

The image features a modern, abstract geometric design. In the top-left corner, there are overlapping shapes in teal, orange, and a dark grey with fine horizontal lines. The rest of the page is a solid light grey. The word "APPENDIX" is centered in the upper right area in a white, bold, sans-serif font.

APPENDIX

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APPENDIX A

EXISTING CONDITIONS REPORT

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

Existing Conditions

June 6, 2019



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ON GOING INITIATIVES

Recode Knoxville

Overview

Recode Knoxville, currently in progress, seeks to reestablished land use regulations for the City of Knoxville, TN. The primary goal of the updated code is to promote orderly economic development, public health, safety, and welfare - while maintaining the character of distinct places and preserving open space. The updated code designates several subdistricts including, but not limited to, the neighborhoods of Old Sevier and Scottish Pike, the Knoxville South Waterfront, Bell Tower Walk, and the Henley Gateway which lie within the Chapman Highway corridor.

Application

Recode Knoxville includes streetscape standards which may serve as a guideline when redesigning the Chapman Highway corridor. According to Recode, Chapman Highway will most likely be categorized as “Street D” (refer to figure 2). Once the new zoning maps have been complete, the code will help designate the character, type of use, and building setbacks along the different segments of the corridor. In lieu of the new zoning maps, the document will serve as a template for future development and give a glimpse of future zoning changes.

New development in the subdistrict for Old Sevier and Scottish Pike should preserve the existing neighborhood orientated atmosphere such as detached houses, cottages, duplex houses, attached townhouses, and rowhouses. The minimum setback is 10 feet and the maximum setback is 25 feet for this subdistrict. Future street alignments and existing roads combine to form a “figure eight” loop. A new rail underpass which will connect to August Avenue and Augusta Avenue will change from a tertiary street to a boulevard. Pedestrian circulation will be improved, and street trees incorporated in the proposed street rights-of-way.

South Waterfront includes higher density with larger buildings, along with a mix of office, residential, commercial, and hospitality uses. New developments should include publicly accessible landscapes and plazas setback from the river to allow for a continuous promenade and marinas. Parking lots should be incorporated into structures or located beneath buildings wherever possible. Buildings should maintain a maximum setback of 10 feet.

The Bell Tower Walk subdistrict serves as an activity center including retail, entertainment, civic, cultural, and residential uses organized around the civic plaza “Bell Tower Walk.” Low to mid-rise mixed used or multiple unit housing buildings with commercial development on the first floor are encouraged with underground parking.

The Henley Gateway subdistrict will serve as a new entrance to downtown Knoxville and capitalizes on economic opportunities provided by Baptist Hospital. The new area will include multi-story office buildings, an open green space, and will continue the Shoals Promenade Riverwalk.

Residential zones designate different standards which accommodate the needs of low density, mixed, and high-density neighborhoods. The typical setback for residential zones will be either be 25 feet minimum and 35 feet for structures over 35 feet in height. Commercial zones are broken into types based upon the use, surrounding development, and adjacent traffic. The minimum setback for each zone varies from 10 feet to 25 feet depending upon the density and building heights. The commercial zoning districts which could potentially be assigned to areas adjacent to Chapman Highway include the neighborhood, general, and highway commercial zones. The typical setback for general commercial zones is between 0 and 15 feet and highway commercial zones a minimum of 20 feet. The industrial zones are broken up into heavy industry, research and development, office parks, and retail. Most industrial districts have a minimum setback of 25 feet. Research and development zones have a minimum setback of 50 feet and industrial mixed-use zones does not have any setback requirement at this time.

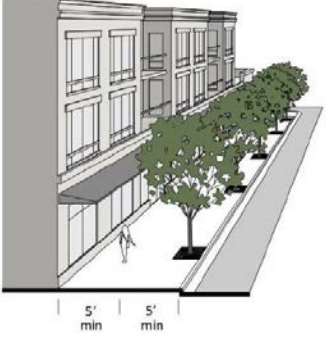
Table 5-6: Required Streetscape	
	
Streetscape	
Min. Sidewalk	5'
Min. Planting Zone	5'
Details	
Planting Zone Type	Tree lawn/tree grate
Tree Spacing	Every 30' on center, on average

Figure 1: Recode Knoxville: Required Streetscape, page 5-22

Table 5-8: Streetscape Standards					
	Side Road	Street D	Commercial Street	Street E	Boulevard
ROW Width	56'	70'	58'	52'	70'
Pavement Width	36'	40'	38'	22'	50'
Movement Type	Slow Movement	Free Movement	Slow Movement	Slow Movement	Slow Movement
Design Speed	20 mph	30-35 mph	25 mph	25 mph	25 mph
Pedestrian Crossing Time	10.3 seconds	11.4 seconds	10.3 seconds	6.9 seconds	10.3 seconds
Traffic Lanes	2 lanes	2 lanes	2 lanes	2 lanes	2 lanes
Parking Lanes	Both Sides at 8' Marked	One Side at 8' Marked	Both Sides at 8' Marked	N/A	One Side at 8' Marked
Bike Lanes	N/A	Both Sides at 5' Marked	N/A	N/A	Both Sides at 5' Marked
Curb Radius	15'	15'	15'	15'	15'
Walkway Type	5' Sidewalk	5' Sidewalk	10' Sidewalk	5' Sidewalk	10' Sidewalk
Planter Type	5' Continuous Planter	5' Continuous Planter	5' Continuous Trench	5' Continuous Planter	5' Continuous Trench
Curb Type	Curb or Swale	Curb or Swale	Curb	Curb or Swale	Curb
Landscape Type	Trees at 30' On Center	Trees at 30' On Center	Trees at 30' On Center	Trees at 30' On Center	Trees at 30' On Center
Transportation Provision	N/A	N/A	Bus Route	Bus Route	Bus Route
Utilities	All Underground	All Underground	All Underground	Overhead Power, Cable, Phone	All Underground

Figure 2: Recode Knoxville: Streetscape Standards, page 29

Chapman Highway Advanced Traffic Management System (ATMS)

The City of Knoxville is designing an ATMS project for the 17 traffic signals along Chapman Highway. The project will include new traffic signal cabinets and signal controllers, fiber optic connections between all 17 traffic signals, and improved vehicle detection that provides video surveillance. The signal data and video streams will be able to be viewed/modified at the City's planned traffic operations center. Additionally, this project has designed improvements to the pedestrian infrastructure at several of the traffic signals, including curb ramps, crosswalks, and enhanced pedestrian signal equipment.

Improving Manufacturing, Public Roads and Opportunities for Vibrant Economy (IMPROVE) Act

The IMPROVE Act is Public Chapter No. 181 in the State of Tennessee. This legislation was passed by the Senate and House of Representatives on 04/24/2017, and signed by the governor on 04/26/2017.

Within the IMPROVE Act, 962 projects were identified throughout Tennessee; #558 is "Knox, Blount, and Sevier counties, SR-71/US-441, (Chapman Highway) Blount Avenue to SR-338 (Boyds Creek Highway) in Seymour, operations and safety improvements (multiple locations);"

The Tennessee Department of Transportation hosts a web page

(<https://www.tdot.tn.gov/projectneeds/spot#/>) that provides more information on each of these projects.

On that webpage, the Chapman Highway project between Blount Avenue and SR-338 (Boyds Creek Highway) is identified to be 10.28 miles in length and having an 'IMPROVE Act Investment' amount of \$45,268,000.

The City of Knoxville portion of Chapman Highway is located between Blount Avenue and Governor John Sevier Highway, which is a distance of approximately 5.9 miles.

Blount Avenue Streetscape

The Blount Avenue Streetscape is currently under construction, in conjunction with the Riverwalk development on the site of the old Baptist Hospital. Blount Avenue was previously a 5-lane roadway with sidewalks on both sides. The streetscape improvement project will transform Blount Avenue to a multi-modal connection between Henley Street/Chapman Highway and Gay Street, including a 2-lane roadway with a landscaped median, sidewalks on both sides, and bicycle lanes on both sides.

Chapman Highway at Woodlawn Pike North/Fort Dickerson Road Intersection

The intersection construction project along Chapman Highway at Woodlawn Pike North/Fort Dickerson Road was completed in 2015. Fort Dickerson Road was previously offset from Woodlawn Pike North by approximately 150 feet, and this project realigned Fort Dickerson to intersect Chapman Highway directly across from Woodlawn Pike North as a 4-leg signalized intersection. This improvement created a gateway into Fort Dickerson, and creates a sense of place along Chapman Highway. The project was recommended in the 2007 Chapman Highway Corridor Improvement Study.

SUMMARY OF PREVIOUS PLANNING DOCUMENTS

Mobility Plan 2040

Overview

The Mobility Plan 2040 is the long-range transportation plan for the Knoxville area that guides transportation decision making for the next two decades. The plans' goals are to promote prosperity and livability. A performance framework was created to detail goals, strategies, and performance measures that should guide policy and funding decisions. The Plan prioritizes \$2.3 billion in multimodal transportation projects over the next 20+ years that focus on maintaining the existing transportation network. One of the goals of the Mobility Plan is to increase pedestrian safety and reduce the frequency and severity of motor vehicle/pedestrian crashes by implementing engineering countermeasures such as refuge islands, high-visibility crosswalks, rectangular rapid-flashing beacons (RRFBs), pedestrian overpasses and underpasses, roundabouts, road diets which create space for other modes of transportation, speed humps, and curb extensions.

Application

The plan includes several prioritized projects relevant to the Chapman Highway Implementation Plan and will be a key reference when outlining the implementation of improvements along the corridor.

Southside Flats TIS Report 2017

Overview

The Southside Flats proposed residential development project is located east of Chapman Highway at the northeast corner of Lippencott Street and E. Martin Mill Pike intersection and south of the Knoxville Central Business District. Lippencott Street primarily serves residential traffic and E. Martin Mill Pike serves both residential and commercial traffic. Unsignalized levels of service for the proposed development were found to be acceptable. Sight distances also exceeded what was required of a 30 mile per hour speed limit zone. Left and right turn lanes for the proposed access road were not warranted.

Application

The overall conclusion of the study was that efficient and safe traffic flows will be maintained with the development of the Southside Flats residences. Any changes to Chapman Highway should consider the development in order to accommodate for future transit, traffic, pedestrians, and cyclists.

Knoxville Bike Design Report 2016

Overview

The Knoxville Bike Design highlights five corridors within the plans' study area, one being Chapman Highway from Blount Avenue to Woodlawn Pike. Existing conditions and proposed alternatives are provided for each corridor. Detailed traffic analysis was performed along the corridor including both intersection and corridor capacity analysis. The concept shows separated bicycle and pedestrian facilities, protected intersections, and details how drivers, pedestrian, and cyclists will interact and move through the spaces.

Application

The Knoxville Bike Design report is relevant to the Chapman Highway Implementation Plan because it provides strong concepts and a clear vision for a future complete street design that safely integrates bicyclists. This study and traffic research will be a guiding document utilizing the concepts provided in the report will be a baseline for future design.

Bicycle Facilities Presentation 2016

Overview

The Bicycle Facilities Design from 2016 introduced viewers to concepts of bicycle facilities on Chapman Highway, Henley Street Bridge, Middlebrook Pike, Woodland Avenue, and Adair Drive. Facilities varied by roadways.

Application

The concepts developed for Chapman Highway should be considered during the Implementation Plan. Concepts between Blount Avenue and Woodlawn Pike included a separated bicycle facility with a landscape buffer on either side of Chapman Highway, along with a shared use path on the east side and a buffered sidewalk on the west side.

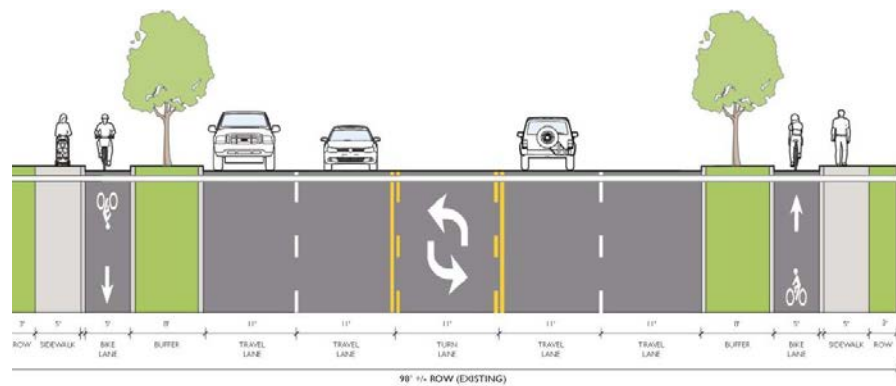


Figure 3: Chapman Highway, Bicycle Facilities Presentation 2016: Recommended Cross Sections, Page 9

2015 Bicycle Facilities Plan

Overview

In response to increased interest in cycling in the City of Knoxville, the 2015 Bicycle Facilities Plan outlines the future of bicycle infrastructure throughout the city. The plan identified over fifty miles of roadway for new or improved bicycle infrastructure.

Application

Portions of Chapman Highway were included in the plan. Potential cross sections, facility types, and cost estimates were provided in the document for Chapman Highway. The Plan should be referenced during the Implementation Plan to ensure cross streets are considered and critical connections are made on and off Chapman Highway.

Blount Avenue Streetscape Improvements 2015

Overview

The Blount Avenue Streetscape Improvements are a construction documentation set that detail roadway improvements to Blount Avenue between the CSX Railroad and Gay Street / Sevier Avenue. Existing drainage and utilities will be demolished and reconstructed in order to accommodate a roadway with striped bicycle lanes. The existing plans show Blount Avenue with four lanes and the occasional center left turn lanes while

the new layout details a two-lane roadway with left turn lanes and large planter islands. The sidewalk facilities proposed are continuous and provide separation from the roadway on the north side of Blount Avenue.

Application

The design for the intersection of Blount Avenue and Chapman Highway is included in the plan set. Portions of the improvements have been completed or are currently under construction, including some sidewalk on the north side of the roadway and utility relocations along East Blount Avenue.

Riverwalk Traffic Impact Study 2014

Overview

The Riverwalk Traffic Impact Study was conducted for the proposed development, Riverwalk. The site of the proposed development is south of the Tennessee River on all four quadrants of the signalized intersection of Henley Street / Chapman Highway at Blount Avenue. The study suggests providing sidewalk with a minimum width of 5 feet and bicycle lanes along both sides of East Blount Avenue.

The study proposes modifying the intersection geometry of Henley Street / Chapman Highway at Blount Avenue to remove the channelized westbound, northbound, and southbound right turn lanes. Both the northbound and southbound right turn lanes are recommended to remain and the westbound right turn movement from the through lane. Due to the proximity of the traffic signal from the un-signalized intersection at St. Paul Street, the intersection geometry should include tighter radii to slow down right turn movements. There is also a proposed “Gateway Plaza” on the northeast quadrant of Henley Street / Chapman Highway at Blount Avenue.

Application

The intersection of Chapman Highway and Blount Avenue is currently in the design and construction phase. The study also highlighted a proposed extension of the Riverwalk bicycle and pedestrian network along the south bank of the Tennessee River and infrastructure improvements to Blount Avenue.

Knoxville Regional Transit Corridor Study 2013

Overview

The Knoxville Regional Transit Corridor Study comprises studies of twelve major corridors in the Knoxville area and their suitability for transit investment. The studies were conducted after the Knoxville Regional Transportation Planning Organization sought guidance in reducing the effects of steady population growth: increased congestion and air quality issues. Goals of the studies include expanding transit opportunities, enhancing the city’s image to become more competitive in the region in terms of rapid transit systems,

exploring the role of transit technologies, and developing and recommending transit supportive land use guidelines, policies and tools to support TOD.

Application

Chapman Highway was included in Tier 1 Analysis along with the remaining 12 corridors, but was not recommended for advancement into Tier 2 Analysis because of a lack of current diversity in transit mode accommodation, low ridership numbers, low population adjacent to the corridor, low connectivity to the region and a low level of stakeholder support. The corridor did, however, have low environmental issues and minimal property impacts given its sufficient right of way.

State Route 71 Re-Evaluation Candidate Project Report 2012

Overview

The Re-Evaluation Candidate Project Report for State Route (SR) 71 re-evaluated a proposed segment of James White Parkway by identifying and recommending feasible and cost-effective roadway improvements, while improving safety and mobility to Chapman Highway between the Governor John Sevier Highway overpass to the Henley Street Bridge. James White Parkway is an alternative route to Chapman Highway. The outcome of recommended improvements is broken down into two phases. Phase I focuses on safety improvements of Chapman Highway, including installation of curb and gutter to limit access, installing median pavement, installing sidewalk, signing and pavement markings. Phase II focuses on operational improvements, including roadway and intersection realignments as well as widening of the Highway in specified areas.

Application

The re-evaluation proposes projects at a total cost of \$8,700,000, whereas the original proposed project costs ranged between \$112,000,000 to \$115,200,000. At the time of the report, three intersections along the highway corridor were being evaluated under the Intersection Action Plan program.

2011 South City Sector Plan

Overview

The 2011 South City Sector Plan is a component of the Metropolitan Planning Commission's comprehensive plan. Seven special land use districts are identified for potential mixed-use development. The South Waterfront District and potential additions, the Log Haven District, The Chapman Highway District, and the Downtown Vestal District all fall along or within proximity to the corridor. In the plan, each Special Land Use District details individualized transportation improvements, community facilities and rezoning recommendations. Additionally, 5-year and 15-year improvement plans are detailed for land-use, transportation, and parks and recreation.

Application

The Implementation Plan will need to accommodate for the proposed Special Land Use Districts in all designs and recommendations in order for transportation to be effective for all modes along Chapman Highway and the surrounding areas.



Figure 4: 2011 South City Sector Plan: Existing Land and Town Center Concept Drawing, Page 25

KAT Transit Development Plan Corridor Analysis 2009

Overview

The KAT Transit Development Plan analyzes eight corridors to determine their potential for supporting Transit-Oriented Development (TOD) or higher capacity transit services. TOD is designed to support both pedestrian and vehicular activities. According to the plan, the transit options with the greatest impact are various levels of Bus Rapid Transit (BRT), Light Rail Transit (LRT), and commuter rail.

Application

Chapman Highway / James White Parkway is one of eight potential transit corridors studied in the KAT Transit Development Plan. Advantages this corridor offers TOD are high ridership on existing bus routes, strong commercial presence, and few right of way restrictions close to downtown Knoxville. The disadvantages of building more transit along Chapman Highway include the presence of less developed areas, low density further from downtown, relatively low employment density adjacent to the route, and possible right of way restrictions through Town of Seymour.

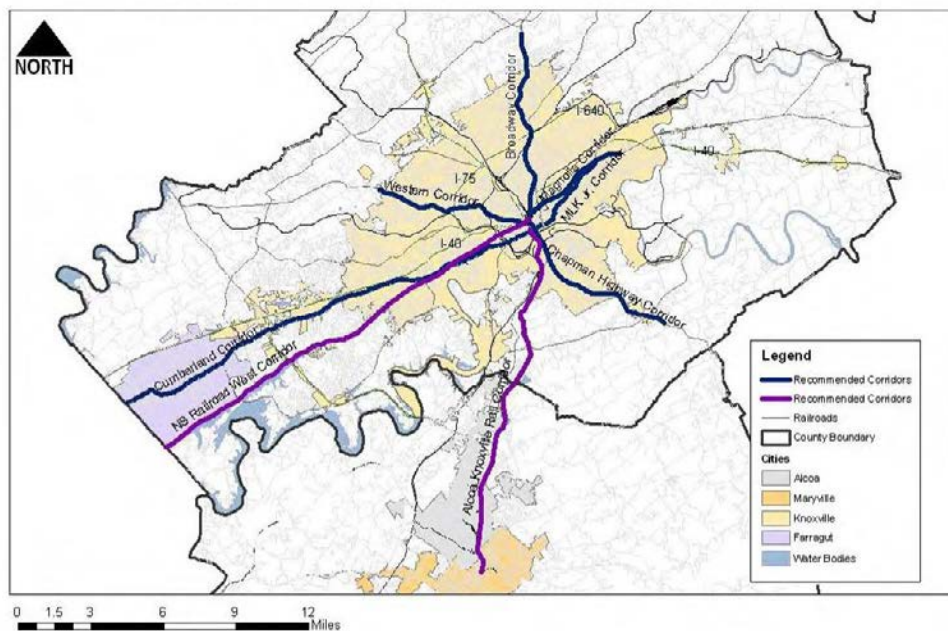


Figure 5: KAT Transit Development Plan Corridor Analysis: Corridors with Greatest Potential for High Capacity Transit, Page 16

Traffic Study Report: Chapman Highway Corridor Improvement Study 2007

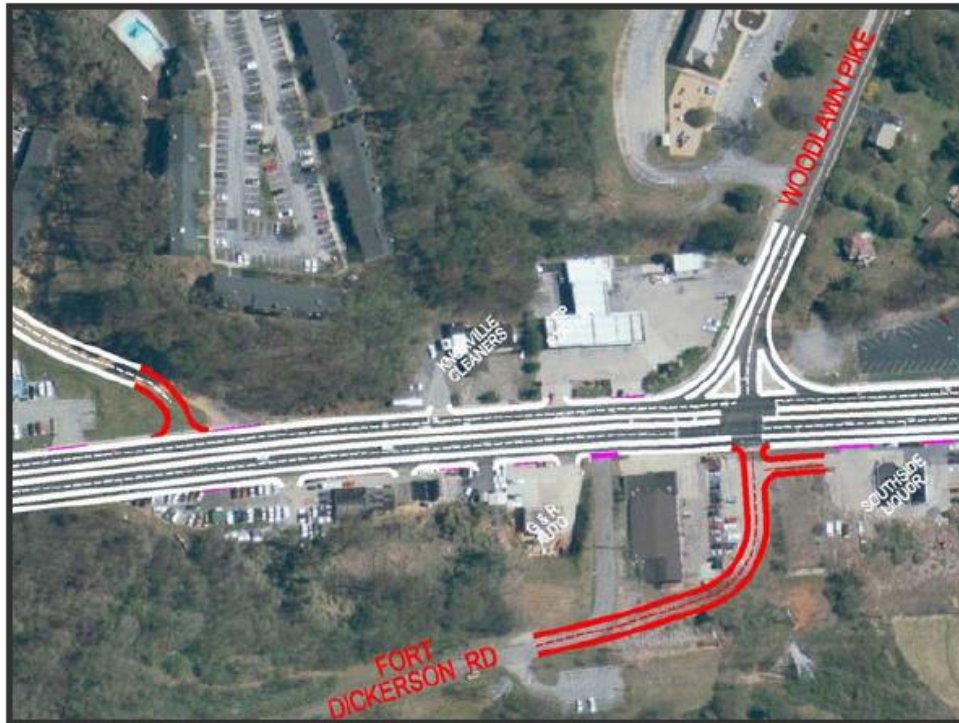
Overview

The Chapman Highway Corridor Improvement Study's purpose is to provide solutions to traffic issues along Chapman Highway from Henley Street Bridge to State Route (SR) 35 / 338 in Seymour, TN. Suggested improvements include consolidating undefined driveway access points, adding turn lanes at critical intersections, improving sight distance, and improving and / or adding signals where applicable.

An extensive data collection effort was performed, which included traffic volume data, current signal timing and operational settings, aerial photography, results from previous studies, Enhanced Tennessee Roadway Information System (E-TRIMS) database information, and field inventories and observations. The study cited the Annual Average Daily Traffic (AADT) forecasts and arterial levels of service.

Application

The Corridor Study identifies six unique segments and outlines key issues and suggested improvements for each. Since this study was completed in 2006, these recommendations will be vetted to ensure current relevancy or completion status and incorporated into the Chapman Highway Implementation Plan.



Section 1B - Fort Dickerson Drive Realignment

Figure 6: An Example of Proposed Intersection Improvements. Chapman Highway Study: Driveway Consolidations, Removal of Fort Dickerson Drive intersection, and the Realignment of Woodlawn, Page 16. It should be noted that the intersection of Fort Dickerson Road and Woodlawn Pike has been constructed.

South Waterfront Traffic Study 2007

Overview

The South Waterfront Traffic Study details the effects of a proposed development on 3.9 square miles immediately south of downtown Knoxville. Ten major intersections were identified in the study as being significant for traffic impact analysis. The report reviews nine existing and one proposed intersection that would impact the mixed-use, waterfront development. The study resulted in a proposed street network that includes improvements to existing streets and intersections, as well as the addition of new location streets to enhance east-west connectivity. Benefits of a new network, including improved traffic circulation, vehicle parking, pedestrian circulation, public safety and service, and development value are detailed throughout the study.

Application

The study is relevant to the Chapman Highway Implementation Plan in that analysis of roadways for the proposed South Waterfront development should be included in any conceptual design for the corridor. This study encourages the implementation of a complete street concept along Chapman Highway by implementing access management, streetscaping, and bicycle and pedestrian accommodations. Since the

completion of this study in 2007, the Chapman Highway and Blount Avenue intersection has been improved, and much of the South Waterfront development has been constructed or is currently under construction.

Traffic Capacity Analysis

AM Peak

Intersection	Existing		2015 With Project	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
1 Blount/Cherokee Connector	N/A	N/A	2	A
2 Augusta/ Hawthorne	N/A	N/A	N/A	A
3 Chapman/Blount	41	D	148	F
4 Chapman /Hawthorne	N/A	N/A	N/A	F
5 Chapman /Martin Mill	13	B	10	A
6 Blount /Gay/Sevier	18	B	Acceptable*	Acceptable*
7 Sevier/Davenport	4	A	7	A
8 Sevier/Island Home/Anita	2	A	N/A	A
9 Anita/James White SB	5	A	5	A
10 Anita/James White NB	9	A	19	A

PM Peak

Intersection	Existing		2015 With Project	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
1 Blount/Cherokee Connector	N/A	N/A	2	A
2 Augusta/ Hawthorne	N/A	N/A	N/A	A
3 Chapman/Blount	86	F	298	F
4 Chapman /Hawthorne	N/A	N/A	N/A	F
5 Chapman /Martin Mill	11	B	12	B
6 Blount /Gay/Sevier	19	B	Acceptable*	Acceptable*
7 Sevier/Davenport	2	A	3	A
8 Sevier/Island Home/Anita	3	A	N/A	A
9 Anita/James White SB	6	A	6	A
10 Anita/James White NB	7	A	19	A

* Analysis based on Roundabouts: An Informational Guide, FHWA-RD-00-67, June 2000

Figure 7: Traffic Capacity Analysis from South Waterfront Study, Page 12

South Waterfront Vision Plan 2006

Overview

The South Waterfront Vision Plan outlines an implementation plan for the revitalization of the south waterfront area to include provision of numerous developments, public amenities, access to the water front, and upgraded streets for the area of Knoxville south of the Tennessee River. The project area consists of retail, residential, and industrial mixed-use areas. Areas include a core commercial and institutional district in the bluff area between the Henley Street and Gay Street bridges, commercial and retail businesses along the Chapman Highway corridor, and a commercial and housing neighborhood in the center of the South Waterfront.

Application

The South Waterfront Vision Plan imagines Chapman Highway as a key gateway and revived commercial entrance to South Knoxville. The Chapman Highway Implementation Plan will consider this vision for growth and enhanced public infrastructure. The plan also outlined three pedestrian infrastructure projects and recommended bike lanes or shared use paths along all existing and new major or connector roads.

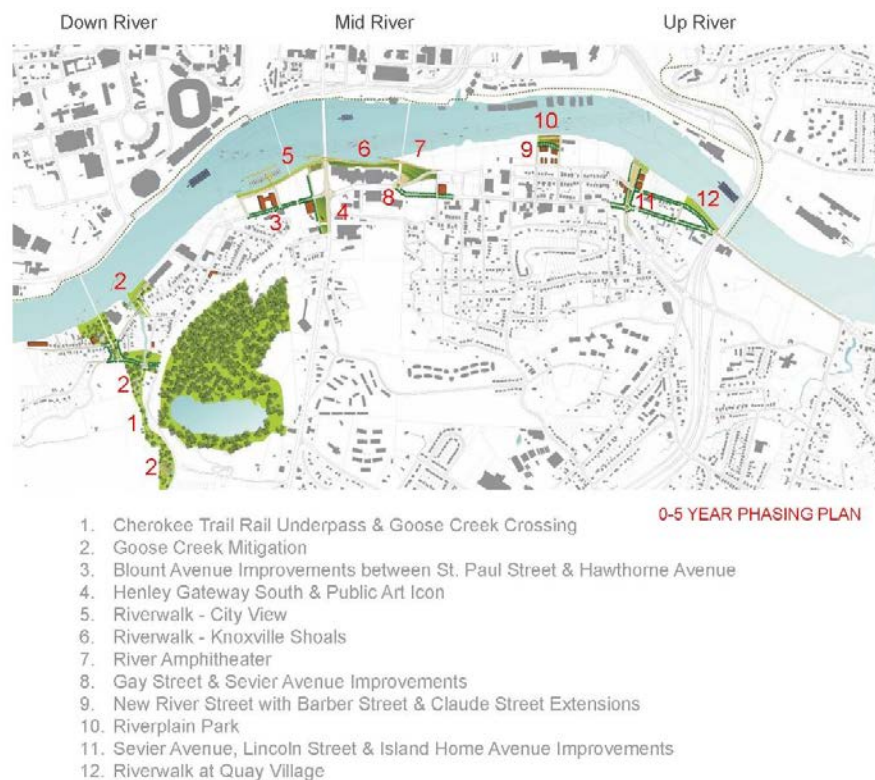


Figure 8: South Waterfront Vision Plan: 0-10 Year Phasing Plan, Page 93

South Waterfront Action Plan 2006

Overview

The Knoxville South Waterfront Action Plan calls for revitalizing the low-lying land between the Tennessee River and the Chapman Ridge. Currently, the area has a substantial amount of underutilized industrial land along the waterfront, which if redeveloped, would offer an attractive viewshed, connections to downtown, and attract mixed-use development. The intersections of Chapman Highway and Blount Avenue, Gay Street and Sevier Avenue, and the James White Parkway interchange have the access and visibility needed for retail development. The increased mixed-use development would in turn increase demand for hotel rooms. The intersection of Chapman Highway and Blount Avenue is an optimum location for a hotel facility due to its

waterfront views and proximity to the convention center. Public transit also serves the project area, with bus lines running along Chapman Highway, Sevier Avenue, and Blount Avenue.

Application

The plan is beneficial to any reconfiguration or construction of Chapman Highway near the proposed development as it details land ownership, policy changes, funding resources, and economic strategies.

Chapman Highway Corridor Study 2006

Overview

The Metropolitan Planning Commission (MPC) prepared a Chapman Highway Corridor Study in 2006, with the support of the City of Knoxville. The Chapman Highway Corridor Study serves as a basis for land use, site and building design, and thoroughfare characteristics along Chapman Highway. The three principles that influenced the development of this study included safety and operations for all modes of transportation, beautification, and economic development. The current land use is primarily composed of fast food restaurants, gas stations, and other auto-related shops. Residents desired a more diverse retail shopping experience, a pedestrian friendly neighborhood, more landscaping, and safer streets. Suggestions from the community included center medians with trees, better lighting, improved sidewalks, and bike lanes. According to the Chapman Highway Corridor Study, priority should be placed on creating mixed-use, compact development with building facades close to the street and a multimodal circulation network.

Application

Traffic operation improvements are recommended with the use of access management, coordinated signal timing, removal of unwarranted signals, and the accommodation of turning traffic at intersections. Additional safety improvement suggestions include allowing space for multiple modes of transportation, adding center turn lanes, medians, right turn lanes, and providing adequate sight distances. The plan also suggests constructing bike lanes along Chapman Highway from the waterfront to Moody Avenue, providing shoulder space for anticipated bike lanes for the rest of the corridor, and filling in sidewalk gaps.

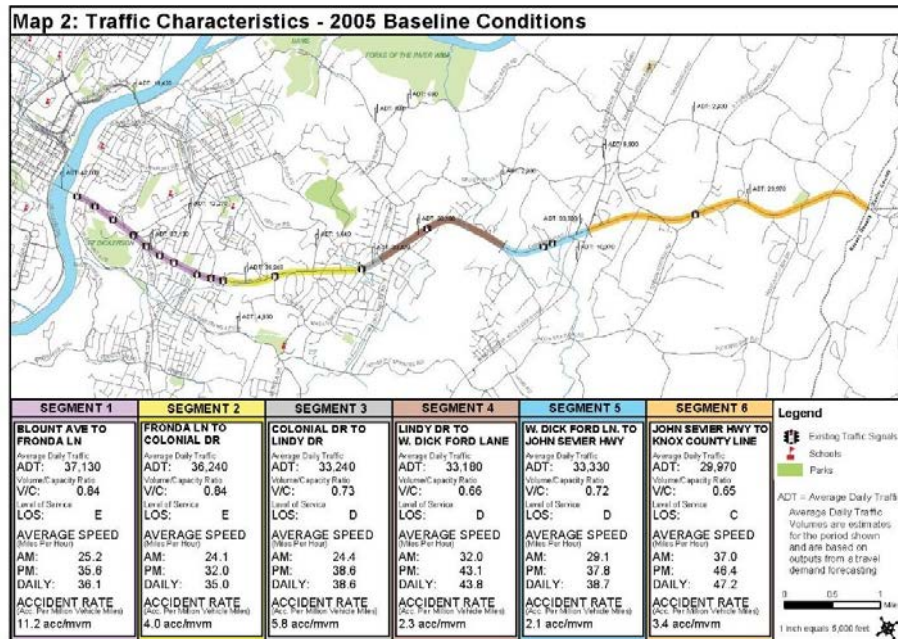


Figure 9: Chapman Highway Corridor Study: Traffic Characteristics of Different Sections, Page 22

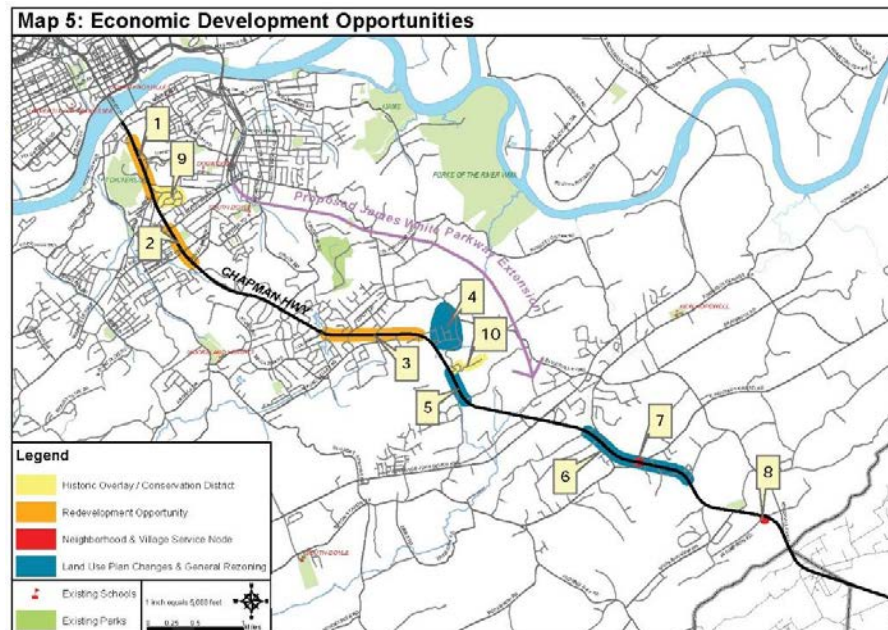


Figure 10: Chapman Highway Corridor Study: Redevelopment Opportunities, Page 49

Plan East Tennessee Playbook

Overview

The Plan East Tennessee Playbook is a guide focused on ensuring the region is attractive, healthy, and offers pathways to success for residents. Using research, analysis, and public input, the plan provides strategies for the future growth of the region and how to accomplish the playbooks' goals while involving the community. Goals include clean air and water, healthy people, regional prosperity, local food production, transportation choices, efficient infrastructure, great places, and housing choices.

Application

The regional prosperity, transportation choices, efficient infrastructure, and great places are particularly important to consider in reference to the Chapman Highway Implementation Plan as they will all be impacted by growth and development along the corridor.

EXISTING FACILITIES

Vehicle Access

There are 17 traffic signals along Chapman Highway, and approximately 295 unsignalized intersections (either public roads or private driveways).

	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	TOTAL
# of Traffic Signals	10	1	2	0	4	17
# of Access / Driveways	125	45	65	25	35	295

Table 1: Existing Signalized and Unsignalized Vehicle Access

Motorized Vehicles

TDOT classifies Chapman Highway as an Urban Principal Arterial.

- South of Martin Mill Pike, Chapman Highway is designated as US-441 / SR-71
- North of Martin Mill Pike, Chapman Highway is designated as US-441 / SR-33 / SR-71

The posted speed limit varies along Chapman Highway:

- 35 miles per hour, north of Hawthorne Avenue (south of the railroad crossing owned by the Knoxville & Holston River Railroad Company, Inc.)

- 45 miles per hour, between Hawthorne Avenue and Chapman Ford Crossing
- 50 miles per hour, south of Chapman Ford Crossing

The typical section varies along Chapman Highway:

- 4-lane with center two-way left-turn lane, between Blount Avenue and Overbrook Drive/Frona Lane
- 4-lane undivided, between Overbrook Drive/Frona Lane and Nixon Road (although some segments are wider to provide left-turn storage bays at some intersections)
- 4-lane with center two-way left-turn lane, between Nixon Road and Mountain Grove Drive

Pedestrian

Along the east side of Chapman Highway, there is sidewalk between Blount Avenue and Young High Pike (approximately 1.5 miles). For the remainder of Chapman Highway (between Young High Pike and Mountain Grove Road), there is no sidewalk along the east side of Chapman Highway.

Along the west side of Chapman Highway, there is no sidewalk along the corridor. The only exceptions are recent development and redevelopment in the vicinity of Young High Pike and Overbrook Drive/Frona Lane.

Roadways intersecting with Chapman Highway that have facilities include: West Young High Pike, East Moody Avenue, Woodlawn Pike, Lippencott Street, and Blount Avenue.

Bicycle

There are currently no bicycle facilities along Chapman Highway. The Knoxville Regional Transportation Planning Organization's Knoxville Bicycle Map designates it as a roadway with limited or no shoulder and moderate to high speeds. Some roadways that intersect with Chapman Highway do have facilities present or are designated as comfortable routes. Designated comfortable Routes include: Blount Avenue, Woodlawn Pike, East Moody Avenue, Young High Pike, Colonial Drive, East Lake Forest Drive, and Ford Valley Road.

Bicycle facilities connecting to the corridor include:

Bike Lanes	Signed Routes	Sharrows	Buffered Bike Lanes	Greenways	Shared Use Trails
-Henley Street Bridge	-Henley Street Bridge	-South Gay Street -West Blount Avenue	-Sevier Avenue -East Moody Avenue	-Harold Lambert Overlook Park	-Harold Lambert Overlook Park

Table 2: Existing Bicycle Facilities

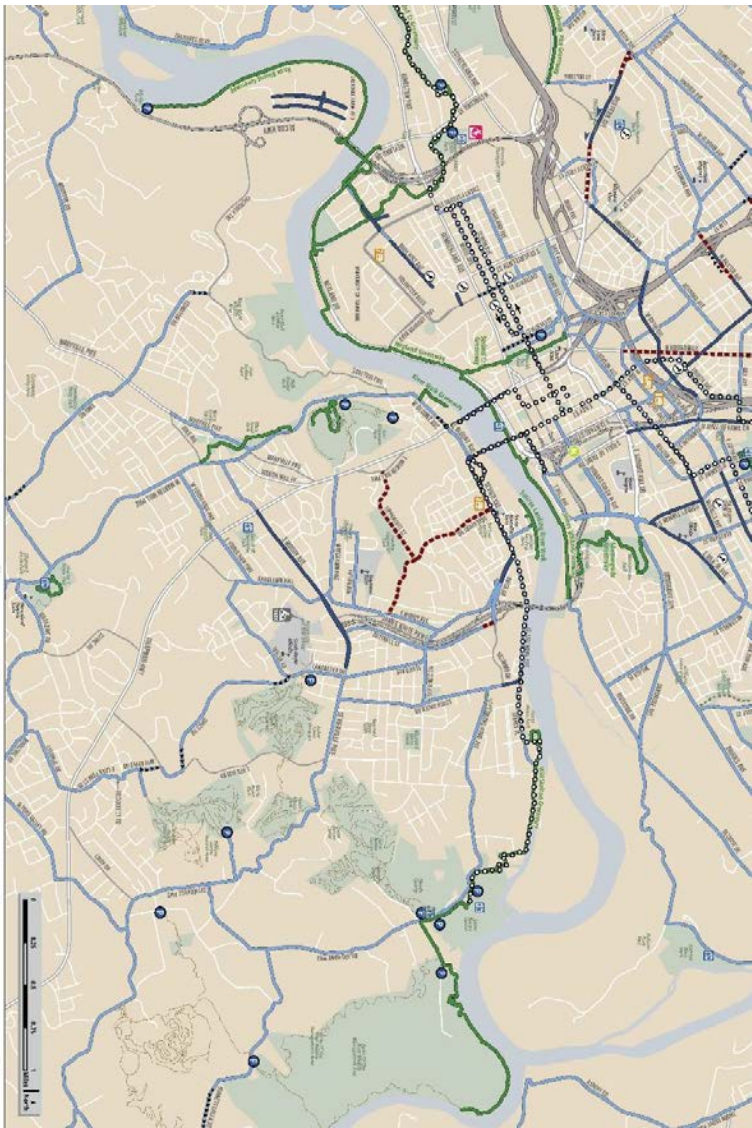


Figure 11: Knoxville Bicycle Map, 2017

Transit

Knoxville Area Transit (KAT) currently provide four (4) bus routes along Chapman Highway and throughout South Knoxville. They are Routes 40, 41, 44, and 45.

Route 40 (a.k.a. South Knoxville) provides a transit connection between Knoxville Station/Downtown, Island Home, Tennessee School for the Deaf, and Chapman Square. Route 40 offers 60-minute headways during the Weekdays and Saturday, but does not operate on Sunday. Near the intersection of Chapman Highway at Young High Pike, there are transfer points to Route 41 and Route 45.

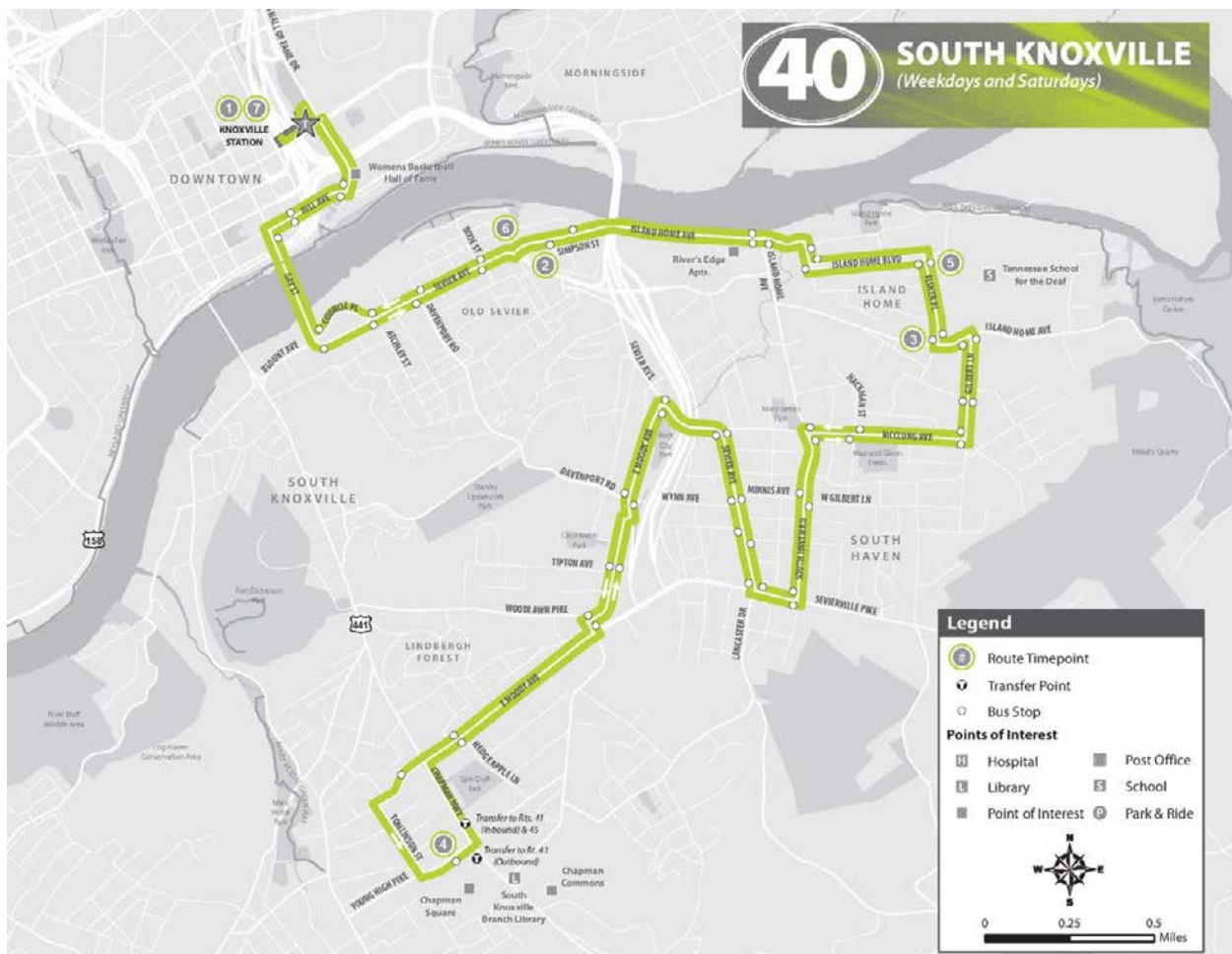


Figure 12: Route 40, Knoxville Area Transit

Route 41 (a.k.a. Chapman Highway) provides a transit connection between Knoxville Station/Downtown, Chapman Square, South Knoxville Branch Library, Chapman Commons, Chapman Plaza, Tennova South, South Grove Shopping Center, and Walmart. Route 41 offers 30-minute headways during the Weekdays and Saturday, and offers 60-minute headways on Sunday. Near the intersection of Chapman Highway at Young High Pike, there are transfer points to Route 40 and Route 45. Additionally, Route 41 serves as the ‘South Route’ within KAT’s *Passenger Playbook* for Vols football games.

