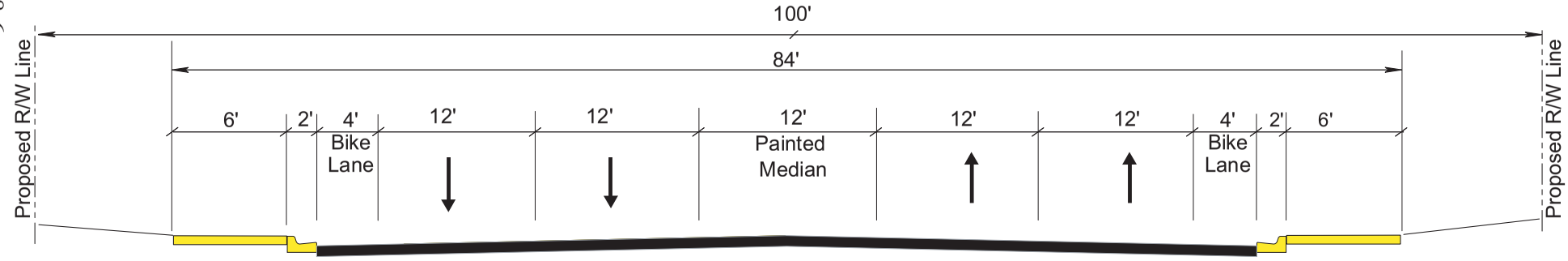


Four-Lane Urban Typical Section (Raised Median)

Posted Speed: 35 mph

Design Speed: 40 mph

Alternative Typical Section # 3



Four-Lane Urban Typical Section

Posted Speed: 35 mph

Design Speed: 40 mph

Alternative Typical Section # 4

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

Figure 8-2

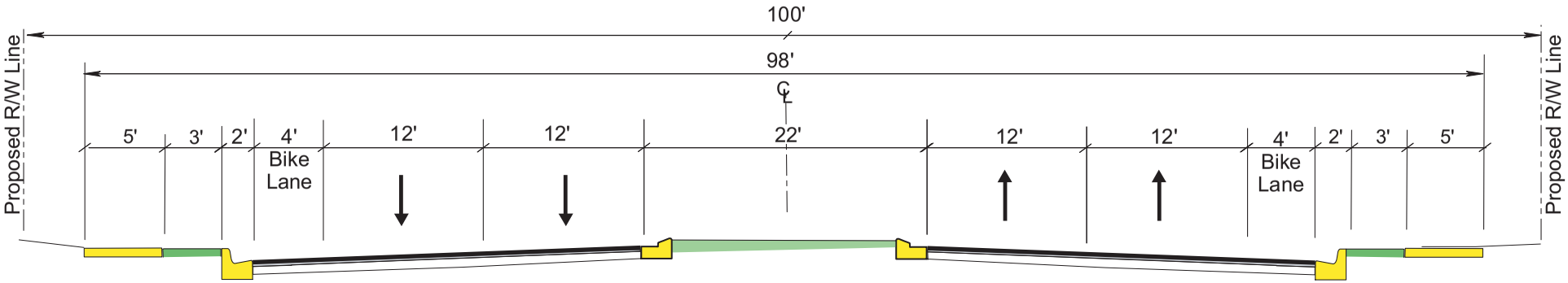
The typical section concepts described in this section represent alternatives that were considered to minimize project impacts and construction costs, however, they do not necessarily address the need to enhance the future urban characteristics of the SR 426/CR 419 corridor. Coordination meetings were held with FDOT, Seminole County and the City of Oviedo to receive input necessary to develop a typical section that will address project concerns. As a result of this coordination, a preferred typical section was developed and is presented below.

Preferred Typical Section

The Preferred Typical section is similar to Typical Section #2. Both concepts have a raised median but the preferred section has a 22-foot wide median. This concept provides four 12-foot wide travel lanes (two in each direction). A curb and gutter system will convey stormwater runoff for the impervious surface of the roadway. A four-foot wide bicycle lane adjacent to the outside edge of pavement would be provided in both directions. A five-foot wide sidewalk would be provided along both sides adjacent to a three-foot wide grass strip which provides separation between pedestrians and vehicles. The preferred typical section, shown in Figure 8-3, could be accommodated within a 100-foot wide right-of-way. This concept was then utilized to develop alignment alternatives for the proposed build alternative.

Alignment Alternatives

As presented in Section 4.0, the existing right-of-way within the study corridor varies from 50 feet to 120 feet. The changes in right-of-way dimension occur not only in width but in the actual location of the right-of-way lines. In other words, based on existing documentation reviewed during the study, the existing right-of-way lines do not appear to be symmetrical along the center line of the existing roadway. Initially, the alignment alternatives for SR 426/CR 419 were developed using the traditional approach which considers right-of-way acquisition for the preferred typical section either entirely on the left or right of the existing alignment or centered equally along both sides of the existing alignment. It should be noted that the existing symmetry of the existing right-of-way in relation to the existing roadway presented a condition where a “true” center alignment alternative was not possible to create. The initial alignment alternatives which were developed and evaluated (Left, Right and Center) during the study process are presented and discussed below. Copies of the alternatives studied are located in Appendix B. It should be noted that from east of the Oviedo Bowling Center to west of Lockwood Boulevard, all of the alignment alternatives would fit within the existing right-of-way (100 to 120 feet). Therefore, Sheets 6 through 10 of each alignment alternative are common to each alternative. Only one set of Sheets 6 through 10 are included in Appendix B.



Four-Lane Urban Typical Section (Raised Median)

Posted Speed: 35 mph

Design Speed: 40 mph

Preferred Typical Section

DRMP ENGINEERS · SURVEYORS · PLANNERS · SCIENTISTS

OVIEDO · FLORIDA

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

Figure 8-3

Left Alignment Alternative

This alignment alternative generally holds the existing right-of-way line along the south (or right) side of the existing roadway and would require right-of-way acquisition along the north (or left) side of the existing roadway.

This alignment alternative begins at the intersection of Pine Avenue and SR 426 and moves east along SR 426. In this area, which is near the Oviedo High School, the existing right-of-way width is generally 100 feet. Holding the existing south right-of-way line, this alignment will impact the Oviedo High School, the American Legion Oviedo Post, and the Oviedo Oaks Plaza along the north side of the proposed roadway.

Approximately 1200 feet from the beginning of the project, the existing right-of-way changes to 60 feet. The 60-foot wide right-of-way continues to the west right-of-way line of Lake Jessup Avenue. Along this section, 40 feet of additional right-of-way is required along the north side of SR 426 impacting several businesses in this section of SR 426 including the Oviedo Learning Center, Sunland Associates, dental offices and two other offices building in the Broadway Plaza Office Park.

From east of Lake Jessup Avenue to approximately 600 feet east of CR 426 the existing right-of-way width is further reduced to 50 feet. Through this section of SR 426, this alignment alternative requires an additional 50 feet of right-of-way from two single family residences, as well as right-of-way from Inet Realty, The Greater Life Church, Step in Time Academy of Dance, Phase Builder, and several parcels from the First Baptist Church of Oviedo, including the front of the original sanctuary.

East of SR 434 this alignment alternative impacts the Townhouse Restaurant, Stanley Consulting Inc., the Doctor of Motors, a group of small shops and a vacant lot. East of the vacant lot the existing right-of-way increases to 80 feet. This condition continues to a point approximately 600 feet east of Division Street. Along this section this alignment alternative impacts a vacant lot to the west of Division Street and the Antioch Missionary Baptist Church on the east side of Division Street. This alignment alternative not only impacts the Antioch Missionary Baptist Church existing facility but also the vacant lot where the new Church facility is being built (as of 2006).

From east of the Antioch Missionary Baptist Church property line to Evans Street the existing right-of-way for CR 419 is 100 feet. Through this section of CR 419 this alignment alternative can be built within the limits of the existing right-of-way. There will be some minor impacts limited to the Round Lake and Long Lake shoreline areas due mostly to potential flood zone encroachment. From Evans Street to Waverlee Woods Boulevard the existing right-of-way is 120 feet and is sufficient to accommodate this alignment alternative.

Right Alignment Alternative

This alignment alternative generally holds the existing right-of-way line along the north (or left) side of the existing roadway and would require right-of-way acquisition along the south (or right) side of the existing roadway.

This alignment alternative also begins at the intersection of Pine Avenue and SR 426. Moving east along SR 426 from Pine Avenue, this alignment alternative will impact a vacant lot and the front of the Oviedo Cemetery; however, no actual grave sites would be disturbed or relocated. The existing right-of-way through this area is 100 feet; however the impact is due to the offset nature of the existing right-of-way as previously described.

Past the Oviedo Cemetery, the existing right-of-way width changes to 60 feet. From this point to the west right-of-way line of Lake Jessup Avenue, this alignment alternative would impact two one-story office buildings, and five single family residences along the south side of SR 426.

East of the east side of Lake Jessup Avenue, the existing right-of-way width on SR 426 changes to 50 feet. This alignment alternative impacts the Oviedo Friendship Park, the property in front of the Lawton House, and the first row of parking spaces at the TW Lawton Elementary School. East of Lawton Avenue this alignment alternative impacts the Espirit Mortgage office building, Antigua Pool Company, and a vacant lot (parking area) belonging to the Lighthouse Baptist Church.

Moving east, past Graham Avenue, this alignment alternative impacts the Photo Restoration Shop, Glenda's Sewing Shop, City Cleaners, Cabbage Rose Furniture and Lee's Karate. Moving further east past SR 434 (Central Avenue) the Right Alignment Alternative impacts the Shoppes of Broadway East. Then, past Station Street this alignment alternative impacts the Nelson Company Building that houses an Acupuncture Office and the Seminole County Sheriff's Community Service Center (which is planned to be relocated by the Seminole County Sheriff's Office).