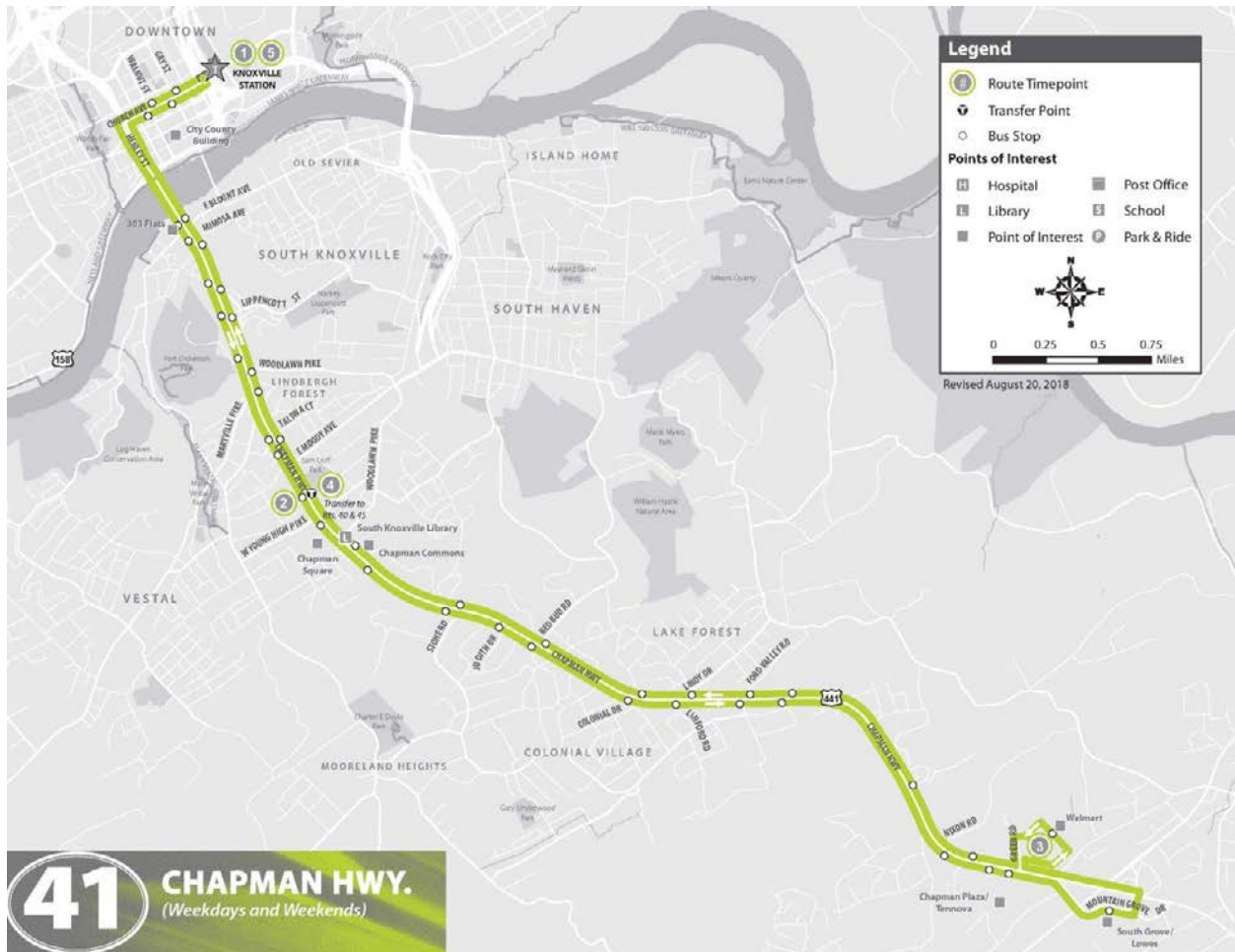


Figure 13: Route 41, Knoxville Area Transit

Route 44 (a.k.a. University Park Apartments/303 Flats) provides a transit connection between the University of Tennessee, University Park, and 303 Flats. Route 44 offers 15-minute headways during the Weekdays and 30-minute headways on Saturday, but does not operate on Sunday.

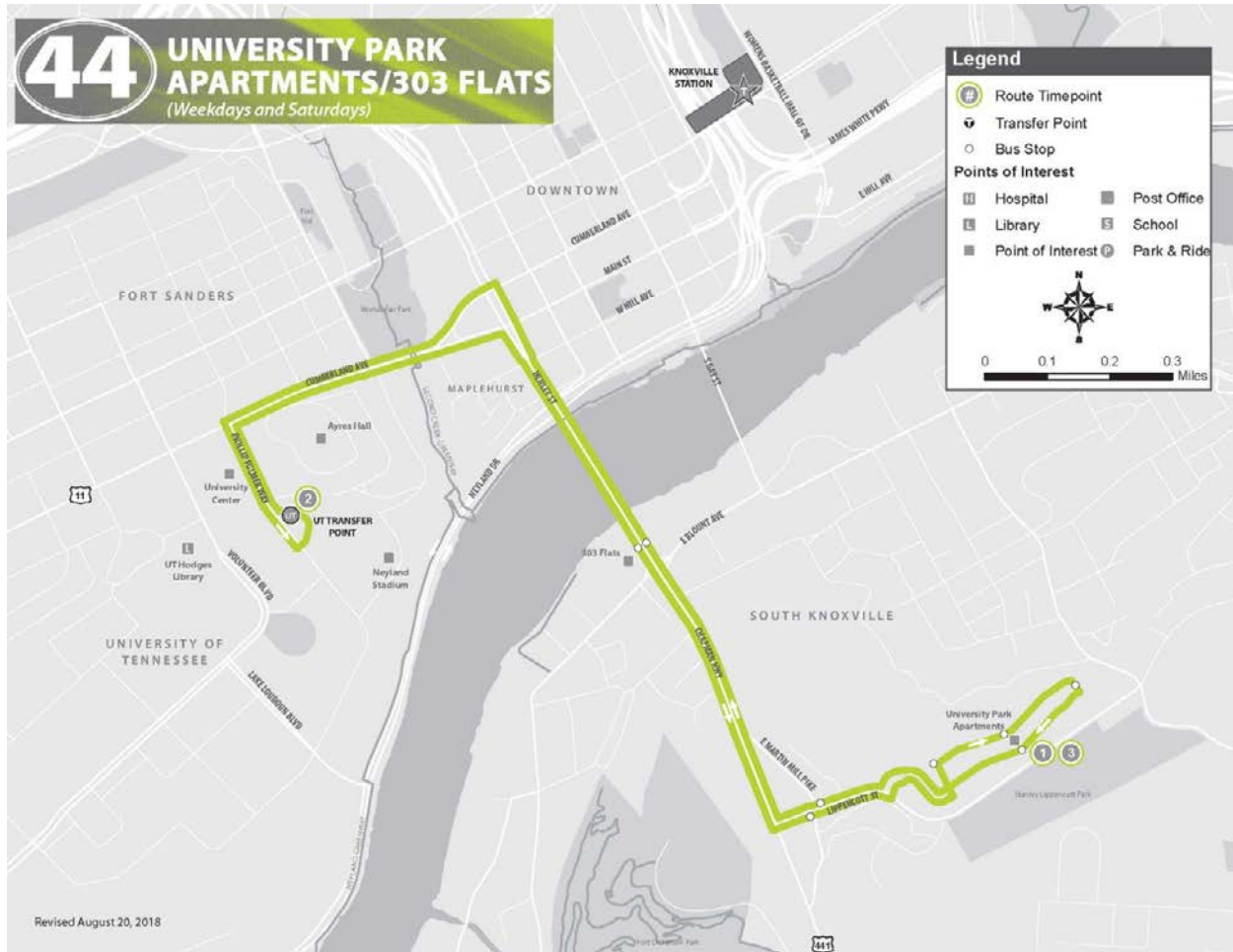


Figure 14: Route 44, Knoxville Area Transit

Route 45 (a.k.a. Vestal) provides a transit connection between Knoxville Station/Downtown, Montgomery Village, Mary Vestal Park, South Knoxville Library, and Chapman Square. Route 45 offers 60-minute headways during the Weekdays and Saturday, but does not operate on Sunday. Near the intersection of Chapman Highway at Young High Pike, there are transfer points to Route 40 and Route 41.

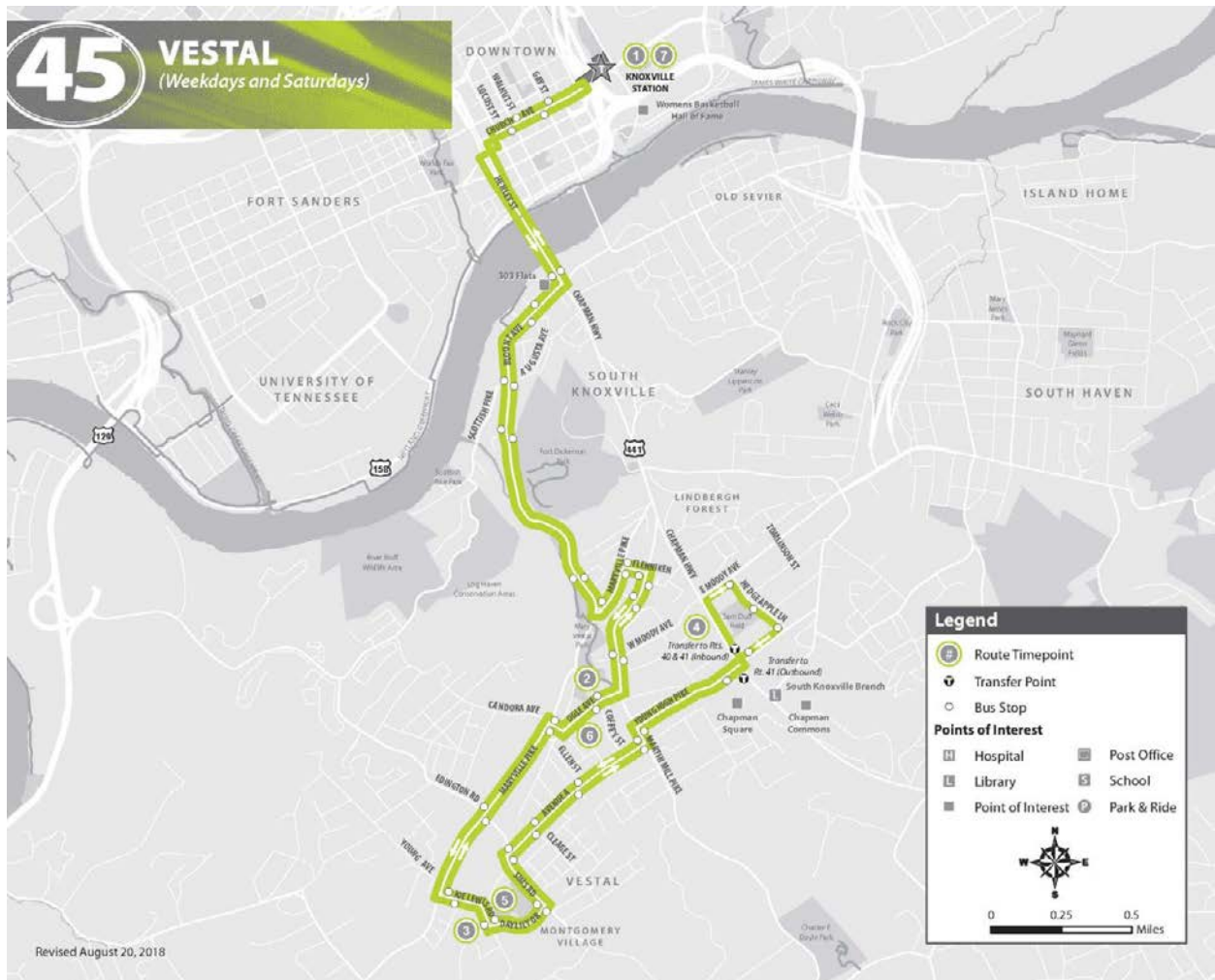


Figure 15: Route 45, Knoxville Area Transit

CHAPMAN HIGHWAY CORRIDOR SEGMENTS

Analyzing the Corridor

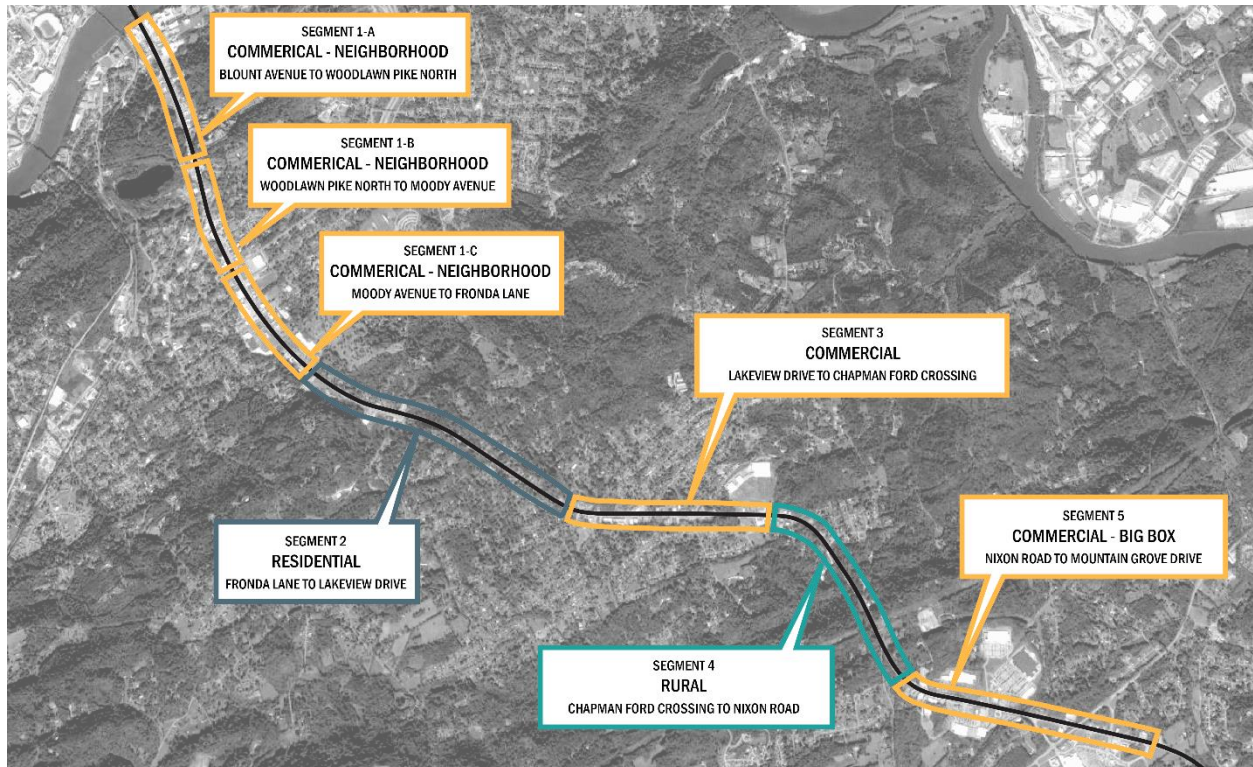
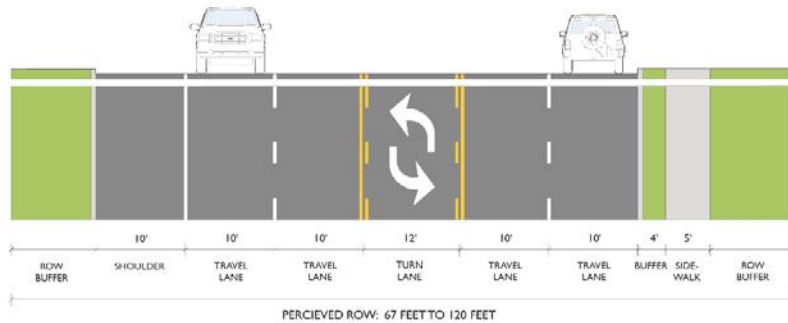


Figure 16: Segments of the Chapman Highway Corridor

Chapman Highway is identified as US Route (US) 441 and State Route (SR) 33 / 71. From Mountain Grove Drive to Martin Mill Pike, Chapman Highway is identified as US 441 / SR 71. However, north of Martin Mill Pike, Chapman Highway is identified as US 441 / SR 71 / SR 33. Chapman Highway was subdivided into segments with similar landuses and existing facility types. Reviewing KGIS data for existing landuses and zoning, as well as reviewing existing physical conditions, the corridor was then broken down into five segments with three types of classification: commercial, residential, and rural. Commercial segments are detailed further, as their uses, layout, and relationship with their surrounding areas differ.

1-A. Commercial-Neighborhood: Blount Avenue to Woodlawn Pike North

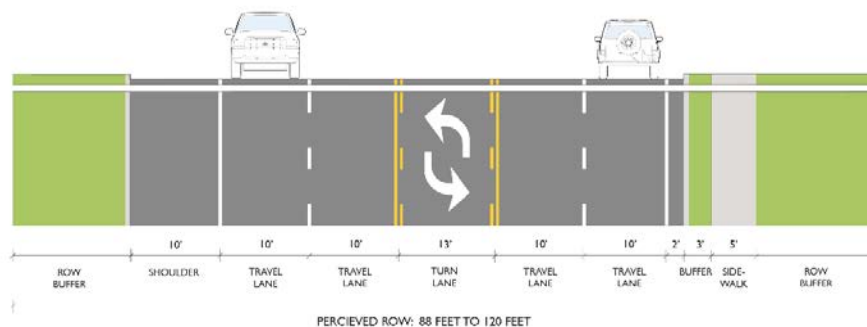


SEGMENT 1-A

Segment 1-A begins at Blount Avenue as a 5-lane highway with a center turn lane and ends at the intersection of Woodlawn Pike North and Fort Dickerson Road. The roadway land use along the Commercial-Neighborhood segment is primarily commercial with some office use, with residential land use surrounding the area. Commercial land use for this segment is characterized by businesses which are servicing the neighborhoods that surround this portion of Chapman Highway. Almost every parcel along the corridor has direct access to Chapman Highway. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 67 feet to 120 feet between property lines.

This segment of Chapman Highway lies within the proposed South Waterfront of Knoxville and is a proposed mixed-use area with bicyclist and pedestrian facilities from the waterfront to Moody Avenue. The existing waterfront is comprised of residential and commercial uses with a substantial amount of underused industrial land. This portion of Chapman Highway experiences heavy traffic and a higher amount of bicycle volumes due to proximity to University of Tennessee-Knoxville and downtown.

1-B. Commercial-Neighborhood: Woodlawn Pike North to Moody Avenue



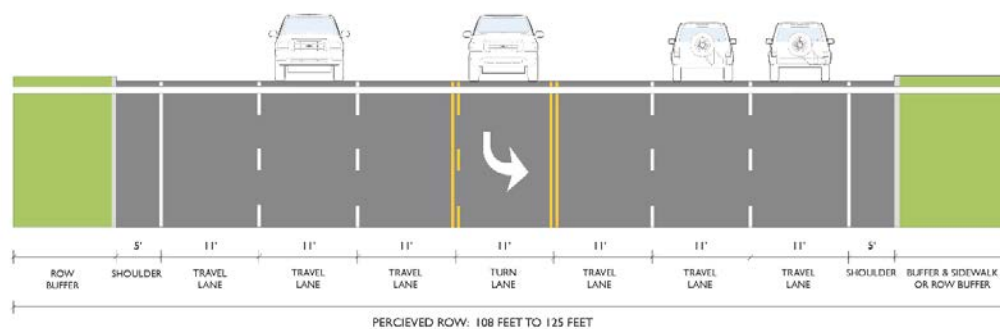
SEGMENT 1-B

Segment 1-B begins at Woodlawn Pike North and ends at Moody Avenue. The roadway primarily consists of a 5-lane highway with a center turn lane. Land use along the Commercial-Neighborhood segment is largely commercial, with residential land use surrounding the area. Commercial land use for this segment is

characterized by businesses which are servicing residents throughout the Chapman Highway corridor. Every parcel along the corridor has direct access to Chapman Highway. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 88 feet to 120 feet between property lines.

There is also a proposed mixed-use Town Center between Taliwa Court and Fronda Lane which builds from existing business and community activity and includes commercial, office, medium density residential uses, walk-in retail, and bike lanes extended throughout the segment.

1-C. Commercial-Neighborhood: Moody Avenue to Fronda Lane

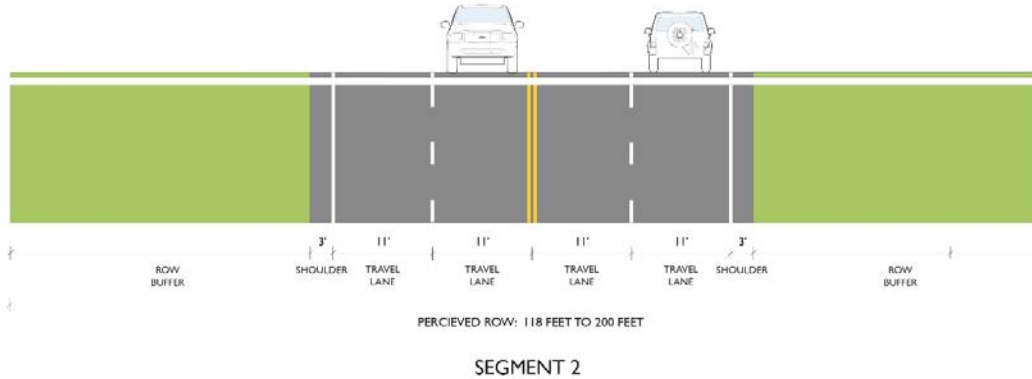


SEGMENT 1-C

The concluding section of the Commercial -Neighborhood area, Segment 1-C, begins at Moody Avenue and ends at Fronda Lane. The road transitions from a 5-lane highway with center turn lane to a 6-lane highway with center left turn lanes with no existing sidewalk. The roadway land use along the Commercial -Neighborhood segment is commercial, with residential land uses surrounding the area. Commercial land use for this segment is characterized by retail and personal service businesses which are serving the neighborhoods that surround this portion of Chapman Highway. All parcels in this section along the corridor have direct access to Chapman Highway. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 108 feet to 125 feet between property lines.

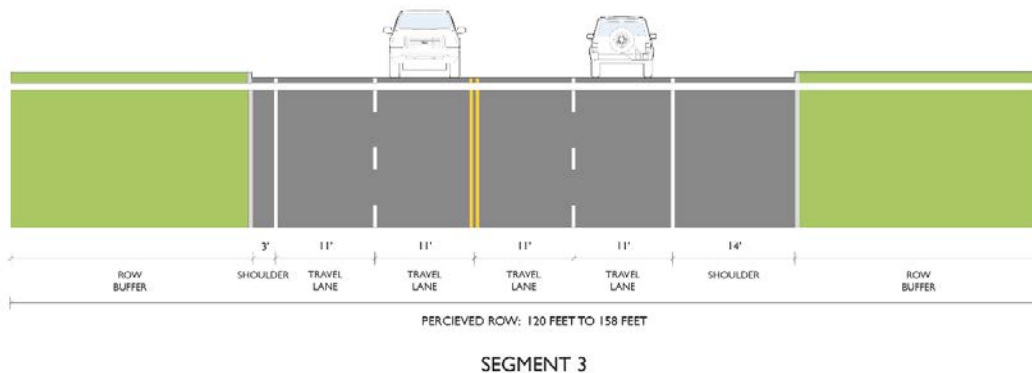
The proposed mixed-use Town Center between Taliwa Court and Fronda Lane continues in this segment. A portion of a shared use path planned from Young High Pike to Stone Road for the year 2026 also lies within segment 1-C.

2. Residential: Fronda Lane to Lakeview Drive



The Residential segment begins south of Fronda Lane where it transitions from five lanes to four and ends at Lakeview Drive. Much of this segment has no curb and gutter. This land-use is almost entirely residential with intermittent commercial uses. There are topographical constraints from Gwinfield Drive to Fronda Lane, from west of Stone Road to Red Bud Road, near Lake Forest Drive (northern intersection), and Brandau Drive. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 118 feet to 200 feet between property lines.

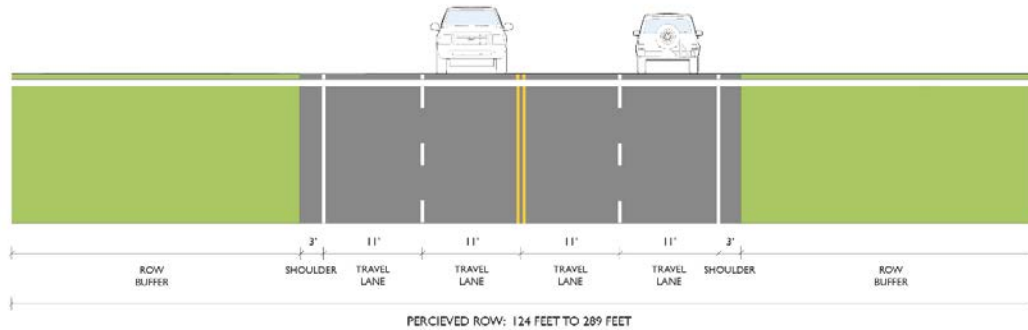
3. Commercial: Lakeview Drive to Chapman Ford Crossing



The Commercial segment begins at Lakeview Drive and ends at the entrance to Chapman Ford Crossing. The roadway transitions between four and five lanes. The land use changes back to primarily commercial use, with residential areas located off side streets. The commercial land use in this area is characterized mostly by single-story small businesses on smaller parcels, each with individual access points to Chapman Highway. There are significant topography changes on the north and south sides of Chapman Highway between East Ford Valley Road and Meridian Road.

There is a proposed mixed-use development for the portion of Chapman Highway between Lakeview Drive and Lindy Drive which would include neighborhood, commercial, and office uses, as well as bike lanes. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 120 feet to 158 feet between parcels.

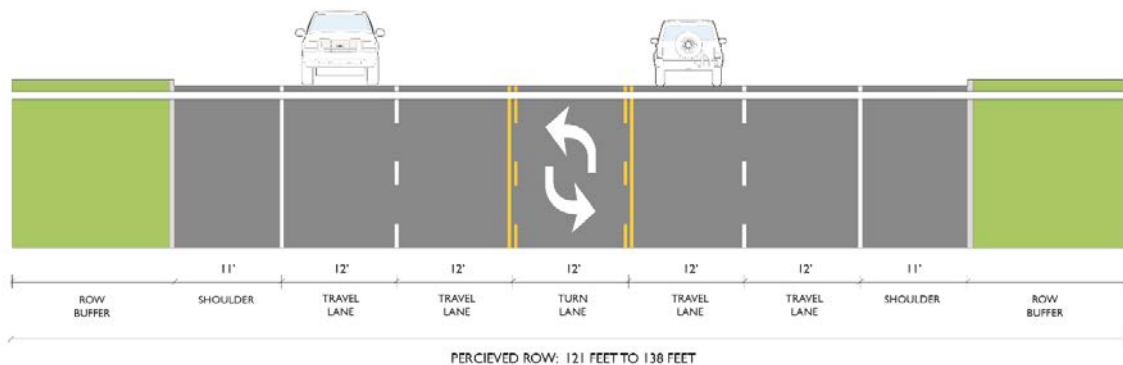
4. Rural: Chapman Ford Crossing to Nixon Road



SEGMENT 4

The Rural segment stretches between the entrance of Chapman Ford Crossing and Nixon Road and is the narrowest section of roadway along the corridor, with four lanes throughout. The segment also has no curb and gutter. It is comprised of mostly rural residential dwellings and some agricultural lands. There are significant topography changes on both sides of Chapman Highway for the entire length of the segment. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 124 feet to 289 feet between property lines.

5. Commercial-Big Box: Nixon Road to Mountain Grove Drive



SEGMENT 5

The Commercial-Big Box segment begins at Nixon Road and ends at Mountain Grove Road. Most of the segment has five lanes with a center turn lane and curb beginning just south of Nixon Road. Land use along this segment of the corridor is characterized by chain commercial buildings with large parking lots. The land uses surrounding this portion of the corridor are predominantly suburban housing developments. There are large landscape buffers on either side of the corridor and numerous access points along the segment to businesses. Topographical constraints exist near Nixon Road and East Norton Road. The perceived maximum and minimum right of way measurements for this segment, according to KGIS, are 121 feet to 138 feet between property lines.

TRAFFIC DATA

Average Annual Daily Traffic (TDOT Data)

Average Annual Daily Traffic (AADT) was obtained from TDOT count stations along Chapman Highway, as well as along Alcoa Highway for comparison purposes. The growth at these count stations between the years of 1985 and 2016 is shown in **Figure 16**.

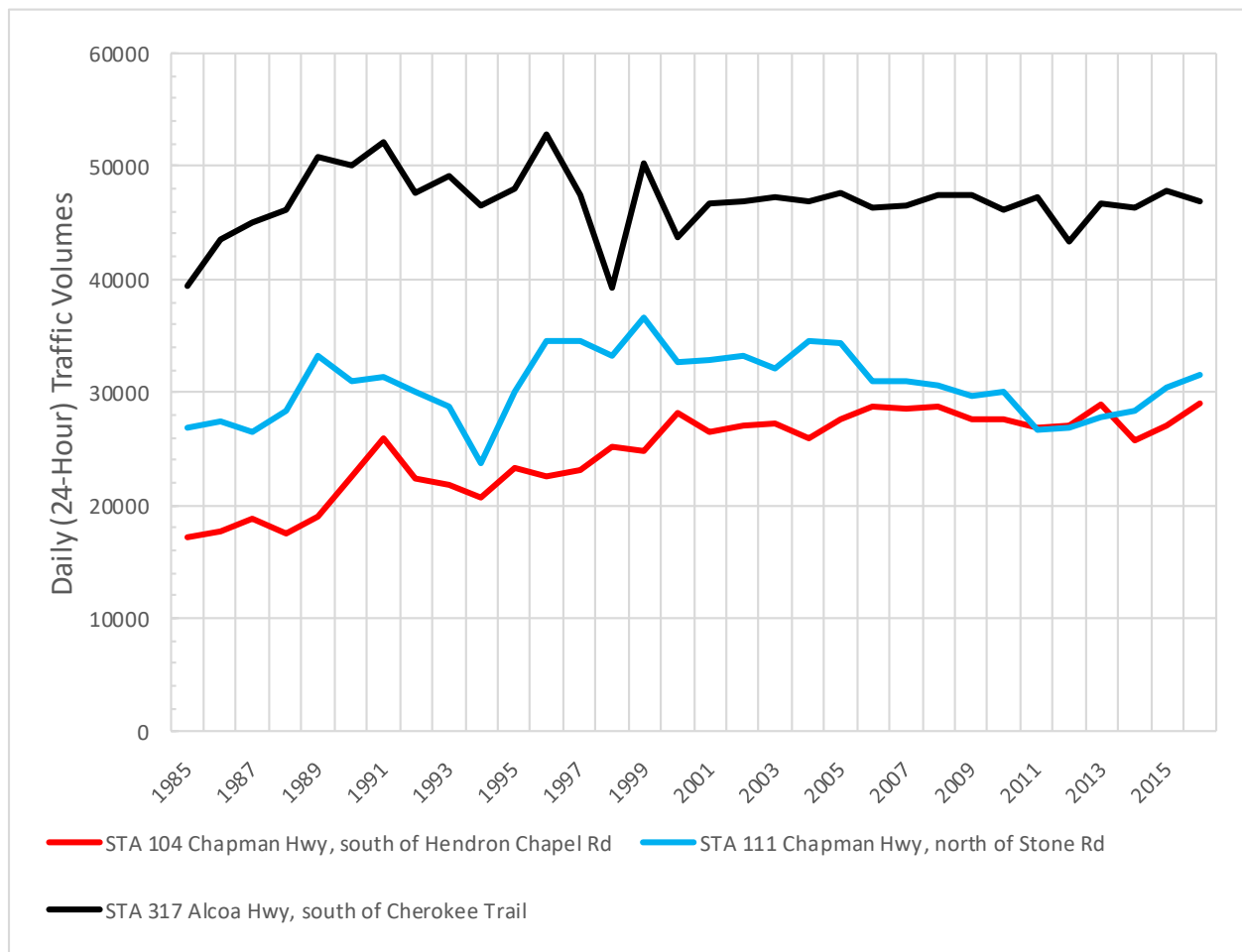
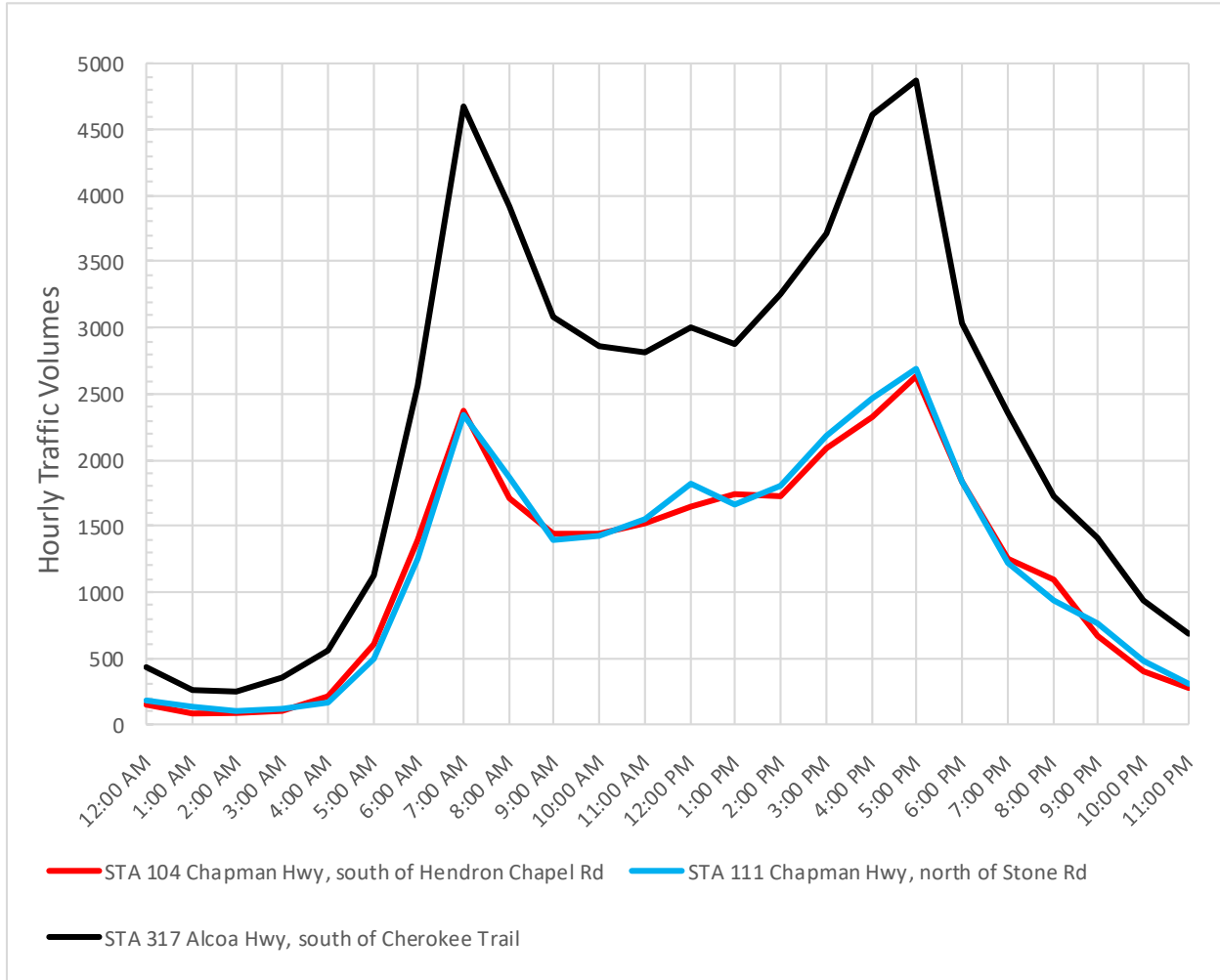


Figure 17: Historical Growth 1985 - 2016

The hourly volumes, for 24-hours is shown in **Figure 17** at the TDOT count stations.



Source: TDOT

Figure 18: Chapman Highway – Hourly Traffic Volumes (TDOT Count Stations)

Average Daily Traffic (Tube Counts)

Average Daily Traffic (48-Hour tube counts) data were collected at five (5) locations along Chapman Highway in October 2018. Traffic data was collected during 48 consecutive hours on Monday, October 29, 2018 and Tuesday, October 30, 2018. The count locations are shown in **Table 3**.

Table 3: Chapman Highway – ADT Count Locations

Count Location	Location
1	Between Fort Avenue and Lippencott Street
2	Between Overbrook Drive/ Fronda Lane and Stone Road
3	Between Stone Road and Colonial Drive
4	Between Colonial Drive and Chapman Ford Crossing
5	Between Chapman Ford Crossing and Chapman Plaza

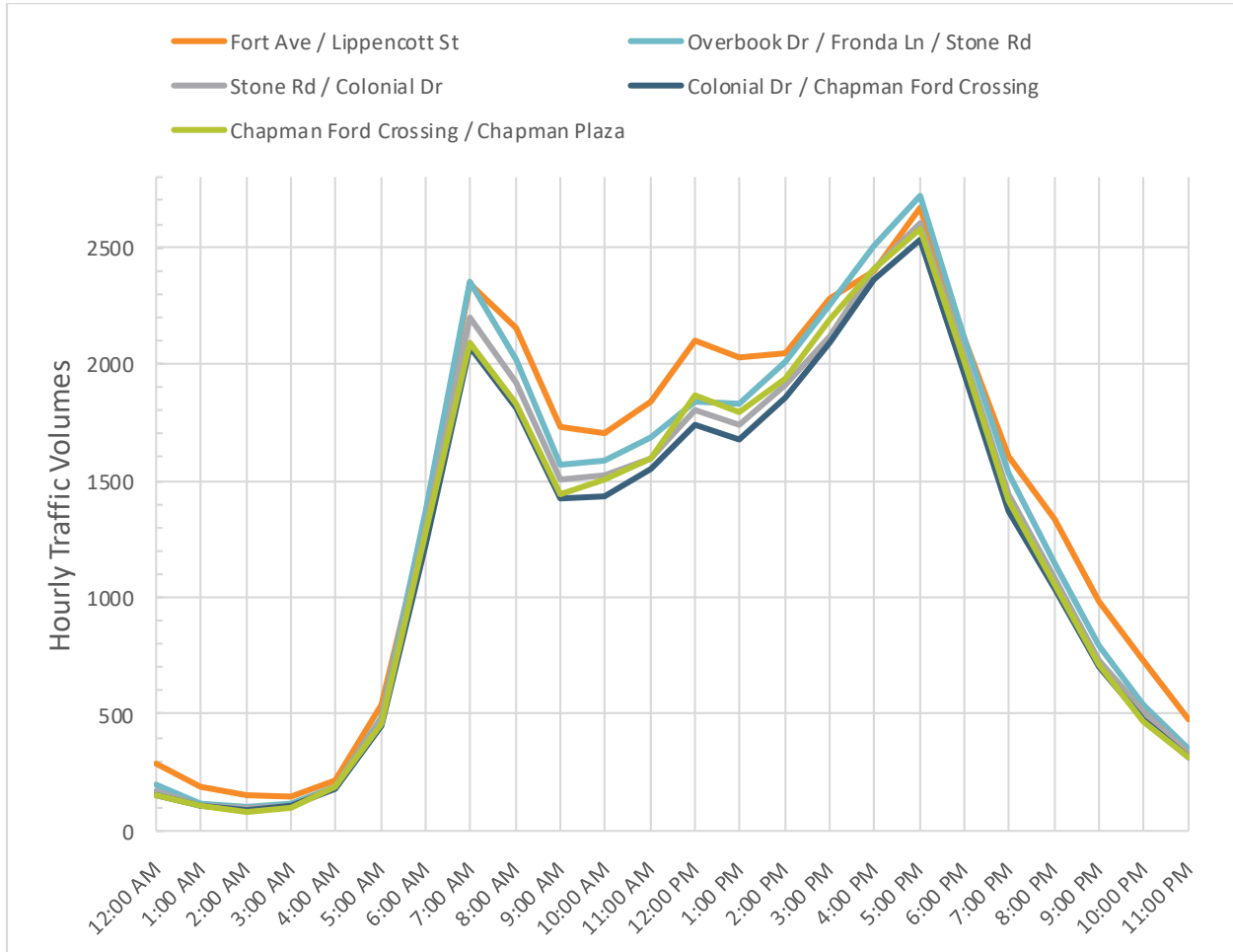
Figure 18 displays graphically the ADT at the five (5) count locations for both Monday (October 29, 2018) and Tuesday (October 30, 2018) data.



Source: NDS

Figure 19: Chapman Highway – Average Daily Traffic

Figure 19 displays graphically the ADT at the five (5) count locations for both Monday and Tuesday data.



Source: NDS

Figure 20: Chapman Highway – Hourly Traffic Volumes

Intersection Peak Hour Turning Movement Counts

Intersection turning movement counts were collected in September 2016 at 17 signalized intersections, and in October 2018 at 6 unsignalized intersections. Using the AADT provided by TDOT and the 48-hour tube counts obtained in October 2018, 24-hour entering volumes were estimated for each intersection for three (3) transportation modes: motorized vehicles, bicycles, and pedestrians. This information, as well as the intersection numbering is shown in **Table 4** for signalized intersections and **Table 5** for unsignalized intersections.

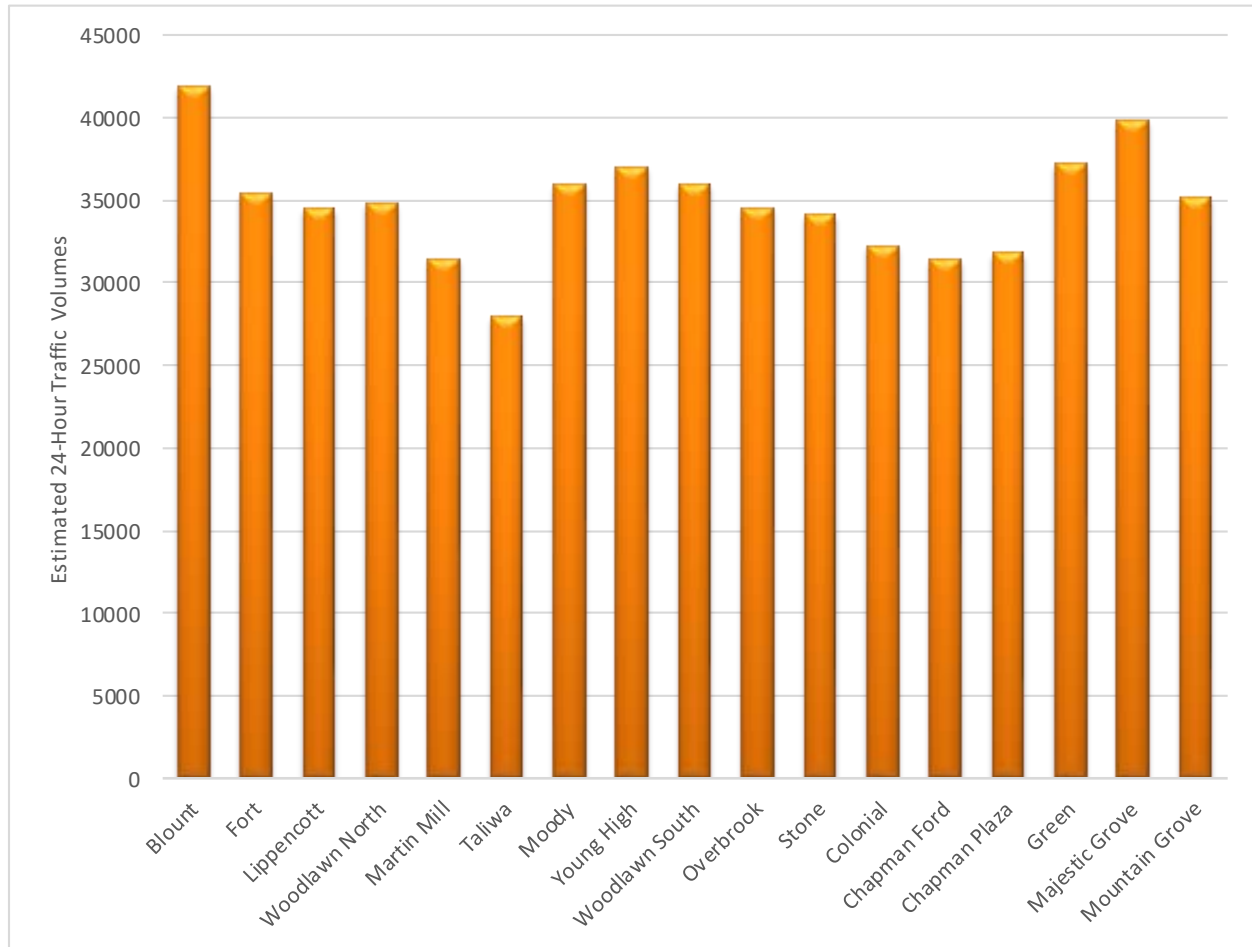
Table 4: Chapman Highway – Estimated 24-Hour Volumes at Signalized Intersections

Intersection ID	Intersection	Est. 24-Hr Traffic	Est. 24-Hr Bicycles	Est. 24-Hr Pedestrians
1	Blount Avenue	41,899	86	57
2	Fort Avenue	35,351	55	90
3	Lippencott Street	34,447	5	88
4	Fort Dickerson / Woodlawn Pike North	34,778	19	64
5	Martin Mill Pike	31,464	14	76
6	Taliwa Court	27,918	14	57
7	Moody Avenue	35,985	17	45
8	Young High Pike	37,017	21	45
9	Woodlawn Pike South	35,970	17	14
10	Overbrook Drive / Fronda Lane	34,533	2	5
11	Stone Road	34,109	2	5
12	Colonial Drive	32,214	5	2
13	Chapman Ford Crossing	31,399	2	0
14	Chapman Plaza	31,736	0	14
15	Green Road	37,162	0	2
16	Majestic Grove Boulevard	39,820	0	2
17	Mountain Grove Drive	35,149	0	2

Table 5: Chapman Highway – Estimated 24-Hour Volumes at Unsignalized Intersections

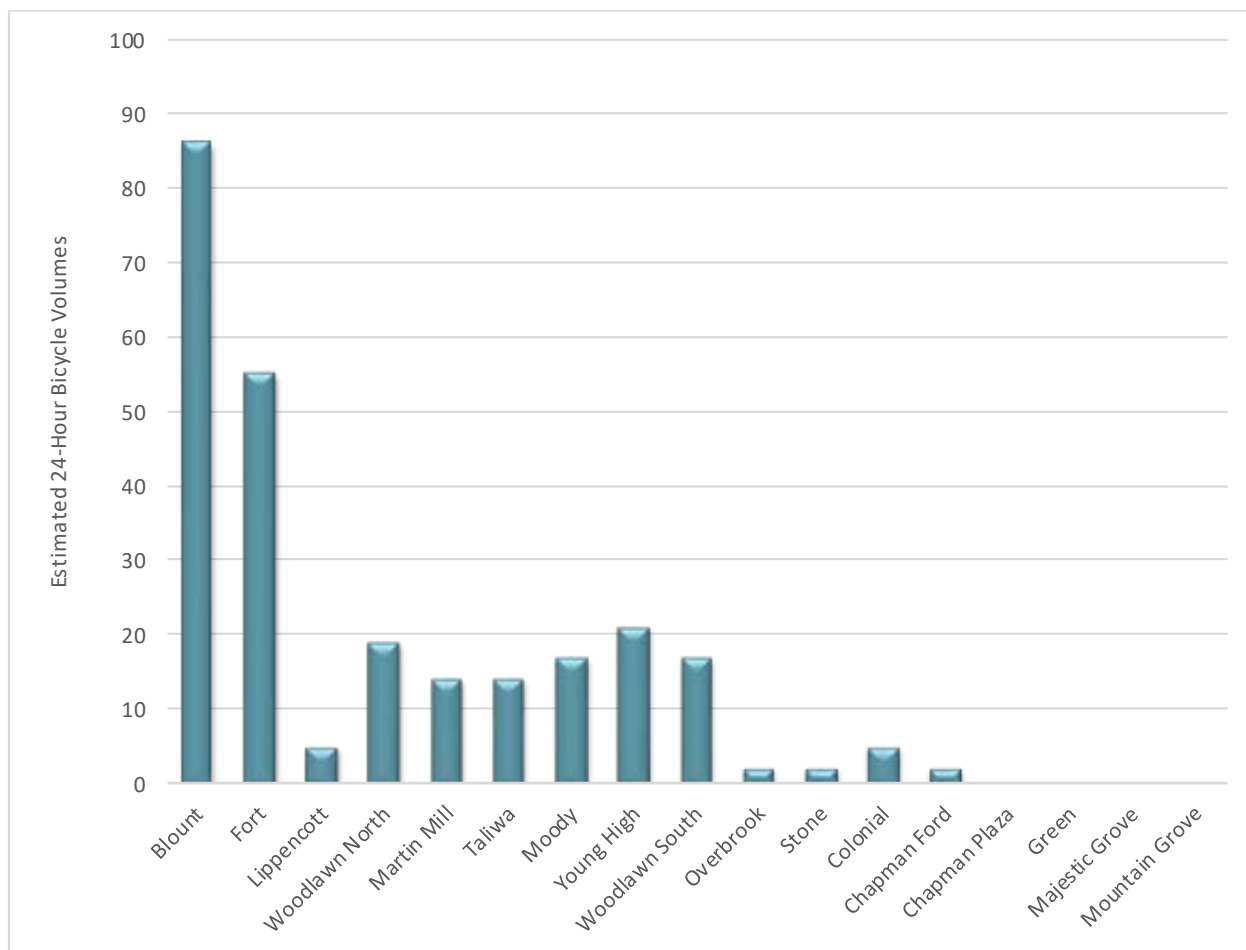
Intersection ID	Intersection	Est. 24-Hr Traffic	Est. 24-Hr Bicycles	Est. 24-Hr Pedestrians
18	East Martin Mill Pike (north)	33,358	29	32
19	Red Bud Road	30,960	0	16
20	Lake Forest Drive	30,750	0	3
21	Linford Road / Lindy Drive	30,630	0	52
22	Ford Valley Road	29,473	0	0
23	West Dick Ford Lane	29,638	0	0

Figure 20, 21, and 22 display the estimated 24-Hour Traffic Volumes, Bicycle Volumes, and Pedestrian Volumes, respectively.