In this vicinity, the existing right-of-way for this section of CR 419 changes to 80 feet and continues as 80 feet to a point approximately 600 feet past Division Street. In this area, several vacant lots, the Paint and Body Shop and Owens Auto Sales and Repairs are impacted. East of Owens Auto Sales and Repairs, the CR 419 R/W increases to 100 feet.

From east of Owens Auto Sales and Repairs to Evans Street the existing right-of-way for CR 419 is 100 feet. Through this section of CR 419 the Right Alignment Alternative is the same as the Left Alignment Alternative; therefore the project impacts are similar.

Center Alignment Alternative

This alignment alternative attempts to minimize direct project impacts by distributing the right-of-way acquisition equally along both sides of the existing roadway. As previously mentioned, the offset nature of the existing right-of-way prevented the development of a "true" center alignment alternative.

Beginning at Pine Avenue, the Center Alignment Alternative moves eastward along SR 426 for approximately 1200 feet and would be situated within the limits of the existing 100 feet of right-of-way. There would be no project impacts in this area.

As mentioned above, the existing right-of-way changes to 60 feet from east the Oviedo Cemetery to the west right-of-way line of Lake Jessup Avenue. Impacts due to the Center Alignment Alternative occur on both sides of the existing roadway. These impacts include two one-story office buildings and three single family residences along the south side and the Oviedo Learning Center, Sunland Associates, the dental offices and two other offices building in Broadway Plaza Office Park along the north side.

The Center Alignment Alternative continues eastward impacting the Oviedo Friendship Park, the property in front of the Lawton House property, the front of the Lawton Elementary School property (without impacting the parking spaces), the Espirit Mortgage office, the Antigua Pool Company and a vacant lot (parking area) belonging to the Lighthouse Baptist Church. All these impacts are on the south side of SR 426.

Along the north side of the existing roadway, this alignment alternative impacts the front of two single family residences, Inet Realty, The Greater Life Church, Step in Time Academy of Dance, Phase Builder and several parcels from the First Baptist Church of Oviedo (avoiding the Church's historical sanctuary).

Impacts along the south and north side of the existing roadway continue through the downtown area. These include: the Photo Restoration Shop, Glenda's Sewing Shop, City Cleaners, Cabbage Rose Furniture, Lee's Karate, the Shoppes of Broadway East, the Nelson Company Building (including the Acupuncture office and the Sheriff Community Service Center) along the south side and the Townhouse Restaurant, Stanley Consulting Inc., the Doctor of Motors, a building with a group of small shops and a vacant lot on the north side.

As the existing CR 419 right-of-way changes to 80 feet from the downtown area to a point approximately 600 feet of Division Street, the Center Alignment Alternative impacts several vacant lots, the Oviedo Paint and Body Shop and Owens Auto Sales and Repairs, located on the south side of the exiting roadway. On the north side of CR 419, this alignment alternative impacts a vacant lot to the west of Division Street and the Antioch Missionary Baptist Church, east of Division Street. This alignment not only impacts the Antioch Missionary Baptist

Church existing facility but also the site where the new Church is being built (as of 2006).

From east of the Antioch Missionary Baptist Church property line, the existing right-of-way for CR 419 is 100 feet. Through this section of CR 419 the Center Alignment Alternative is the same as the previous alignment alternatives; therefore the project impacts are similar.

Best Fit Alignment Alternative

This alignment was developed in an effort to minimize and/or avoid community impacts along the project corridor associated with the alignment alternatives described. There is a "No-build" alternative that can be completely without impacts; however, the "Best Fit" alignment alternative attempts to avoid the most significant property impacts along the study area.

As with the other alignment alternatives, the Best Fit Alignment Alternative begins at the intersection of SR 426 and Pine Avenue. It continues eastward within the existing 100-foot wide right-of-way for a distance of approximately 1200 feet. In the vicinity of the existing right-of-way reduction, (100 feet to 80 feet) this alignment alternative curves slightly to the north impacting the vacant lot in front of the Oviedo Oaks Plaza and the vacant property to the east of the Oviedo Oaks Plaza along the north side of the existing roadway.

On the south side of the existing SR 426, this alignment alternative impacts a minor portion of the property in front of the new single-story office buildings (impacts to existing sidewalk only). In this area, the alignment alternative then curves south impacting five single-family residential properties along the south SR 426, but avoiding impacts to the Oviedo Learning Center and the offices buildings in the Broadway Plaza Office Park.

East of Lake Jessup Avenue, the Best Fit Alignment Alternative holds the existing north right-of-way line and impacts the front of the Oviedo Friendship Park but not any of the parks' playground items or the fence bordering the park. Moving further east the alignment impacts the property in front of the Lawton House including the oak trees. Continuing east, the alignment alternative impacts the first row of parking spaces from the Lawton Elementary School, the Espirit Mortgage Office, Antigua Pool Company and the Lighthouse Baptist Church parking lot. There would be no impacts to the north side of SR 426 under this alternative.

Past Graham Avenue, this alignment alternative impacts the Photo Restoration Shop, Glenda's Sewing Shop, City Cleaners, Cabbage Rose Furniture, Lee's Karate, the Shoppes of Broadway East, the Nelson Company Building (including the Acupuncture office and the Sheriff Community Service Center) on the south side of the existing roadway.

As the existing CR 419 right-of-way changes to 80 feet from the downtown area to a point approximately 600 feet of Division Street, the Best Fit Alignment Alternative impacts several vacant lots, the Paint and Body Shop, and Owens Auto Sales and Repairs. From east of this area, the existing right-of-way for CR 419 is 100 feet. Through this section of CR 419 the Center Alignment Alternative is the same as the previous alignment alternatives; therefore the project impacts are similar.

8.4 Evaluation Matrix

Each of the project alternatives described above were evaluated in terms of potential social, economic and environmental impacts. Table 8-1 shows the evaluation matrix which was prepared to summary these potential project impacts.

On October 28, 2003 an Alternatives Public Workshop was held to present the results of the alternatives analysis described above. Approximately 24 persons attended the informal workshop to review project details, discuss potential project impacts and provide input.

8.5 Preferred Alternative

As a result of the technical analysis presented in this Report, along with public input received at the October 28, 2003 Alternatives Public Workshop, the Best Fit Alignment Alternative, was identified as the preferred project alternative. Additional input received from the City Council and the independent Project Advisory Group (PAG), which was formed at the beginning of the study process, resulted in the identification of potential modifications to the preferred project alternative. These modifications included the development of additional turn lanes on SR 434 (Central Avenue) north and south of SR 426 and the relocation of CR 426 to the east of its current location. See Figure 8-4 for details on the CR 426 modifications. This area was generally referred to as the downtown intersection. The proposed modifications were made to further enhance the traffic operational characteristics between the existing signalized intersections along SR 426/CR 419 at SR 434 and CR 426.

These modifications resulted in additional project impacts. Therefore, an additional public workshop was held on June 9, 2005 to present the proposed improvements to the downtown intersection (involving the intersection of SR 426 with SR 434 and the intersection of CR 419 with CR 426). This additional improvement included the easterly re-alignment of CR 426 and the relocation of the existing CR 419 intersection with CR 426 to the east in order to increase signal spacing. In addition, proposed noise walls in the vicinity of Waverlee Woods and Kingsbridge East subdivisions were shown at the June 2005 public workshop for discussion and comment. Table 8-2 shows the revised Evaluation Matrix which was presented at the June 9, 2005 Public Workshop.

Table 8-1 Original Evaluation Matrix

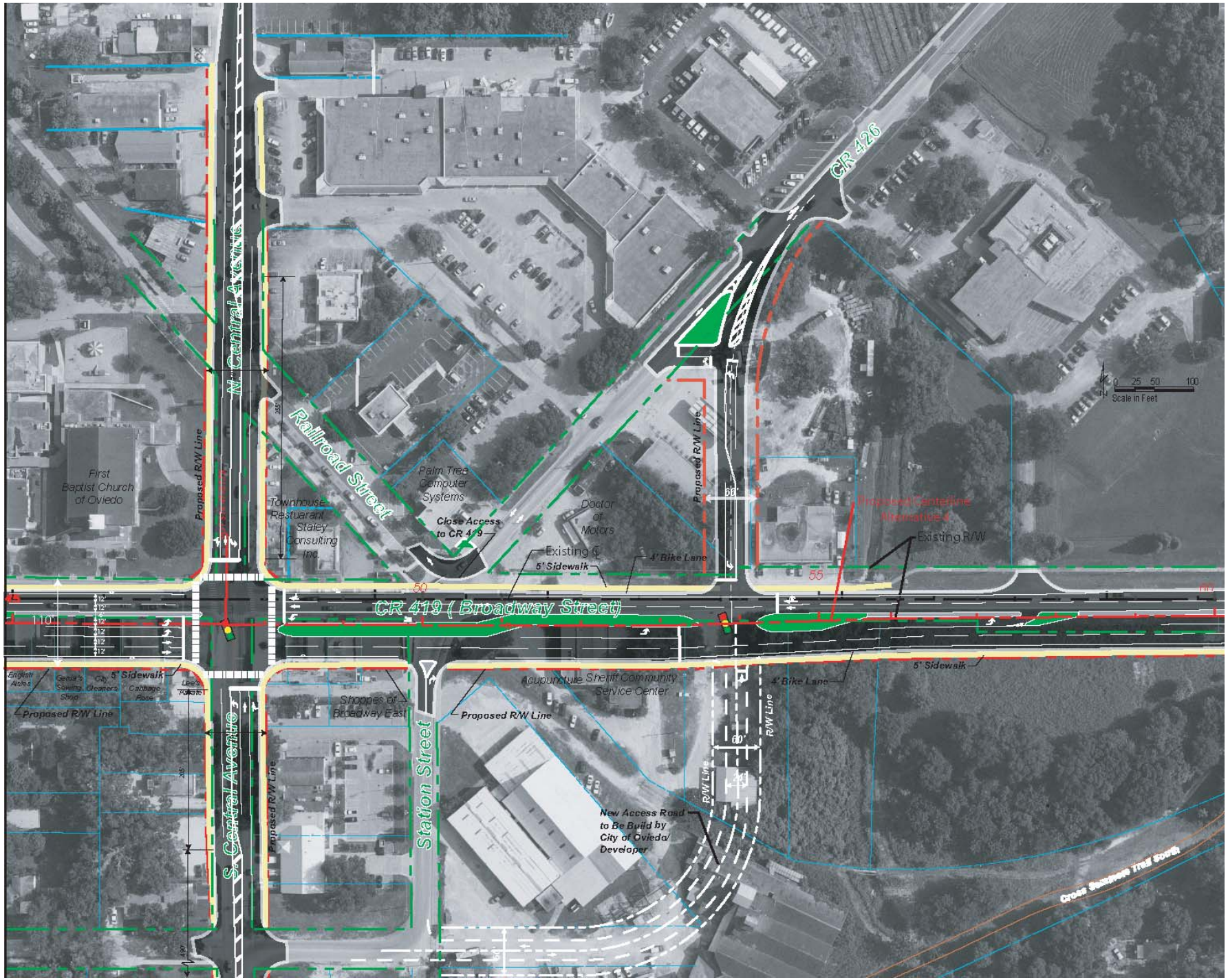
SR 426/CR 419 Project Development and Environment (PD&E) Study