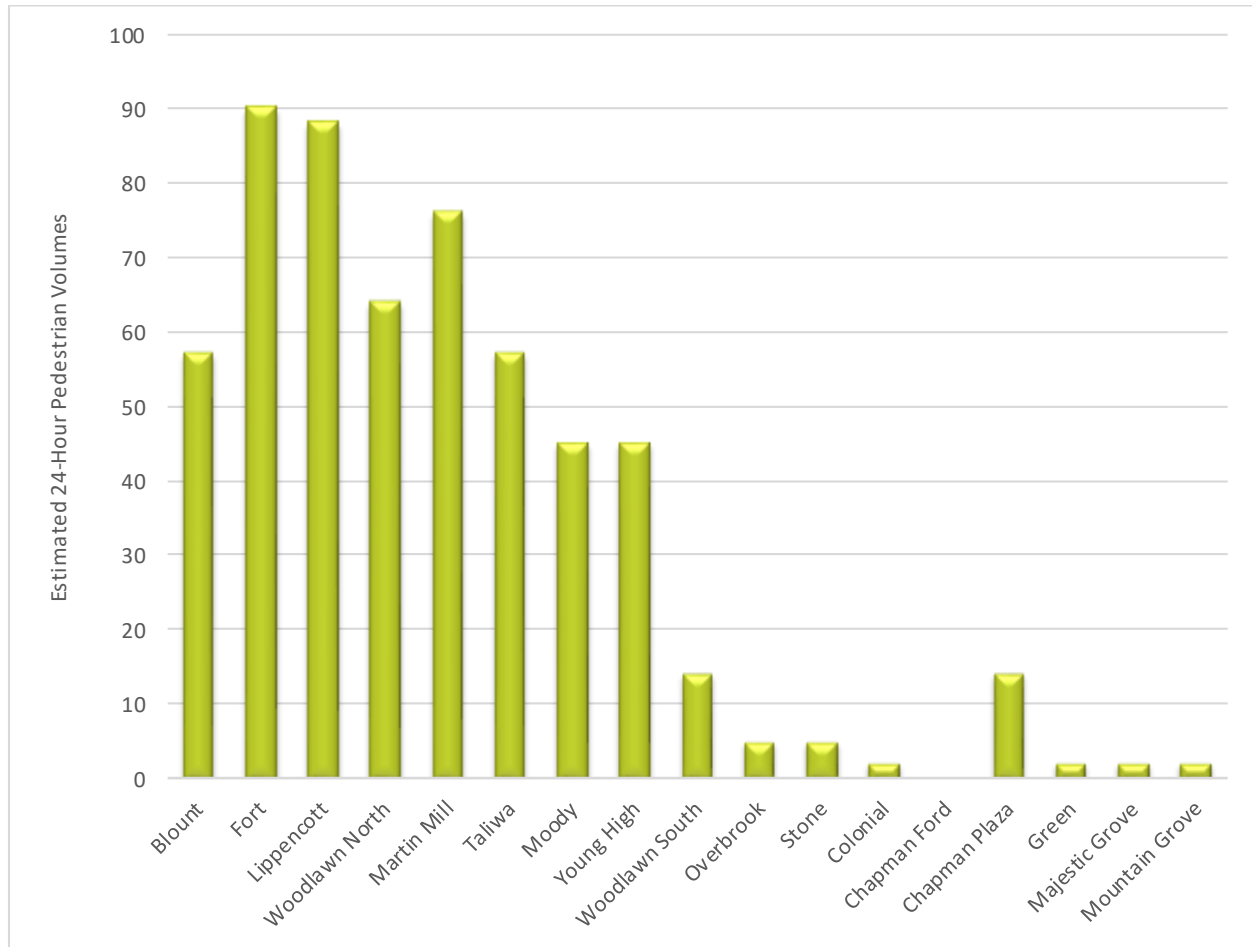
Source: NDS

Figure 21: Chapman Highway Intersections – Estimated 24-Hour Traffic Volumes



Source: NDS

Figure 22: Chapman Highway – Estimate 24-Hour Bicycle Volumes



Source: NDS

Figure 23: Chapman Highway – Estimate 24-Hour Pedestrian Volumes

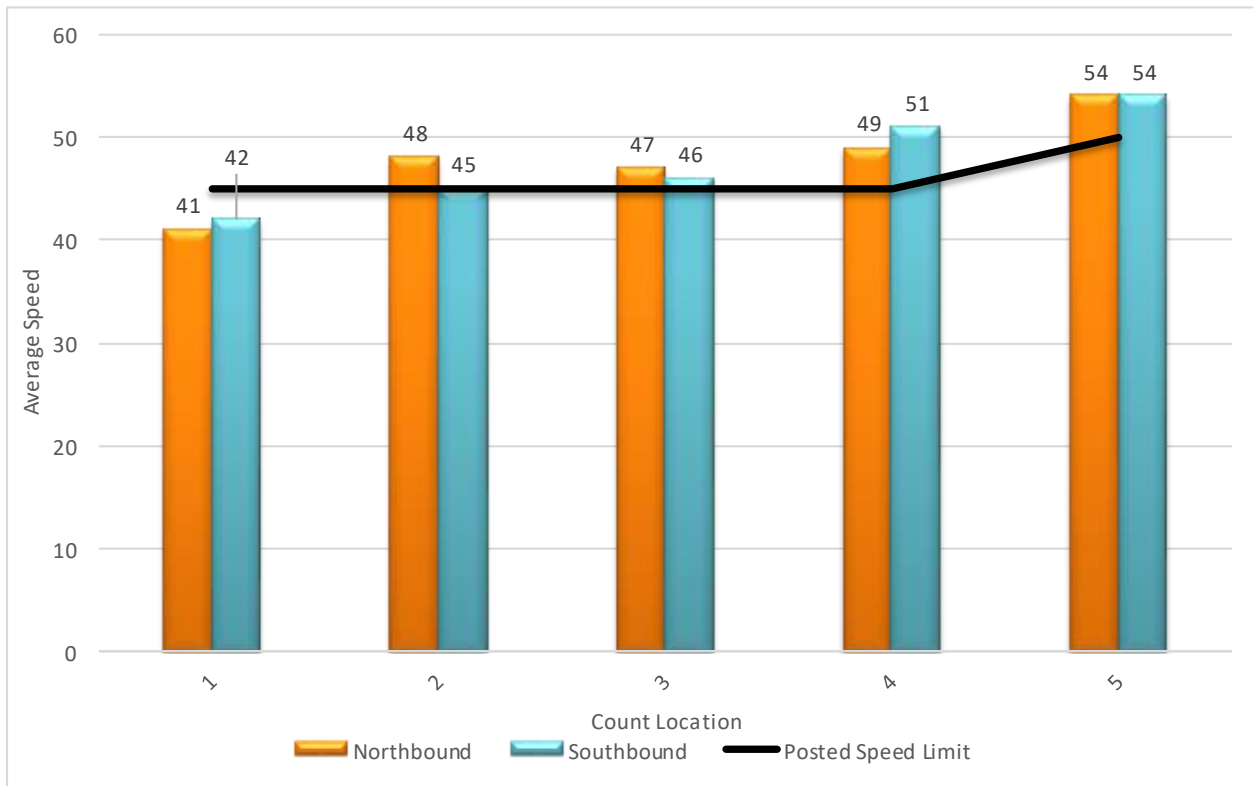
Chapman Highway Speed Data (NDS)

Speed Data was collected at five (5) locations along Chapman Highway in October 2018. Traffic data was collected during 48 consecutive hours on Monday, October 29, 2018 and Tuesday, October 30, 2018. The count locations as well as the posted speed limit, average speeds, and 85th percentile speeds by direction are shown in **Table 6**.

Table 6: Speed Data along Chapman Highway – Two Day Average

Count Location	Count Location	Posted Speed Limit	Northbound		Southbound	
			Average	85th	Average	85th
1	Between Fort Avenue and Lippencott Street	45	41	49	42	49
2	Between Overbook Drive / Fronda Lane and Stone Road	45	48	54	45	51
3	Between Stone Road and Colonial Drive	45	47	55	46	54
4	Between Colonial Drive and Chapman Ford Crossing	45	49	55	51	58
5	Between Chapman Ford Crossing and Chapman Plaza	50	54	61	54	61

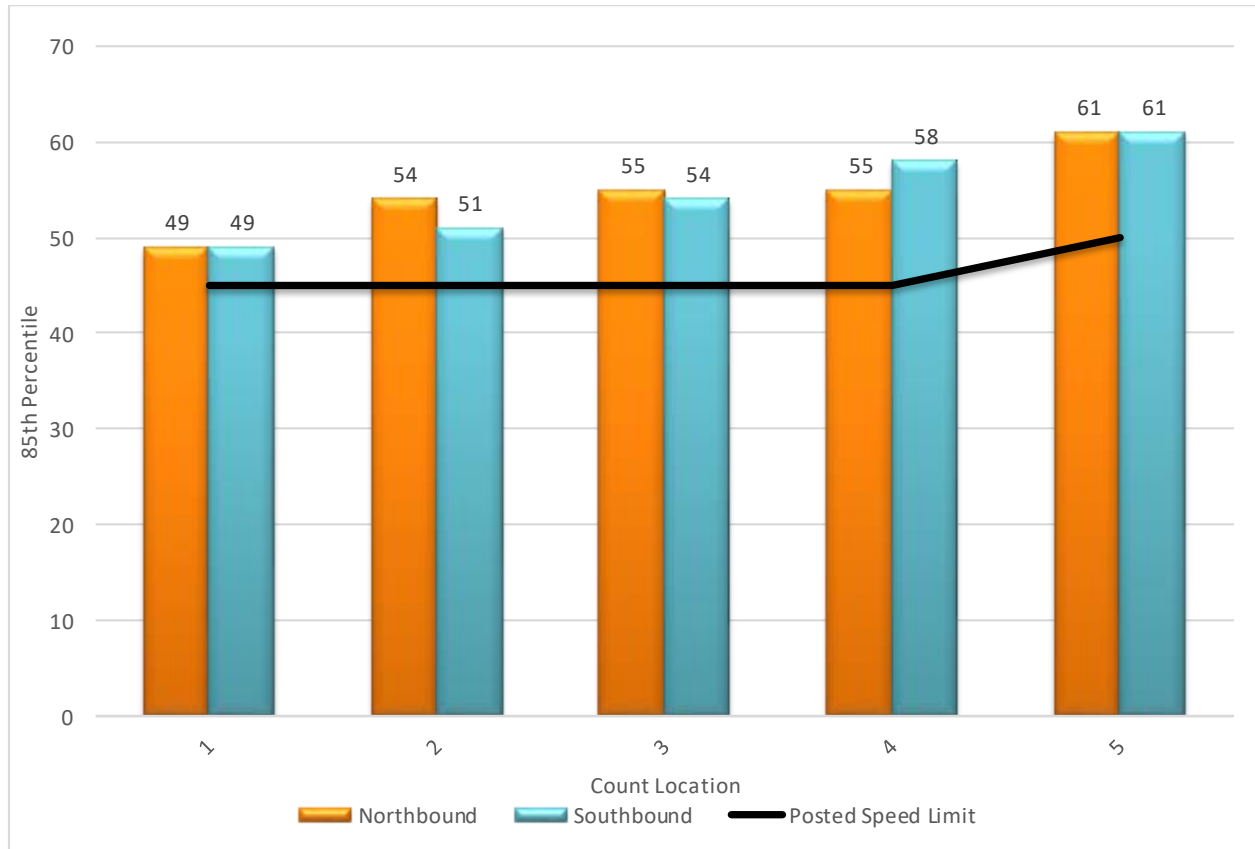
Figure 23 displays the average speed at each count location.



Source: NDS

Figure 24: Average Speed along Chapman Highway

Figure 24 displays the 85th percentile speed at each count location.



Source: NDS

Figure 25: 85th Percentile Speed along Chapman Highway

CRASH DATA

Crash data was reviewed along Chapman Highway between Blount Avenue and Mountain Grove Drive. Crash data was obtained from TDOT's ETRIMS database for a 3-year period between January 1, 2016 and December 31, 2018. Over the course of three years, 927 crashes occurred throughout the Chapman Highway Corridor.

Table 7 summarizes the 3-year crash total categorized by crash severity. **Table 8** displays the number of pedestrian and pedalcycle (e.g. bicycle) crashes that occurred along Chapman Highway.

Table 7: Chapman Highway – 3-Year (2016-2018) Crash Total

Type of Crash	Number of Crashes
Prop Damage (under)	47
Prop Damage (over)	636
Suspected Minor Injury	195
Suspected Serious Injury	44
Fatal	5
TOTAL	927

Table 8: Chapman Highway – Pedestrian and Pedalcycle Crashes

Type of Crash	Number of Crashes
Pedestrian	8
Pedalcycle	1

The crash data was used to calculate the crash rate, both at intersections and along segments of Chapman Highway. Additionally, the TDOT Statewide Average was used to calculate the Critical Crash Rate Factor (A/C). A Critical Crash Rate Factor (A/C) of 1.0 or higher can indicate that a safety issue may exist. The Severity Index was also calculated, which considers the number of fatal crashes, suspected serious injury crashes, and suspected minor injury crashes. **Table 9** displays the crash analysis for the five (5) segments along Chapman Highway.

Table 9: Chapman Highway – Crash Analysis by Segment

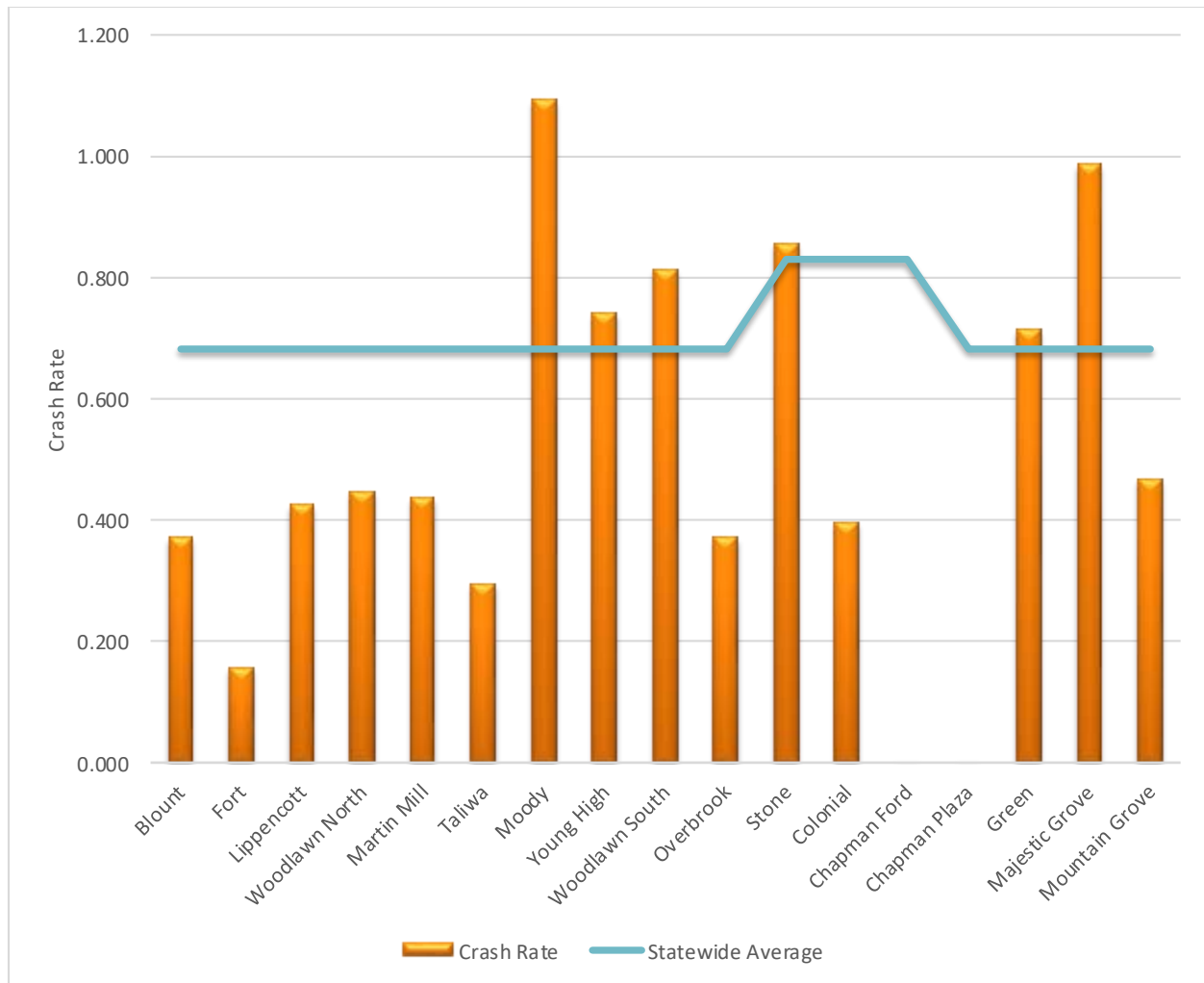
	Crash Rate	TDOT Statewide Average	Critical Crash Rate Factor (A/C)	Severity Index	Number of Traffic Signals	Number of Access/ Driveways
<u>Segment 1</u> from Blount Avenue to Overbrook Drive / Fronda Lane	6.620	3.297	1.724	0.29	10	125
<u>Segment 2</u> from Overbrook Drive / Fronda Lane to Lakeview Drive	2.849	3.954	0.616	0.39	1	45
<u>Segment 3</u> from Lakeview Drive to Chapman Ford Crossing	4.074	3.954	0.844	0.35	2	65
<u>Segment 4</u> from Chapman Ford Crossing to Nixon Road	1.762	3.954	0.370	0.48	0	25
<u>Segment 5</u> from Nixon Road to Mountain Grove Drive	3.757	3.297	0.941	0.31	4	35

Table 10 displays the crash analysis at the signalized intersections along Chapman Highway.

Table 10: Chapman Highway – Crash Analysis at Signalized Intersections

Intersection ID	Intersection	Crash Rate	Statewide Average	Critical Crash Rate Factor (A/C)	Severity Index
1	Blount Avenue	0.371	0.682	0.379	0.12
2	Fort Avenue	0.155	0.682	0.154	0.17
3	Lippencott Street	0.424	0.682	0.421	0.31
4	Fort Dickerson Road / Woodlawn Pike North	0.446	0.682	0.444	0.29
5	Martin Mill Pike	0.435	0.682	0.425	0.53
6	Taliwa Court	0.294	0.682	0.281	0.44
7	Moody Avenue	1.091	0.682	1.090	0.23
8	Young High Pike	0.740	0.682	0.743	0.43
9	Woodlawn Pike South	0.812	0.682	0.812	0.34
10	Overbrook Drive / Fronda Lane	0.370	0.682	0.367	0.29
11	Stone Road	0.857	0.830	0.720	0.34
12	Colonial Drive	0.397	0.830	0.330	0.14
13	Private Drive / Chapman Ford Crossing	0.000	0.830	0.000	0.00
14	Chapman Plaza	0.000	0.682	0.000	0.00
15	Green Road	0.713	0.682	0.716	0.24
16	Majestic Grove Boulevard / Gov. John Sevier Hwy	0.986	0.682	1.002	0.23
17	Mountain Grove Drive	0.468	0.682	0.465	0.44

Figure 26 displays the crash rate at the signalized intersections against the statewide average crash rate.



Source: ETRIMS

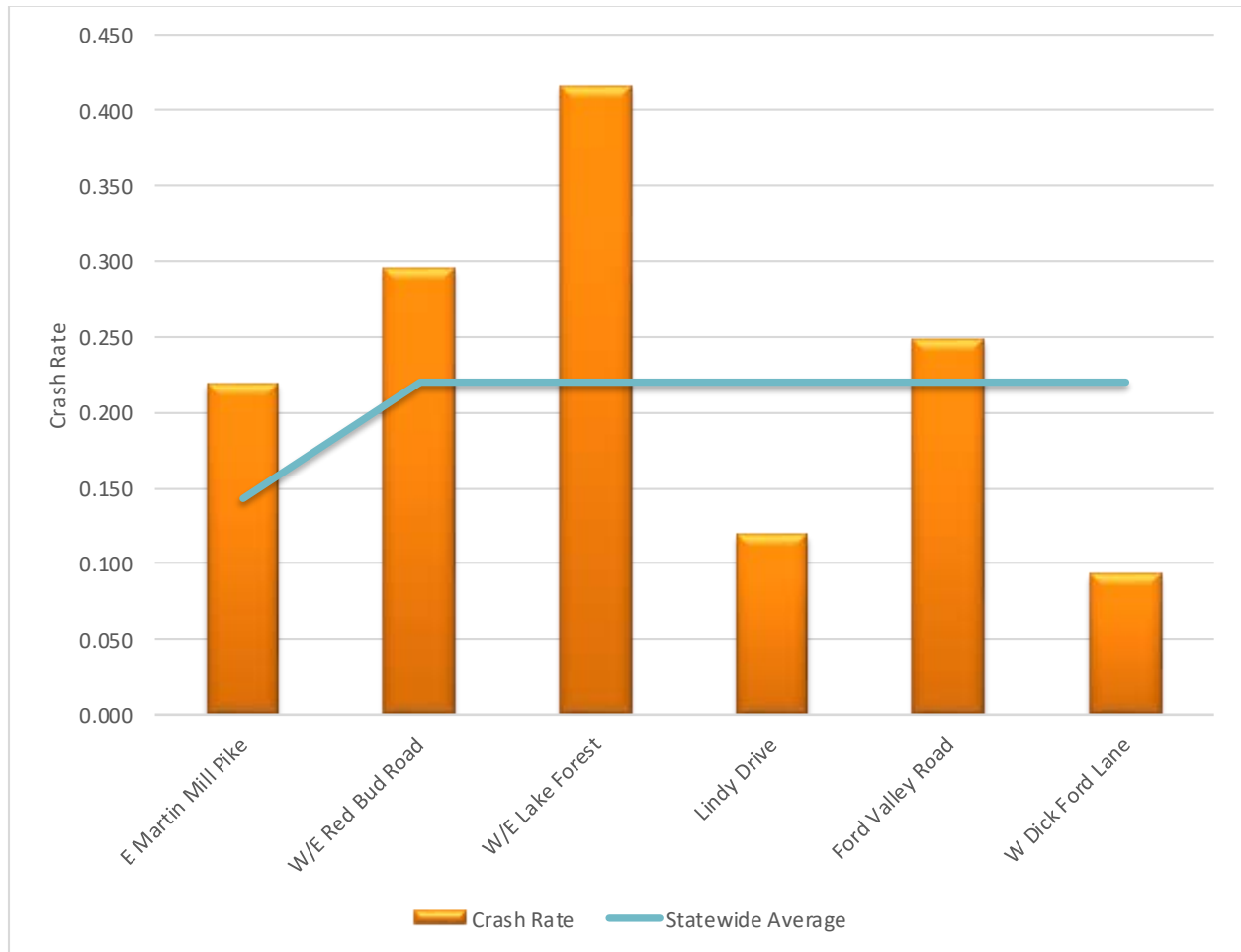
Figure 26: Signalized Intersection Crash Rates

Table 11 displays the crash analysis at the unsignalized intersections along Chapman Highway.

Table 11: Chapman Highway – Crash Analysis at Unsignalized Intersections

Intersection ID	Intersection	Crash Rate	Statewide Average	Critical Crash Rate Factor (A/C)	Severity Index
18	East Martin Mill Pike	0.219	0.143	0.725	0.00
19	West Red Bud Road / East Red Bud Road	0.295	0.220	0.699	0.00
20	West Lake Forest Drive / East Lake Forest Drive	0.416	0.220	0.983	0.14
21	Lindy Drive / Linford Drive	0.119	0.220	0.282	1.50
22	East Ford Valley Road	0.248	0.220	0.580	0.38
23	West Dick Ford Lane	0.092	0.220	0.216	0.33

Figure 27 displays the crash rate at the unsignalized intersections against the statewide average crash rate.



Source: ETRIMS

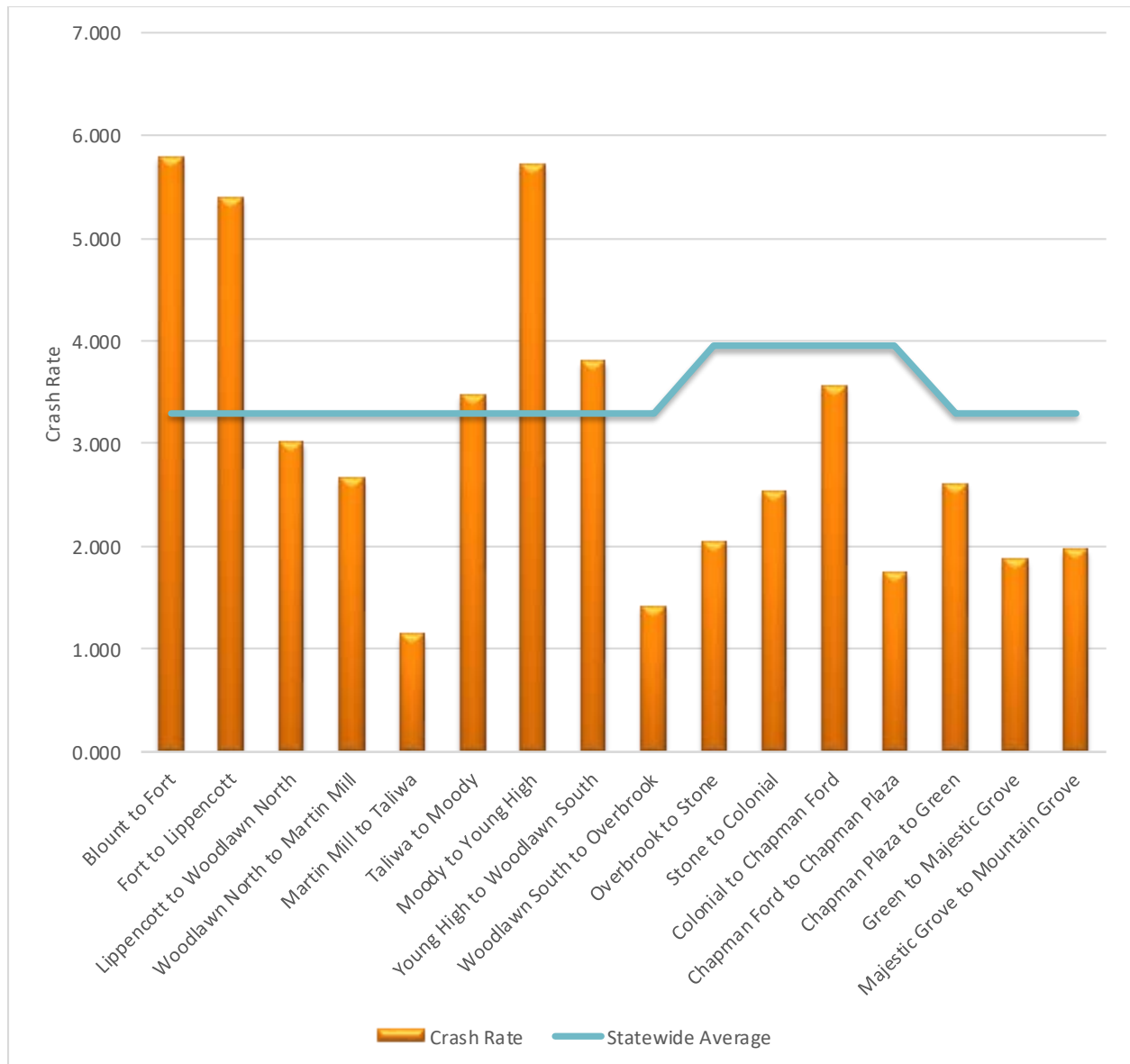
Figure 27: Unsignalized Intersection Crash Rates

Table 12 displays the crash analysis between signalized intersections along Chapman Highway.

Table 12: Chapman Highway – Crash Analysis between Signalized Intersections

From	To	Crash Rate	Statewide Average	Critical Crash Rate Factor (A/C)	Severity Index
Blount Avenue	Fort Avenue	5.791	3.294	1.197	0.06
Fort Avenue	Lippencott Street	5.391	3.294	1.131	0.31
Lippencott Street	Fort Dickerson Road / Woodlawn Pike North	3.012	3.294	0.640	0.41
Fort Dickerson Road / Woodlawn Pike North	Martin Mill Pike	2.658	3.294	0.533	0.33
Martin Mill Pike	Taliwa Court	1.143	3.294	0.218	0.50
Taliwa Court	Moody Avenue	3.468	3.294	0.638	0.13
Moody Avenue	Young High Pike	5.711	3.294	1.210	0.26
Young High Pike	Woodlawn Pike South	3.795	3.294	0.726	0.15
Woodlawn Pike South	Overbrook Drive / Fronda Lane	1.415	3.294	0.267	0.43
Overbrook Drive / Fronda Lane	Stone Road	2.050	3.954	0.409	0.34
Stone Road	Colonial Drive	2.537	3.954	0.529	0.39
Colonial Drive	Chapman Ford Crossing	3.568	3.954	0.731	0.42
Chapman Ford Crossing	Chapman Plaza	1.752	3.954	0.376	0.44
Chapman Plaza	Green Road	2.615	3.294	0.457	0.67
Green Road	Majestic Grove Boulevard / Gov. John Sevier Hwy	1.869	3.294	0.435	0.43
Majestic Grove Boulevard / Gov. John Sevier Hwy	Mountain Grove Drive	1.967	3.294	0.387	0.17

Figure 28 displays the crash at the segments between signalized intersections against the statewide average crash rate.



Source: ETRIMS

Figure 28: Crash Rates between Signalized Intersections

CAPACITY ANALYSIS

A capacity analysis was performed for the 17 signalized intersections and six (6) unsignalized intersections for the Existing 2018 AM and PM peak hours. The results of this capacity analysis are shown in **Table 13** and **Table 14** for signalized intersections and unsignalized intersections, respectively.

Table 13: Chapman Highway – Signalized Intersection Level of Service

Intersection ID	Signalized Intersection	AM		PM	
		Level of Service	Control Delay	Level of Service	Control Delay
1	Chapman Highway at Blount Avenue	D	38.1	C	29.5
2	Chapman Highway at Fort Avenue	A	1.7	A	1.6
3	Chapman Highway at Lippencott Street	A	7.0	A	1.9
4	Chapman Highway at Fort Dickerson Road / Woodlawn Pike North	C	22.4	B	10.9
5	Chapman Highway at Martin Mill Pike	B	11.7	A	6.3
6	Chapman Highway at Taliwa Court	A	2.8	A	2.5
7	Chapman Highway at Moody Avenue	B	17.5	C	35.0
8	Chapman Highway at Young High Pike	B	12.2	C	29.3
9	Chapman Highway at Woodlawn Pike South	A	9.3	B	16.0
10	Chapman Highway at Overbrook Drive / Fronda Lane	A	8.5	A	5.6
11	Chapman Highway at Stone Road	B	16.1	A	7.0
12	Chapman Highway at Colonial Drive	B	11.5	B	10.7
13	Chapman Highway at Private Drive / Chapman Ford Crossing	A	7.3	B	17.4
14	Chapman Highway at Chapman Plaza	A	2.3	B	15.8
15	Chapman Highway at Green Road	B	12.9	C	25.0
16	Chapman Highway at Majestic Grove Boulevard / Gov. John Sevier Hwy	B	19.5	C	25.1
17	Chapman Highway at Mountain Grove Drive	A	9.8	C	24.2

Table 14: Chapman Highway – Unsignalized Intersection Level of Service

Intersection ID	Unsignalized Intersection	Approach	AM		PM	
			Level of Service	Control Delay	Level of Service	Control Delay
18	Chapman Highway at East Martin Mill Pike (north)	Eastbound STOP	C	19.0	E	44.7
		Westbound STOP	C	18.4	B	14.2
19	Chapman Highway at Red Bud Road	Eastbound STOP	F	282.5	F	1747.9
		Westbound STOP	C	19.5	D	26.9
20	Chapman Highway at Lake Forest Drive	Eastbound STOP	E	44.7	F	133.2
		Westbound STOP	D	26.5	E	37.8
21	Chapman Highway at Linford Road / Lindy Drive	Eastbound STOP	F	51.2	F	275.6
		Westbound STOP	F	56.4	F	91.9
22	Chapman Highway at Ford Valley Road	Eastbound STOP	C	15.8	D	26.9
		Westbound STOP	D	25.8	F	93.5
23	Chapman Highway at West Dick Ford Lane	Eastbound STOP	F	65.4	F	337.6

CHAPMAN HIGHWAY RIGHT OF WAYS

Chapman Highway begins south / east of the Henley Street Bridge as a five-lane road with a center left-turn lane. The road transitions between four and seven lanes along the corridor with widths averaging between 50 and 85 feet between the existing curbs. Throughout the corridor, the right of way (ROW) extends well beyond the roadway ranging between 67 and 289 feet. The following table measures ROW for each section along the corridor. It is important to note that the ROW, taken from the KGIS - Knoxville Knox County KUB GIS website, was measured from the average parcel lines north and south of the intersections and not from areas where the ROW increases at corners. Major constraints are listed in the notes section of the table.

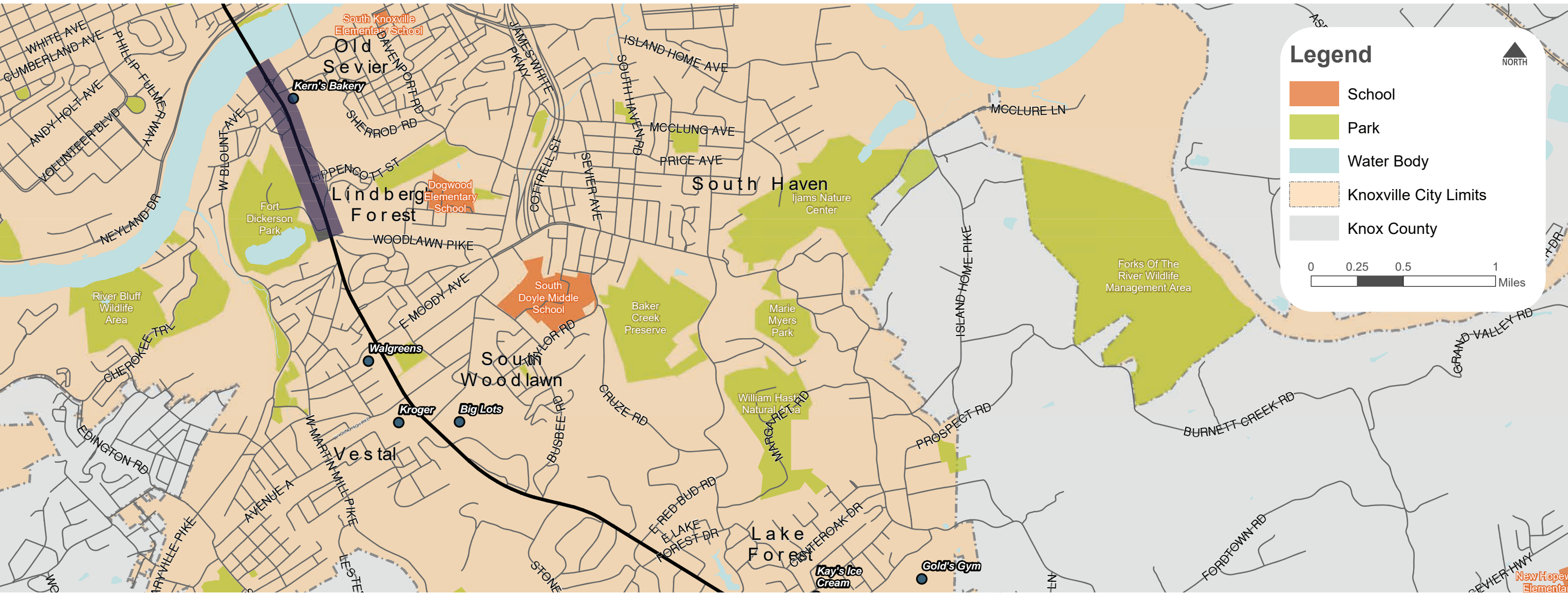
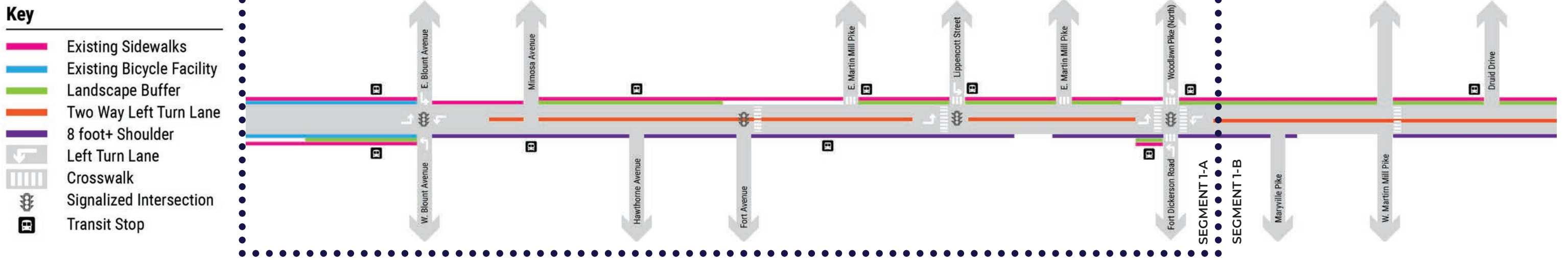
		Intersecting Roadway	North ROW (Ft.)	South ROW (Ft.)	Notes
Commercial-Neighborhood	1A	Blount Avenue	120	76	
		Mimosa Avenue	72	67	
		Hawthorne Avenue	70	70	
		Fort Avenue	93	93	
		E. Martin Mill Pike	93	89	
		Lippencott Street	96	100	Rock outcropping between Lippencott St. and West Martin Mill Pike
		W. Martin Mill Pike	103	95	Heavy vegetation on east side of highway after W. Martin
	1B	Woodland Pike (North)	102	106	Cul-de-sac directly adjacent to slip-lane on southeast side
		Maryville Pike	105	101	Tight right turning radius from Maryville Pike onto Chapman
		W. Martin Mill Pike	120	118	
		Druid Drive	110	110	
		Taliwa Court	93	88	
	1C	Childress Street	88	94	
		Moody Avenue	100	108	
		Young High Pike	108	111	
		Woodlawn Pike (South)	122	123	
		Frona Lane (North)	125	123	
Residential		Gwinfield Drive (North)	127	138	Sharp right turn from highway. Heavy vegetation on east side
		Gwinfield Drive (South)	166	200	
		Frona Lane (South)	198	157	
		Stonewall Drive	152	120	Several driveways entering Stonewall Drive at intersection
		Stone Road	120	119	
		Judith Drive	176	136	Topographic and physical constraints at intersection
		Larry Drive	138	186	
		Locust Hill Lane	171	175	
		East Red Bug Road	140	120	Significal topography change from Stone Road to East Red Bud Road
		Lake Forest Drive (North)	133	119	ROW restricted by topography to north
		Brandau Drive	118	118	Multiple residential driveways in this section
		Lake Shore Drive	123	119	
		Mayflower Drive	118	130	
		Lakeview Drive	131	128	
Commercial		East Lake Forest Drive (South)	129	130	
		Colonial Drive	130	131	
		Eastwood Drive	125	122	
		Lindy Drive	120	122	
		Ford Valley Road/Brown Mountain Loop	141	152	
		Meridian Road	146	158	
Rural		Ellis Road	124	128	Steep slope on North side of Chapman restricts south ROW
		Longvale Drive	130	124	
		Deva Drive	133	202	
		Anderson Drive	219	207	
		East Dick Ford Lane	218	218	
		West Dick Ford Lane	197	289	
		Nixon Road	135	149	
Commercial-Big Box		Green Road	138	136	
		Norton Road	121	122	Topographical restraints on both sides of Chapman
		John Sevier Highway	123	129	
		Majestic Grove Boulevard	130	138	
		Michaels Lane	145	126	
		Mountain Grove Drive	116	115	