Evaluation Matrix
Total Project Impacts

EVALUATION MEASURE	Alternative 1 Widen to South	Alternative 2 Widen to North	Alternative 3 Widen Both Sides	Alternative 4 Combination	No-Build
Travel Service					
Compatible with Local, State and Regional Plans:					
Downtown Oviedo Master Plan	Yes	Yes	Yes	Yes	No
City of Oviedo Comprehensive Land Use Plan	Yes	Yes	Yes	Yes	No
Seminole County Comprehensive Land Use Plan	Yes	Yes	Yes	Yes	No
METROPLAN Orlando Long Range Transportation Plan	No	No	No	No	Yes
Provides Facilities for Bicyclists	Yes	Yes	Yes	Yes	No
Provides Facilities for Pedestrians	Yes	Yes	Yes	Yes	No
Accommodates Future Traffic Projections	Yes	Yes	Yes	Yes	No
Project Length (miles)	± 3.0	± 3.0	± 3.0	± 3.0	0.0
Social/Cultural Impacts					
TOTAL NUMBER OF PARCELS	36	36	66	41	0
Residential Property					
Impacts	5	2	7	5	0
Potential Relocations	3	2	3	3	0
Business Property					
Impacts	21	20	35	24	0
Potential Relocations	20	10	22	16	0
Unimproved Sites					
Impacts	10	11	20	11	0
Church Property					
Impacts	1	3	4	1	0
Potential Relocations	0	3	1	0	0
Community Facilities					
Impacts	2	1	2	2	0
Potential Relocations	1	0	1	1	0
Cross Seminole Trail					
Impacts	No	Yes	Yes	No	No
Potential Historic Sites					
Impacts	2	2	4	2	0
Potential Relocations	1	1	2	1	0
Park Lands					
Impacts	1	0	1	1	0
Cemeteries					
Impacts	1	0	0	0	0
School Property					
Impacts	1	1	1	1	0
Approved Site Plans					
Impacts	No	No	No	No	No
Aesthetic Considerations	Yes	Yes	Yes	Yes	No
Natural Environment Impacts					
Existing Wetland Areas (acres)	2.20	1.70	1.90	2.20	0.00
Threatened and Endangered Species	No	No	No	No	No
Riparian Habitat Protection Zone (RHPZ) (acres)	0.10	0.10	0.10	0.10	0.00
Outstanding Florida Waters (OFW)	None	None	None	None	None
Potential 100-year Floodplains (acres)	0.80	0.60	0.80	0.80	0.00
Physical Environment Impacts					
Potential Contamination Sites	4	6	7	4	0
Potential Noise Impacts	To be determined	To be determined	To be determined	To be determined	No
Potential Utility Relocations	Yes	Yes	Yes	Yes	No
Project Cost ($ millions)					
[1] Preliminary Engineering (Design)	1.07	1.07	1.07	1.07	0.00
Right-of-Way Acquisition	12.51	15.23	15.50	11.73	0.00
[2] Roadway Construction	10.67	10.67	10.67	10.67	Annual Maintenance
[3] Construction Engineering and Inspection	1.60	1.60	1.60	1.60	0.00
[4] Environmental Mitigation	0.18	0.14	0.15	0.18	0.00
TOTAL PROJECT COST	$26.03	$28.71	$28.99	$25.25	$0.00

(1) Preliminary Engineering costs estimated at 10% of Roadway Construction cost
(2) Includes roadway, drainage, signing, marking, traffic control and maintenance of traffic costs
(3) Construction Engineering and Inspection estimated at 15% of total Roadway Construction cost; includes post design services
(4) Environmental Mitigation calculated at $80,000/acre

Date: October 28, 2003



	SR 426 /CR 419 PROJECT DEVELOPMENT & ENVIRONMENT (PD&E) STUDY From Pine Avenue to Lockwood Boulevard City of Oviedo	CR 419 and CR 426 Improvements	Figure 8-4

Table 8-2 Revised Evaluation Matrix

SR 426/CR 419 Project Development and Environment (PD&E) Study
Evaluation Matrix/Project Impacts

EVALUATION MEASURE	Preferred Alternative
Travel Service	
Compatible with Local, State and Regional Plans:	
Downtown Oviedo Master Plan	Yes
City of Oviedo Comprehensive Land Use Plan	Yes
Seminole County Comprehensive Land Use Plan	Yes
METROPLAN Orlando Long Range Transportation Plan	No
Provides Facilities for Bicyclists	Yes
Provides Facilities for Pedestrians	Yes
Accommodates Future Traffic Projections	Yes
Project Length (miles)	± 3.0
Social/Cultural Impacts	
TOTAL NUMBER OF PARCELS	64
Residential Property	
Impacts	5
Potential Relocations	3
Business Property	
Impacts	42
Potential Relocations	21
Unimproved Sites	
Impacts	17
Church Property	
Impacts	2
Potential Relocations	0
Community Facilities	
Impacts	2
Potential Relocations	1
Cross Seminole Trail	
Impacts	None
Potential Historic Sites	
Impacts	3
Potential Relocations	1
Park Lands	
Impacts	1
Cemeteries	
Impacts	0
School Property	
Impacts	1
Aesthetic Considerations	Yes
Natural Environment Impacts	
Existing Wetland Areas (acres)	2.20
Threatened and Endangered Species	None
Riparian Habitat Protection Zone (RHPZ) (acres)	0.10
Outstanding Florida Waters (OFW)	None
Potential 100-year Floodplains (acres)	0.80
Physical Environment Impacts	
Potential Contamination Sites	6
Potential Noise Impacts	Yes
Potential Utility Relocations	Yes
Project Cost ($ millions)	
(1) Preliminary Engineering (Design)	1.85
Right-of-Way Acquisition	19.44
(2) Roadway Construction	14.48
(3) Construction Engineering and Inspection	2.17
(4) Environmental Mitigation	0.18
TOTAL PROJECT COST	$38.12

(1) Preliminary Engineering costs estimated at 10% of Roadway Construction cost
(2) Includes roadway, drainage, signing, marking, traffic control and maintenance of traffic costs
(3) Construction Engineering and Inspection estimated at 15% of total Roadway Construction cost; includes post design services
(4) Environmental Mitigation calculated at $80,000/acre

On September 22, 2005, a formal Public Hearing was held to present the results of the study to date and to present the preferred build and no-build alternatives for public input. Approximately 57 persons attended and written comments were submitted as part of the official Public Hearing record. A *Public Hearing Transcript and Summary* was prepared and submitted under separate cover.

Following the formal Public Hearing, the City of Oviedo continued to coordinate with Seminole County and FDOT in developing refinements to the preferred project alternative. In particular, the preferred typical section alternative shown in Figure 8-3 was further refined to accommodate variations in travel lane widths and sidewalk widths throughout the SR 426/CR 419 corridor. These variations are reflected in the Figures 1-1 through 1-4 in Section 1.0. In addition, enhancements to the SR 434 and CR 426 typical section alternative were also made. These are reflected in Figures 1-5 through 1-7 in Section 1.0.

It should be noted that the typical section refinements for SR 426/CR 419 did not affect the overall right-of-way width required and therefore did not affect the impact status presented at the September 22, 2005 Public Hearing. A slight increase in right-of-way width occurred for the SR 434 improvement north and south of SR 426 which is the result of the refinement to the SR 434 typical section. This resulted in an increase in right-of-way and construction cost.

Below is a summary of the typical section refinements which are shown in the approved Typical Section Package (Appendix C) and reflected in Section 1.0. The overall right-of-way and construction costs for the entire proposed improvement were re-evaluated and updated in June 2006 and are shown in the Table 8-3.