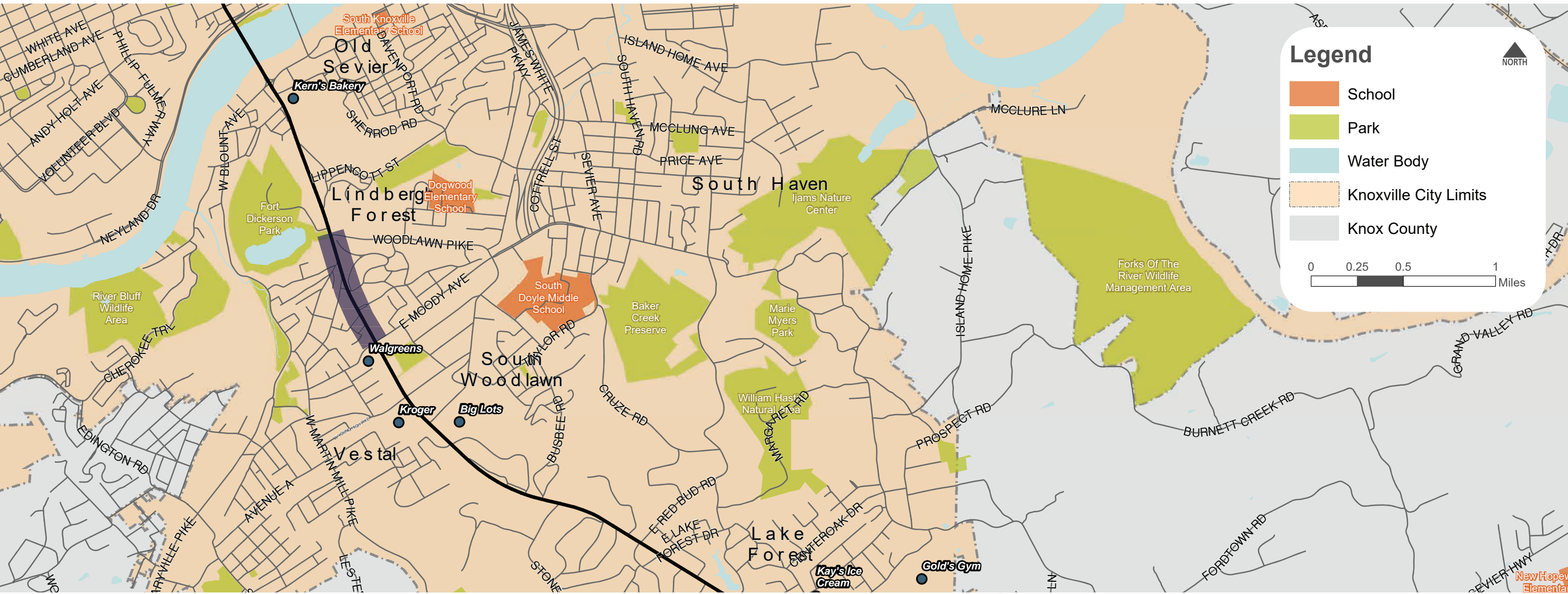
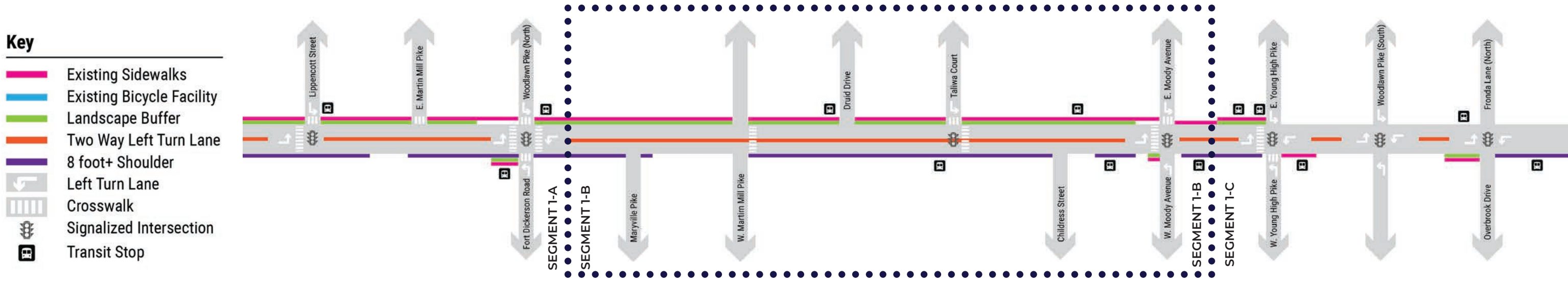
APPENDIX B

EXISTING CONDITIONS MAP

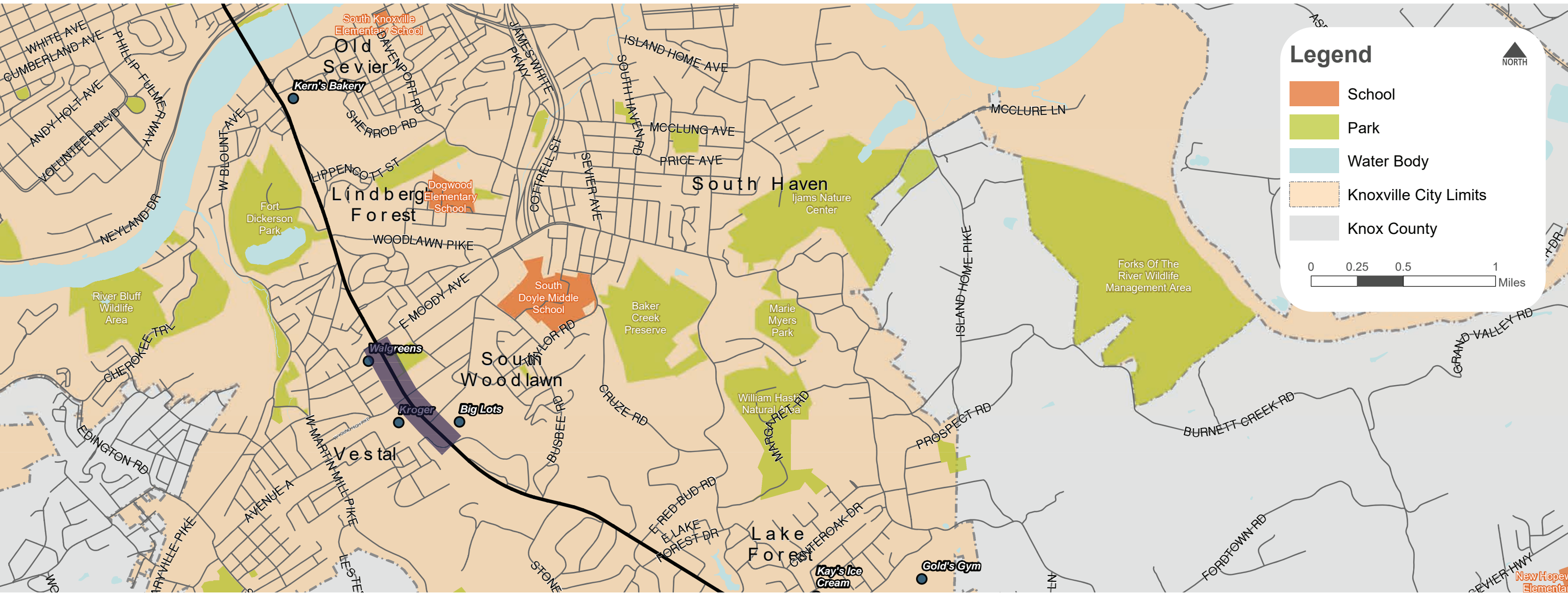
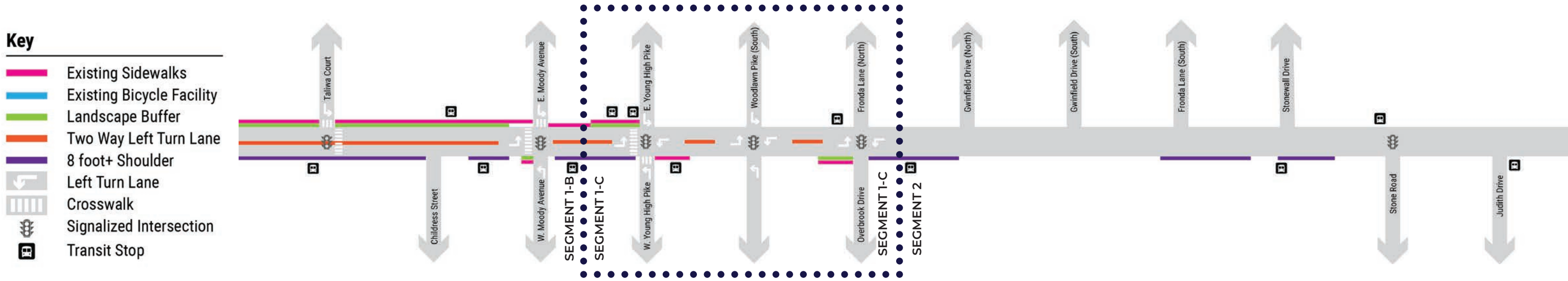
EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 1-A



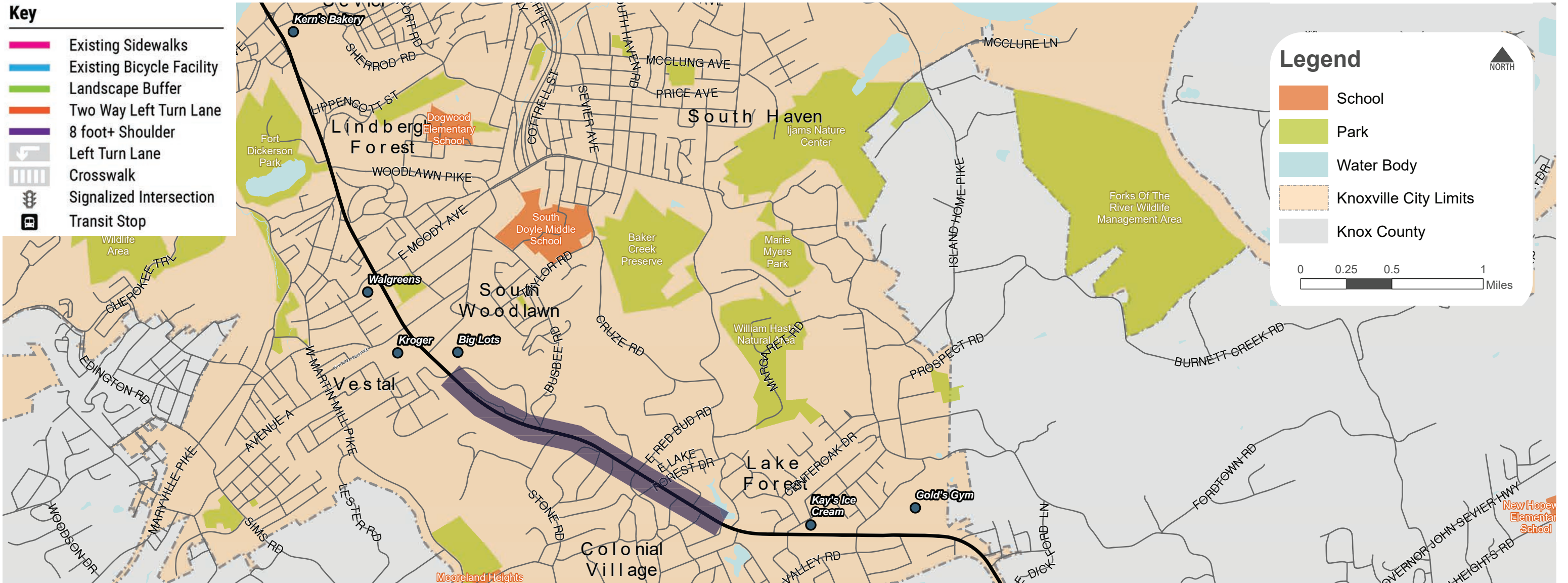
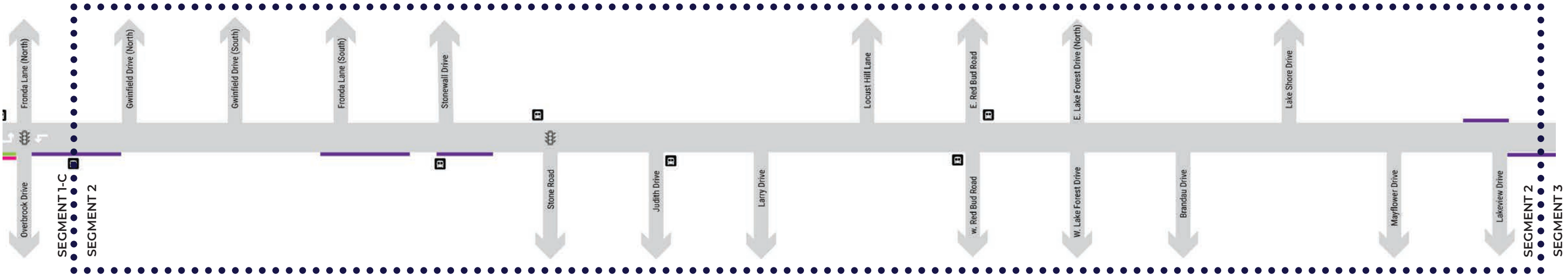
EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 1-B



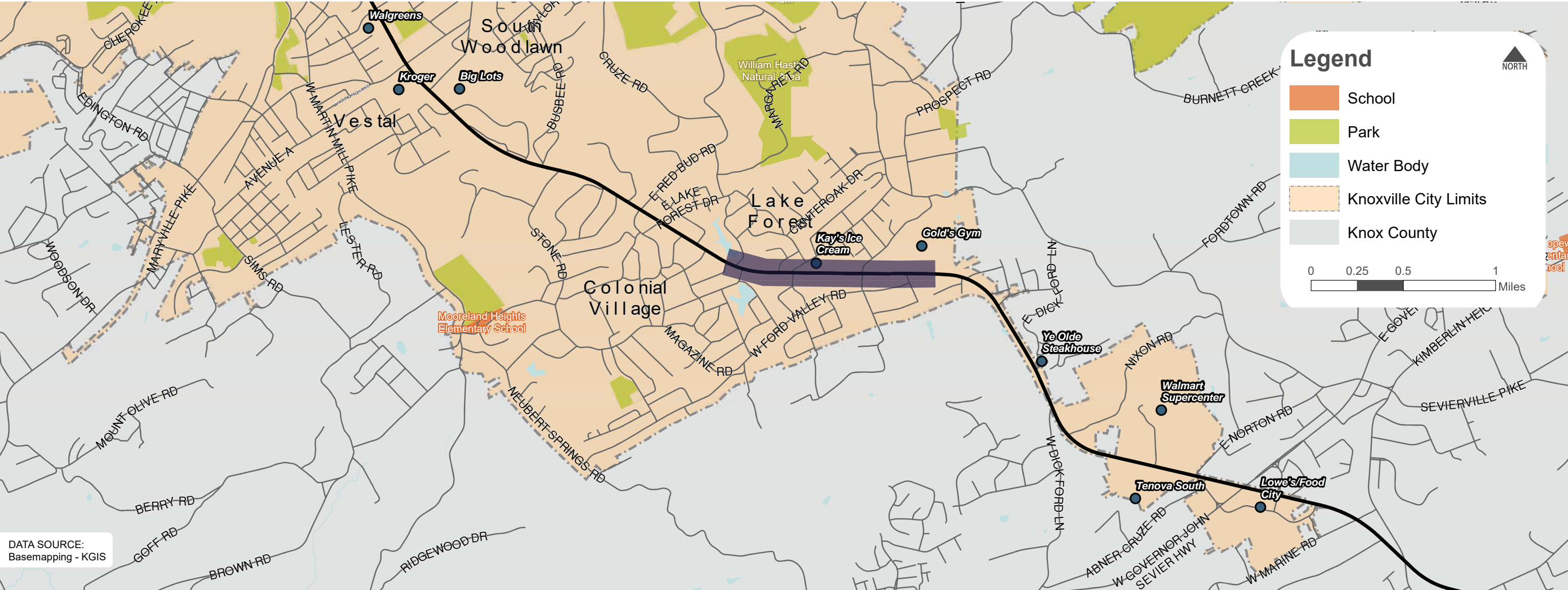
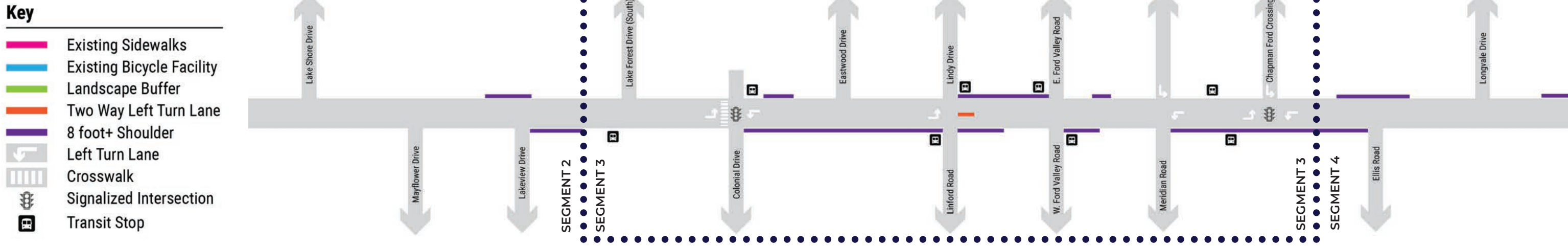
EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 1-C



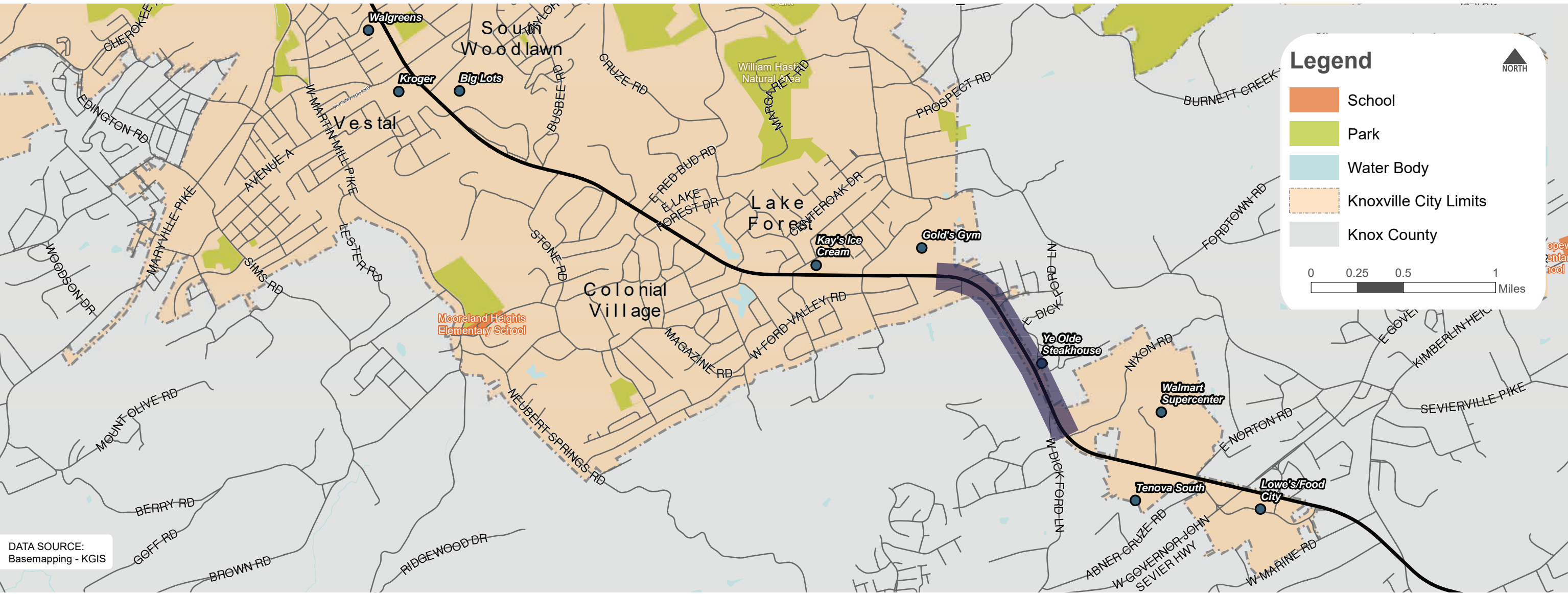
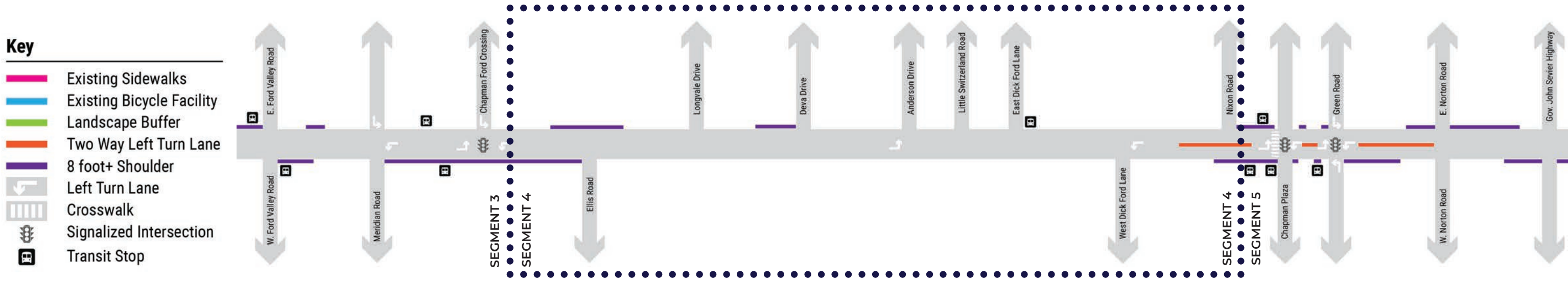
EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 2



EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 3



EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 4



EXISTING ROADWAY FACILITIES AND CONDITIONS: SEGMENT 5

Key

Existing Sidewalks

Existing Bicycle Facility

Landscape Buffer

Two Way Left Turn Lane

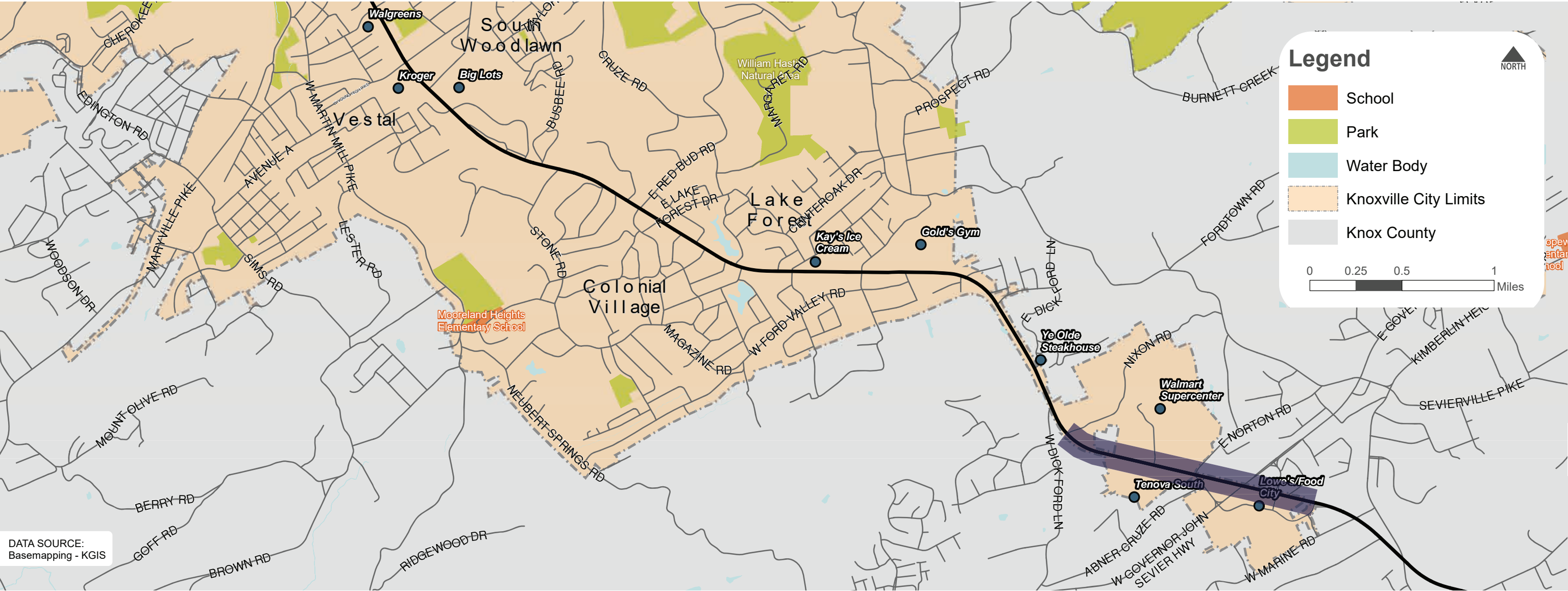
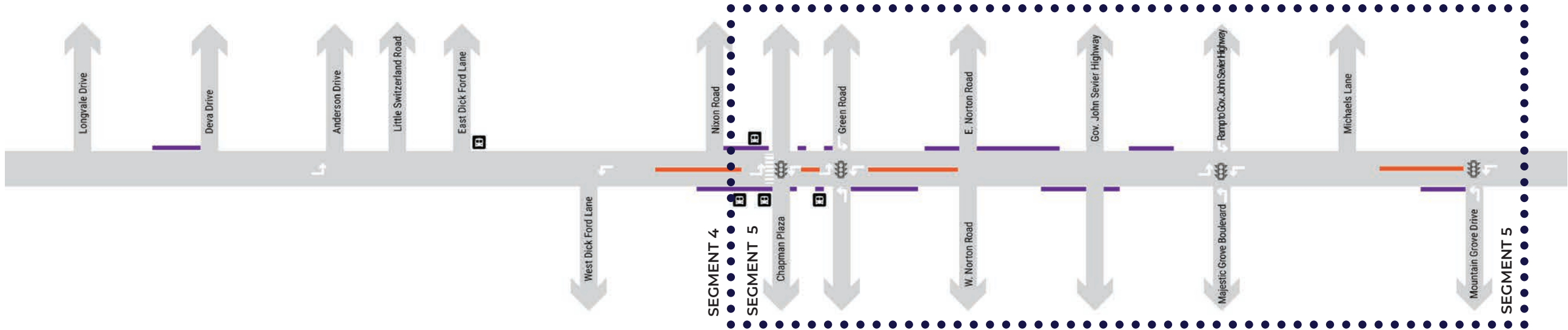
8 foot+ Shoulder

Left Turn Lane

Crosswalk

Signalized Intersection

Transit Stop





APPENDIX C

ORIGIN-DESTINATION DATA

STREETLIGHT DATA OVERVIEW

Methodology

Using *StreetLight Insight* Location-Based Services (LBS), analysis was performed to understand the trips between unique zones to a standard geography – 2010 Census Traffic Analysis Zones (TAZs). This analysis allows for a deeper look into where trips are going to and coming from in relation to a selected zone set. The criteria below were used in the analysis and post-processing of data.

Data Period

- May – October 2018

Day Part

- 0: All Day (12am-12am)
- 1: Early AM (12am-6am)
- 2: Peak AM (6am-9am)
- 3: Mid-Day (9am-3pm)
- 4: Peak PM (3pm-6pm)
- 5: Late PM (6pm-12am)

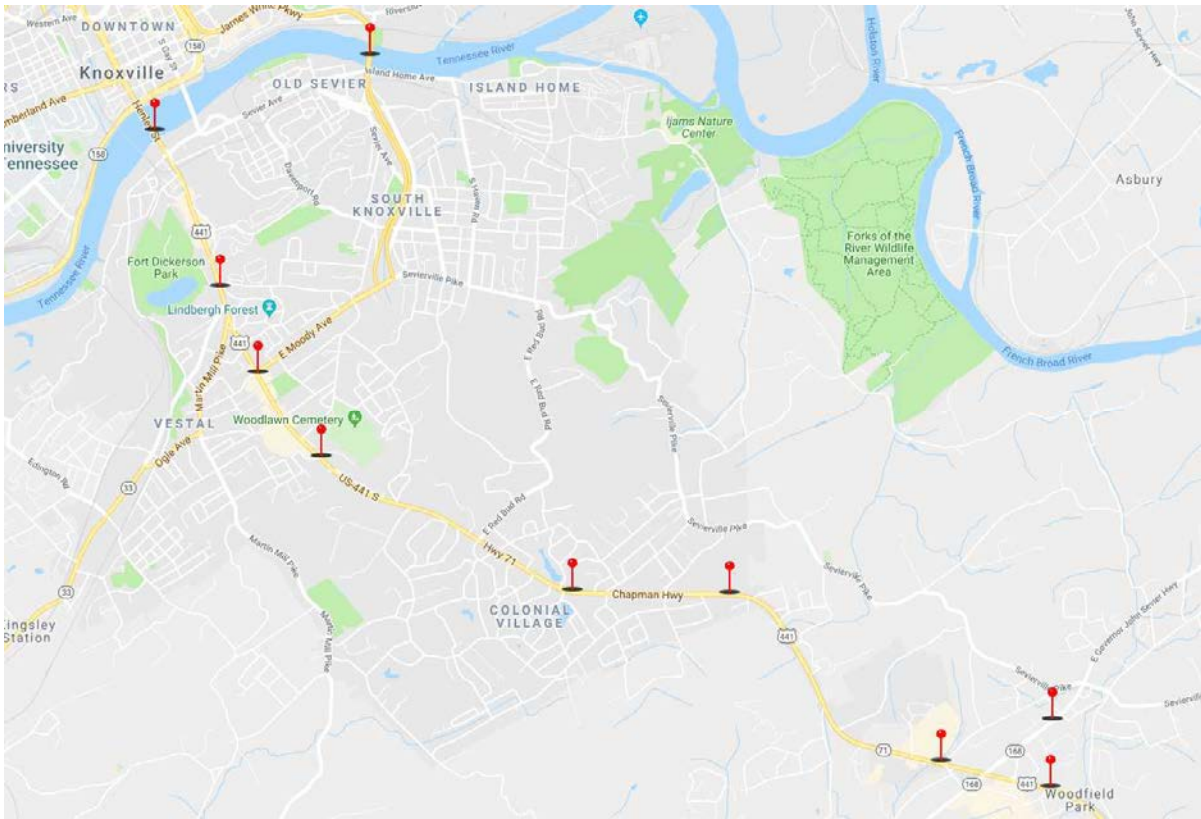
Day Type

- 0: Average Day (M-Su)
- 1: Average Weekday (M-Th)
- 2: Average Weekend Day (Sa-Su)

Zone Selection

For Chapman Highway, 10 unique zones were selected for analysis in coordination with the MPC. All zones along Chapman Highway, except the zone at Norton Road, were placed south of the noted intersection. Due to the skewed alignment and exit ramp character of W Norton Road, this zone was placed north of the intersection to better capture trips in Segment 5. Three additional zones were placed off of Chapman Highway – one on the Henley Street Bridge, the James White Parkway Bridge (South Knoxville Bridge), and one on E Governor John Sevier Highway. The full list of zones and a map is shown below.

- | | |
|---------------------|-------------------------------------|
| • South Knox Bridge | • Colonial Drive |
| • Henley Street | • Chapman Ford Crossing |
| • Woodlawn Pike | • Norton Road |
| • Moody Avenue | • East Governor John Sevier Highway |
| • Fronda Lane | • Mountain Grove Drive |



Post-Processing

Using standard census naming conventions, TAZs were tagged by county for those within the model area of the Knoxville Regional Travel Demand Model. TAZs outside of the model area are noted as such. The sections below summarize the percentage of trips by origin and destination county for each zone shown above. Values are noted for both 'IN' or inbound to Knoxville and 'OUT' or outbound from Knoxville.

Daily Trip Percentages

DAILY TRIPS BY ORIGIN COUNTY

	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
ORIGIN COUNTY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	0%	1%	0%	2%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	0%	1%
BLOUNT	2%	1%	4%	1%	5%	1%	5%	1%	6%	1%	7%	1%	7%	0%	11%	0%	1%	24%	12%	6%
GRAINGER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
JEFFERSON	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%
KNOX	91%	94%	77%	93%	72%	94%	69%	95%	61%	95%	56%	96%	54%	96%	43%	97%	87%	62%	19%	88%
LOUDON	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
NOT IN MODEL AREA	0%	1%	0%	2%	0%	1%	0%	1%	0%	1%	0%	2%	0%	1%	0%	1%	2%	1%	0%	2%
ROANE	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
SEVIER	7%	1%	18%	0%	22%	1%	27%	1%	34%	1%	37%	0%	38%	0%	45%	0%	4%	12%	69%	2%
UNION	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

DAILY TRIPS BY DESTINATION COUNTY

	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
DESTINATION COUNTY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	1%	0%	2%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	0%	1%	0%
BLOUNT	1%	2%	1%	3%	0%	4%	1%	4%	1%	5%	1%	6%	1%	7%	1%	10%	24%	0%	6%	12%
GRAINGER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
JEFFERSON	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%
KNOX	94%	93%	93%	81%	94%	77%	94%	73%	95%	66%	95%	61%	95%	56%	94%	46%	62%	87%	90%	20%
LOUDON	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NOT IN MODEL AREA	2%	0%	2%	0%	2%	0%	2%	0%	2%	0%	2%	0%	2%	0%	1%	0%	1%	3%	2%	0%
ROANE	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
SEVIER	1%	5%	0%	16%	0%	18%	0%	23%	0%	29%	1%	33%	1%	37%	2%	43%	12%	4%	0%	67%
UNION	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

AM Peak (6am-9am) Trip Percentages

PEAK AM (6AM-9AM) TRIPS BY ORIGIN COUNTY																				
ORIGIN COUNTY	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	0%	1%	0%	3%	0%	3%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	0%	1%
BLOUNT	2%	0%	6%	0%	7%	0%	8%	1%	9%	1%	10%	0%	11%	0%	15%	0%	0%	36%	15%	8%
GRAINGER	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
JEFFERSON	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	6%	0%	0%	0%
KNOX	82%	94%	68%	91%	61%	94%	51%	96%	46%	96%	36%	97%	35%	97%	30%	97%	82%	46%	16%	86%
LOUDON	0%	0%	0%	1%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
NOT IN MODEL AREA	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	1%	0%	1%
ROANE	0%	0%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
SEVIER	16%	0%	26%	1%	31%	1%	41%	1%	45%	1%	53%	0%	54%	0%	53%	0%	5%	17%	69%	3%
UNION	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

PEAK AM (6AM-9AM) TRIPS BY DESTINATION COUNTY

	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
DESTINATION COUNTY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	1%	0%	2%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%
BLOUNT	0%	1%	0%	3%	0%	4%	1%	3%	1%	4%	1%	4%	1%	4%	1%	7%	29%	0%	7%	9%
GRAINGER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
JEFFERSON	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%
KNOX	95%	97%	96%	85%	97%	80%	96%	78%	97%	75%	97%	73%	97%	70%	97%	52%	56%	91%	90%	19%
LOUDON	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NOT IN MODEL AREA	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	0%	2%	2%	1%	0%
ROANE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
SEVIER	1%	2%	0%	12%	0%	15%	0%	19%	0%	21%	0%	23%	0%	26%	1%	41%	12%	2%	0%	71%
UNION	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Peak PM (3PM-6PM) Trip Percentages

PEAK PM (3PM-6PM) TRIPS BY ORIGIN COUNTY																				
ORIGIN COUNTY	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	0%	1%	0%	2%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%
BLOUNT	1%	1%	4%	1%	4%	1%	4%	1%	4%	1%	5%	1%	6%	0%	10%	0%	1%	26%	12%	5%
GRAINGER	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
JEFFERSON	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%
KNOX	96%	96%	84%	95%	79%	94%	78%	95%	72%	95%	68%	96%	66%	97%	50%	97%	91%	62%	20%	89%
LOUDON	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
NOT IN MODEL AREA	0%	1%	0%	2%	0%	2%	0%	1%	0%	1%	0%	2%	0%	2%	0%	1%	1%	1%	0%	2%
ROANE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
SEVIER	3%	1%	12%	0%	17%	1%	18%	0%	23%	1%	27%	0%	28%	0%	40%	0%	2%	10%	68%	2%
UNION	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

PEAK PM (3PM-6PM) TRIPS BY DESTINATION COUNTY

	SOUTH KNOX BRIDGE		HENLEY STREET BRIDGE		WOODLAWN PIKE		MOODY AVENUE		FRONDA LANE		COLONIAL DRIVE		CHAPMAN FORD CROSSING		NORTON ROAD		EAST GOV JOHN SEVIER HWY		MOUNTAIN GROVE DRIVE	
DESTINATION COUNTY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
ANDERSON	1%	0%	3%	0%	2%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	0%	1%	0%
BLOUNT	1%	2%	1%	4%	0%	5%	1%	4%	1%	5%	1%	5%	1%	7%	1%	10%	25%	0%	6%	12%
GRAINGER	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
JEFFERSON	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	7%	0%	0%
KNOX	95%	89%	92%	77%	95%	74%	95%	70%	97%	62%	96%	56%	96%	51%	95%	41%	62%	84%	91%	18%
LOUDON	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NOT IN MODEL AREA	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	1%	0%	0%	2%	1%	0%
ROANE	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
SEVIER	0%	9%	0%	18%	0%	21%	1%	26%	0%	33%	1%	38%	1%	43%	3%	48%	11%	5%	0%	69%
UNION	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



APPENDIX D

FUTURE TRAFFIC ANALYSIS

Chapman Highway - Growth Rates and Growth Factors

	Year	Annual Growth Rate	Growth Factor
Existing	2018	---	
Horizon 1	2025	2%	1.15
Horizon 2	2040	1%	1.33

Level of Service and Average Vehicle Delay - HCM 6 Results - AM Peak Hour

			Existing 2018		Horizon 2025		Horizon 2040	
			Level of Service	Control Delay	Level of Service	Control Delay	Level of Service	Control Delay
1	Chapman Hwy at Blount Ave	Intersection	D	38.1	D	45.0	E	62.1
2	Chapman Hwy at Fort Ave	Intersection	A	1.7	A	2.1	A	3.5
3	Chapman Hwy at Lippencott St	Intersection	A	7.0	A	6.9	A	7.7
4	Chapman Hwy at Fort Dickerson Rd / Woodlawn Pk (north)	Intersection	C	22.4	C	30.3	E	61.8
5	Chapman Hwy at Martin Mill Pk	Intersection	B	11.7	B	14.0	B	19.6
6	Chapman Hwy at Taliwa Ct	Intersection	A	2.8	A	2.8	A	2.7
7	Chapman Hwy at Moody Ave	Intersection	B	17.5	B	19.3	C	22.4
8	Chapman Hwy at Young High Pk	Intersection	B	12.2	B	12.5	C	22.7
9	Chapman Hwy at Woodlawn Pk (south)	Intersection	A	9.3	B	11.0	C	31.9
10	Chapman Hwy at Overbrook Dr / Fronda Ln	Intersection	A	8.5	B	10.8	C	23.4
11	Chapman Hwy at Stone Rd	Intersection	B	16.1	C	31.9	E	73.7
12	Chapman Hwy at Colonial Dr	Intersection	B	11.5	B	14.2	C	21.4
13	Chapman Hwy at Chapman Ford Crossing	Intersection	A	7.3	A	8.6	B	11.1
14	Chapman Hwy at Chapman Plaza	Intersection	A	2.3	A	2.5	A	2.4
15	Chapman Hwy at Green Rd	Intersection	B	12.9	B	15.5	C	26.7
16	Chapman Hwy at Majestic Grove Blvd	Intersection	B	19.5	C	22.0	C	28.4
17	Chapman Hwy at Mountain Grove Dr	Intersection	A	9.8	B	12.7	C	23.6
18	Chapman Hwy at East Martin Mill Pk (north)	Eastbound STOP	C	19.0	C	24.5	E	37.8
		Westbound STOP	C	18.4	C	22.3	D	29.7
19	Chapman Hwy at Red Bud Rd	Eastbound STOP	F	282.5	F	608.3	F	1608.1
		Westbound STOP	C	19.5	C	24.7	E	35.2
20	Chapman Hwy at Lake Forest Dr	Eastbound STOP	E	44.7	F	69.5	F	117.2
		Westbound STOP	D	26.5	E	39.7	F	67.2
21	Chapman Hwy at Linford Rd / Lindy Dr	Eastbound STOP	F	51.2	F	100.6	F	324.6
		Westbound STOP	F	56.4	F	202.2	F	863.4
22	Chapman Hwy at Ford Valley Rd	Eastbound STOP	C	15.8	C	19.3	E	37.4
		Westbound STOP	D	25.8	E	38.1	F	126.0
23	Chapman Hwy at West Dick Ford Ln	Eastbound STOP	F	65.4	F	180.2	F	584.8

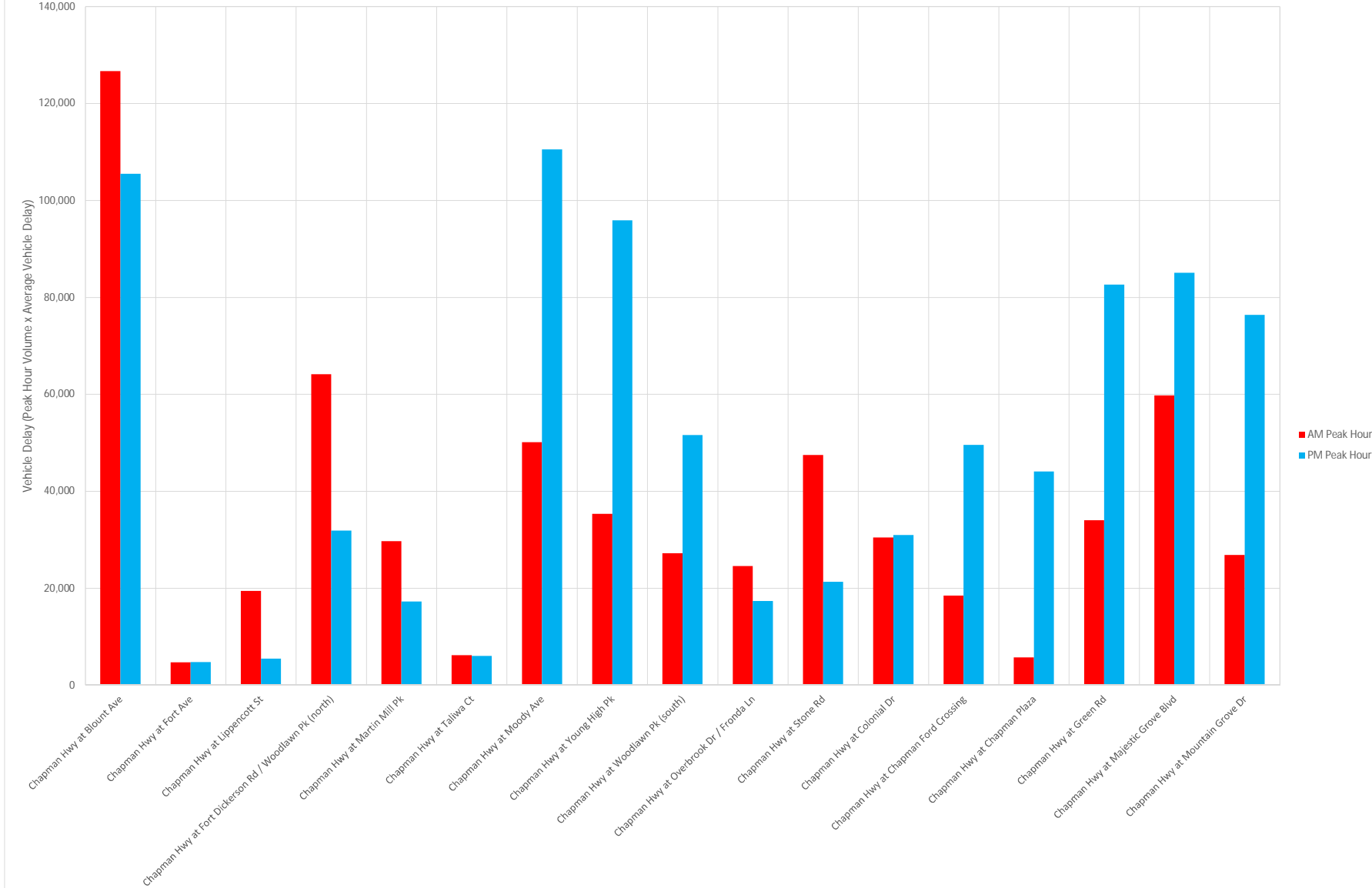
Existing 2018		Horizon 2025		Horizon 2040	
Volume (veh)	Delay (veh-sec)	Volume (veh)	Delay (veh-sec)	Volume (veh)	Delay (veh-sec)
3,324	126,644.0	3,823	172,035.0	4,421	274,544.0
2,777	4,721.0	3,194	6,707.0	3,693	12,926.0
2,778	19,446.0	3,195	22,046.0	3,695	28,452.0
2,862	64,109.0	3,291	99,717.0	3,806	235,211.0
2,536	29,671.0	2,916	40,824.0	3,373	66,111.0
2,208	6,182.0	2,539	7,109.0	2,937	7,930.0
2,865	50,138.0	3,295	63,594.0	3,810	85,344.0
2,894	35,307.0	3,328	41,600.0	3,849	87,372.0
2,924	27,193.0	3,363	36,993.0	3,889	124,059.0
2,890	24,565.0	3,324	35,899.0	3,844	89,950.0
2,949	47,479.0	3,391	108,173.0	3,922	289,051.0
2,648	30,452.0	3,045	43,239.0	3,522	75,371.0
2,530	18,469.0	2,910	25,026.0	3,365	37,352.0
2,477	5,697.0	2,849	7,123.0	3,294	7,906.0
2,636	34,004.0	3,031	46,981.0	3,506	93,610.0
3,066	59,787.0	3,526	77,572.0	4,078	115,815.0
2,742	26,872.0	3,153	40,043.0	3,647	86,069.0
77	1,463.0	89	2,181.0	102	3,856.0
44	810.0	51	1,137.0	59	1,752.0
1	283.0	1	608.0	1	1,608.0
21	410.0	24	593.0	28	986.0
5	224.0	6	417.0	7	820.0
10	265.0	12	476.0	13	874.0
12	614.0	14	1,408.0	16	5,194.0
98	5,527.0	113	22,849.0	130	112,242.0
35	553.0	40	772.0	47	1,758.0
19	490.0	22	838.0	25	3,150.0
62	4,055.0	71	12,794.0	82	47,954.0