SR 426 Mainline: The basic improvement concept is a four-lane divided arterial with a 22-foot wide raised median and closed drainage system (curb and gutter). In addition, a four-foot wide bike lane is provided along the entire length of the proposed roadway, adjacent to the outside travel lane. Between the proposed project limits (Pine Avenue to west of Lockwood Boulevard) the travel lane widths and sidewalk widths vary as follows:

- **Pine Avenue to Lake Jessup Avenue (see Figure 1-1):** 11-foot wide inside travel lanes and 12-foot wide outside travel lanes; five-foot wide sidewalks along both sides of the proposed improvement, separated by a three-foot wide grass strip behind the back of curb.

- **Lake Jessup Avenue to Oviedo Boulevard (formerly Division Street) (see Figure 1-2):** 11-foot wide inside and outside travel lanes; eight-foot wide sidewalks along both sides of the proposed improvement, located adjacent to the back of curb (no grass strip).

Table 8-3 Updated Evaluation Matrix

SR 426/CR 419 Project Development and Environment (PD&E) Study
Evaluation Matrix/Project Impacts

EVALUATION MEASURE	Preferred Alternative
Travel Service	
Compatible with Local, State and Regional Plans:	
Downtown Oviedo Master Plan	Yes
City of Oviedo Comprehensive Land Use Plan	Yes
Seminole County Comprehensive Land Use Plan	Yes
METROPLAN Orlando Long Range Transportation Plan	No
Provides Facilities for Bicyclists	Yes
Provides Facilities for Pedestrians	Yes
Accommodates Future Traffic Projections	Yes
Project Length (miles)	± 3.0
Social/Cultural Impacts	
TOTAL NUMBER OF PARCELS	64
Residential Property	
Impacts	5
Potential Relocations	3
Business Property	
Impacts	42
Potential Relocations	21
Unimproved Sites	
Impacts	17
Church Property	
Impacts	2
Potential Relocations	0
Community Facilities	
Impacts	2
Potential Relocations	1
Cross Seminole Trail	
Impacts	None
Potential Historic Sites	
Impacts	3
Potential Relocations	1
Park Lands	
Impacts	1
Cemeteries	
Impacts	0
School Property	
Impacts	1
Aesthetic Considerations	Yes
Natural Environment Impacts	
Existing Wetland Areas (acres)	2.20
Threatened and Endangered Species	None
Riparian Habitat Protection Zone (RHPZ) (acres)	0.10
Outstanding Florida Waters (OFW)	None
Potential 100-year Floodplains (acres)	0.80
Physical Environment Impacts	
Potential Contamination Sites	6
Potential Noise Impacts	Yes
Potential Utility Relocations	Yes
Project Cost ($ millions)	
[1] Preliminary Engineering (Design)	2.44
Right-of-Way Acquisition	35.72
[2] Roadway Construction	24.44
[3] Construction Engineering and Inspection	4.03
[4] Environmental Mitigation	0.18
TOTAL PROJECT COST	$66.81

(1) Preliminary Engineering costs estimated at 10% of Roadway Construction cost
(2) Includes roadway, drainage, signing, marking, traffic control and maintenance of traffic costs
(3) Construction Engineering and Inspection estimated at 15% of total Roadway Construction cost; includes post design services
(4) Environmental Mitigation calculated at $80,000/acre

- **Oviedo Boulevard to Evans Street (see Figure 1-3):** 11-foot wide inside travel lanes and 12-foot wide outside travel lanes; eight-foot wide sidewalk along the north side of the proposed roadway (located adjacent to the back of curb with no grass strip); and, a five-foot wide sidewalk along the south side of the proposed improvement, separated by a three-foot wide grass strip behind the back of curb.

- **Evans Street to west of Lockwood Boulevard (see Figure 1-4):** 12-foot wide inside and outside travel lanes; five-foot wide sidewalks (tie into the existing sidewalk locations) along both sides of the proposed action, separated by an existing 12-foot wide grass strip behind the back of curb.

SR 434 Improvement: The basic improvement concept along SR 434 north and south of SR 426 is to provide additional turn-lane capacity and accommodate a four-foot wide bike lane and sidewalks along both sides of the proposed roadway. These improvements may be considered a four-lane improvement with center-turn lane within the immediate vicinity of the proposed SR 426/SR 4343 intersection improvement. Between the proposed SR 434 project limits (north and south of SR 426) the following travel lane and sidewalk widths are recommended:

- **South of SR 426 (see Figure 1-5):** 11-foot wide inside and outside travel lanes; 11-foot wide two-way left-turn lane; eight-foot wide sidewalk on the west side and six-foot wide sidewalk on the east side of the proposed improvement. Both sidewalks are located adjacent to the back of curb (no grass strip).

- **North of SR 426 (see Figure 1-6):** 11-foot wide inside and outside travel lanes; 11-foot wide two-way left-turn lane and eight-foot wide sidewalks on both sides of the proposed improvement, located adjacent to the back of curb with no grass strip.

CR 426 Re-alignment: The basic improvement concept involving the re-alignment of CR 426 (also known as Geneva Road) is to improve the signal spacing and progression along SR 426/CR 419 between SR 434 (Central Avenue) and Oviedo Boulevard. These improvements consist of a two-lane improvement with center-turn lane, curb and gutter and sidewalks along this local collector. The following travel lane and sidewalk widths are recommended:

- **From CR 419 to Citizens Bank (see Figure 1-7):** 12-foot wide travel lanes; 12-foot wide two-way left-turn lane; and, eight-foot wide sidewalks along both sides of the proposed improvements, located flush to the back of curb (no grass strip).

The following Section discusses the Preliminary Design details of the preferred project alternative.

9.0 PRELIMINARY DESIGN ANALYSIS

This Section presents the results of the preliminary design analysis conducted for the preferred project alternative identified in Section 8.

9.1 Design Traffic Volumes

The information in this section was developed from the document entitled *Design Traffic Report for SR 426/CR 419 from Pine Avenue to Lockwood Boulevard dated October 2002*. This report was prepared as part of the PD&E Study services conducted by DRMP on behalf of the City of Oviedo. The scope of the Design Traffic Report entailed the development of future traffic forecasts for no-build and build conditions and the evaluation of the characteristics and basic operational conditions of the corridor during the service life of the roadway improvement project.

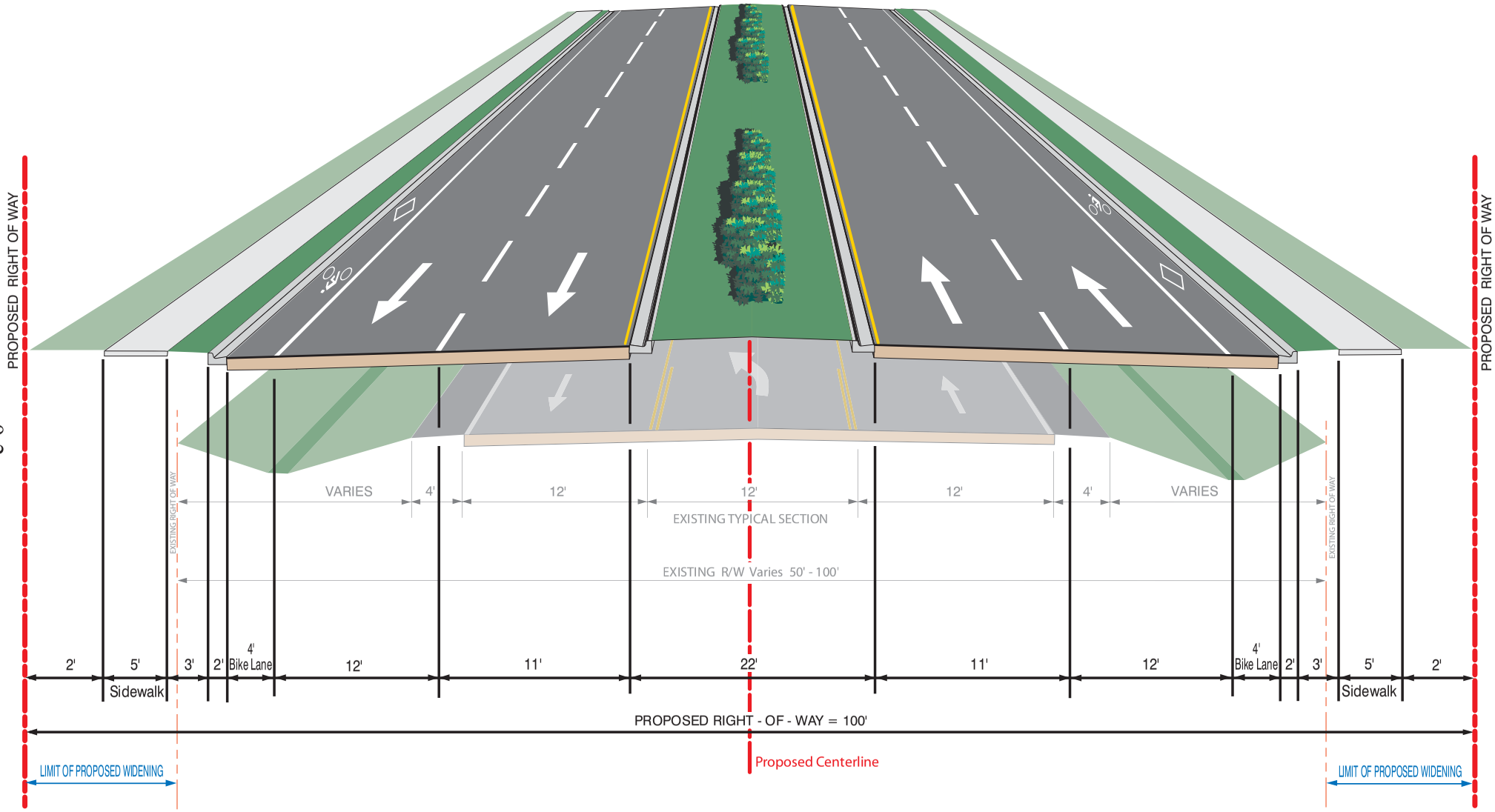
Table 9-1 below presents the recommended design characteristics for the SR 426/CR 419 PD&E Study.

Table 9-1 Recommended Design Characteristics for SR 426/CR 419

Roadway Segment	Recommended		
	K_{30}	D	T_{daily}
SR 426 from Pine Avenue to Lake Jessup Drive	0.0956	0.56	4.38%
SR 426/CR 419 from Lake Jessup Drive to Oviedo Boulevard	0.0956	0.56	4.38%
CR 419/ from Oviedo Boulevard to west of Lockwood Boulevard)	0.0956	0.56	3.02%

9.2 Typical Sections

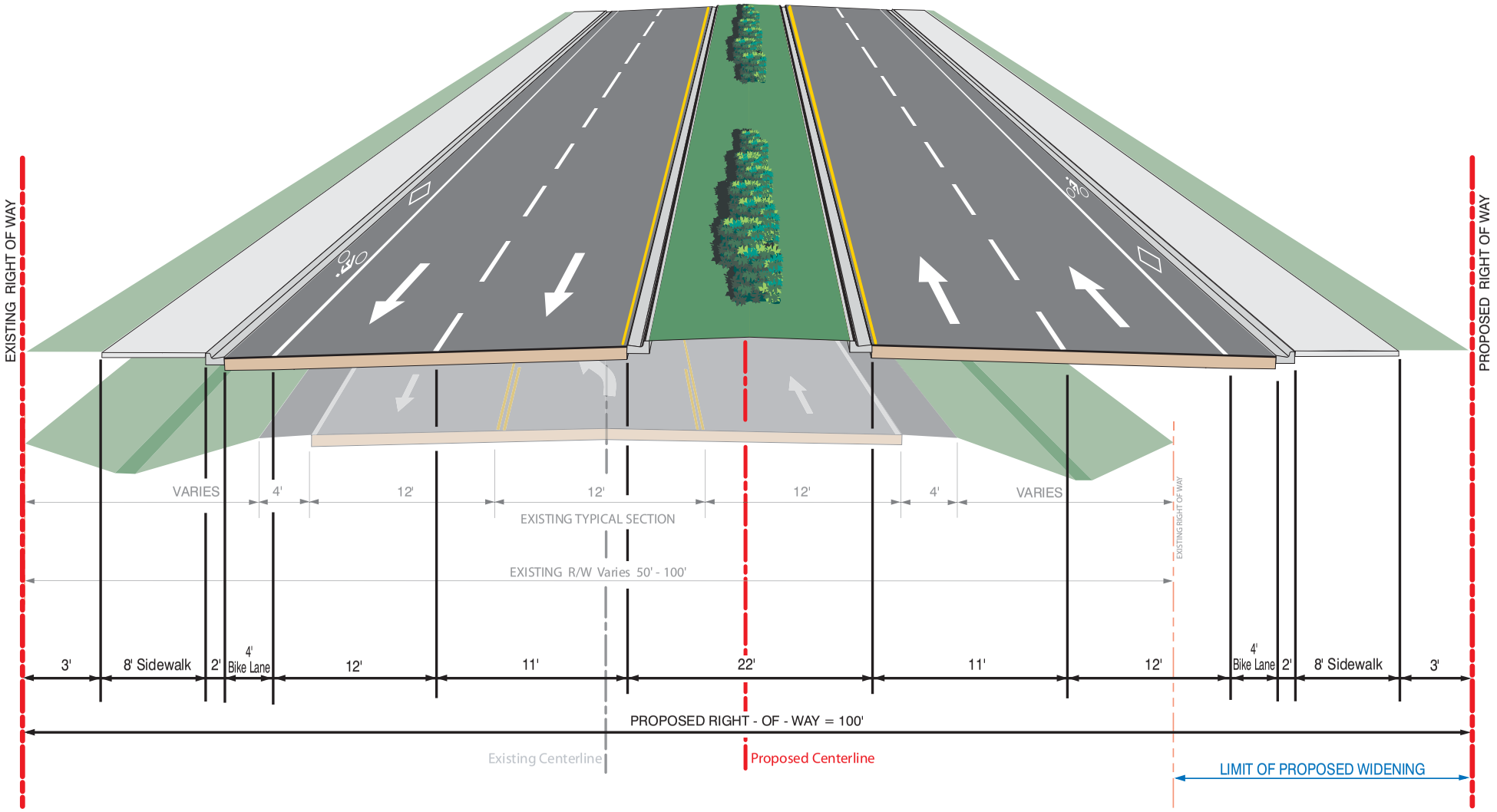
The preferred typical sections for the proposed action were discussed in Section 8.5. Figures 9-1 through 9-4 illustrate the preferred typical sections for SR 426/SR 419 from Pine Avenue to west of Lockwood Boulevard. Figures 9-5 and 9-6 illustrate the preferred typical sections for SR 434 north and south of SR 426 while Figure 9-7 illustrates the preferred typical sections for CR 426. The Approved Typical Section Package is included in this Report as Appendix C.



PREFERRED PROJECT TYPICAL SECTION
From Pine Street to Lake Jessup Avenue

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

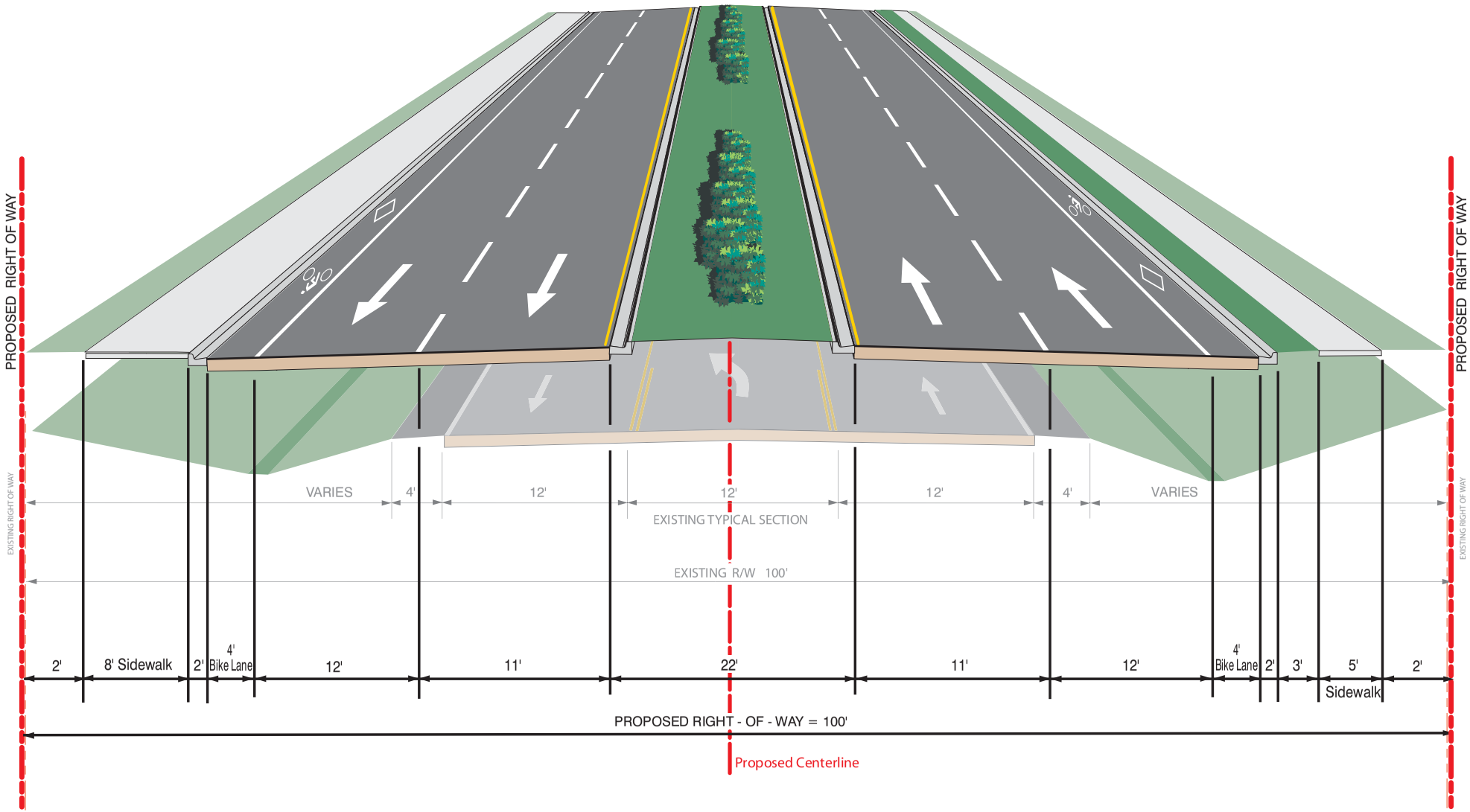
Figure 9-1



PREFERRED PROJECT TYPICAL SECTION
From Lake Jessup Avenue to Oviedo Boulevard (Division Street)