Level of Service and Average Vehicle Delay - HCM 6 Results - PM Peak Hour

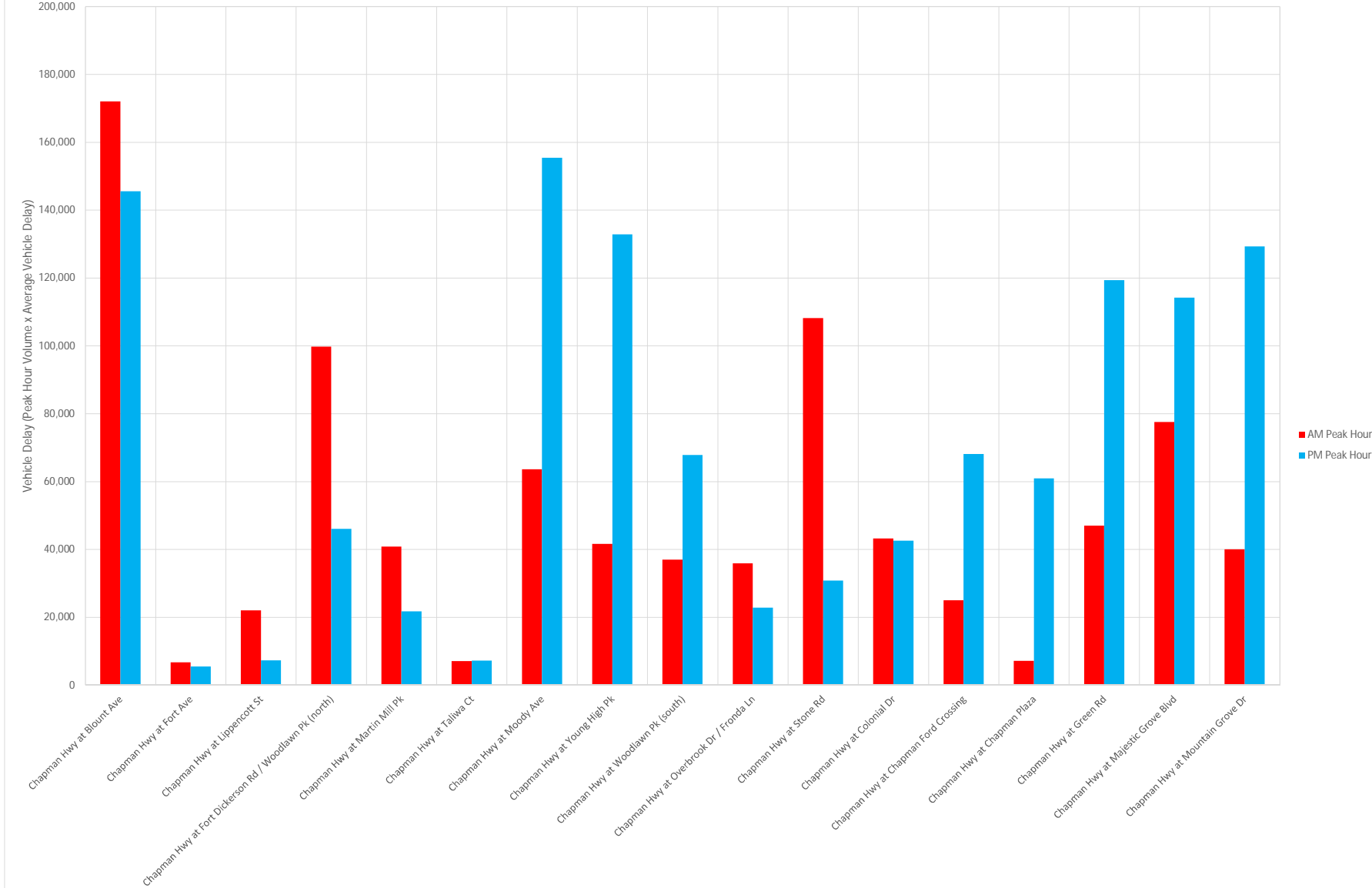
			Existing 2018		Horizon 2025		Horizon 2040	
			Level of Service	Control Delay	Level of Service	Control Delay	Level of Service	Control Delay
1	Chapman Hwy at Blount Ave	Intersection	C	29.5	D	35.4	D	53.9
2	Chapman Hwy at Fort Ave	Intersection	A	1.6	A	1.6	A	1.4
3	Chapman Hwy at Lippencott St	Intersection	A	1.9	A	2.2	A	3.0
4	Chapman Hwy at Fort Dickerson Rd / Woodlawn Pk (north)	Intersection	B	10.9	B	13.7	C	21.8
5	Chapman Hwy at Martin Mill Pk	Intersection	A	6.3	A	6.9	A	7.6
6	Chapman Hwy at Taliwa Ct	Intersection	A	2.5	A	2.6	A	2.8
7	Chapman Hwy at Moody Ave	Intersection	C	35.0	D	42.8	D	53.3
8	Chapman Hwy at Young High Pk	Intersection	C	29.3	D	35.3	E	61.3
9	Chapman Hwy at Woodlawn Pk (south)	Intersection	B	16.0	B	18.3	C	23.3
10	Chapman Hwy at Overbrook Dr / Fronda Ln	Intersection	A	5.6	A	6.4	A	8.1
11	Chapman Hwy at Stone Rd	Intersection	A	7.0	A	8.8	B	12.5
12	Chapman Hwy at Colonial Dr	Intersection	B	10.7	B	12.8	C	20.5
13	Chapman Hwy at Chapman Ford Crossing	Intersection	B	17.4	C	20.8	C	26.6
14	Chapman Hwy at Chapman Plaza	Intersection	B	15.8	B	19.0	C	27.5
15	Chapman Hwy at Green Rd	Intersection	C	25.0	C	31.4	D	46.4
16	Chapman Hwy at Majestic Grove Blvd	Intersection	C	25.1	C	29.3	D	41.9
17	Chapman Hwy at Mountain Grove Dr	Intersection	C	24.2	D	35.6	E	69.3
18	Chapman Hwy at East Martin Mill Pk (north)	Eastbound STOP	E	44.7	F	88.4	F	259.0
		Westbound STOP	B	14.2	C	16.1	C	19.2
19	Chapman Hwy at Red Bud Rd	Eastbound STOP	F	1747.9	F	5897.5	F	6140.9
		Westbound STOP	D	26.9	D	31.4	E	49.8
20	Chapman Hwy at Lake Forest Dr	Eastbound STOP	F	133.2	F	298.5	F	936.5
		Westbound STOP	E	37.8	F	68.7	F	281.1
21	Chapman Hwy at Linford Rd / Lindy Dr	Eastbound STOP	F	275.6	F	1108.3	F	5741.3
		Westbound STOP	F	91.9	F	9999.9	F	9999.9
22	Chapman Hwy at Ford Valley Rd	Eastbound STOP	D	26.9	E	41.8	F	9999.9
		Westbound STOP	F	93.5	F	241.0	F	1945.6
23	Chapman Hwy at West Dick Ford Ln	Eastbound STOP	F	337.6	F	920.5	F	3381.3

Existing 2018		Horizon 2025		Horizon 2040	
Volume (veh)	Delay (veh-sec)	Volume (veh)	Delay (veh-sec)	Volume (veh)	Delay (veh-sec)
3,576	105,492.0	4,112	145,565.0	4,756	256,348.0
2,963	4,741.0	3,407	5,451.0	3,941	5,517.0
2,886	5,483.0	3,319	7,302.0	3,838	11,514.0
2,923	31,861.0	3,361	46,046.0	3,888	84,758.0
2,741	17,268.0	3,152	21,749.0	3,646	27,710.0
2,411	6,028.0	2,773	7,210.0	3,207	8,980.0
3,157	110,495.0	3,631	155,407.0	4,199	223,807.0
3,273	95,899.0	3,764	132,869.0	4,353	266,839.0
3,223	51,568.0	3,706	67,820.0	4,287	99,887.0
3,099	17,354.0	3,564	22,810.0	4,122	33,388.0
3,047	21,329.0	3,504	30,835.0	4,053	50,663.0
2,893	30,955.0	3,327	42,586.0	3,848	78,884.0
2,849	49,573.0	3,276	68,141.0	3,789	100,787.0
2,789	44,066.0	3,207	60,933.0	3,709	101,998.0
3,304	82,600.0	3,800	119,320.0	4,394	203,882.0
3,389	85,064.0	3,897	114,182.0	4,507	188,843.0
3,157	76,399.0	3,631	129,264.0	4,199	290,991.0
64	2,861.0	74	6,542.0	85	22,015.0
63	895.0	72	1,159.0	84	1,613.0
2	3,496.0	2	11,795.0	3	18,423.0
26	699.0	30	942.0	35	1,743.0
8	1,066.0	9	2,687.0	11	10,302.0
8	302.0	9	618.0	11	3,092.0
28	7,717.0	32	35,466.0	37	212,428.0
58	5,330.0	67	669,993.0	77	769,992.0
29	780.0	33	1,379.0	39	389,996.0
15	1,403.0	17	4,097.0	20	38,912.0
25	8,440.0	29	26,695.0	33	111,583.0

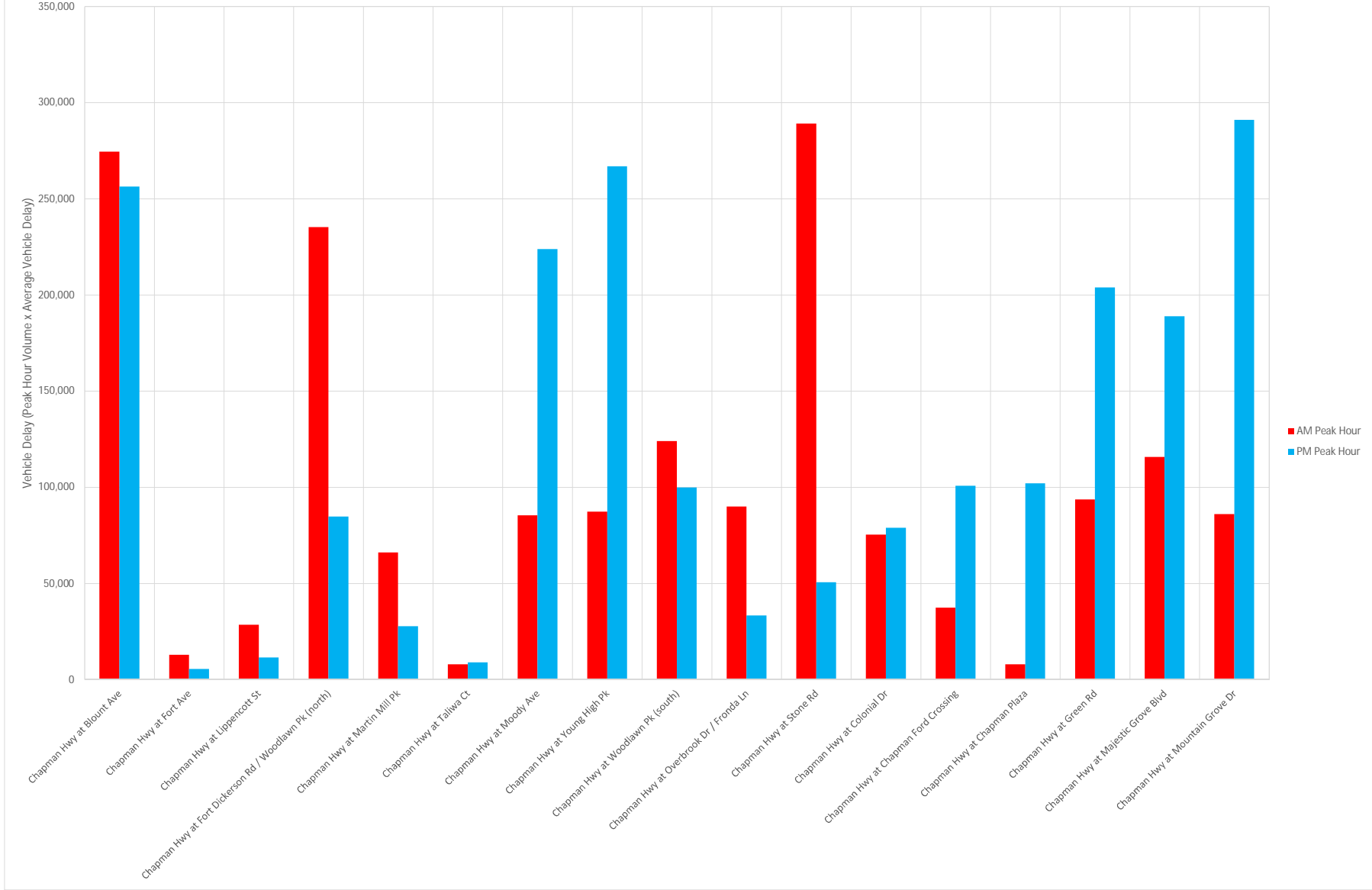
Chapman Highway Implementation Plan - Signalized Intersections - Existing 2018 Vehicle Delay



Chapman Highway Implementation Plan - Signalized Intersections - Horizon 2025 Vehicle Delay



Chapman Highway Implementation Plan - Signalized Intersections - Horizon 2040 Vehicle Delay





APPENDIX E

STEERING COMMITTEE MEETING #1

STEERING COMMITTEE MEETING

Ijams Nature Center (Visitor Center Multipurpose Room)

July 18, 2018 – 2:00 PM Eastern

AGENDA

- Welcome and Introductions
- Project Overview
 - Purpose and Need
 - Outcome: Implementation Plan
- Review of Existing Conditions
 - Current Activity
 - Corridor Segments
 - Previous Plans/Studies
 - Crash/Traffic Data
 - Current/Future TDOT Projects Update
- Interactive Activities
 - Visioning Exercise
 - Mapping Exercise – Opportunities / Constraints
- Future Opportunities for Outreach
 - Community Survey (August 2018 – September 2018)
 - Steering Committee Meeting and Community Workshop #1 (September 2018)
 - Steering Committee Meeting and Community Workshop #2 (December 2018)

STEERING COMMITTEE MEETING

Ijams Nature Center (Visitor Center Multipurpose Room)

July 18, 2018 – 2:00 PM Eastern

SUMMARY

- All attendees introduced themselves. There were 22 attendees:
 - 3 from Knoxville Regional TPO
 - 4 from City of Knoxville
 - 7 from Tennessee DOT
 - 2 from Knoxville Area Transit
 - 1 from Knox County
 - 5 from the consultant team
- The 54-slide presentation was delivered. Discussion occurred intermittently throughout the presentation.
- During the presentation, 16 polling questions were asked of the attendees.
 - 1 question was a test question to ensure the handheld devices were functioning properly.
 - 5 questions pertained to Chapman Highway as an entire corridor
 - 10 questions pertained to Chapman Highway divided into segments. There were 5 segments, with 2 questions per segment.
- Since the consultant team was excluded from the polling, a maximum of 17 attendees participated in the polling. The total number of votes varied between questions, as some attendees departed during the meeting and some attendees abstained from voting on some questions.
 - A summary of the vote count for each question is on the next page.
- The meeting concluded.

Question Number	Slide Number	Vote Count
Question 1 (Test)	14	17
Question 2	16	17
Question 3	18	15
Question 4	20	15
Question 5	22	13
Question 6	24	13
Question 7	28	13
Question 8	30	13
Question 9	33	11
Question 10	35	12
Question 11	38	13
Question 12	40	13
Question 13	43	13
Question 14	45	12
Question 15	48	13
Question 16	50	13

STEERING COMMITTEE MEETING

July 18, 2018 – 2:00 PM Eastern

	NAME	AGENCY	EMAIL
	Jeff Welch	Knoxville Regional TPO	jeff.welch@knoxtrans.org
MC	Mike Conger	Knoxville Regional TPO	mike.conger@knoxtrans.org
Dub	Amy Brooks	Knoxville Regional TPO	amy.brooks@knoxtrans.org
ph	Jim Hagerman	City of Knoxville	jhagerman@knoxvilletn.gov
DMF	Dawn Michelle Foster	City of Knoxville	dmfoster@knoxvilletn.gov
JL	Jon Livengood	City of Knoxville	jlivengood@knoxvilletn.gov
JB	Jeff Branham	City of Knoxville	jbranham@knoxvilletn.gov
	Ernie Pierce	City of Knoxville	epierce@knoxvilletn.gov
	Steve Borden	Tennessee DOT	steve.borden@tn.gov
	Amanda Snowden	Tennessee DOT	amanda.snowden@tn.gov
N	Nathan Vatter	Tennessee DOT	nathan.vatter@tn.gov
AP	Andy Padgett	Tennessee DOT	andrew.padgett@tn.gov
CB	Christie Brown	Tennessee DOT	christie.brown@tn.gov
DD	Dawn Distler	Knoxville Area Transit	ddistler@katbus.com
BB	Belinda Woodiel-Brill	Knoxville Area Transit	bbrill@katbus.com

	NAME	AGENCY	EMAIL
✓	Cindy Pionke	Knox County	cindy.pionke@knoxcounty.org <i>CP</i>
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AF	Allison Fluitt	Kimley-Horn	allison.fluitt@kimley-horn.com
KK	Kristina King	Kimley-Horn	kristina.king@kimley-horn.com
✓	Chris Lambka	Toole Design Group	clambka@tooledesign.com
✓	Bonnie Moser	Toole Design Group	bpmoser@tooledesign.com
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✓	Troy Joiner	TDOT	jerome.joiner@tn.gov
11/27	Dexter Justis	TDOT	Dexter.Justis@tn.gov
✓	Troy Ebert	TDOT	Troy.J.Ebert@tn.gov



APPENDIX F

STAKEHOLDER WORKSHOP #1

STAKEHOLDER WORKSHOP

Ijams Nature Center (Visitor Center Multipurpose Room)

July 18, 2018 – 4:30 PM Eastern

AGENDA

- Welcome and Introductions
- Project Overview
 - Purpose and Need
 - Outcome: Implementation Plan
- Review of Existing Conditions
 - Current Activity
 - Corridor Segments
 - Previous Plans/Studies
 - Crash/Traffic Data
- Interactive Activities
 - Visioning Exercise
 - Mapping Exercise – Opportunities / Constraints
- Future Opportunities for Outreach
 - Community Survey (August 2018 – September 2018)
 - Community Workshop #1 (September 2018)
 - Community Workshop #2 (December 2018)

STAKEHOLDER WORKSHOP

Ijams Nature Center (Visitor Center Multipurpose Room)

July 18, 2018 – 4:30 PM Eastern

SUMMARY

- All attendees introduced themselves. There were 20 attendees:
 - 10 from the neighborhoods and businesses within South Knoxville
 - 3 from Knoxville Regional TPO
 - 2 from City of Knoxville
 - 5 from the consultant team
- The 54-slide presentation was delivered. Discussion occurred intermittently throughout the presentation.
- During the presentation, 16 polling questions were asked of the attendees.
 - 1 question was a test question to ensure the handheld devices were functioning properly.
 - 5 questions pertained to Chapman Highway as an entire corridor
 - 10 questions pertained to Chapman Highway divided into segments. There were 5 segments, with 2 questions per segment.
- Since the TPO, City, and consultant team was excluded from the polling, a maximum of 10 attendees participated in the polling. The total number of votes varied between questions, as some attendees departed during the meeting and some attendees abstained from voting on some questions.
 - A summary of the vote count for each question is on the next page.
- A mapping exercise was facilitated, wherein the attendees representing neighborhoods and businesses within South Knoxville provided comments on aerial imagery of Chapman Highway.
- The meeting concluded.

Question Number	Slide Number	Vote Count
Question 1 (Test)	14	10
Question 2	16	9
Question 3	18	9
Question 4	20	10
Question 5	22	10
Question 6	24	9
Question 7	28	10
Question 8	30	8
Question 9	33	8
Question 10	35	9
Question 11	38	9
Question 12	40	9
Question 13	43	8
Question 14	45	8
Question 15	48	8
Question 16	50	8

STAKEHOLDER WORKSHOP

Ijams Nature Center (Visitor Center Multipurpose Room)

July 18, 2018 – 4:30 PM Eastern

MAPPING EXERCISE RESULTS

Attendees were asked to identify safety concerns, opportunities, and constraints along Chapman Highway during an interactive mapping exercise. The following represents a summary of the attendees' comments, broken down by corridor segment.

Segment 1A

- Urban wilderness connections and tie in
- How to get bikes and pedestrians across Chapman safely?
- Minimize access points, too many curb cuts, interior parcel connectivity
- Martin Mill intersection improvements / closings

Segment 1B

- Minimize access points, too many curb cuts, interior parcel connectivity
- Feel unsafe in this area
- Opportunity for adaptive reuse at Woodlawn Pike of vacant land

Segment 1C

- Physical separation of bike lane on Chapman
- Need protected left turn for west bound turn onto Moody
- Heavy transit at Young High Pike

Segment 2

- High vehicle speeds
- Review intersections for safety, modes, and proximity to other intersections
- Minimize access points, too many curb cuts, interior parcel connectivity
- Need access to urban wilderness trails

Segment 3

- Minimize access points, too many curb cuts, interior parcel connectivity
- Review intersections for safety, modes, and proximity to other intersections



APPENDIX G

STEERING COMMITTEE MEETING #2

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

September 5, 2018 – 1:30 PM Eastern

AGENDA

- Welcome and Introductions
- Preview of Public Engagement
 - Community Workshop
 - MetroQuest Survey
- Existing Conditions
 - Crash/Traffic Data
 - On Going Initiatives
 - Previous Planning Documents
 - Existing Facilities
- Discussion – Potential Projects
 - Improvement Menu
 - ‘Catalyst’ Projects
 - Corridor Opportunities
- Future Opportunities for Outreach
 - MetroQuest Survey
 - Community Workshop #1 (September 5, 5:30 PM – 7:00 PM)
 - Steering Committee Meeting and Community Workshop #2 (December 2018)

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

September 5, 2018 – 1:30 PM Eastern

SUMMARY

- All attendees introduced themselves. There were 23 attendees:
 - 3 from Knoxville Regional TPO
 - 5 from City of Knoxville
 - 1 from Urban Wilderness (City of Knoxville)
 - 5 from Tennessee DOT
 - 2 from Knoxville Area Transit
 - 1 from Knox County
 - 6 from the consultant team
- The consultant team provided a preview of the MetroQuest online survey as well as the Community Workshop.
- The consultant team reviewed the crash data, traffic data, calculated crash rates, and their comparison with the statewide average crash rates.
- An ‘improvement menu’ was used to contemplate and discuss the various types of improvements that should be considered along Chapman Highway. In general, there were only two (2) improvements that were deemed unsuitable along Chapman Highway:
 - Widening from 4/5 lanes to 7 lanes
 - Road Diet from 4/5 lanes to 3 lanes
- Opportunities for possible ‘catalyst’ improvements or areas were discussed.
- The meeting concluded.

STEERING COMMITTEE MEETING

September 5, 2018 – 1:30 PM Eastern

NAME	AGENCY	EMAIL
Jeff Welch ✓	Knoxville Regional TPO	jeff.welch@knoxtrans.org
Mike Conger ✓	Knoxville Regional TPO	mike.conger@knoxtrans.org
Amy Brooks ✓	Knoxville Regional TPO	amy.brooks@knoxtrans.org
Jim Hagerman ✓	City of Knoxville	jhagerman@knoxvillekn.gov
Dawn Michelle Foster <i>DMF</i>	City of Knoxville	dmfoster@knoxvillekn.gov
Jon Livengood <i>JL</i>	City of Knoxville	jlivengood@knoxvillekn.gov
Jeff Branham <i>JB</i>	City of Knoxville	jbranham@knoxvillekn.gov
Ernie Pierce <i>EP</i>	City of Knoxville	epierce@knoxvillekn.gov
Rebekah Jane Montgomery <i>RM</i>	Urban Wilderness Coordinator (City of Knoxville)	rmontgomery@knoxvillekn.gov
Dawn Distler ✓	Knoxville Area Transit	ddistler@katbus.com
Belinda Woodiel-Brill <i>BWB</i>	Knoxville Area Transit	bbrill@katbus.com
Cindy Pionke <i>CP</i>	Knox County	cindy.pionke@knoxcounty.org

	NAME	AGENCY	EMAIL
	Steve Borden	Tennessee DOT	steve.borden@tn.gov
	Amanda Snowden	Tennessee DOT	amanda.snowden@tn.gov
	Nathan Vatter	Tennessee DOT	nathan.vatter@tn.gov
	Andy Padgett <i>AP</i>	Tennessee DOT	andrew.padgett@tn.gov
	Christie Brown <i>CB</i>	Tennessee DOT	christie.brown@tn.gov
	Cameron Parker <i>CP</i>	Tennessee DOT	cameron.parker@tn.gov
	Dexter Justis	Tennessee DOT	dexter.justis@tn.gov
	Troy Ebbert	Tennessee DOT	troy.j.ebbert@tn.gov
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	Chris Lambka ✓	Toole Design Group	clambka@tooledesign.com
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APPENDIX H

COMMUNITY WORKSHOP #1

COMMUNITY WORKSHOP #1

South Doyle Middle School (Library)

September 5, 2018 – 5:30 PM – 7:00 PM

WORKSHOP SUMMARY

Overall Summary

- 123 people signed in for this workshop, although it is believed that the total attendance may have been closer to 150 people.
- Each attendee was provided a Handout and a Passport; both are included as an attachment.
- Also in attendance were 4 representatives from the Knoxville-Knox County Metropolitan Planning Commission, 2 representatives from the City of Knoxville, and 6 representatives from the consultant team.



One Word Exercise

- Participants were asked to provide 'one word' describing how they view Chapman Highway today, and 'one word' describing their vision for the future of Chapman Highway.
- The results are summarized on the next page; the size of the text in these 'word cloud' summaries are proportional to the number of responses matching that word.

ONE WORD

Please provide one word to describe the following:

How do you view Chapman Highway today?

What is your vision for the future of Chapman Highway?

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

How do you view Chapman Highway today?

DANGEROUS

What is your vision for the future of Chapman Highway?

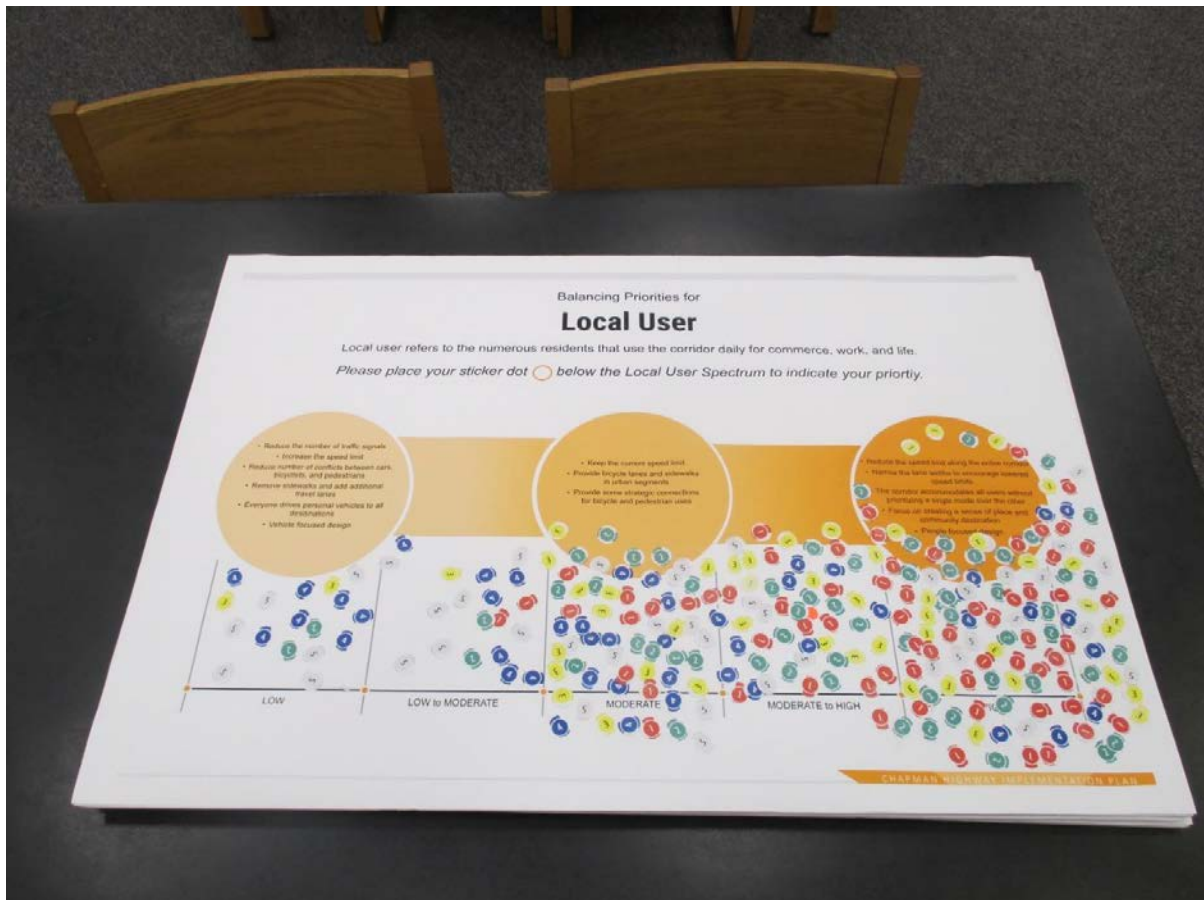
PEDESTRIAN-FRIENDLY

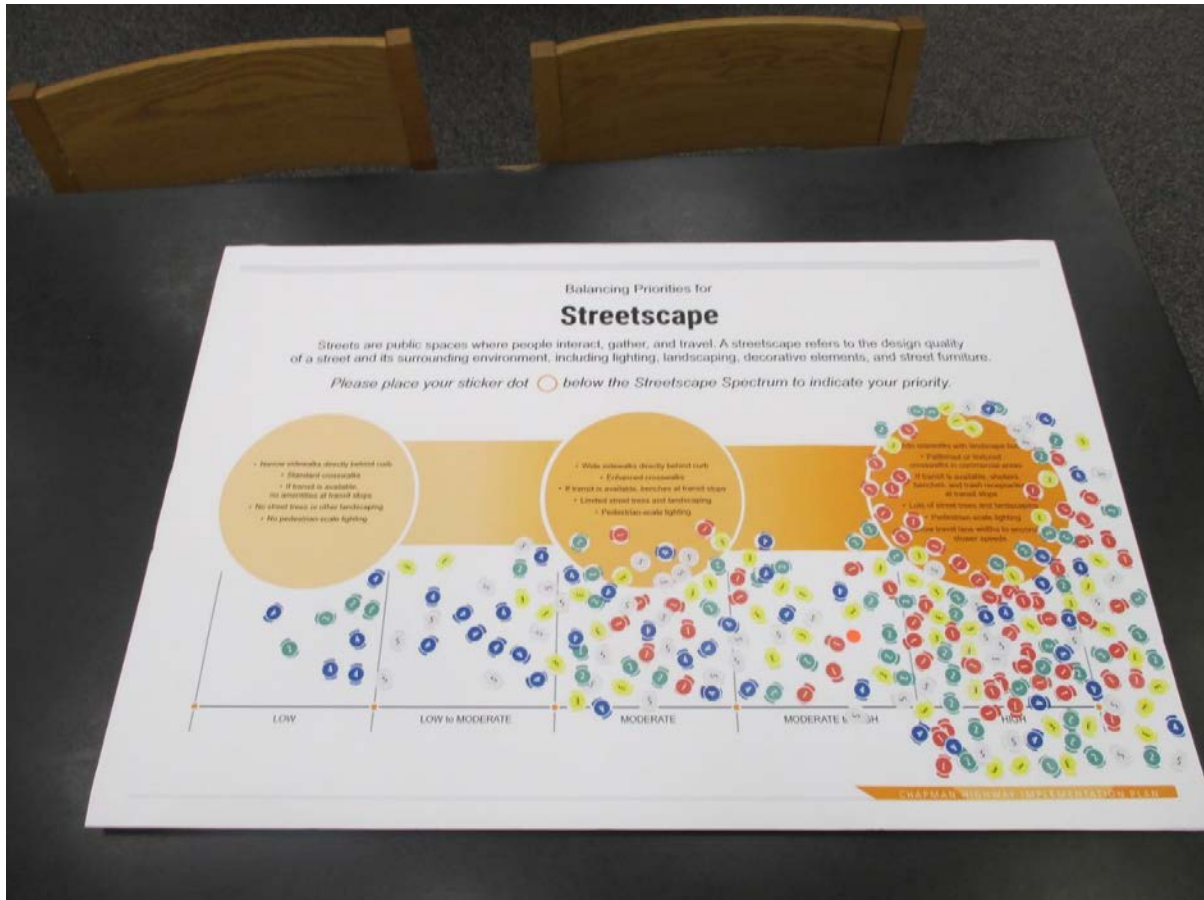
Multimodal Mapping Exercise

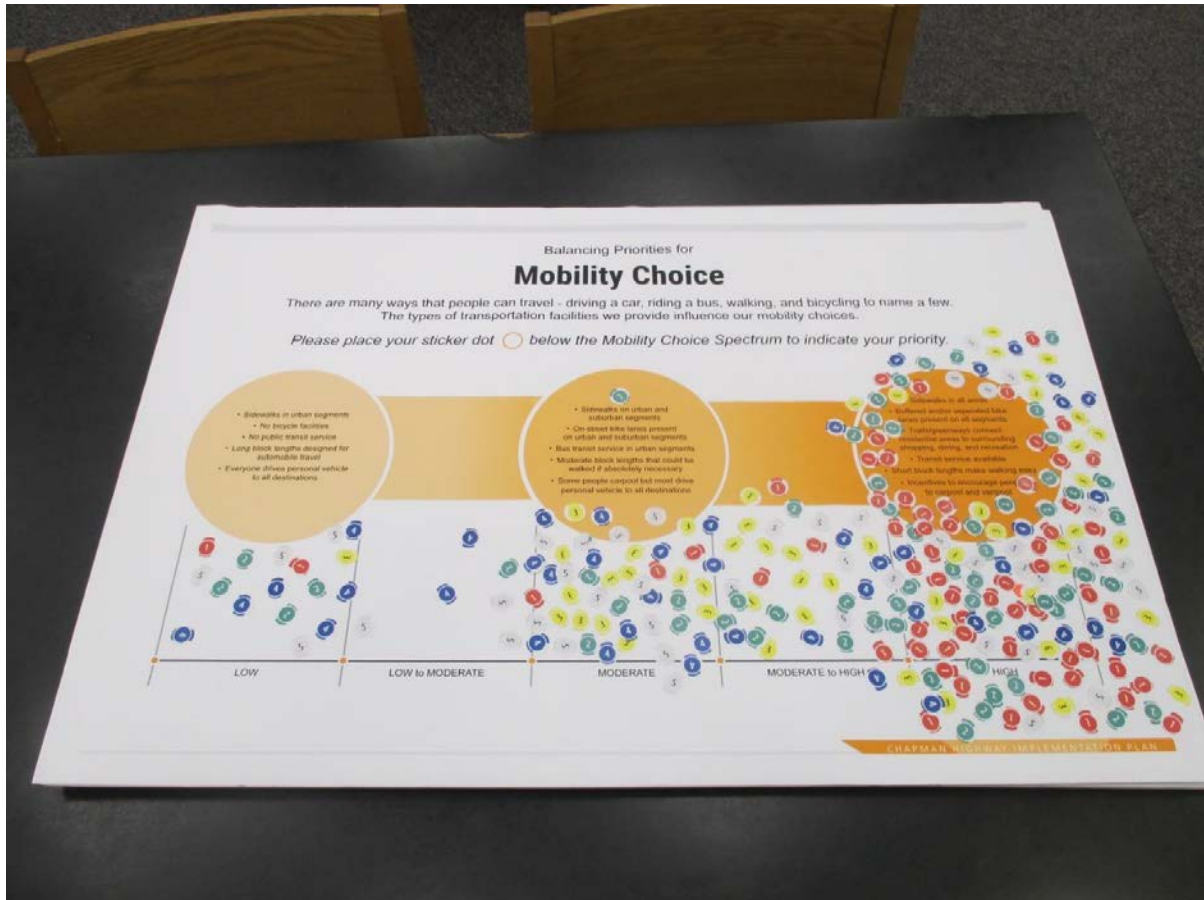
- Participants were asked to use varying colors of dots to identify areas for improvement on aerial mapping of the Chapman Highway Corridor. The most frequent comments are summarized below.
- Segment 1
 - Prefer separated bike/ped facilities in this area
 - Need bike/ped facilities at signalized intersections (crosswalks, striping, etc.)
 - Several businesses have too much parking along the corridor
 - There is congestion at several intersections
 - East Martin Mill Park Pike intersection has major accidents
 - Need more comfortable facilities for pedestrians, especially when crossing driveways
- Segment 2
 - Need center turn lanes in this segment
 - Visibility issues at Stone Road intersection
 - Dangerous for pedestrians to walk in this segment—no facility or lighting
 - Turning movements at Red Bug Road are dangerous
- Segment 3
 - Colonial Drive intersection needs improvement: sight distance, vehicles using parking lots for access to Chapman Highway
 - Trees along corridor block visibility
 - Need center turn lane in this segment
 - Need pedestrian facilities at intersections
 - East Ford Valley Road feels dangerous: visibility
 - Old Walmart site could be retrofitted into new retail if parking were reduced
- Segment 4
 - Need turn lanes in this segment
 - There is an old railroad bed along a portion of this segment that could be used as side path
 - W Dick Ford Lane intersection is dangerous
 - Nixon intersection is dangerous
- Segment 5
 - Congestion at Green Road and W Norton Road
 - Need pedestrian access to businesses

Priority Spectrum

- Participants were asked to use varying colors of dots to consider trade-offs and determine their own priority for four (4) categories – Local User, Streetscape, Mobility Choice, and Access Management.
- The **Local User** results indicate that most workshop attendees identified themselves as ‘local users’ who travel to/from Chapman Highway, as opposed to ‘regional commuters’ who travel through Chapman Highway.
- The **Streetscape** results indicate that most workshop attendees prefer more streetscape elements.
- The **Mobility Choice** results indicate that most workshop attendees prefer having mode choices for their own transportation, and that pedestrian/bicycle/transit options should be provided.
- The **Access Management** results indicate that most workshop attendees prefer reducing the number of driveways and reducing the number of left-turn movements along Chapman Highway.
- The 5 workshop boards and complete results are included as an attachment.







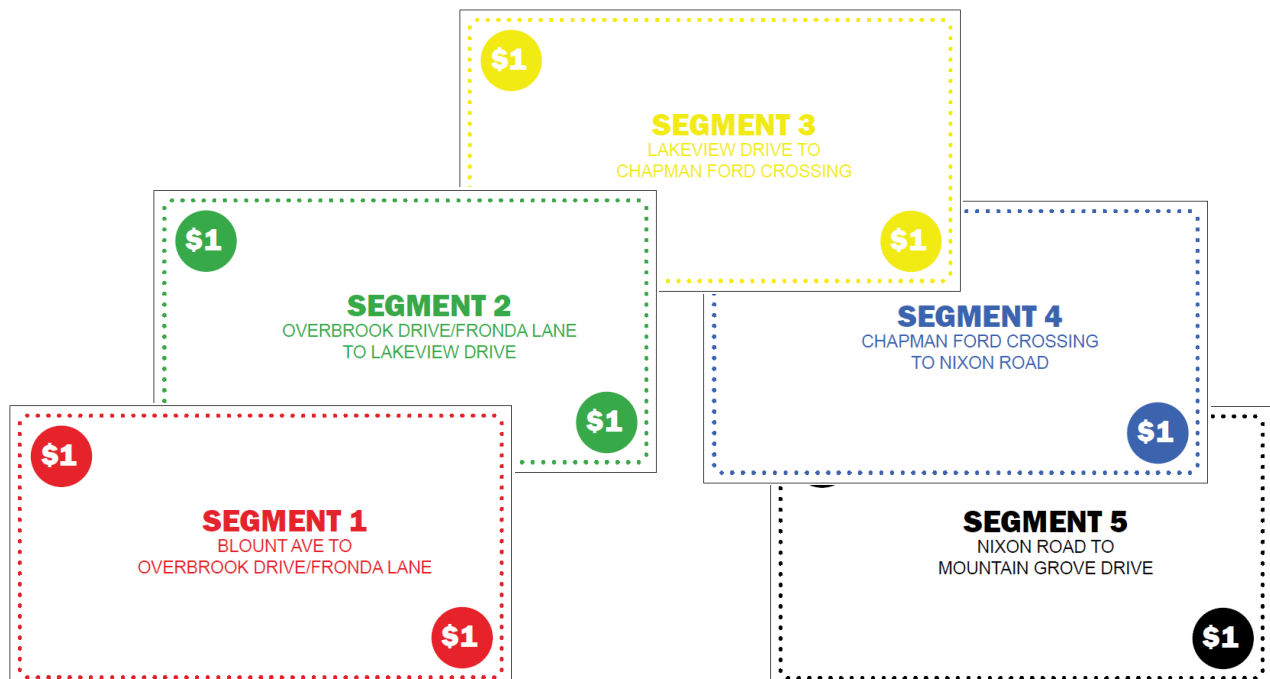


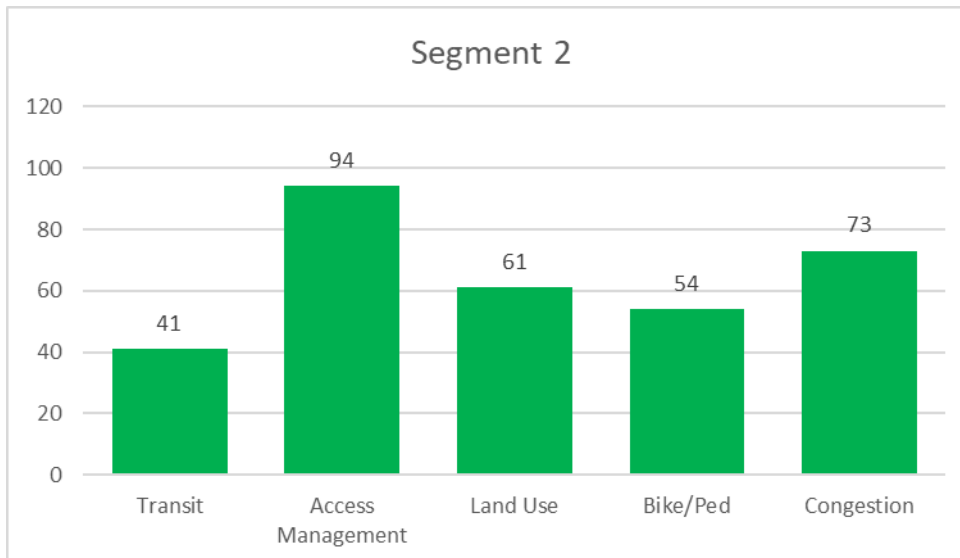
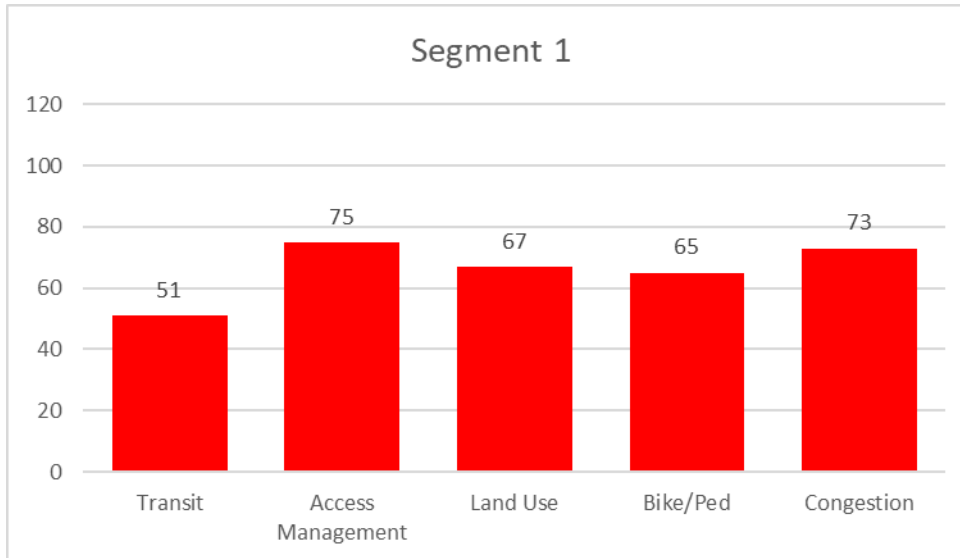
Visual Preference Survey

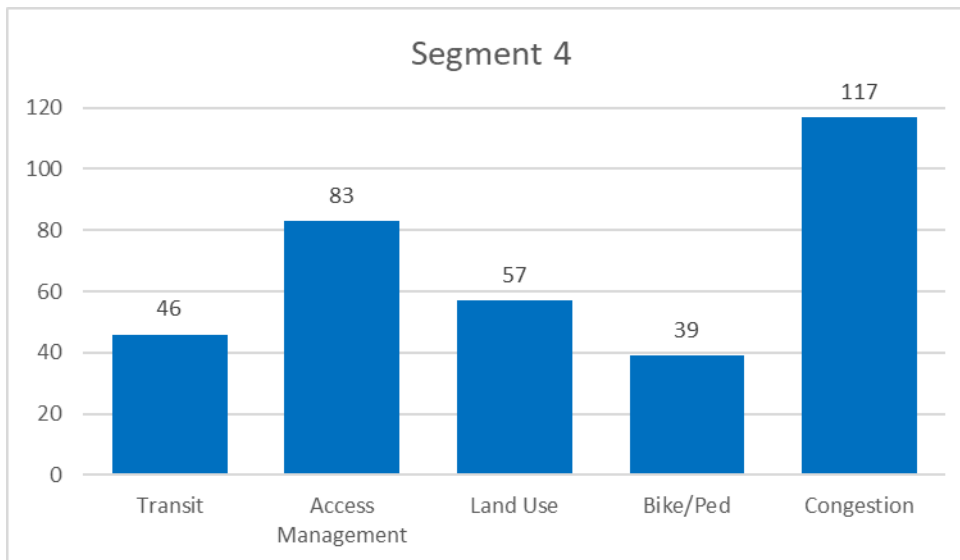
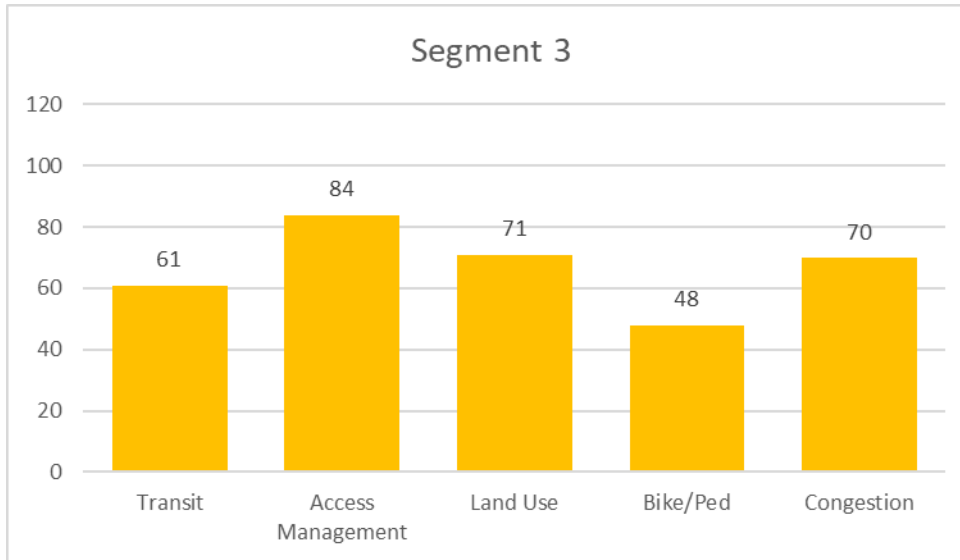
- Participants were asked to view 30 slides of various transportation facilities (bicycle, transit, pedestrian, roadway) and indicate if they “Like” or “Don’t Like” what they were viewing.
- Participants identified a desire for pedestrian and bicycle facilities that have some type of physical separation from the roadway where vehicles travel.
- The 30 slides and complete results are included as an attachment.