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

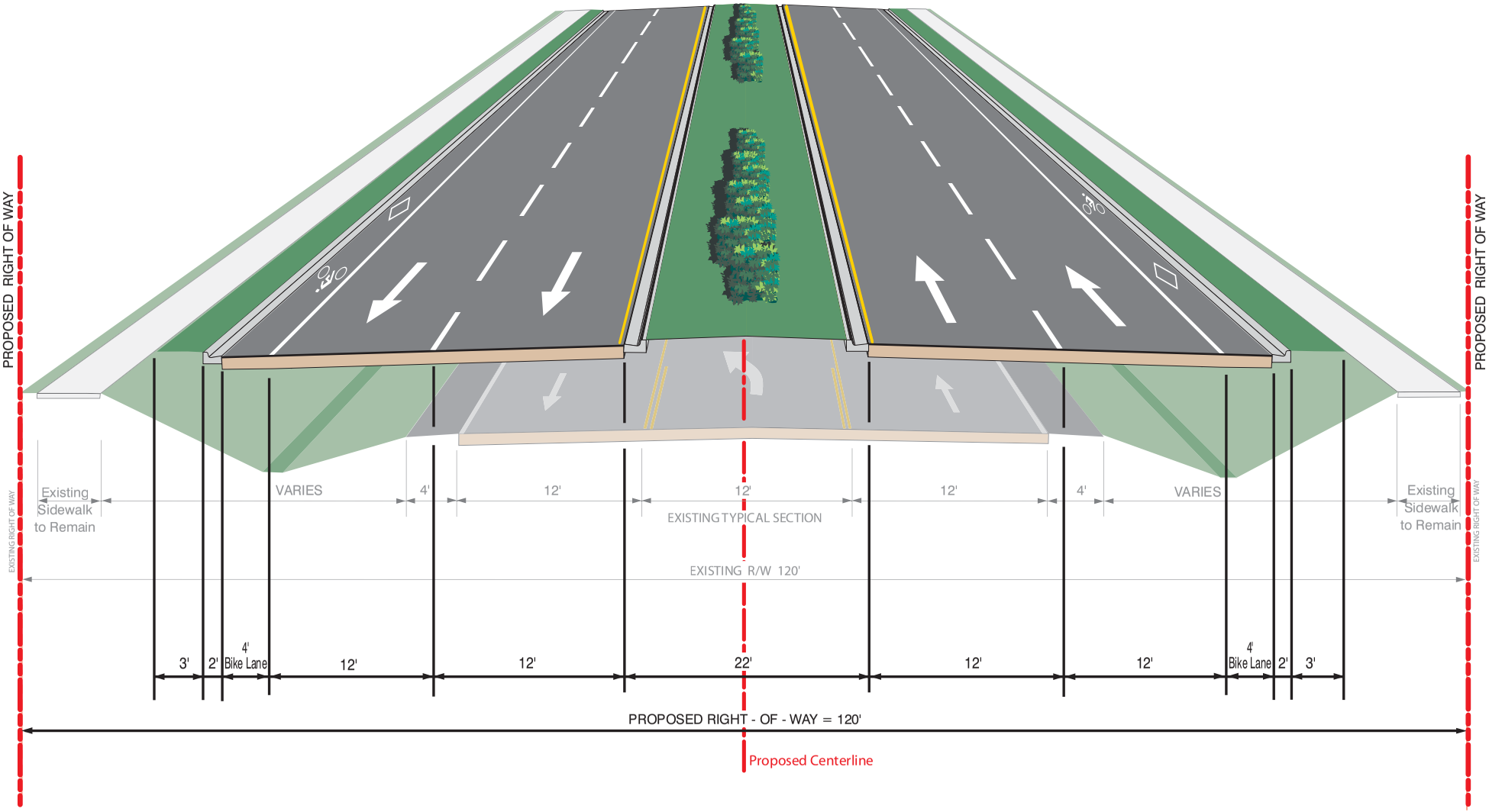
Figure 9-2



PREFERRED PROJECT TYPICAL SECTION
From Oviedo Boulevard (Division Street) to Evans Street

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

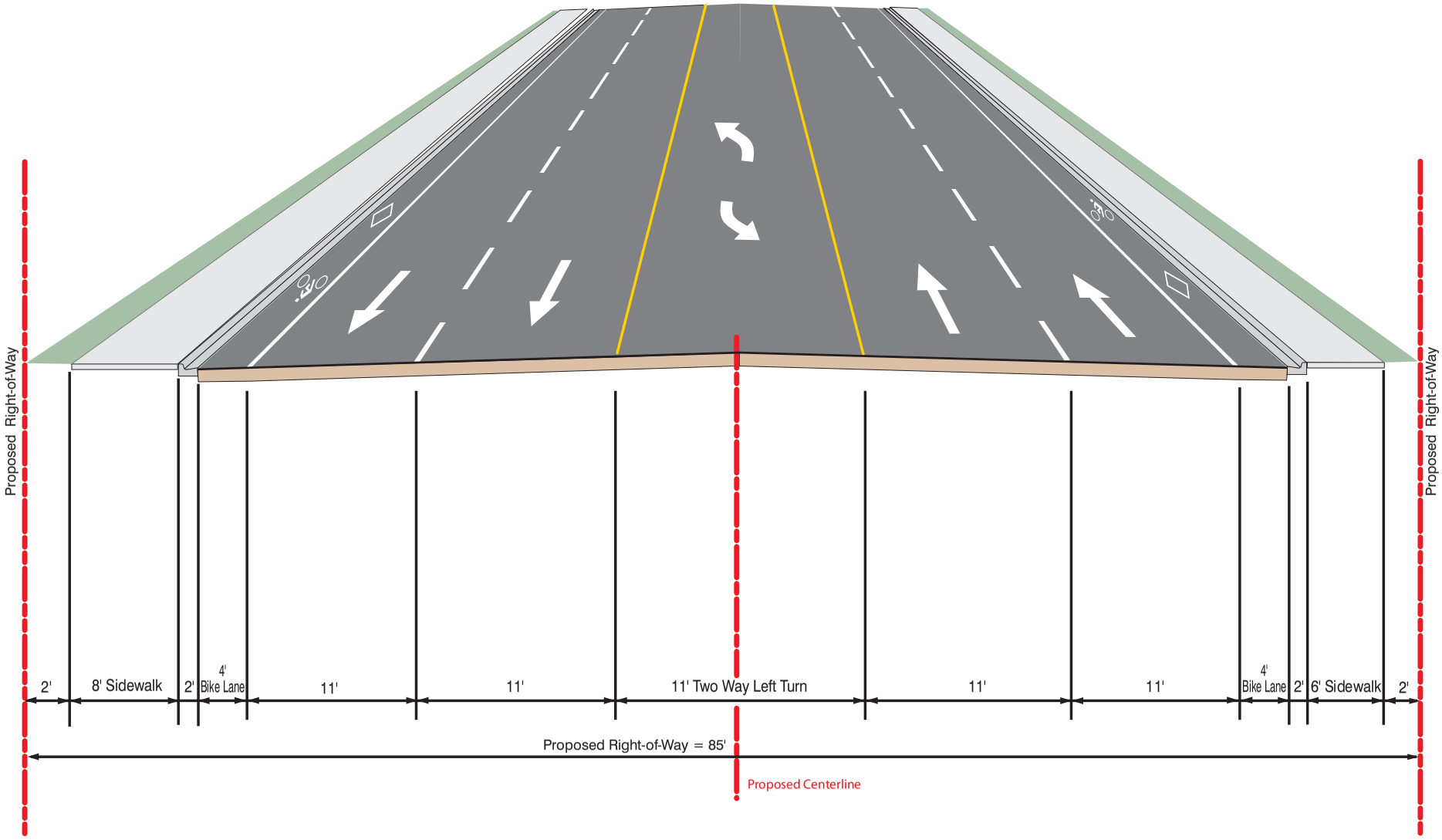
Figure 9-3



PREFERRED PROJECT TYPICAL SECTION
From Evans Street to Waverlee Woods Boulevard

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Loockwood Boulevard
City of Oviedo

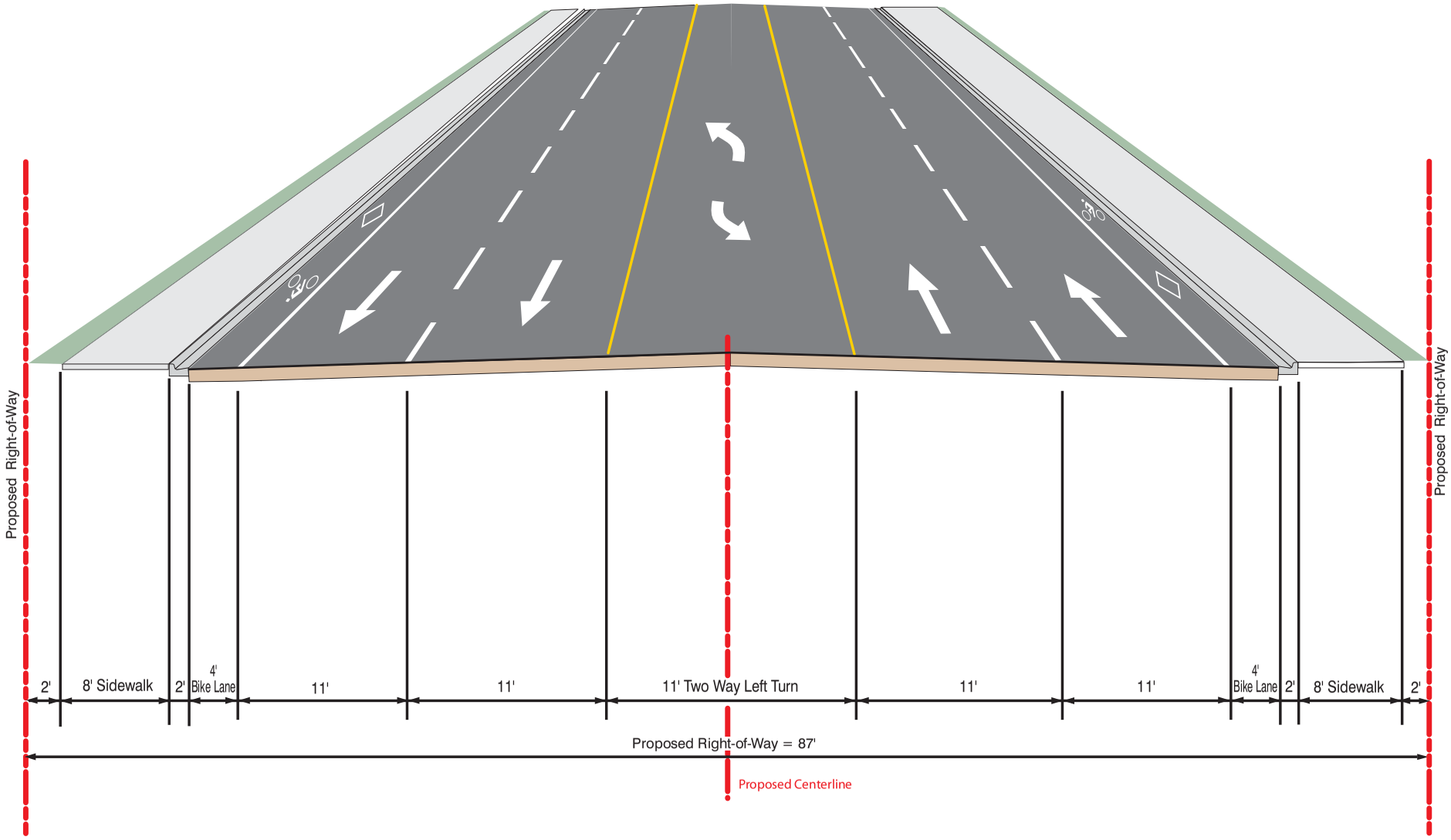
Figure 9-4



PREFERRED PROJECT TYPICAL SECTION SR 434
From Smith Street to SR 426

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

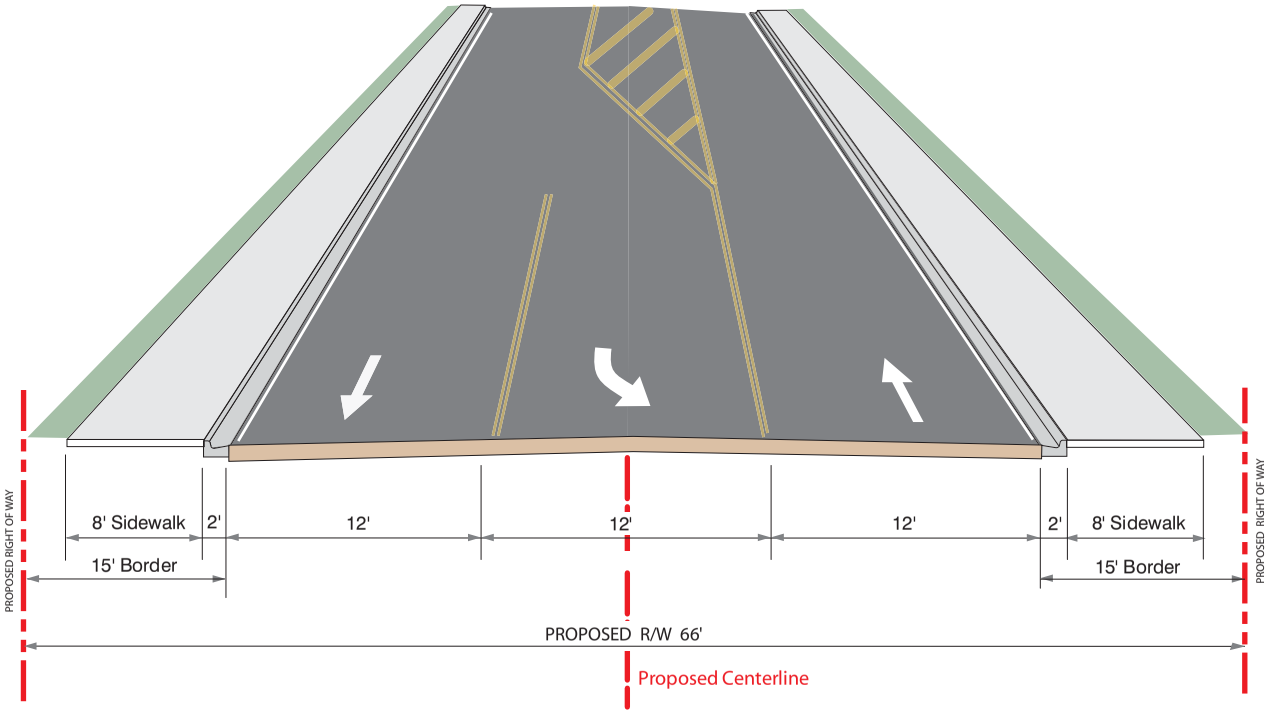
Figure 9-5



PREFERRED PROJECT TYPICAL SECTION SR 434
From SR 426 to Oviedo Shopping Center

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

Figure 9-6



PREFERRED PROJECT TYPICAL SECTION CR 426
From CR 419 to Citizens Bank of Oviedo

SR 426 /CR 419
PROJECT DEVELOPMENT &
ENVIRONMENT (PD&E) STUDY
From Pine Avenue to Lockwood Boulevard
City of Oviedo

Figure 9-7

The proposed improvements would be accommodated within the existing 100-foot wide right-of-way from Pine Avenue east approximately 1200 feet and from east of Oviedo Boulevard to west of Lockwood Boulevard, Additional right-of-way would be required for the remainder of the proposed improvement. The preliminary engineering concept plans for these improvements are located in Appendix D.

In addition to the proposed improvements along the mainline of SR 426/CR 419 from Pine Avenue to west of Lockwood Boulevard, the preferred project alternative involves the relocation of CR 426 (Geneva Road) to the east of it's current location and the minor widening of SR 434 north and south of SR 426 in the core downtown area. These improvements require additional right-of-way, are necessary to achieve an acceptable level of service, and improved traffic operational conditions in the downtown area.

Overall, the proposed improvement requires a raised median as a traffic control measure to separate traffic in opposing travel directions, channel turning movements at intersecting side streets and provide opportunities for future landscaping and/or other aesthetic treatments. Median openings were developed in accordance with standard FDOT Access Management guidelines. The proposed locations of full and partial median openings are shown on the preliminary engineering concept plans located in Appendix D. These locations have been reviewed by staff from the FDOT, Seminole County and City of Oviedo as well as the general public. These locations may be re-evaluated during subsequent project development phases; however, FDOT Access management guidelines and input from local government agency staff will be necessary. The City of Oviedo is committed to evaluating access management strategies associated with the preferred alternative including the modification, elimination and/or consolidation of existing driveways along SR 426/CR 419. Through negotiation with existing property owners and during the implementation of its Downtown Re-development Master Plan, the City may investigate the consolidation of multiple driveway access points in order to reduce the number of conflict points along the mainline.

9.3 Intersection Concepts and Signal Analysis

Appendix D contains a set of conceptual design plans which shows the conceptual design for intersections along SR 426/CR 419. There seven signalized intersections along SR 426/CR 419 within the study area. These include:

- Pine Avenue @ SR 426 (Broadway Street)
- Lake Jessup Avenue @ SR 426 (Broadway Street)
- SR 434 (Central Avenue) @ SR 426 (Broadway Street)
- CR 426 (Geneva Drive) @ CR 419 (Broadway Street)
- Oviedo Boulevard @ CR 419 (Broadway Street)

- Academy Avenue @ CR 419 (Broadway Street)
- Lockwood Boulevard @ CR 419 (Broadway Street)

Intersection improvements were developed to accommodate future year turning movement projections (travel demand) and to minimize and/or avoid significant right-of-way impacts. Turn lane recommendations were made based on travel demand forecasts and the need to provide improvements that meet or exceed minimum operating level of service standards.