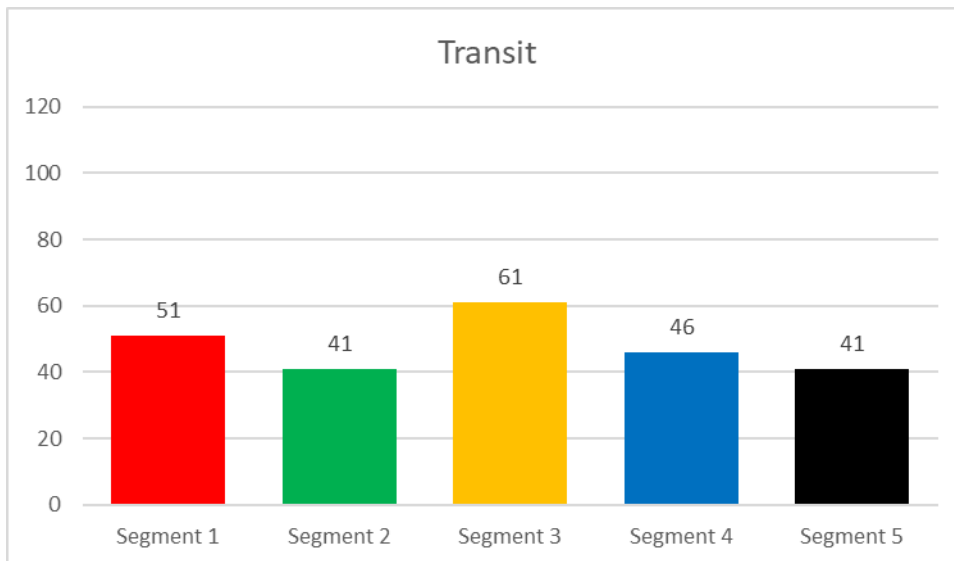
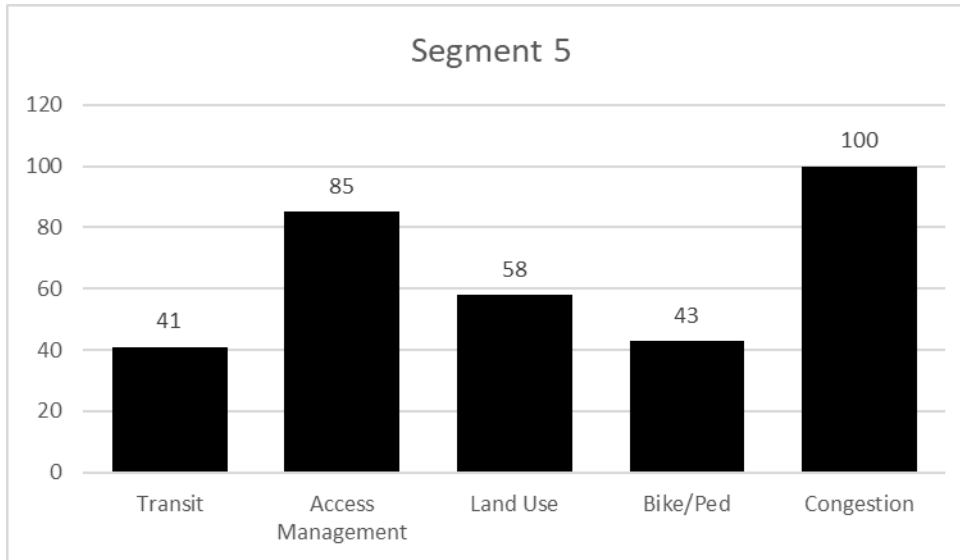
Budgeting Exercise

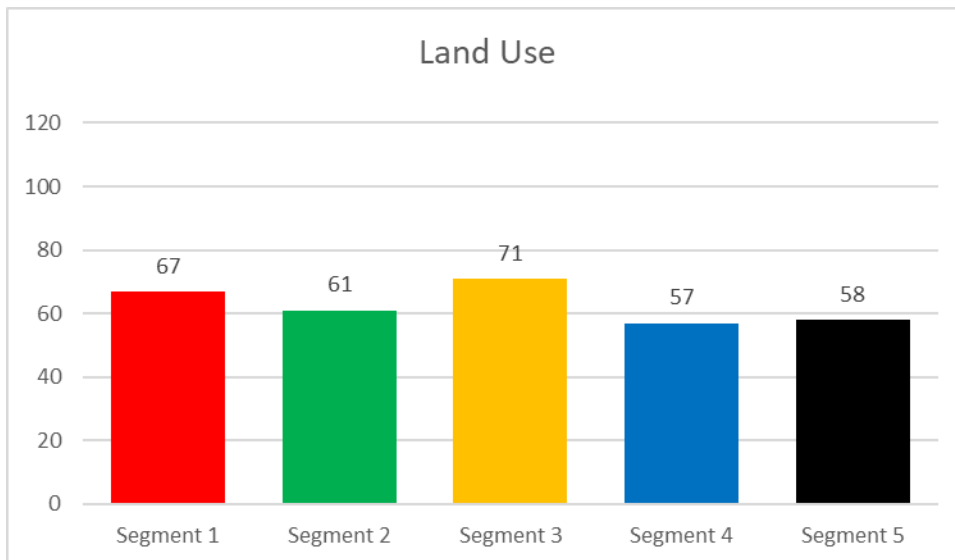
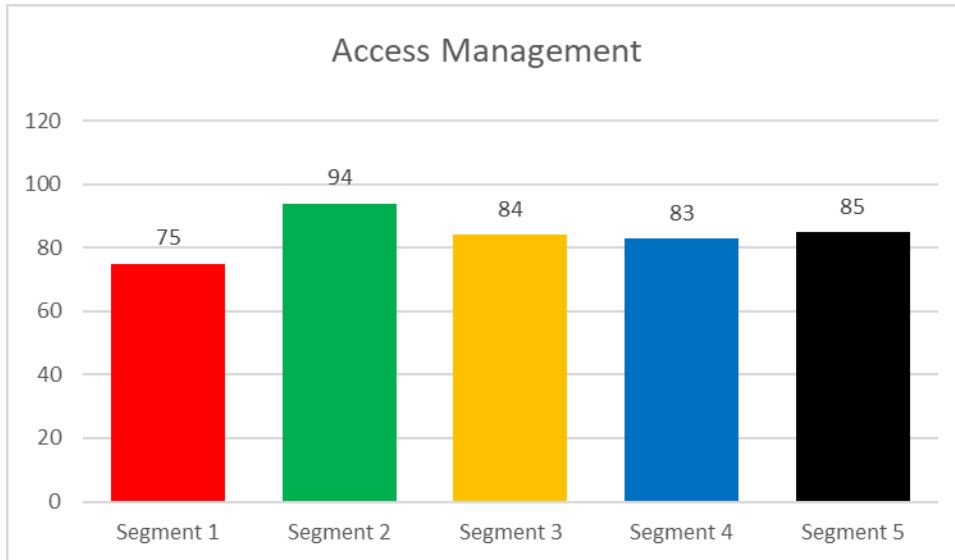
- Participants were asked to allocate \$25 of pretend money - \$5 per segment, for 5 different segments of Chapman Highway – among five (5) investment categories:
 - **Access Management:** Install Medians, Consolidate Driveways, or Limit Left Turns
 - **Bicycle & Pedestrian:** Provide Sidewalks, Bike Lanes, Shared Use Paths, Curb Ramps, Crosswalks, and Pedestrian Signals
 - **Congestion:** Improve Existing Traffic Signals, Add New Signals, or Add Turn Lanes
 - **Land Use:** Create a Cohesive Streetscape Through Landscaping, Development Form, and Design
 - **Transit:** Provide Better Transit Amenities Such as Shelters, Benches, and Lighting
- A total of **\$1,657** was allocated by participants:
 - \$433 – Congestion
 - \$421 – Access Management
 - \$314 – Land Use
 - \$249 – Bicycle & Pedestrian
 - \$240 – Transit
- Access Management received the most investment for Segments 1, 2, and 3.
 - Access Management received the 2nd most investment for Segments 4 and 5.
- Congestion received the most investment for Segments 4 and 5.
 - Congestion received the 2nd most investment for Segments 1 and 2, and was nearly tied for 2nd most investment for Segment 3.
- The results are summarized in two (2) different ways on the following pages – first, by segment; second, by investment category. The numbers represent the amount of pretend money allocated to each investment category for each segment.

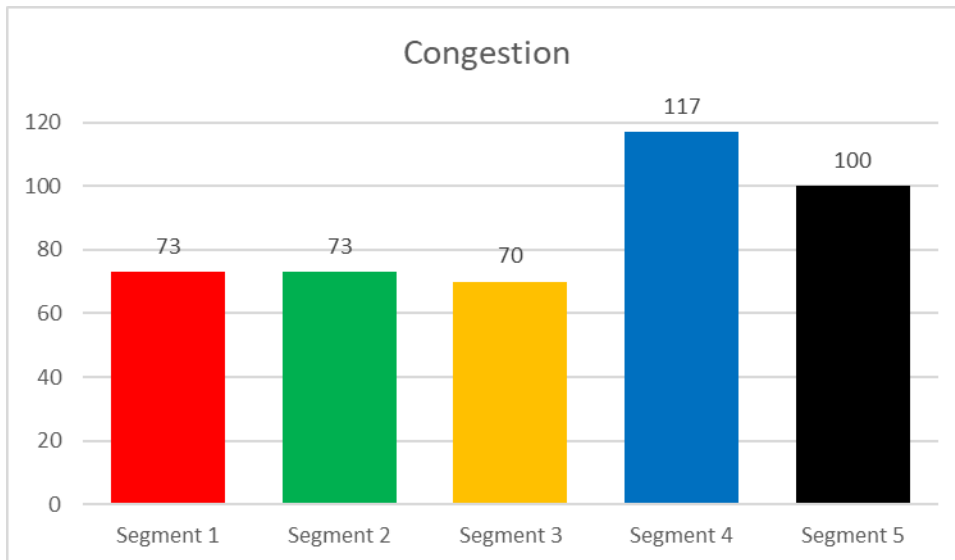
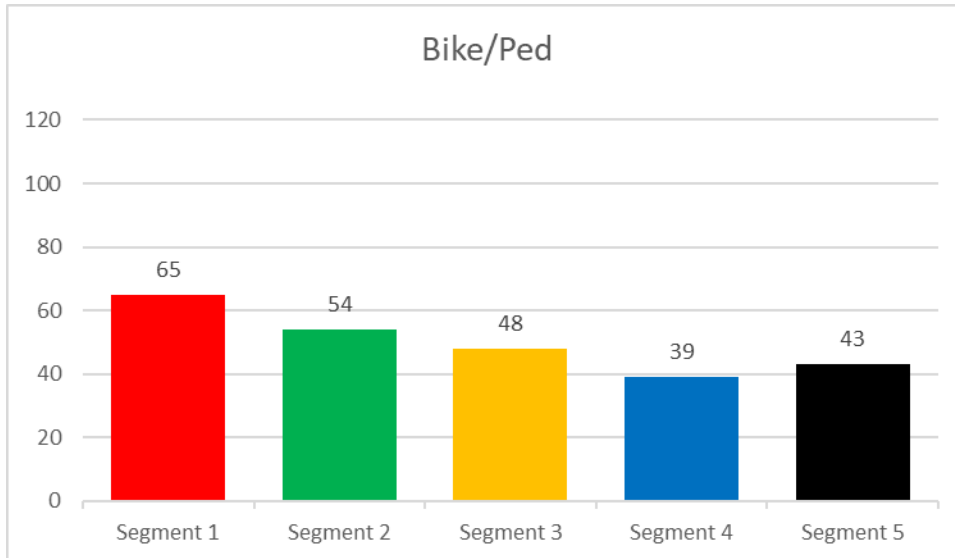












What is the Chapman Highway Implementation Plan?

The Chapman Highway Implementation Plan, led by the Metropolitan Planning Commission and City of Knoxville, will identify and prioritize improvements for the six-mile section of Chapman Highway within the city limits that runs from Blount Avenue to just south of Governor John Sevier Highway. This effort will evaluate previous studies, confirm their recommendations, identify new issues, and develop an actionable strategy for corridor improvements. The project is anticipated to wrap up in early 2019.

Your input at this workshop is important!

Feedback received at this workshop and other public outreach opportunities will be used to develop a list of projects to be considered for implementation.

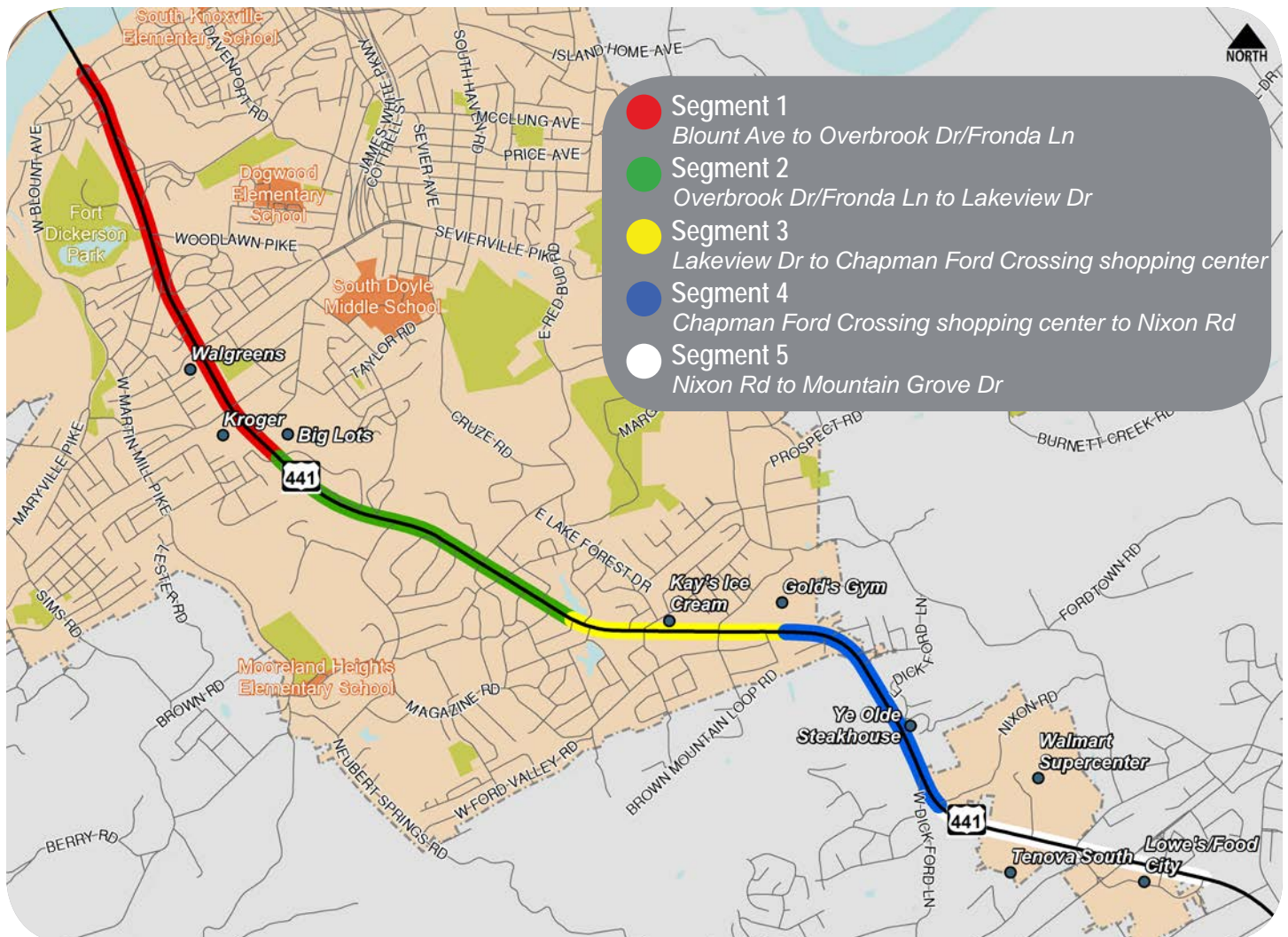
Corridor Segments

Many of the activities at the workshop ask you to provide feedback specific to five unique segments of Chapman Highway. The segments are detailed on the map at the bottom of this handout for your reference.

Stay Involved

In addition to the workshop tonight, you can provide additional feedback using the project's online survey. Help spread the word, by encouraging your family and friends to take the survey as well. For project updates and to access the online survey, please visit

<https://knoxtrans.org/chapman-highway>



PASSPORT

ITINERARY

SEPTEMBER 5, 2018

CHECKLIST	ACTIVITY LOG
<input type="checkbox"/>	SIGN IN STATION <ul style="list-style-type: none"> • INFORMATION WALL • ONE WORD
<input type="checkbox"/>	STATION 1 - MAPPING EXERCISE
<input type="checkbox"/>	STATION 2 - TRADEOFFS EXERCISE
<input type="checkbox"/>	STATION 3 - VISUAL PREFERENCE SURVEY
<input type="checkbox"/>	STATION 4 - BUDGET EXERCISE

THANK YOU!

Your feedback tonight is invaluable to the success of the **Chapman Highway Implementation Plan**. As a way to say thank you, participants who complete all activities will be entered in a **prize drawing**. Simply fill out the information below and place your passport in the box at the sign in table.

Name: _____

Email: _____

Zip Codes:

Home: _____

Work: _____

PASSPORT

ITINERARY

SEPTEMBER 5, 2018

CHECKLIST	ACTIVITY LOG
<input type="checkbox"/>	SIGN IN STATION <ul style="list-style-type: none"> • INFORMATION WALL • ONE WORD
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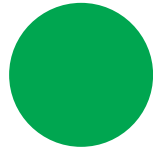
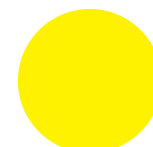
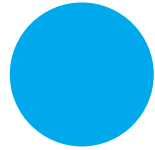
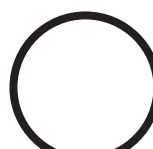
Work: _____

Balancing Priorities

We Need Your Help

We want to know your priorities regarding transportation for the Chapman Highway Corridor.

You have been given five sticker dots:

- 1 red sticker dot  representing segment 1
- 1 green sticker dot  representing segment 2
- 1 yellow sticker dot  representing segment 3
- 1 blue sticker dot  representing segment 4
- 1 white sticker dot  representing segment 5

Adjacent to this board there are four boards, each with a different priority spectrum:

- **Local user** refers to the numerous residents that use the corridor daily for commerce, work, and life.
- **Streetscape** refers to the design quality of a street and its surrounding environment, including lighting, landscaping, decorative elements, and street furniture.
- **Mobility Choice** refers to the many ways that people can travel - driving a car, riding a bus, walking, and bicycling to name a few.
- **Access Management** refers to elements of the street that organize vehicle movements through strategic driveway placement, left-turn consolidation, and property connectivity.

Please place each sticker dot along the spectrum with the corresponding segment color to indicate your priority for each subject. You can place your dot at either end, the middle, or somewhere in between based on your desires.

Keep in mind that ***TRADE-OFFS*** are inevitable; when you prioritize one concern, you minimize others. While we know we cannot please everyone and this is not a binding “vote,” our goal is to understand and balance priorities to achieve a level of consensus as we assemble an implementation plan for the Chapman Highway Corridor.

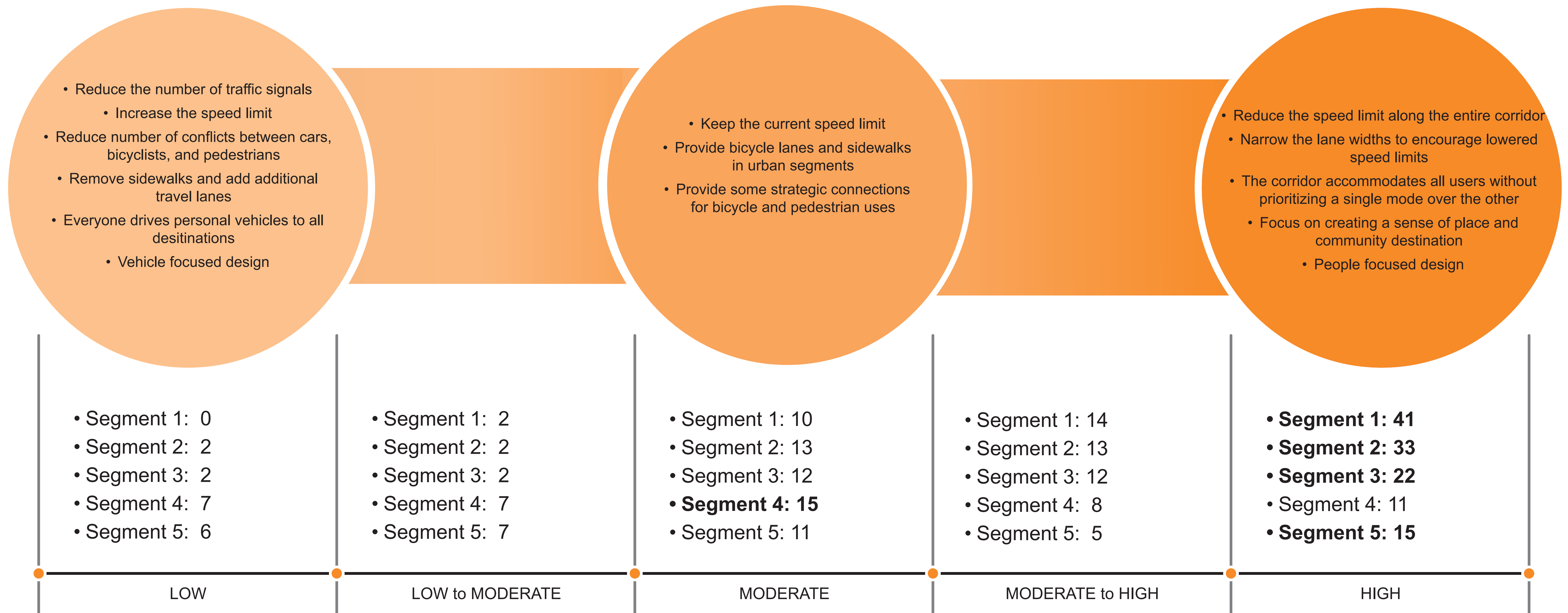
Thank you for your participation.

Balancing Priorities for

Local User

People use streets for many different reasons - life, work, school, accessing a destination. Residents, students, and commuters all utilize the corridor with different purposes in mind. Local user refers to residents and students that use the corridor daily to access commerce, work, and destinations within their community.

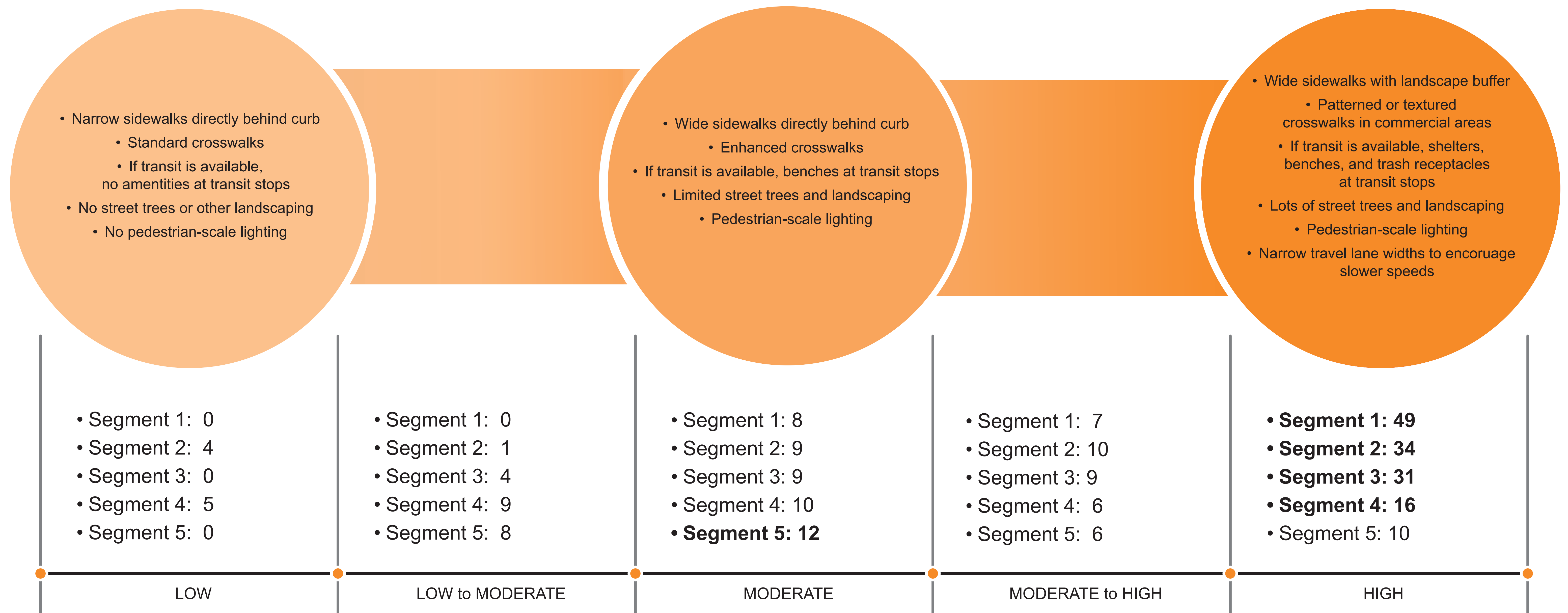
Please place your sticker dot  below the Local User Spectrum to indicate your priority.



Balancing Priorities for Streetscape

Streets are public spaces where people interact, gather, and travel. A streetscape refers to the design quality of a street and its surrounding environment, including lighting, landscaping, decorative elements, and street furniture.

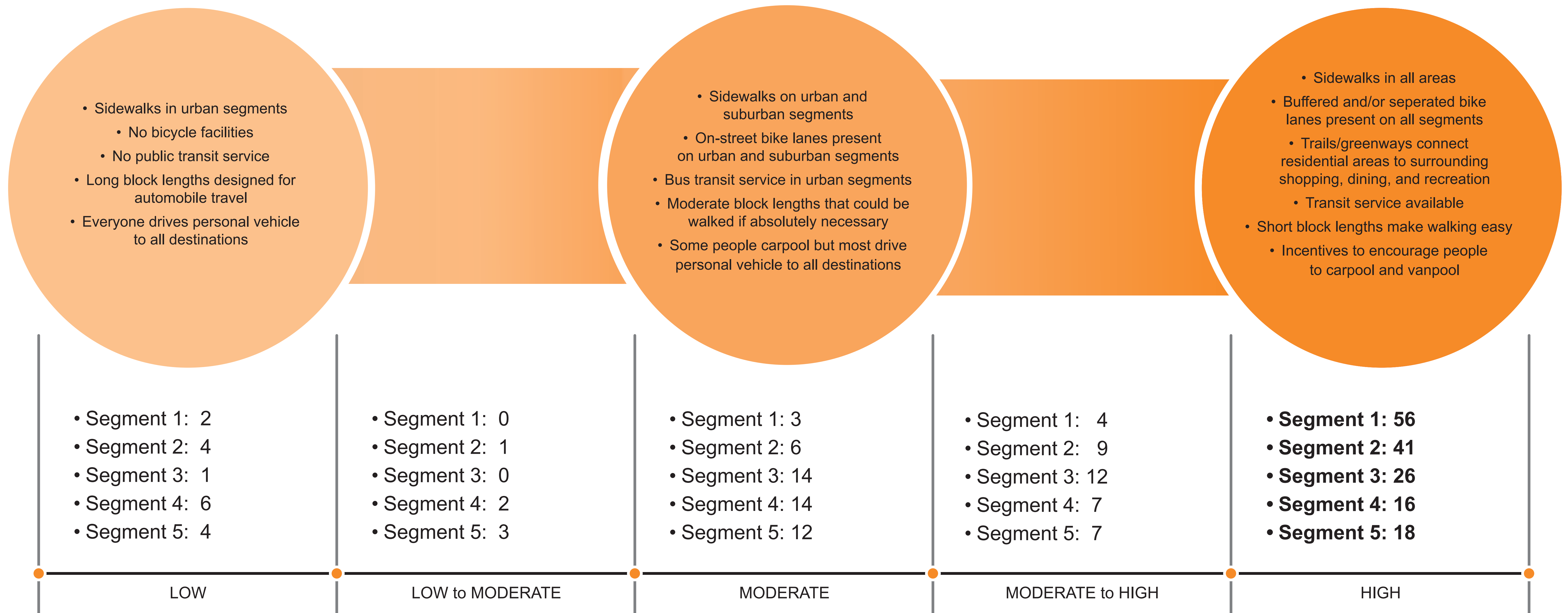
Please place your sticker dot  below the Streetscape Spectrum to indicate your priority.



Balancing Priorities for Mobility Choice

There are many ways that people can travel - driving a car, riding a bus, walking, and bicycling to name a few. The types of transportation facilities we provide influence our mobility choices.

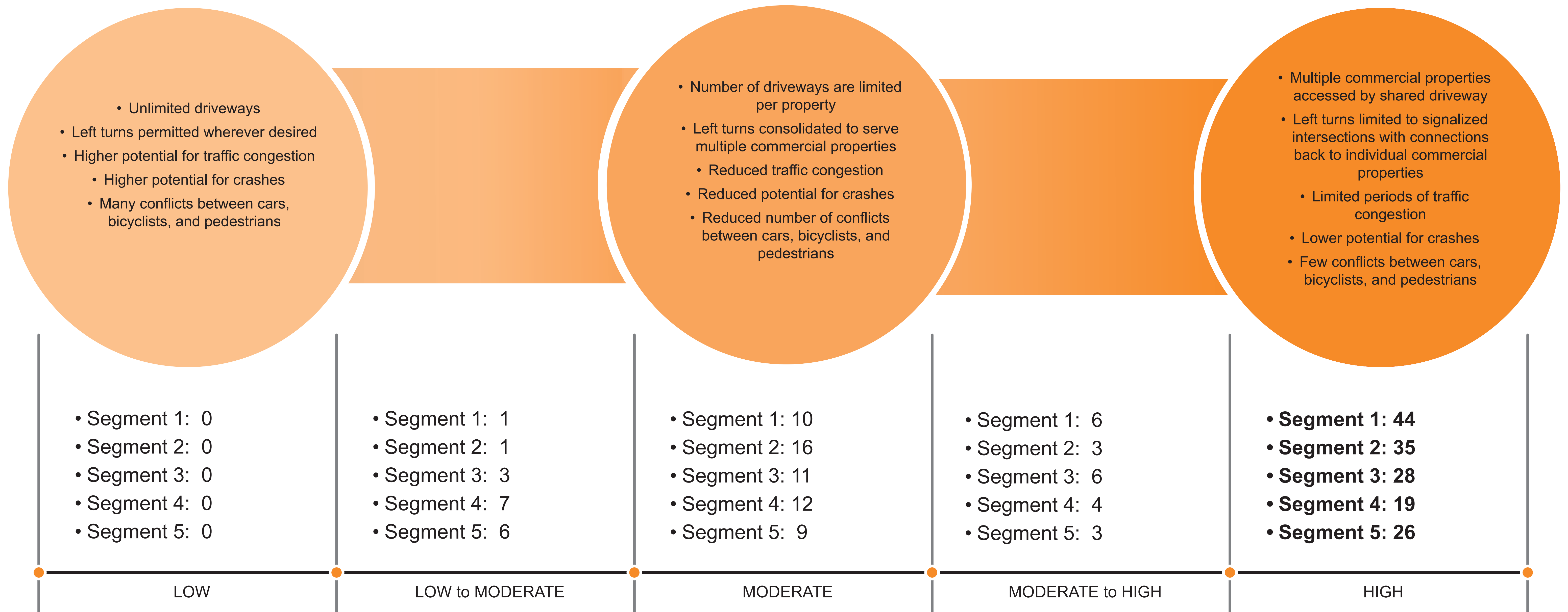
Please place your sticker dot  below the Mobility Choice Spectrum to indicate your priority.



Balancing Priorities for Access Management

When a person driving a car decides to stop, turn, or change lanes, there is the potential for conflict with other people driving, walking, and bicycling. Access management organizes vehicle movements through strategic driveway placement, left-turn consolidation, and property connectivity.

Please place your sticker dot  below the Access Management Spectrum to indicate your priority.



BICYCLE FACILITIES

IMAGE 1



Source: Toole Design Group

Like – 61
Don't Like – 11

BICYCLE FACILITIES



IMAGE 2

Like – 18
Don't Like – 56

BICYCLE FACILITIES

IMAGE 3



Source: www.divisare.com

Like – 68
Don't Like – 7

BICYCLE FACILITIES

IMAGE 4



Source: Ernie Boughman

Like – 64
Don't Like – 11

BICYCLE FACILITIES

IMAGE 5



Source: Ernie Boughman

Like – 65 Don't Like – 9

BICYCLE FACILITIES

IMAGE 6



Source: <http://www.cityofgoleta.org>

Like – 41 Don't Like –32

BICYCLE FACILITIES

IMAGE 7



Source: www.agenda.ge

Like – 61 Don't Like – 12

TRANSIT FACILITIES

IMAGE 8



Source: usa.streetsblog.org

Like – 63
Don't Like – 11

TRANSIT FACILITIES

IMAGE 9



Source: Ernie Boughman

Like – 59
Don't Like – 14

TRANSIT FACILITIES

IMAGE 10



Like – 62
Don't Like – 13

TRANSIT FACILITIES



IMAGE 11

Source: www.jeffersoncitymo.gov

Like – 51
Don't Like – 22

TRANSIT FACILITIES

IMAGE 12



Source: Congress for the New Urbanism

Like – 11
Don't Like – 63

TRANSIT FACILITIES

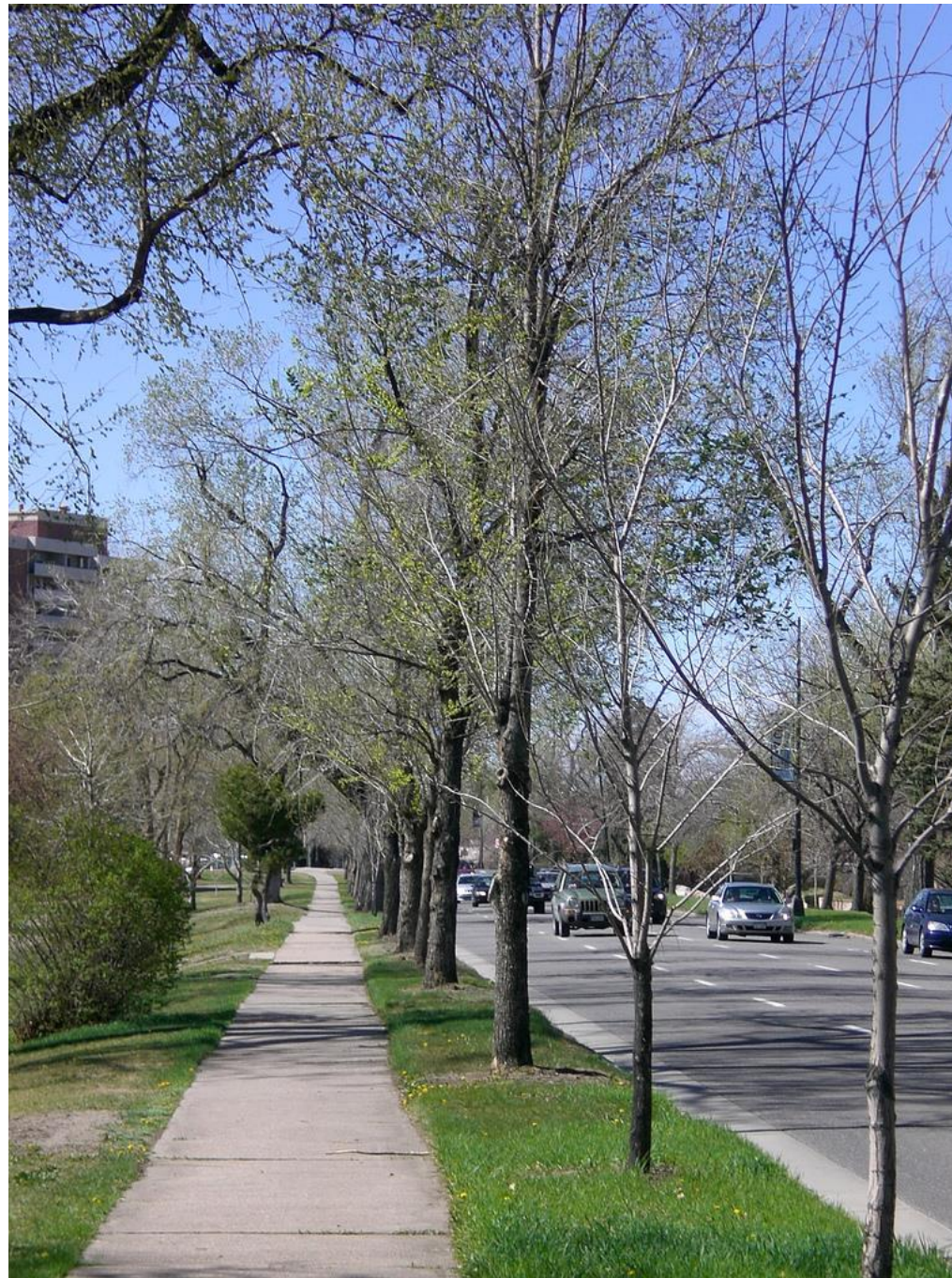
IMAGE 13



Source: City of Knoxville, Cumberland Avenue

Like – 48
Don't Like – 26

PEDESTRIAN FACILITIES



Source: Flickr, Complete Streets

Like – 62 Don't Like – 11

IMAGE 14

PEDESTRIAN FACILITIES



IMAGE 15

Source: Ernie Boughman

Like – 59
Don't Like – 13

PEDESTRIAN FACILITIES



IMAGE 16

Source: Hedstrom Design, Knoxville

Like – 65 Don't Like – 9

PEDESTRIAN FACILITIES

IMAGE 17



Source: Stock Photo

Like – 25
Don't Like – 46

PEDESTRIAN FACILITIES



Source: Parsons Brinckerhoff

Like – 63 Don't Like – 11

IMAGE 18

PEDESTRIAN FACILITIES



Source: City of Nashville, 31st Connector

Like – 69 Don't Like – 6

PEDESTRIAN FACILITIES

IMAGE 20



Source: www.nashville.gov

Like – 29 Don't Like – 42

PEDESTRIAN FACILITIES

Source: <http://www.urbanophile.com/2010/05/23/next-american-suburb-carmel-indiana/comment-page-1/>



IMAGE 21

ROADWAY FACILITIES

IMAGE 22



Source: Libby Thomas

Like – 60 Don't Like – 14

ROADWAY FACILITIES

IMAGE 23



Source: Forward Pinellas

Like – 51
Don't Like – 21

ROADWAY FACILITIES

IMAGE 24



Source: www.wwpa.org

Like – 32
Don't Like – 40

ROADWAY FACILITIES

IMAGE 25



Source: esp.com

Like – 48
Don't Like – 24

ROADWAY FACILITIES

IMAGE 26



Source: Complete Streets

Like – 51 Don't Like – 23

ROADWAY FACILITIES

IMAGE 27



Source: Ernie Boughman

Like – 45 Don't Like – 30

ROADWAY FACILITIES

IMAGE 28



Source: Ernie Boughman

Like – 6
Don't Like – 67

ROADWAY FACILITIES

IMAGE 29



Source: Gresham, Smith and Partners

Like – 66 Don't Like – 9

ROADWAY FACILITIES

IMAGE 30



Source: www.co.Washington.or.us

Like – 28
Don't Like – 45



APPENDIX I

METROQUEST SURVEY #1

MetroQuest Summary

Rev. 2018-12-19

OVERVIEW

To ensure a broad range of perspectives was involved in the early phases of the Chapman Highway Implementation Plan, an online survey was designed to provide a tool for community input. The survey launched on September 5, 2018 at the first public workshop and was available online through October 19, 2018. Through the MetroQuest survey platform, the survey allowed participants to identify transportation issues, prioritize topics that are most important to them, and suggest projects they would like to see completed.

The MetroQuest survey included five screens that guided participants through the process of learning about the project and providing input. The overall purpose of the survey is to gain insight into the priorities and preferences to better align the potential design alternatives with the community's vision and needs.

This summary includes the following major elements:

- Screenshots of Survey Slides
- Participation Recap
- Map Participation
- Segment 1
 - Tradeoffs
 - Investment Strategies
 - Map Markers
- Segment 2
 - Tradeoffs
 - Investment Strategies
 - Map Markers
- Segment 3
 - Tradeoffs
 - Investment Strategies
 - Map Markers
- Segment 4
 - Tradeoffs
 - Investment Strategies
- Map Markers
- Segment 5
 - Tradeoffs
 - Investment Strategies
 - Map Markers
- Wrap Up Questions
- Home and Work Locations of Respondents by Zip Code

SCREENSHOTS OF SURVEY SLIDES

1

WELCOME

Your input is important!

Thanks for taking the time to tell us what you think!

The **Chapman Highway Implementation Plan**, led by the Metropolitan Planning Commission (MPC) and City of Knoxville, will identify and prioritize improvements for the six-mile section of Chapman Highway within the city limits that runs from Blount Avenue to just south of Governor John Sevier Highway.

STUDY AREA MAP

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

Your input is important! Feedback received from this survey and other public outreach opportunities will be used to develop a list of projects to be considered for implementation.

Begin

2

MAP IT!

Where are the issues?

Please drag and drop at least 3 markers on the map.

Access Bike/Walk/Bus Congestion Land Use Safety Other

Map data ©2018 Google Terms of Use Report a map error

3

TRADEOFFS

Segment Tradeoffs

Segment 1 Segment 2 Segment 3 Segment 4 Segment 5

Blount Avenue to Fronda Lane/Overbrook Drive **Show Map**

Mobility Choice

There are many ways that people can travel – driving a car, riding a bus, walking, and bicycling to name a few. The types of transportation facilities we provide influence our mobility choices.

LOW Mobility Choice **HIGH Mobility Choice**

Low mobility choice: Limited sidewalks, No bicycle facilities, No transit service, Auto-oriented

High mobility choice: Sidewalks everywhere, Separated bicycle facilities, Transit service, People-oriented

Where does your priority fall?

Previous Optional Comment **Next**

4

STRATEGIES

Segment Improvement Strategies

Segment 1 Segment 2 Segment 3 Segment 4 Segment 5

SEGMENT 1 Segment 1 stretches between Blount Avenue (at the Henley Street Bridge) and Overbrook Drive/Fronda Lane (near Big Lots).

Access Management Install medians, consolidate driveways, or limit left turns. **Comment**

Bicycle and Pedestrian Provide sidewalks, bike lanes, shared use paths, curb ramps, crosswalks, and pedestrian signals. **Comment**

Congestion Improve existing traffic signals, add new signals, or add turn lanes. **Comment**

Land Use Create a cohesive streetscape through landscaping, development form, and design. **Comment**

Transit Provide better transit amenities such as shelters, benches, and lighting. **Comment**

Suggest another **Next Category**

5

WRAP UP

Wrap Up

Thank You!

Thank you for providing input! Your participation is critical to the success of the process and we want to stay in touch!

Be sure to check our project website for updates!
<https://knoxtrans.org/chapman-highway>

MPC METROPOLITAN PLANNING COMMISSION

CITY OF KNOXVILLE

Final Questions

What is your primary interest in Chapman Hwy?
Select...

If you selected other, please describe below.
Type...

Which segment is most important to you?
Select...

What is your home zipcode?
Type...

What is your work/school zipcode?
Type...

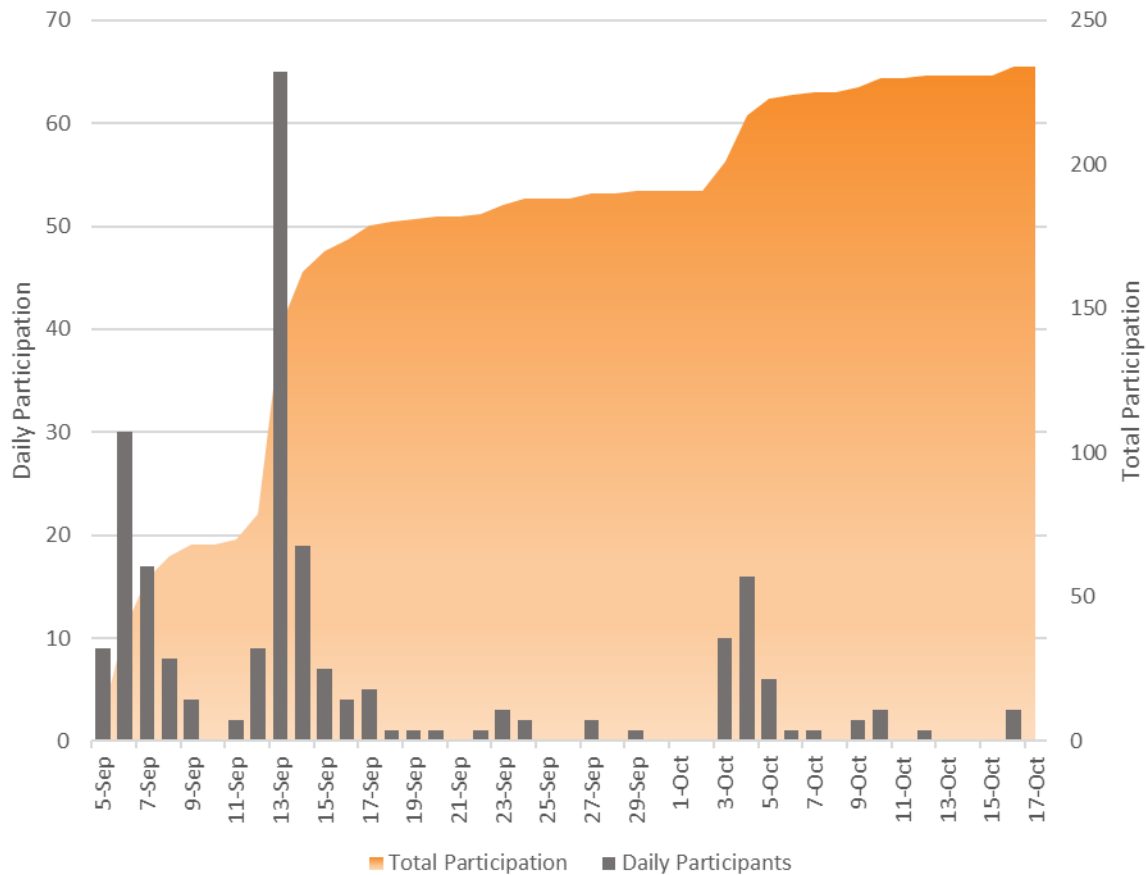
Email Address
Type...