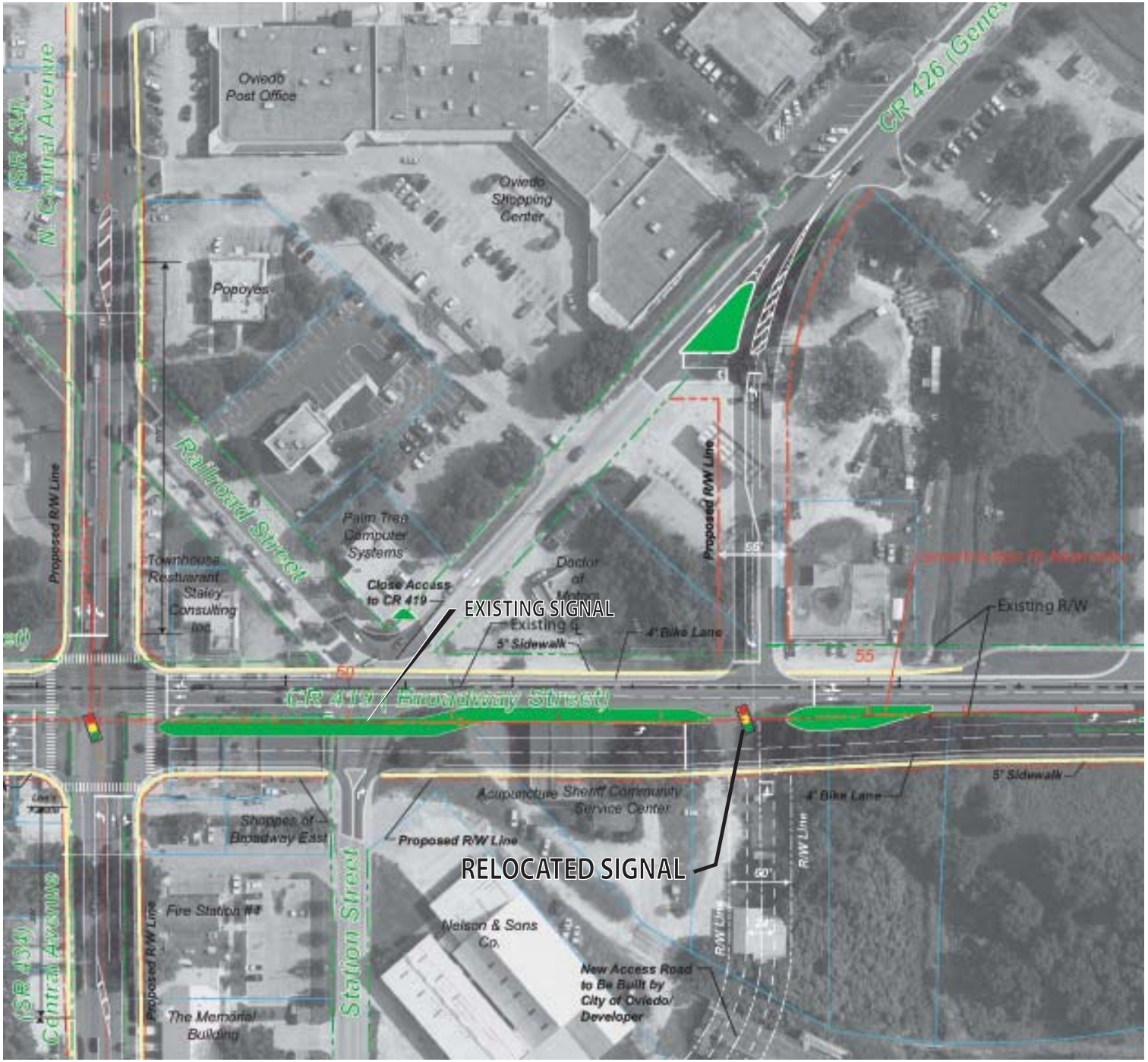
The operational condition between the existing signals at SR 434 and CR 426 was evaluated in the SR 426/CR 419 PD&E Study. The existing spacing between these two signals would not meet current design standards. As part of the preferred project alternative, it is recommended that the existing signal at CR 426 be relocated to the east of its current location as shown in Figure 9-8.

9.4 Alignment and Right-of-Way Costs

Right-of-way for the proposed improvements identified in this *Preliminary Engineering Report* is required for the roadway and stormwater management improvements. A red dashed line (Proposed R/W Line) identifies the parcels, residential, business or others, impacted by the Preferred Project Alternative. The specific areas of right-of-way impact are shown on the conceptual design plans contained in Appendix D.

9.5 Relocation

The preferred project alternative, including the relocation of CR 426 and improvements along SR 434 will displace three (3) single-family residences and up to twenty-one (21) businesses. The businesses are located in the central business district of downtown Oviedo between Lake Jessup Drive and Oviedo Boulevard. The potential business displacements should be re-evaluated in subsequent project development to ensure accuracy in the number and type of businesses potentially affected.



9-11

	SR 426 /CR 419 PROJECT DEVELOPMENT & ENVIRONMENT (PD&E) STUDY From Pine Avenue to Lockwood Boulevard City of Oviedo	CR 426 Improvements	Figure 9-8

9.6 Project Costs

Right of Way Costs

The preferred alternative as presented in this *Preliminary Engineering Report*, including the relocation of CR 426, the additional of turn lanes on Central Avenue (SR 434) and proposed stormwater management areas, was developed and plotted on aerial photographs depicting the acquisition of each impacted parcel. The area of the acquisition for each affected parcel was then estimated for FDOT's use in developing representative right-of-way costs.

Right-of-way costs, including administrative support costs, operational costs and land costs were estimated for each affected parcel. The total estimated right-of-way costs (updated in 2006) for the preferred alternative, is approximately $35.72 million (see Table 9.2 on page 9-36).

Construction Costs

The estimated construction cost for the preferred alternative was estimated at $24.44 million (based on 2006 dollars). This figure includes contingencies for legal and administrative fees, construction engineering and inspection (CEI). The construction cost estimate also includes drainage costs associated with the outfall pipe systems for each stormwater management area.

Preliminary Engineering Costs

The estimated Preliminary Engineering cost for the preferred alternative is approximately $2.44 million which includes field survey, roadway and drainage design, signing and marking plans, maintenance of traffic plans and other contingency items.

Environmental Mitigation

Impacts to natural environment features such as jurisdictional wetlands and critical wildlife habitat are anticipated to be minimal. Environmental mitigation costs were estimated at $0.18 million in 2006 dollars.

Total Project Costs

The total cost of the preferred alternative, including preliminary engineering, right-of-way acquisition and construction, is estimated at $ 66.81 million, based on 2006 dollars.

9.7 Recycling and Salvageable Material

The opportunity to recycle any salvageable materials by the contractor is encouraged by the FDOT. Any salvageable materials will be identified during the final design of the project. If these materials are removed from the construction site, the removal should be done as specified in the current FDOT Standard Specifications for Road and Bridge Construction. It is anticipated that a majority of the existing pavement material can be salvaged and recycled.

9.8 User Benefits

Highway user costs are defined by AASHTO's *A Manual on User Benefit Analysis of Highway and Bus-Transit Improvements*, 1977, as the sum of (1) motor vehicle running costs, (2) the value of the vehicle user travel time and (3) traffic accident cost. User benefits are the cost reductions and other advantages that occur to highway motor vehicle users through the use of a particular transportation facility as compared with the use of another. Benefits are generally measured in terms of a decrease in user costs. The preferred alternative provides user benefits to the extent that it reduces user costs as compared to the "No Project" concept that will operate entirely at an unacceptable level of service. In addition, the improved access management provided with the project should reduce the occurrence rate of many accident types on the roadway.

9.9 Pedestrian and Bicycle Facilities

The proposed action includes the reconstruction and re-use of existing concrete sidewalks. These improvements would be designed to meet current standards established in the FDOT Plans Preparation Manual. As a minimum, a five-foot wide continuous concrete sidewalk, located approximately three feet beyond the back of curb, would be provided on both sides of the roadway from Pine Avenue to west of Lockwood Boulevard with one exception. On the north side of CR 419 from Oviedo Boulevard to Reed Road, an eight-foot wide sidewalk would be provided. This improvement would tie into the planned Cross-Seminole Trail.

The City of Oviedo has expressed a desire to provide connectivity to the existing and planned recreational trail systems within and around the City and to incorporate opportunities for streetscaping and/or roadside beautification. The potential streetscaping and/or roadside beautification features would be funded by the City of Oviedo, FDOT and Seminole County and would need to meet FDOT design and permitting standards. The preferred alternative includes a four-foot wide bicycle lane adjacent to the edge of each outside travel lane in each direction.

9.10 Safety

Safety is a major aspect in the development of the project. Improved pavement conditions, adequate drainage systems, sight distances, roadway geometry, signalization improvements, access management, clear recovery areas and pedestrian and bicycle features are all proposed to improve the safety of this roadway.

9.11 Economic and Community Development

The existing land uses found within the study area are a mixture of residential, commercial and institutional. Future land uses are expected to remain consistent with existing uses. The project will not adversely impact and is expected to enhance any proposed community infill development or redevelopment activities.

9.12 Environmental Impacts

Detailed studies and evaluations were conducted to determine the potential for adverse impacts that may result from the proposed project. Baseline data, evaluation procedures and analysis of results are contained in the project files and the following reports: *Cultural Resources Assessment Survey*; *Wetland Evaluation Report; Wildlife Habitat Assessment; Air Quality Report; Noise Study Report;* and *Contamination Screening Evaluation Report*. Due to the developed nature of the study area, the potential for natural environmental impacts is relatively low within the existing right-of-way. Therefore, the selection of the preferred alternative was not primarily influenced by these factors.

Contamination

The findings of the *Contamination Screening Evaluation Report* (CSER) located 23 sites along the project corridor for potential hazardous materials or petroleum contamination. Further findings concluded that four of the sites reside on two parcels so the number has been condensed to 21 sites. Of the 21 sites, 14 have been assigned a contamination risk potential of Low, two were assigned a rating of Medium and five were assigned a rating of High.

The sites which were rated 'High' or 'Medium' should be further investigated during the remaining pre-construction phases. Should cleanup procedures be required, FDOT will implement a plan prior to, or during construction, if feasible. Special provisions for handling unexpected contamination discovered during construction will be included in the construction plans package. The potential contamination concerns are not anticipated to affect or delay project implementation significantly. No substantial contamination involvement is anticipated.

Sites which were rated 'Low' possibly had past agricultural operations related to citrus grove operations that may have downgraded regional groundwater quality. However, regulatory agencies are not currently pursuing assessment and remediation of contamination in citrus grove areas, except in extreme cases where concentrated chemicals or contamination such as those associated with mixing areas, smudge pots, etc are identified. For these reasons, a contamination risk of 'Low" was assigned to the following properties: Oviedo High School, American Legion Oviedo Post, Oviedo Oaks Plaza, Lee's Karate, Oviedo Friendship Park/ Lawton House, T.W. Lawton Elementary School, Oviedo sports Complex, Waverlee woods Subdivision, Kingsbridge East Subdivision, Riverside Landings Shopping Center and Wachovia Bank.