Submit Final Questions **Skip**

PARTICIPATION RECAP

In total, 232 people participated in the survey between September 5, 2018 and October 19, 2018. Participants provided more than 7,500 data points for analysis and 117 written comments. Three major activity spikes – September 5, September 11, and October 1 – correspond with the survey’s initial launch, a release in the City’s Office of Neighborhoods newsletter, and the mayor’s weekly E-letter.

Survey Participation Overview



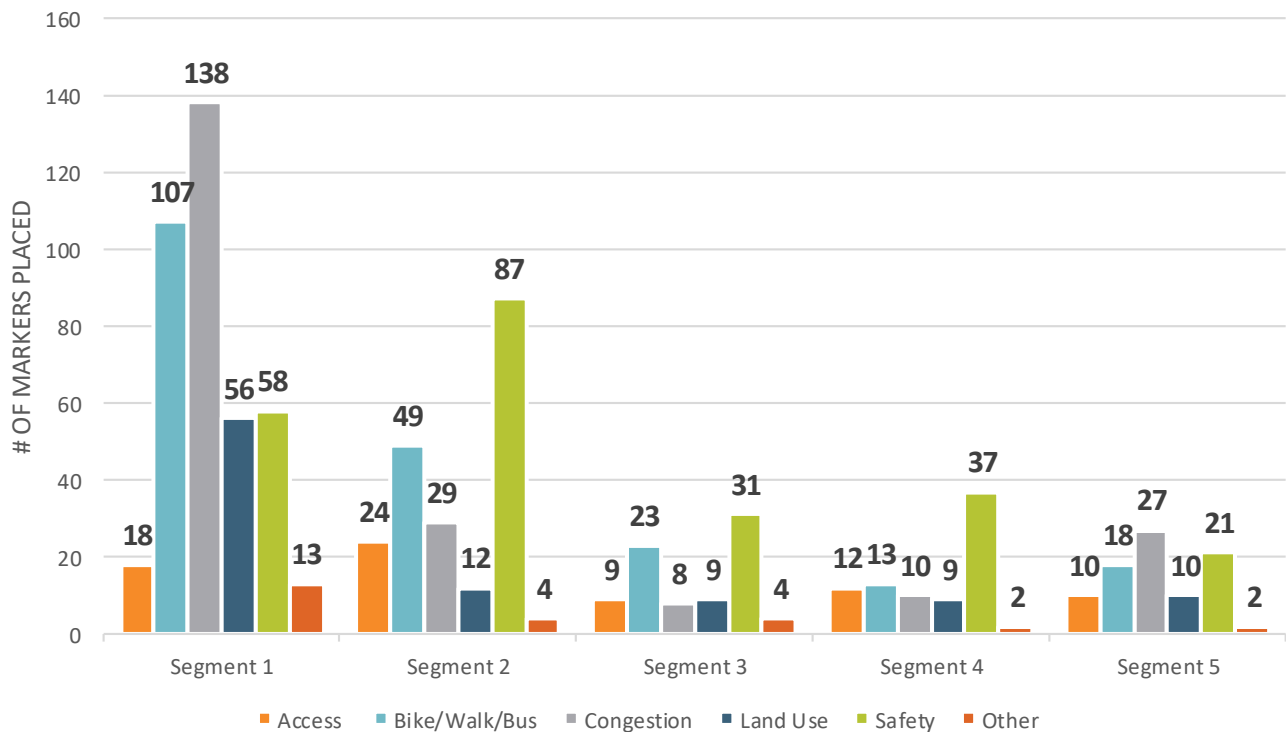
MAP PARTICIPATION

The first step of the online survey asked participants to place markers on a map to show locations of desired improvement using the categories below:

- Access
- Bike/Walk/Bus
- Congestion
- Land Use
- Safety
- Other

In total, participants placed 1,004 markers along Chapman Highway. The safety category garnered the most responses; however, it was followed closely by congestion and bike/walk/bus. The chart below shows the breakdown of marker types placed along the corridor.

Count of Marker Types Placed Along Chapman Highway by Segment

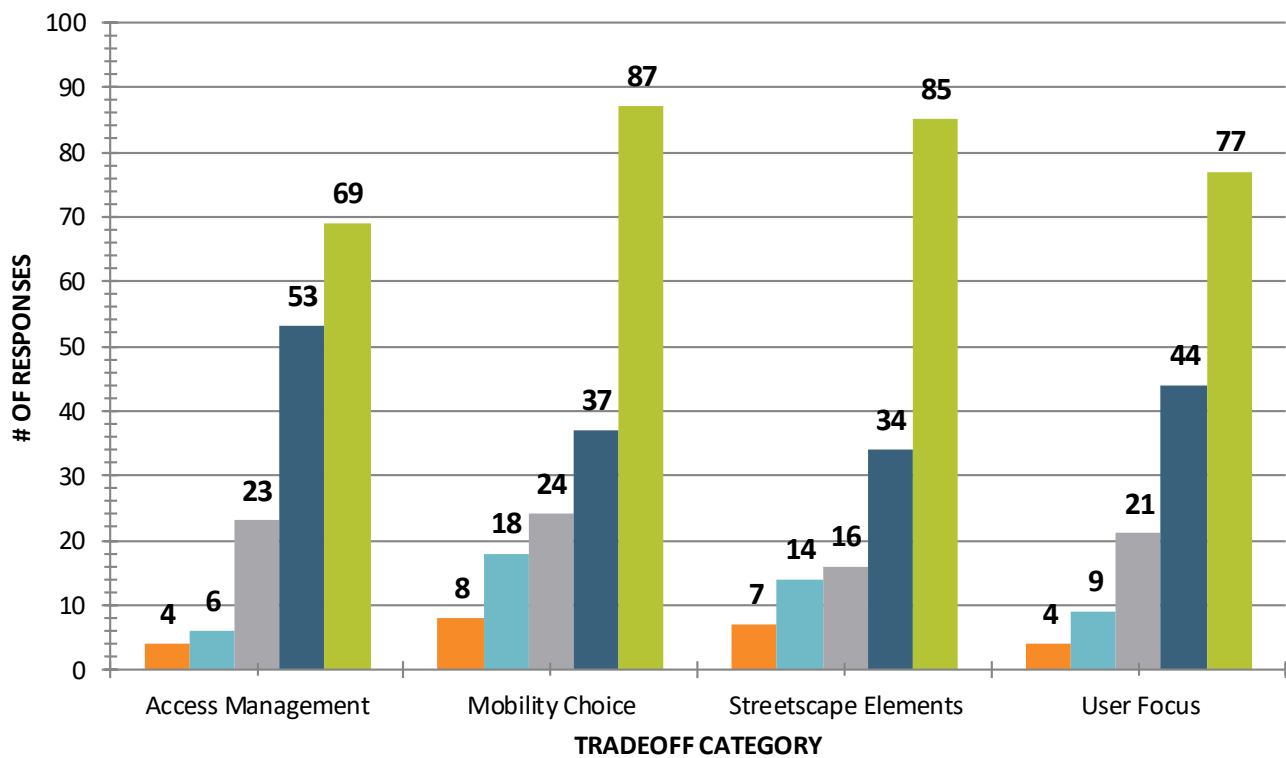


SEGMENT 1: BLOUNT AVENUE TO FRONDA LANE

Tradeoffs

For each segment, survey respondents were asked to consider tradeoffs associated with user focus, streetscape, mobility choices, and access management. This activity helped participants understand that tradeoffs are inevitable when considering transportation improvements. The figure below shows the results of this exercise for Segment 1. Survey responses show that participants were very interested in Segment 1 having a predominately local user-focused roadway with high mobility options, improved access management, and heavy streetscaping.

Segment 1 – Tradeoffs Results by Category



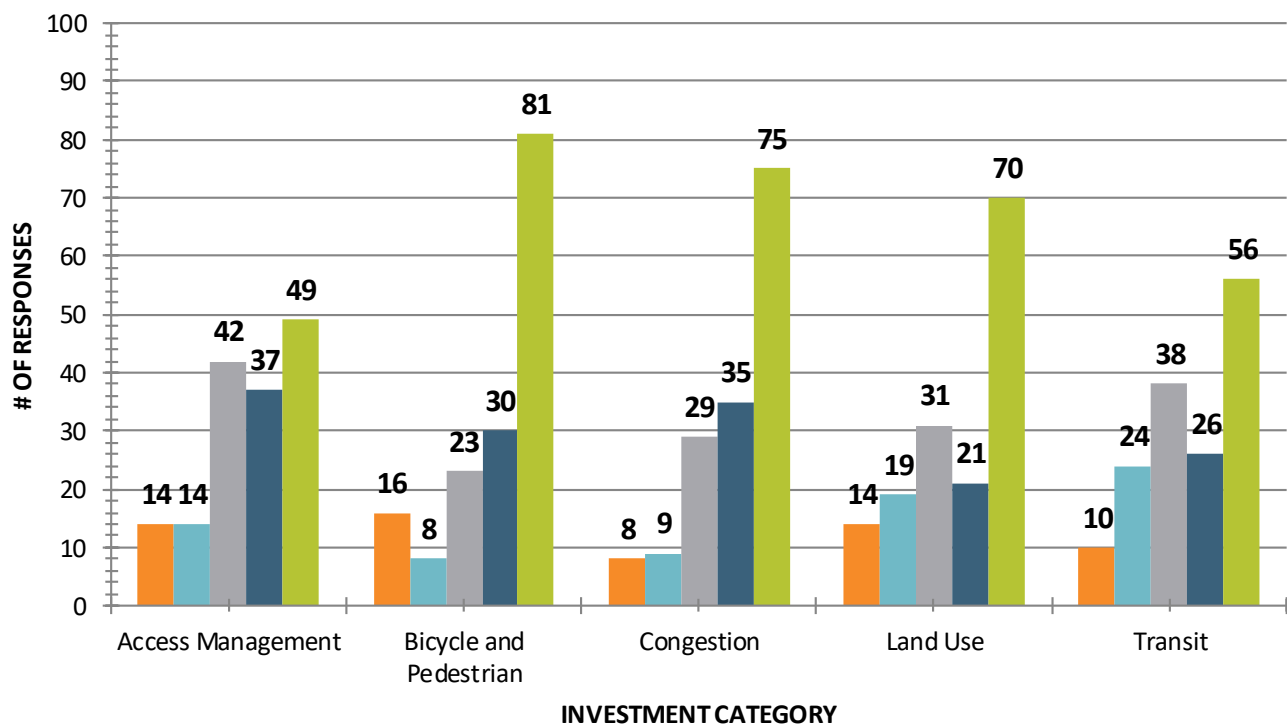
Investment Strategies

For each segment, survey respondents were asked to rank various investment strategies from 1 to 5 stars with 1 being lowest and 5 being highest. For Segment 1 the total count of each strategies' rating is shown in the figure below. The table below shows the total number of times each strategy was ranked and the average rank.

Segment 1 – Investment Strategy Ranking Summary

Investment Strategy	Number of Time Ranked	Average Rank
Access Management	158	3.589
Bicycle and Pedestrian	160	3.956
Congestion	158	4.032
Land Use	157	3.726
Transit	156	3.603

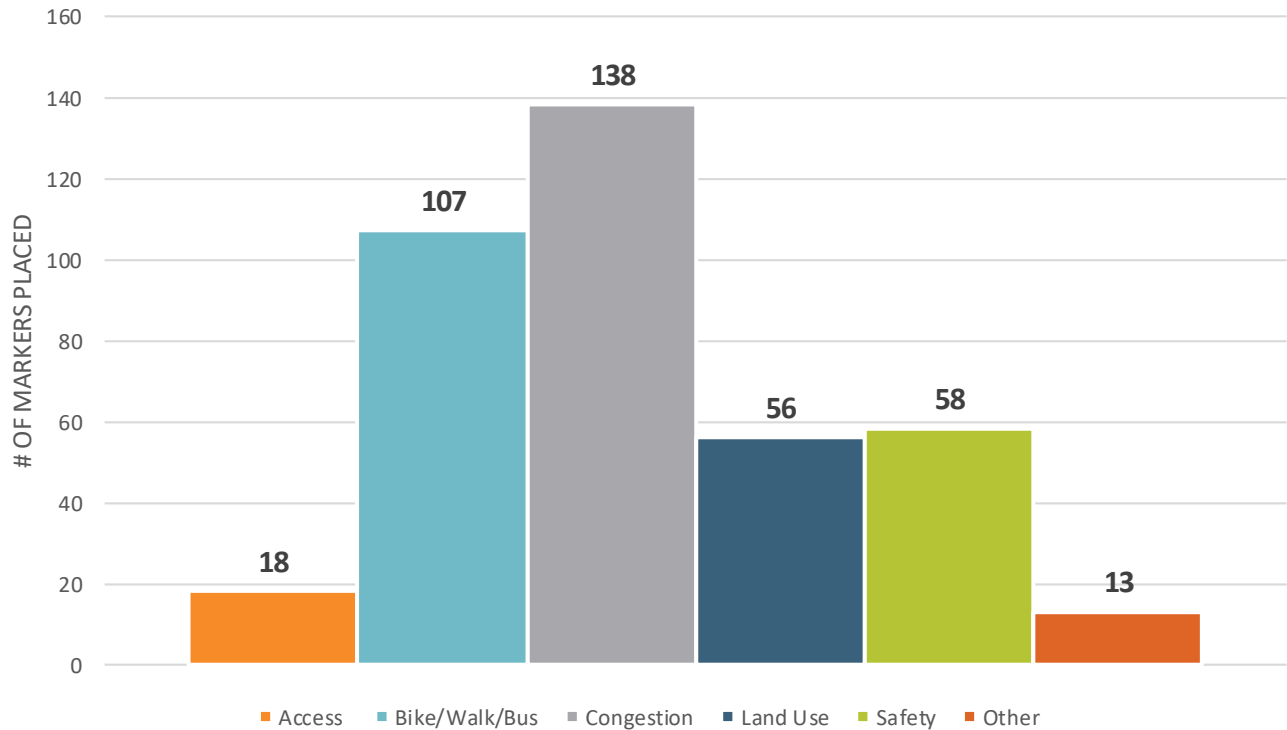
Segment 1 – Investment Strategies



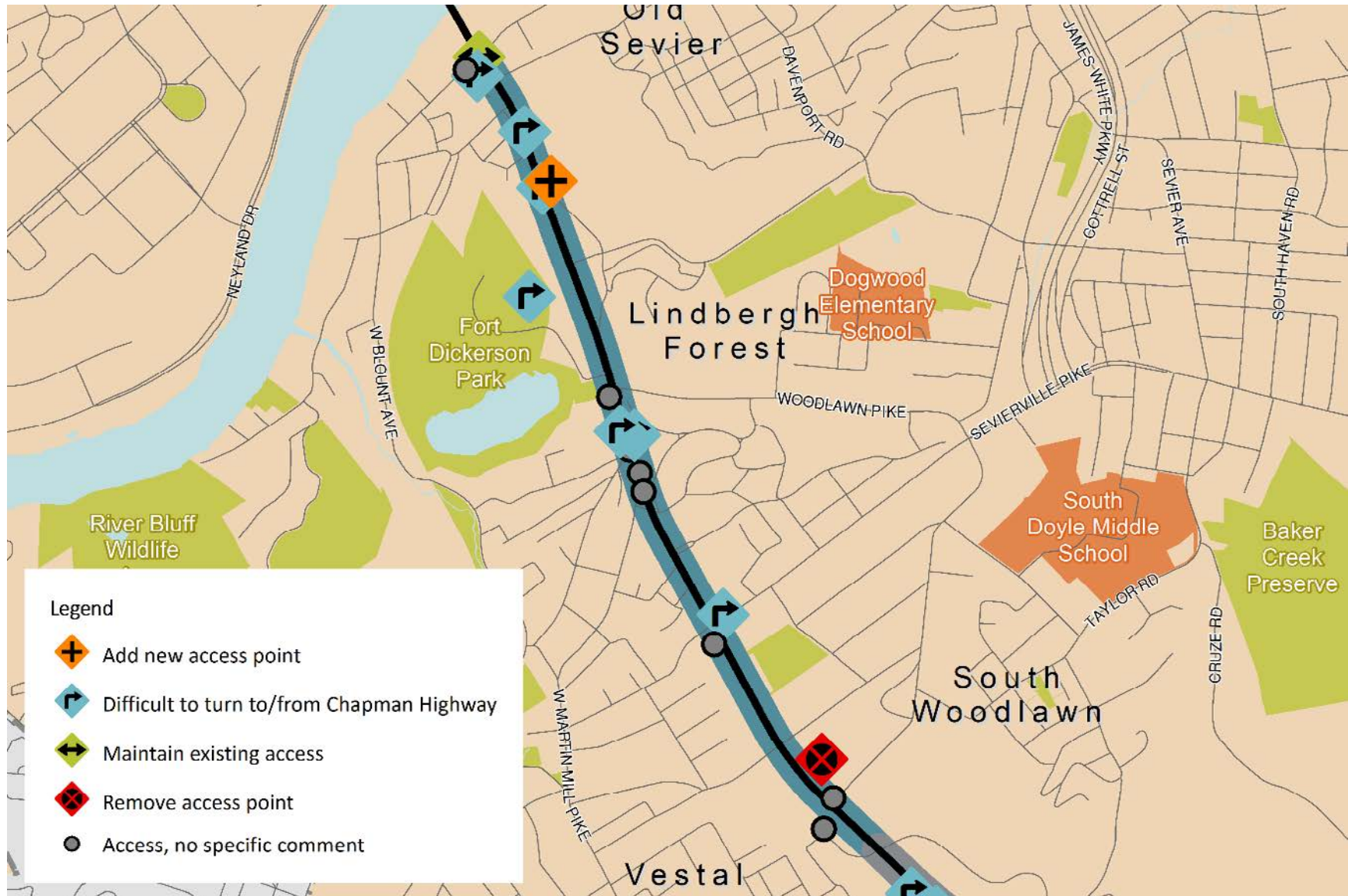
Map Markers

Segment 1, from Blount Avenue to Fronda Lane, accounted for 44% of all map markers placed in the mapping exercise. The most popular marker type was congestion, followed by bike/walk/bus. The chart below shows the full breakdown of marker types placed. The pages that follow outline where markers were placed along segment 1. All comments are provided as an appendix to this document.

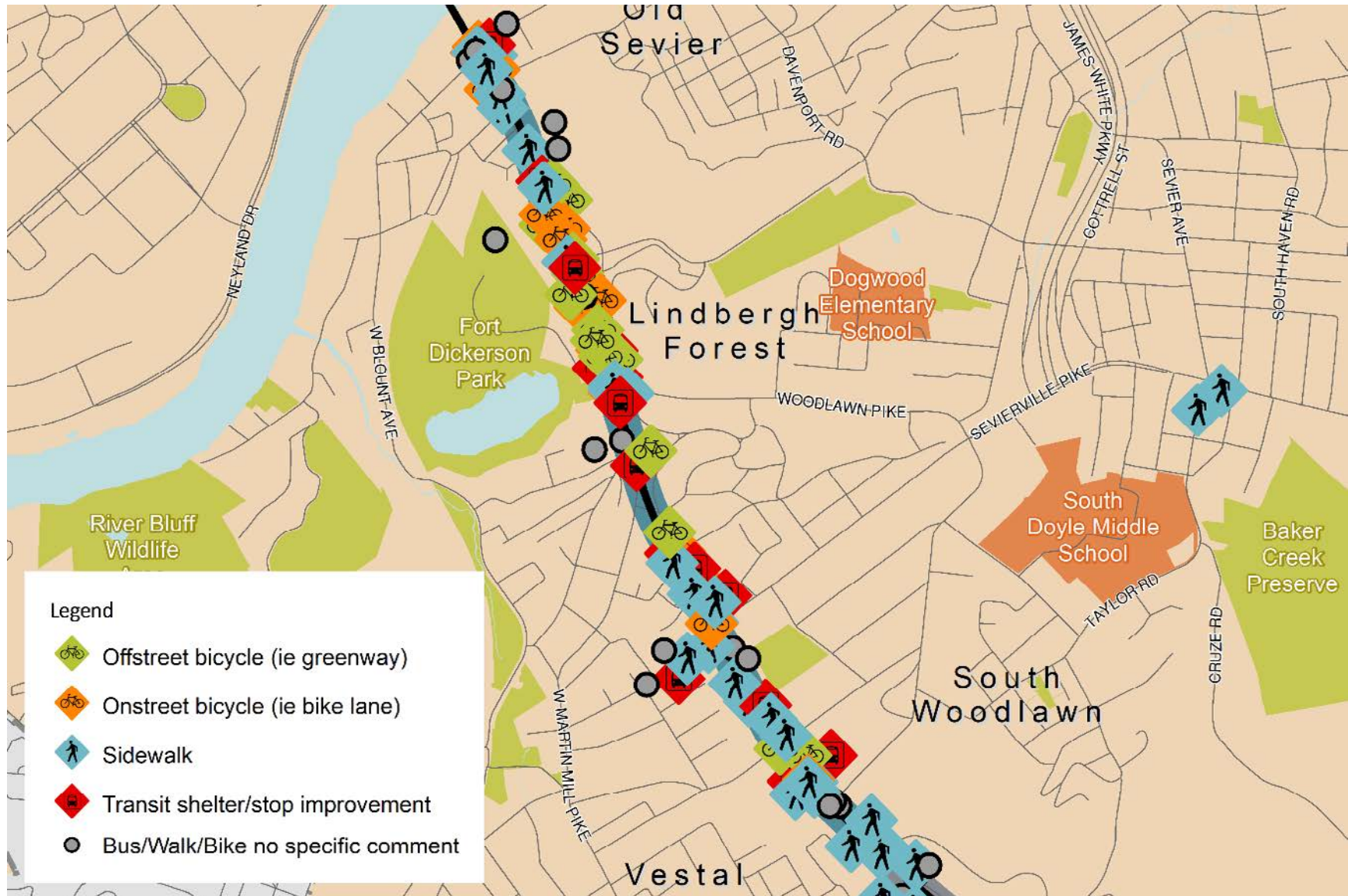
Count of Marker Types Placed Along Segment 1



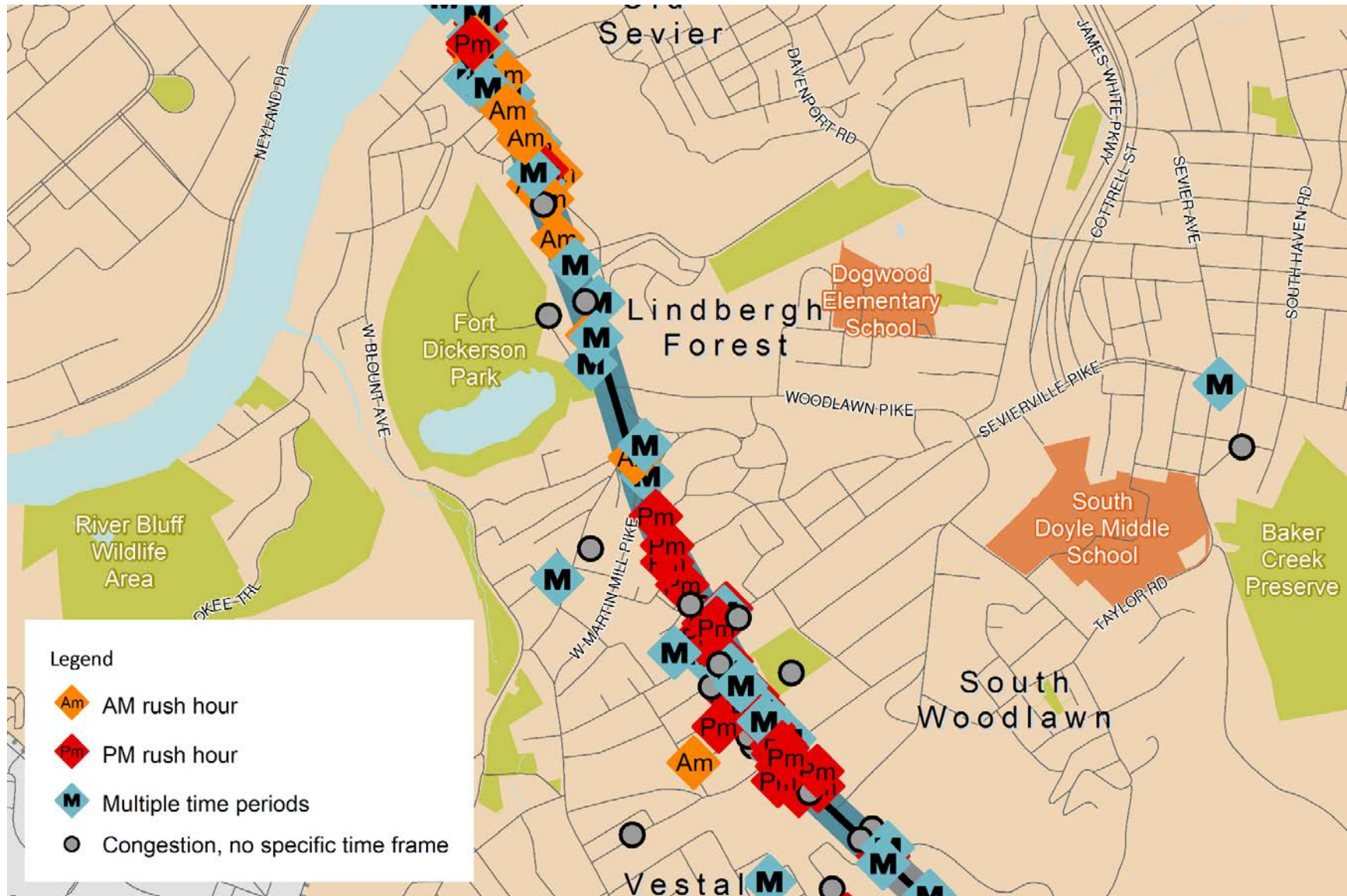
Segment 1 - Access Map Markers and Comments



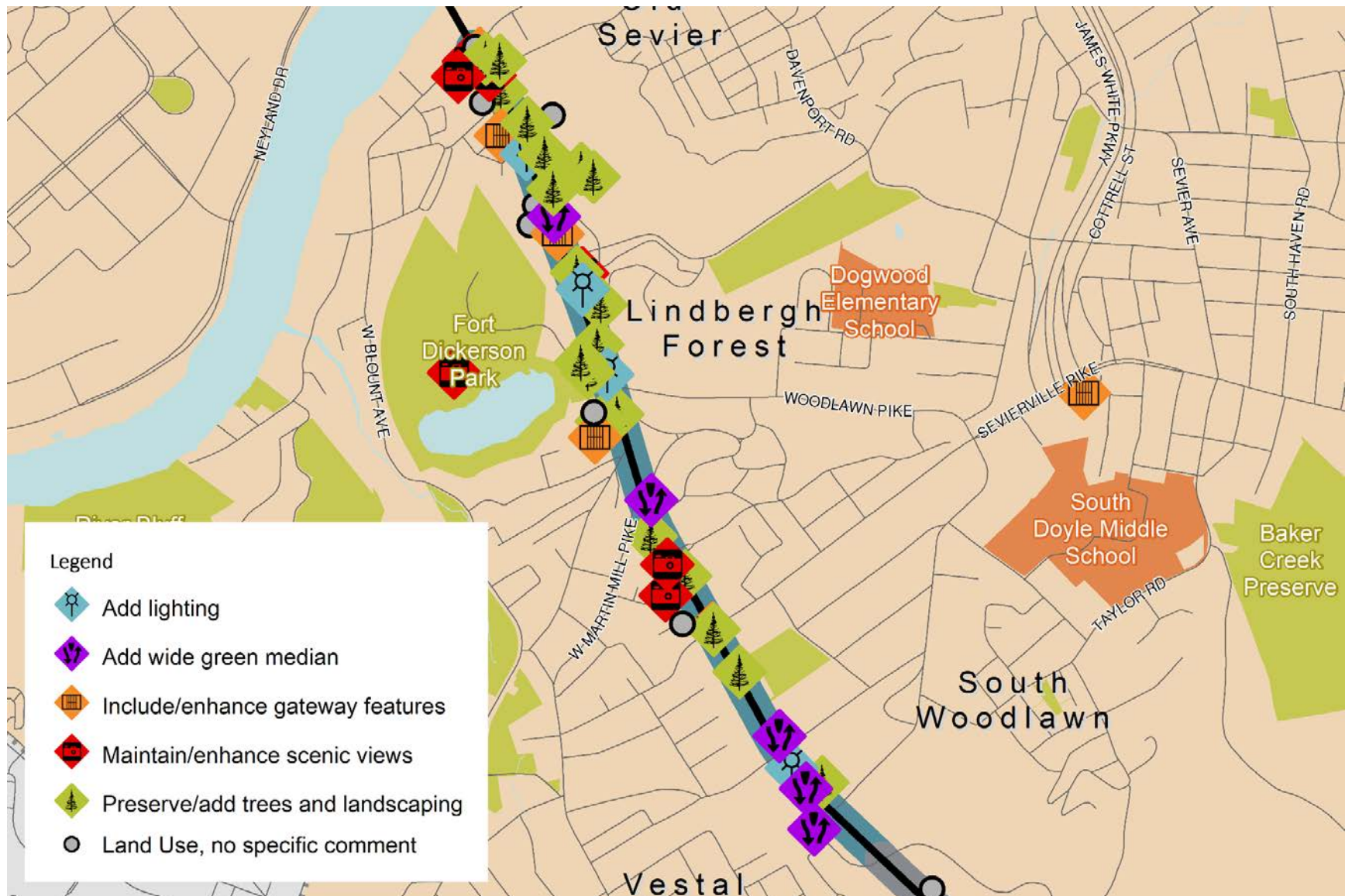
Segment 1 – Bike/Walk/Bus Map Markers and Comments



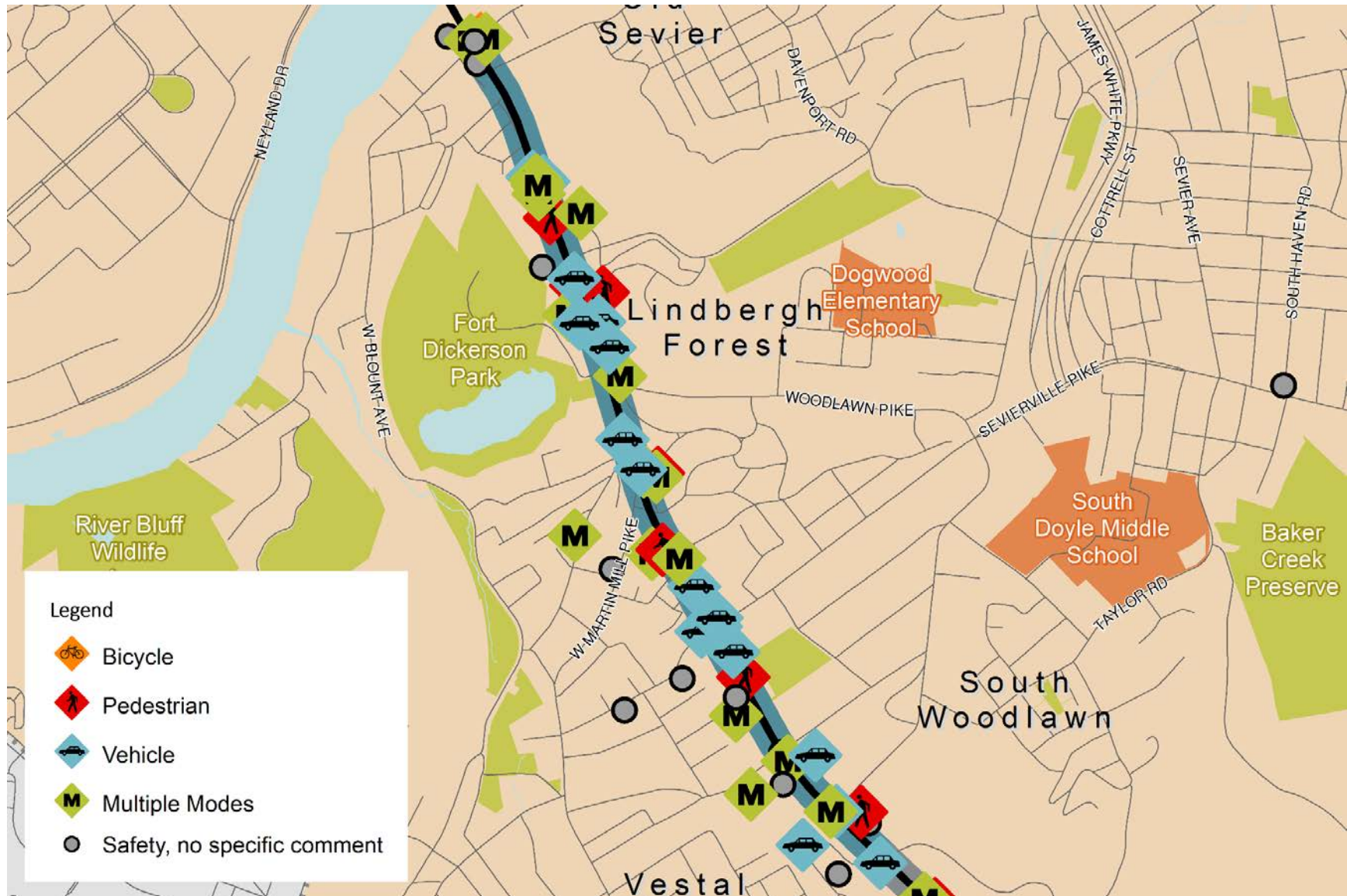
Segment 1 –Congestion Map Markers and Comments



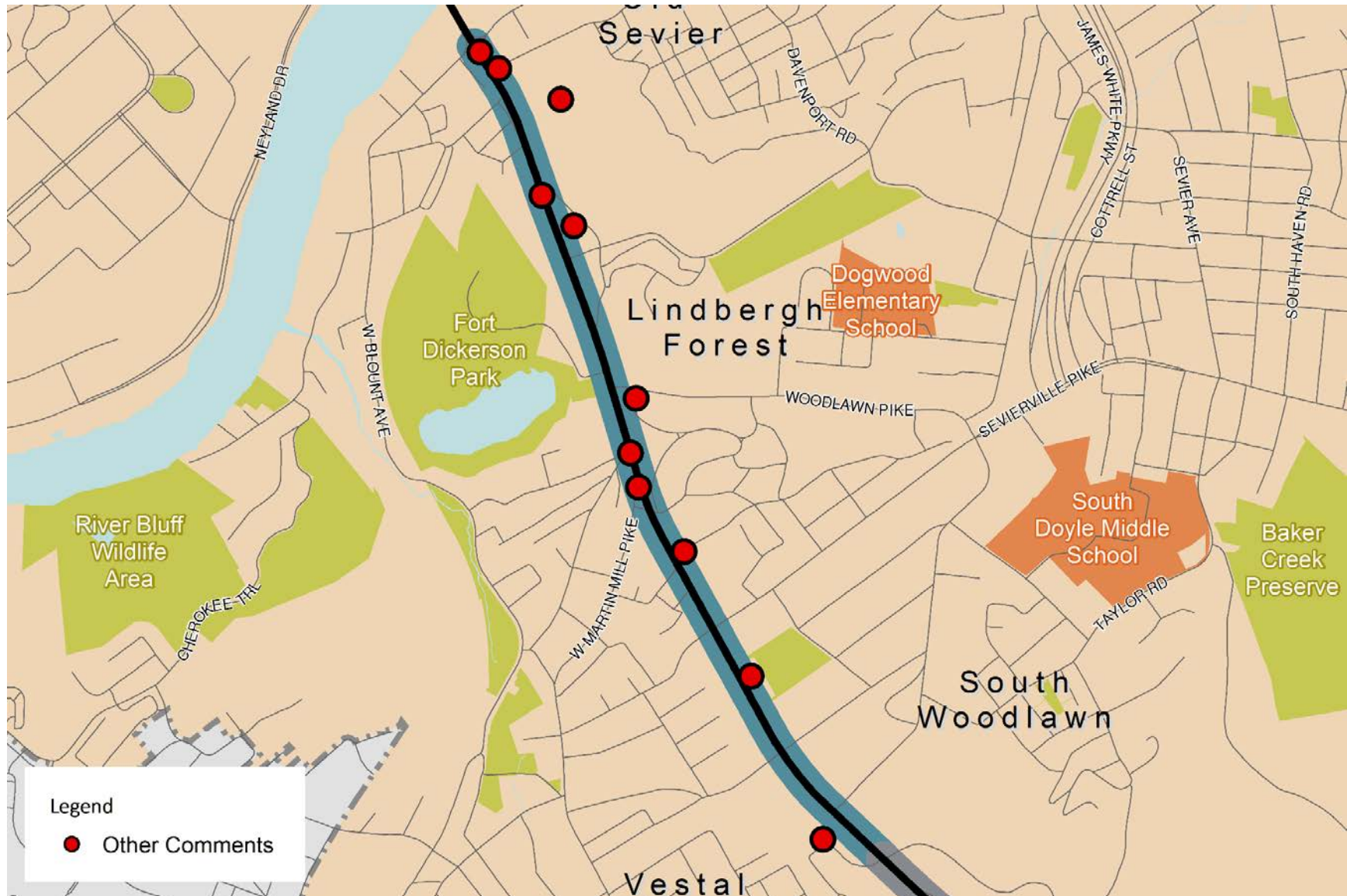
Segment 1 –Land Use Map Markers and Comments



Segment 1 – Safety Map Markers and Comments



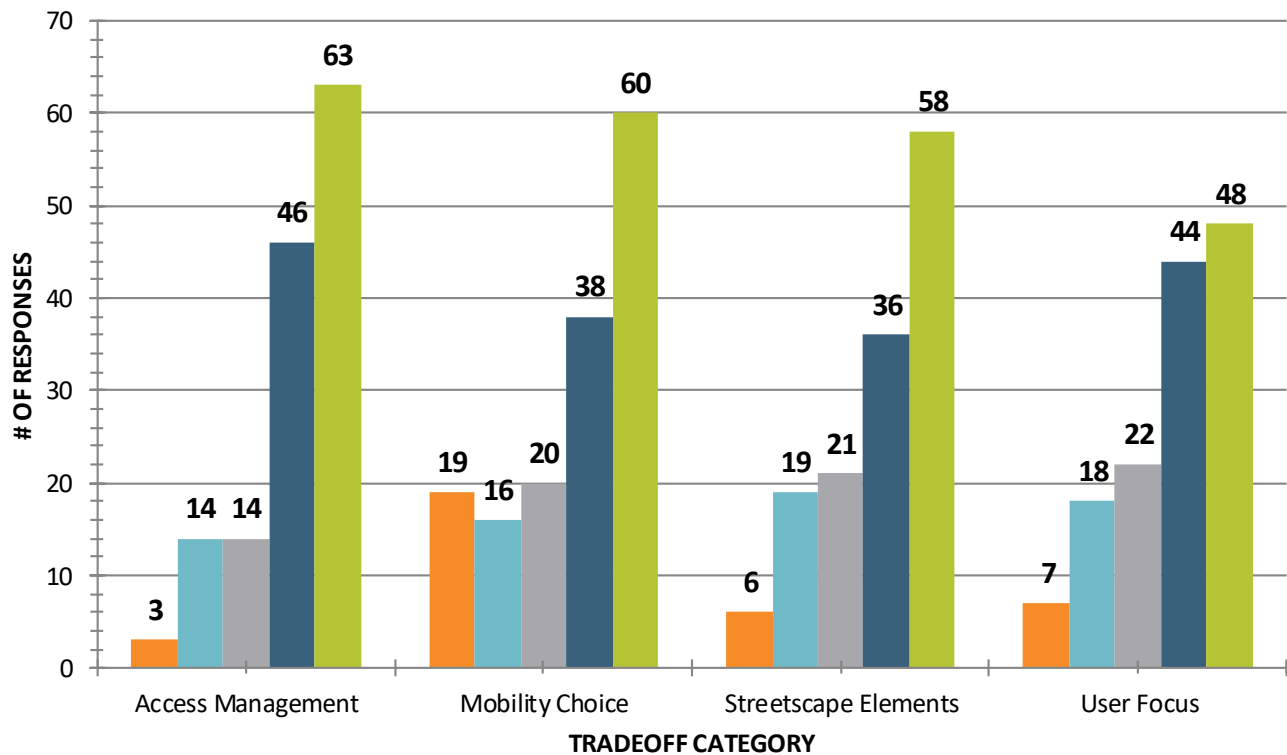
Segment 1 – Other Map Markers and Comments



SEGMENT 2: FRONDA LANE TO LAKEVIEW DRIVE

Tradeoffs

For each segment, survey respondents were asked to consider tradeoffs associated with user focus, streetscape, mobility choices, and access management. This activity helped participants understand that tradeoffs are inevitable when considering transportation improvements. The figure below shows the results of this exercise for Segment 2. While not as stark as the skew of segment 1, the majority of participants strongly favor high access management, mobility choice, and streetscape elements, with a more moderate focus on local users.



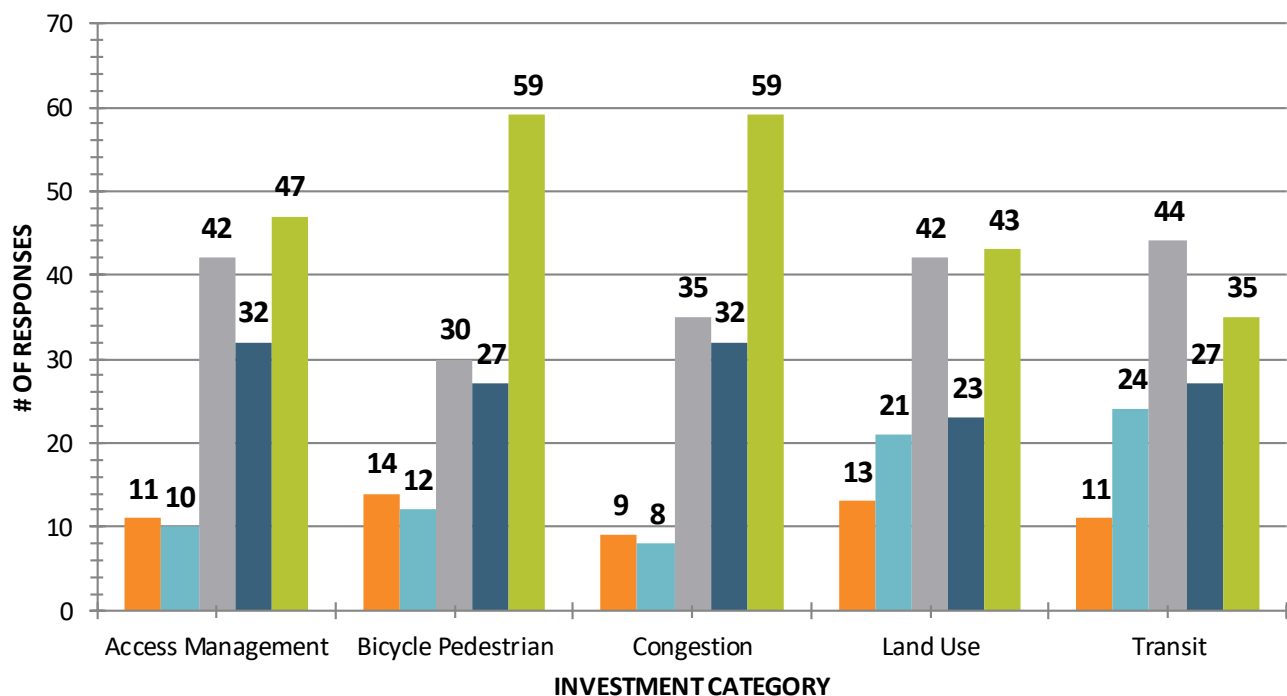
Investment Strategies

For each segment, survey respondents were asked to rank various investment strategies from 1 to 5 stars with 1 being lowest and 5 being highest. For Segment 2 the total count of each strategies' rating is shown in the figure below. The table below shows the total number of times each strategy was ranked and the average rank.

Segment 2 – Investment Strategy Ranking Summary

Investment Strategy	Number of Time Ranked	Average Rank
Access Management	143	3.357
Bicycle and Pedestrian	144	3.736
Congestion	145	3.883
Land Use	144	3.431
Transit	143	3.357

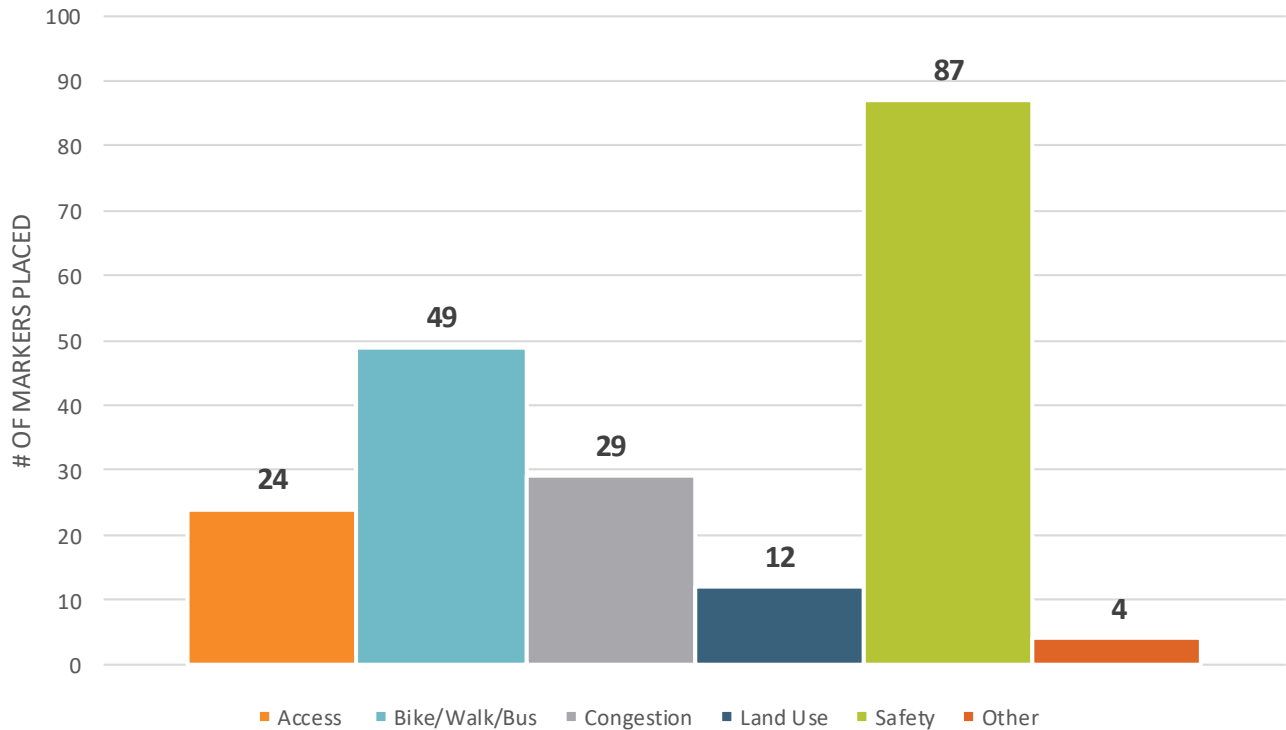
Segment 2 – Investment Strategies



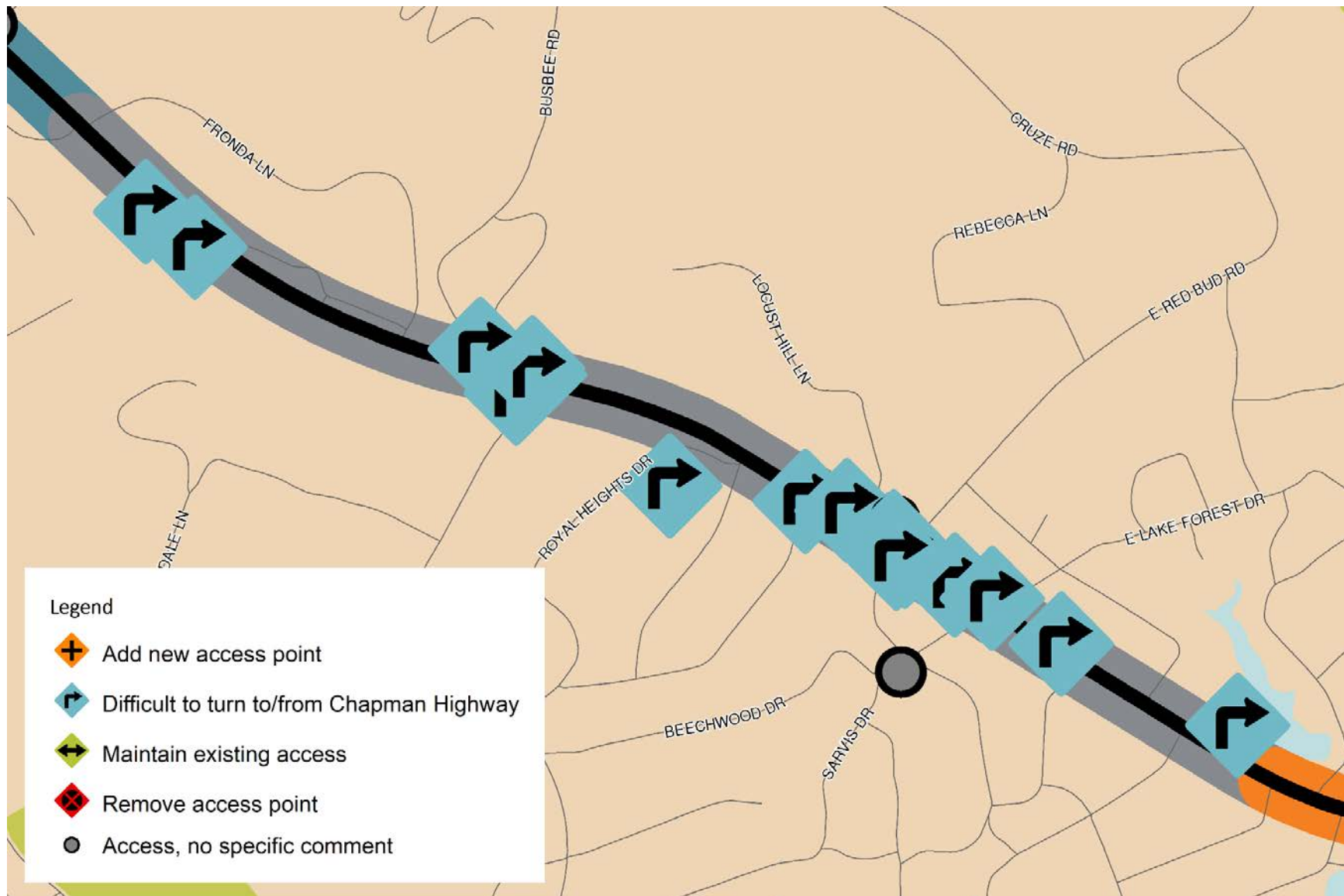
Map Markers

Segment 2, from Fronda Lane to Lakeview Drive, accounted for 23% of all map markers placed in the mapping exercise. The most popular marker type was safety, followed by bike/walk/bus. The chart below shows the full breakdown of marker types placed. The pages that follow outline where markers were placed along segment 1. All comments are provided as an appendix to this document.

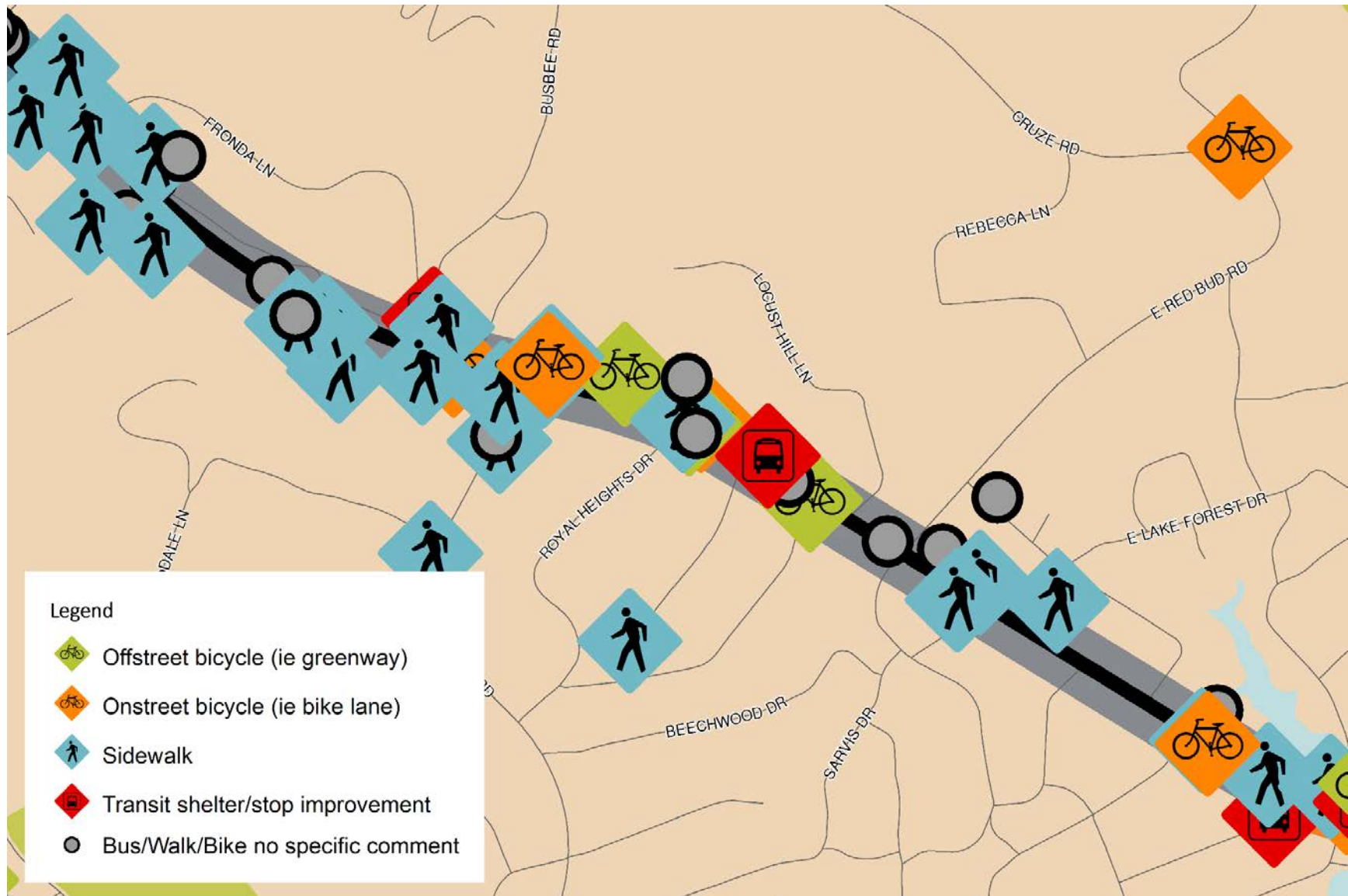
Count of Marker Types Placed Along Segment 2



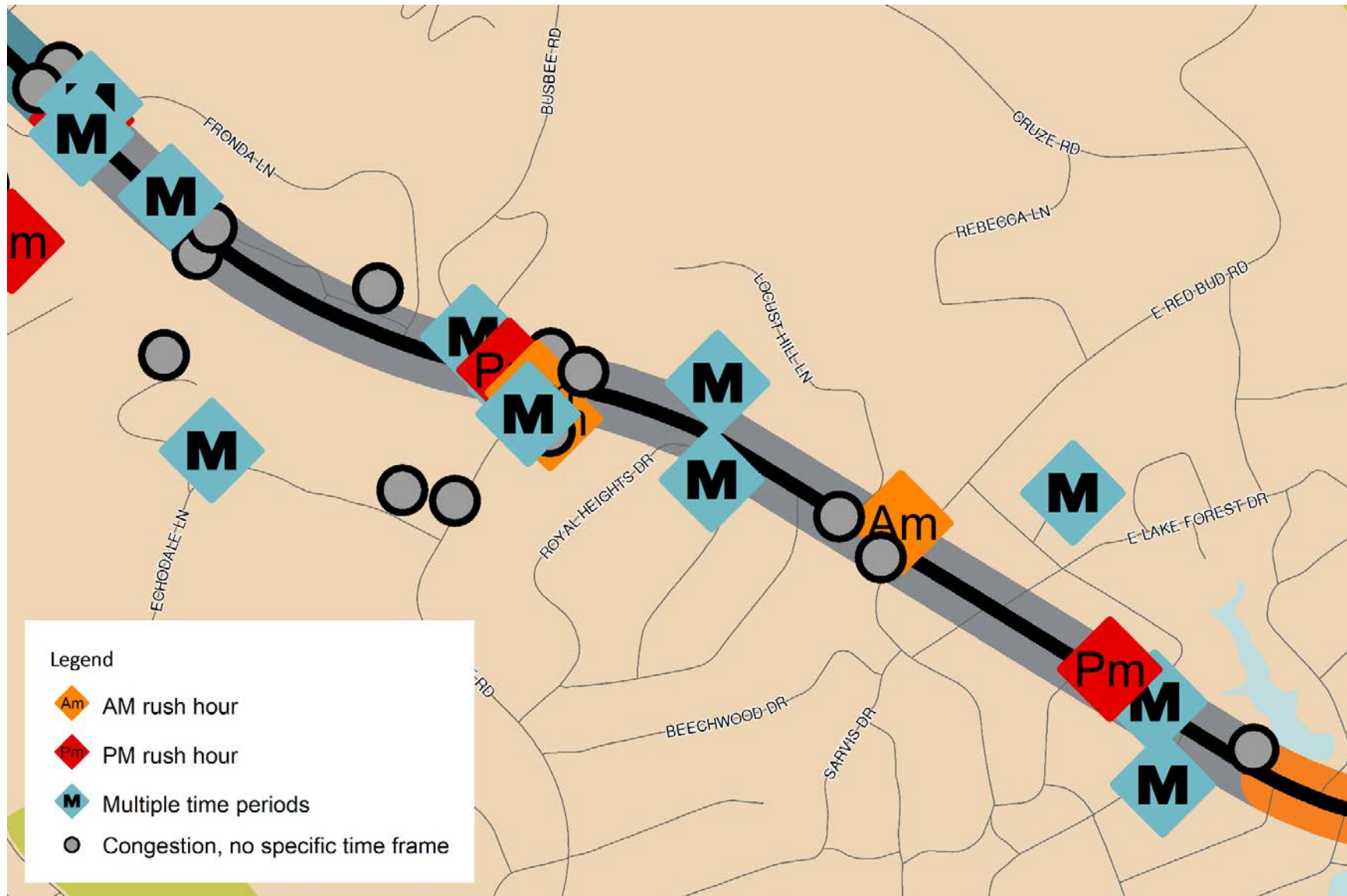
Segment 2 - Access Map Markers and Comments



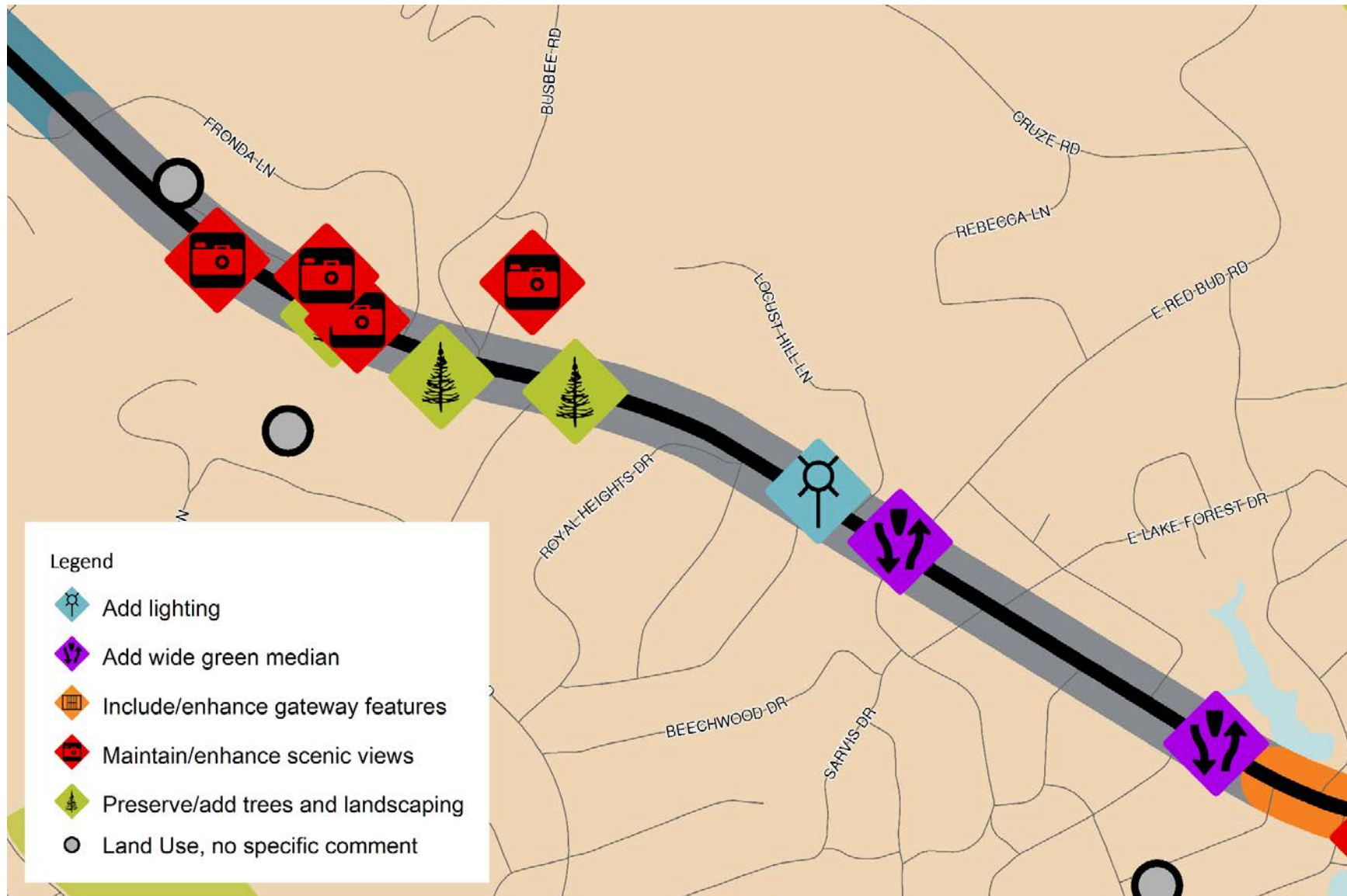
Segment 2 – Bike/Walk/Bus Map Markers and Comments



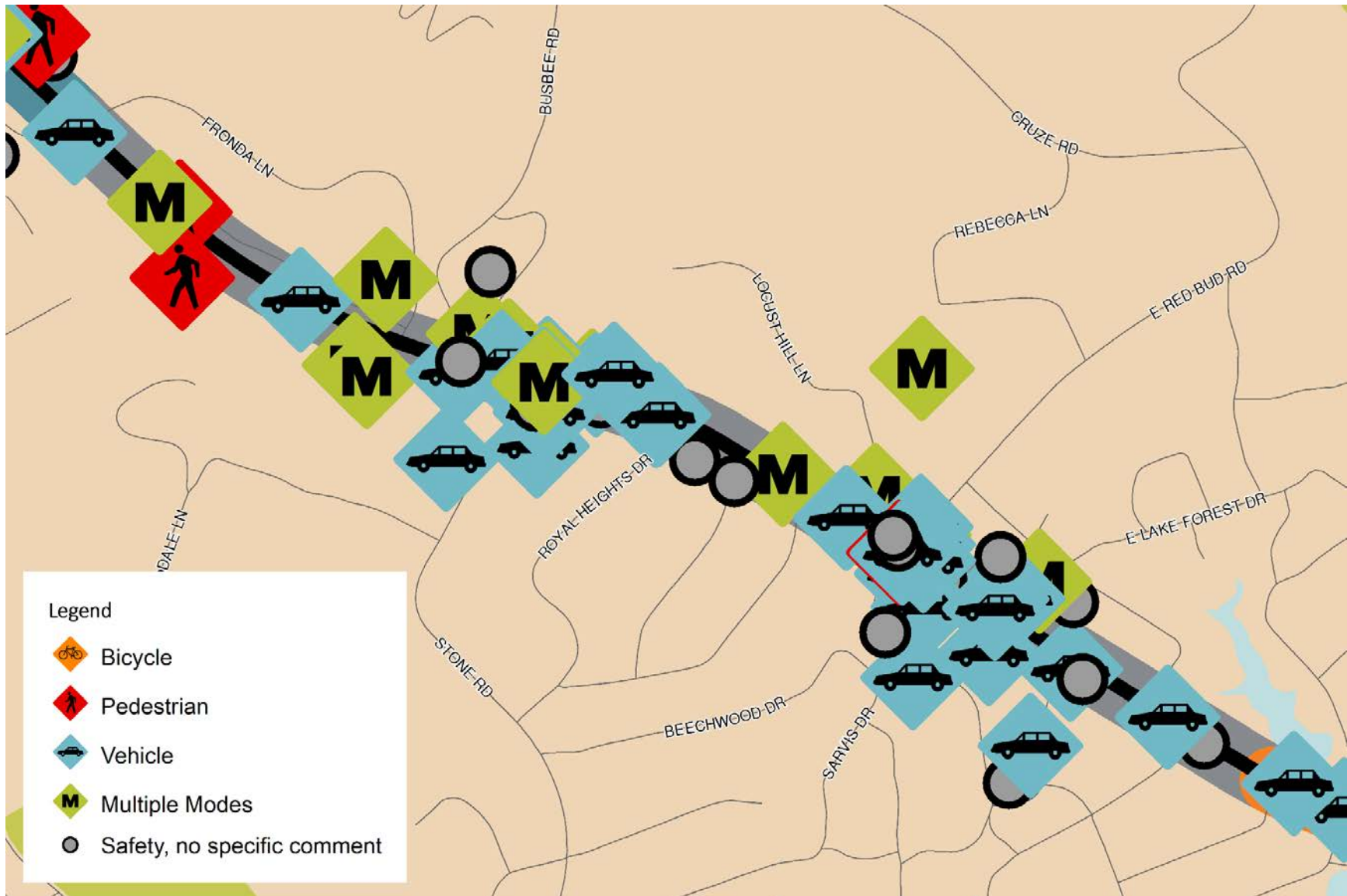
Segment 2 –Congestion Map Markers and Comments



Segment 2—Land Use Map Markers and Comments



Segment 2 –Safety Map Markers and Comments



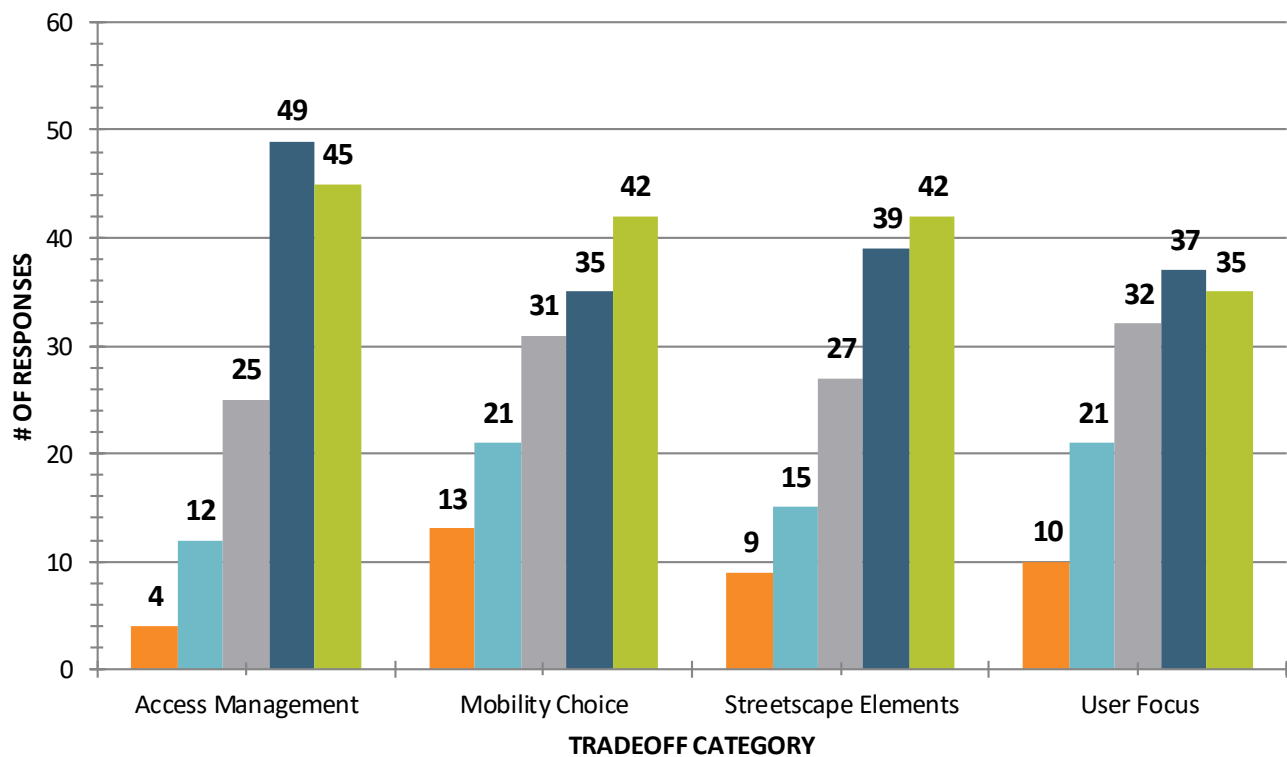
Segment 2 – Other Map Markers and Comments



SEGMENT 3: LAKEVIEW DRIVE TO CHAPMAN FORD CROSSING

Tradeoffs

For each segment, survey respondents were asked to consider tradeoffs associated with user focus, streetscape, mobility choices, and access management. This activity helped participants understand that tradeoffs are inevitable when considering transportation improvements. The figure below shows the results of this exercise for Segment 3.



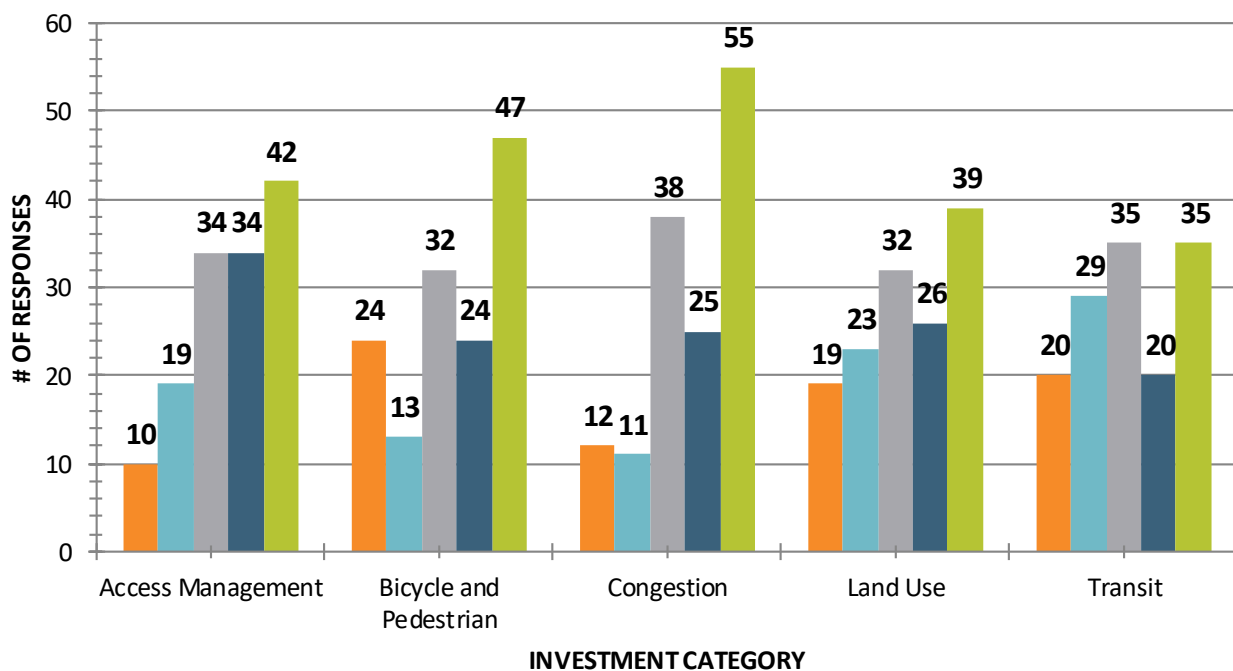
Investment Strategies

For each segment, survey respondents were asked to rank various investment strategies from 1 to 5 stars with 1 being lowest and 5 being highest. For Segment 3 the total count of each strategies' rating is shown in the figure below. The table below shows the total number of times each strategy was ranked and the average rank.

Segment 3 – Investment Strategy Ranking Summary

Investment Strategy	Number of Time Ranked	Average Rank
Access Management	140	3.550
Bicycle and Pedestrian	141	3.397
Congestion	142	3.718
Land Use	140	3.293
Transit	140	3.136

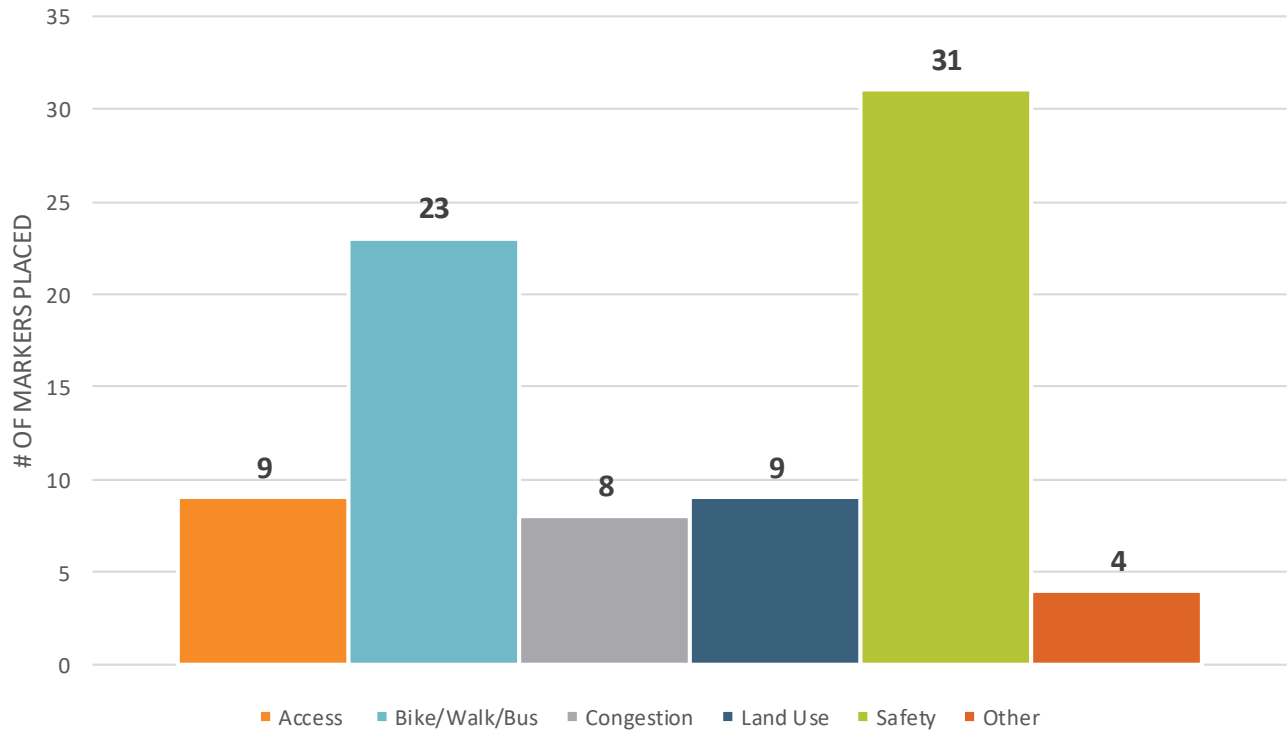
Segment 3 – Investment Strategies



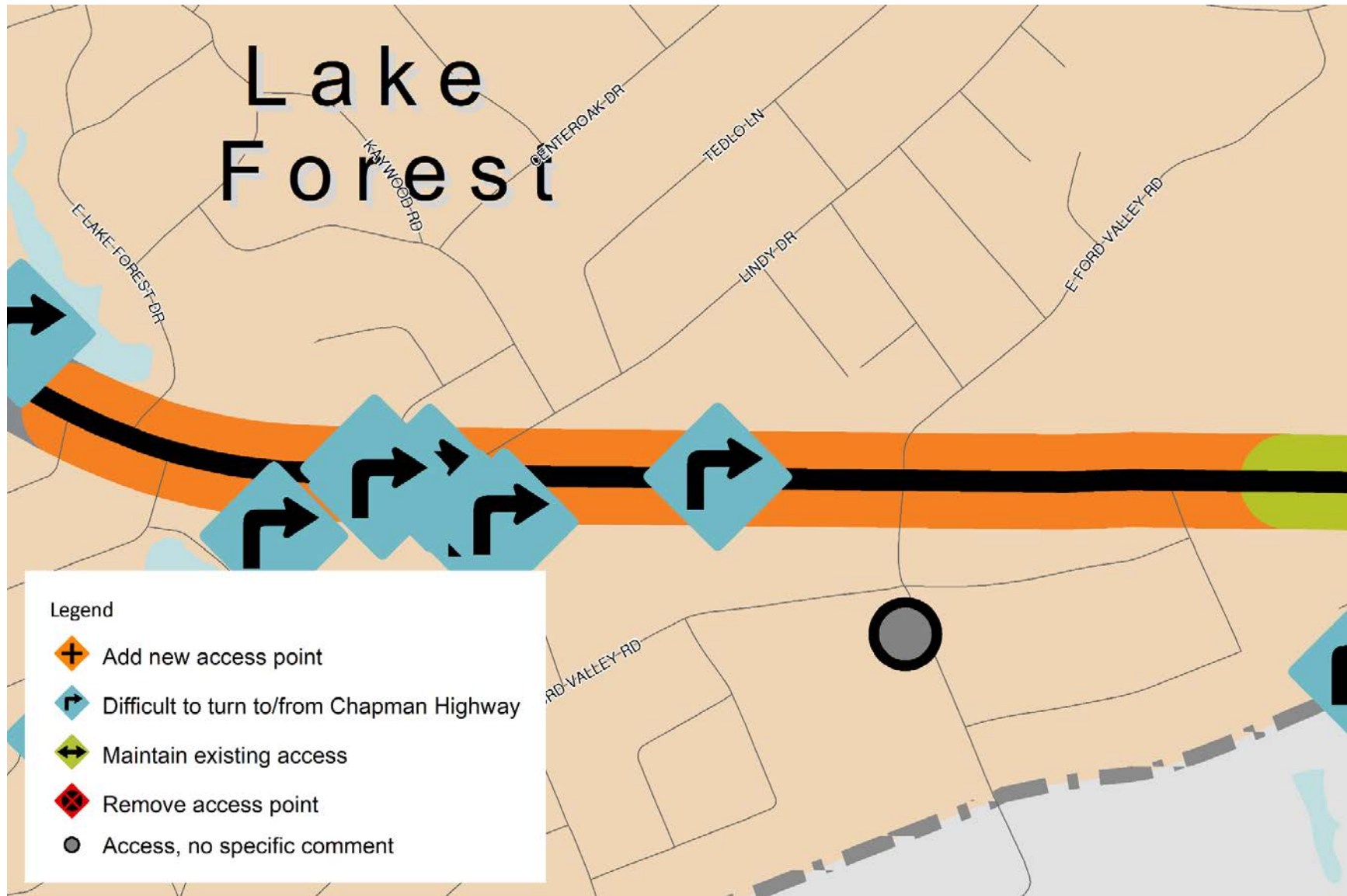
Map Markers

Segment 3, from Lakeview Drive to Chapman Ford Crossing, accounted for 9% of map markers placed in the mapping exercise. The most popular marker types were safety and bike/walk/bus. The chart below shows the full breakdown of marker types placed. The pages that follow outline where markers were placed along segment 3. All comments are provided as an appendix to this document.

Count of Marker Types Placed Along Segment 3



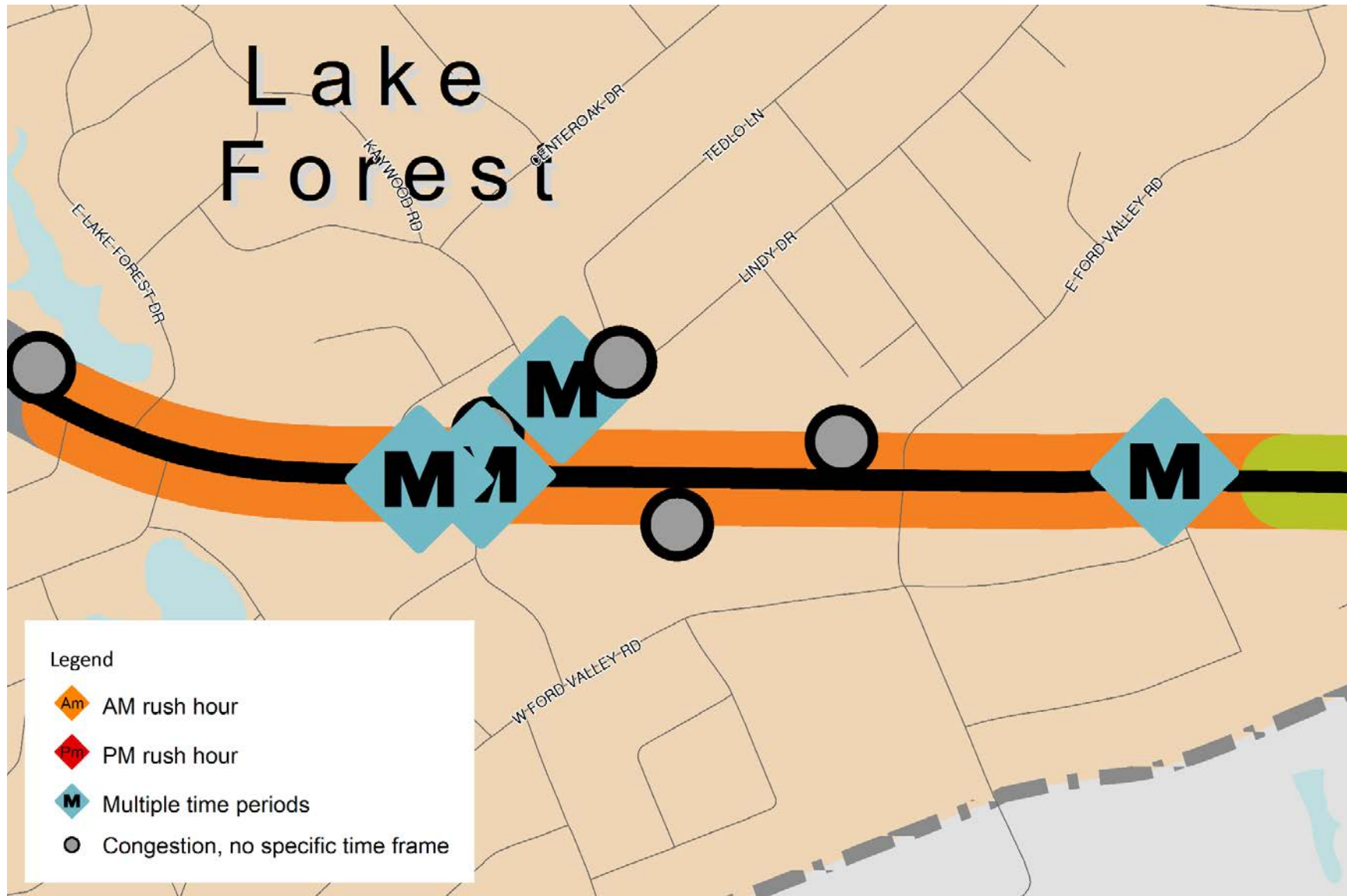
Segment 3 - Access Map Markers and Comments



Segment 3 – Bike/Walk/Bus Map Markers and Comments



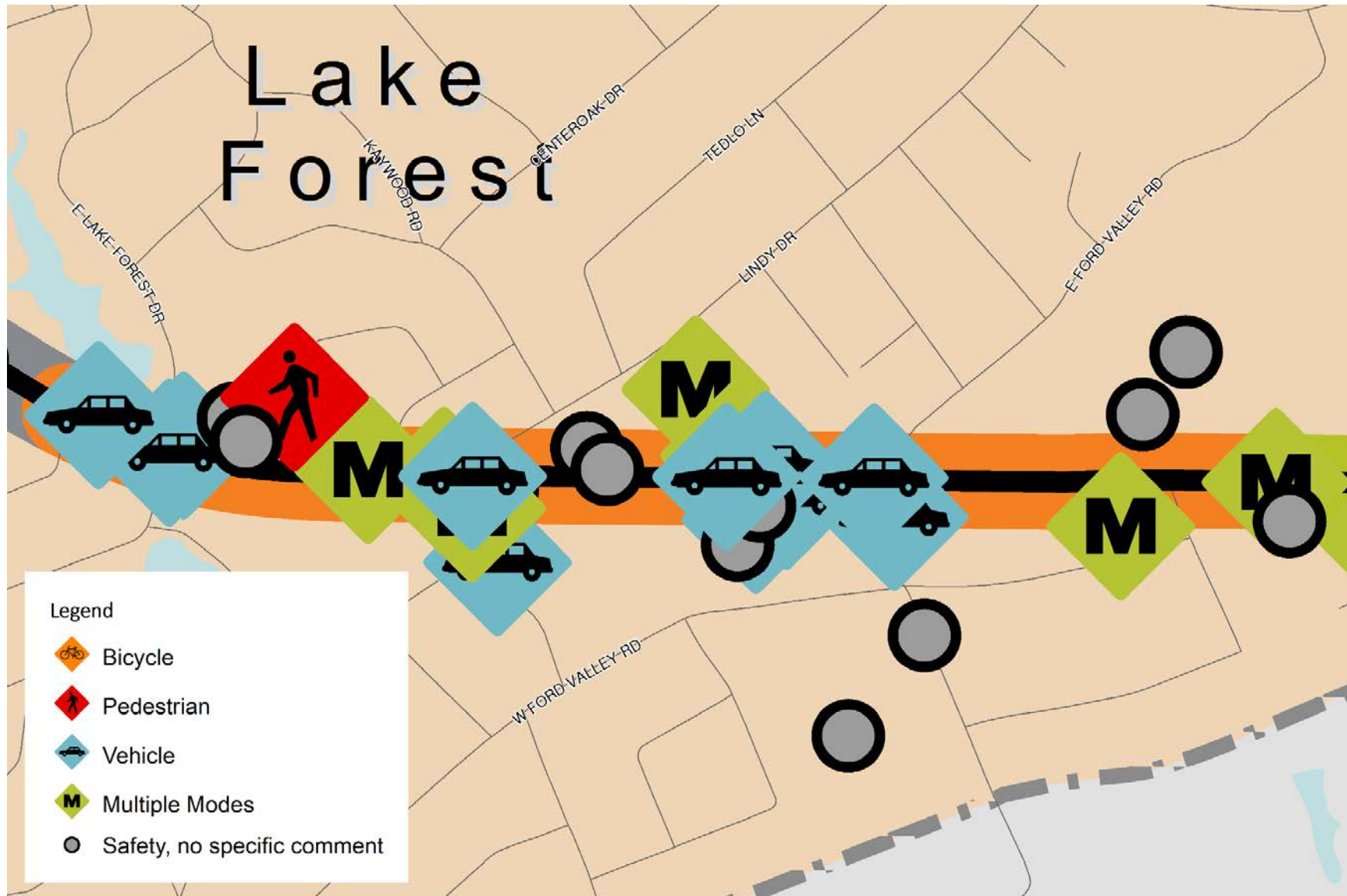
Segment 3—Congestion Map Markers and Comments



Segment 3—Land Use Map Markers and Comments



Segment 3 – Safety Map Markers and Comments



Segment 3 – Other Map Markers and Comments

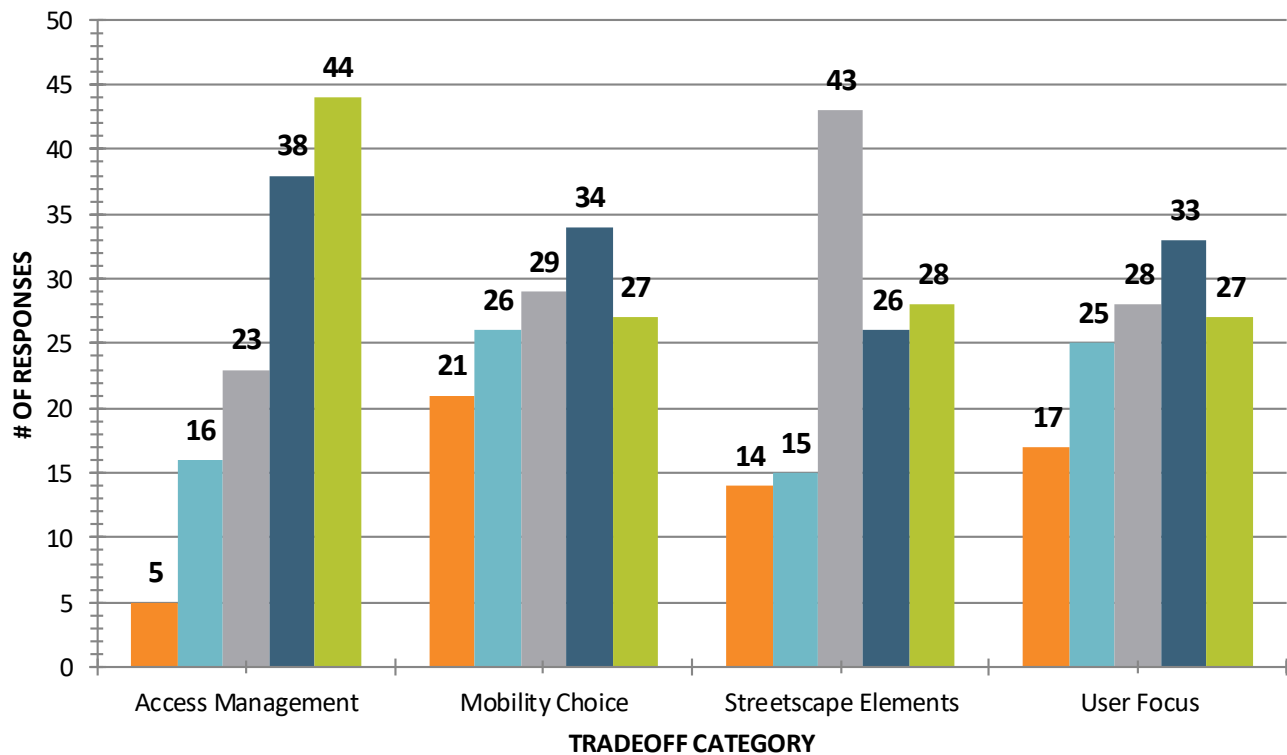


SEGMENT 4: CHAPMAN FORD CROSSING TO NIXON ROAD

Tradeoffs

For each segment, survey respondents were asked to consider tradeoffs associated with user focus, streetscape, mobility choices, and access management. This activity helped participants understand that tradeoffs are inevitable when considering transportation improvements. The figure below shows the results of this exercise for Segment 4.

Segment 4 – Tradeoffs Results by Category



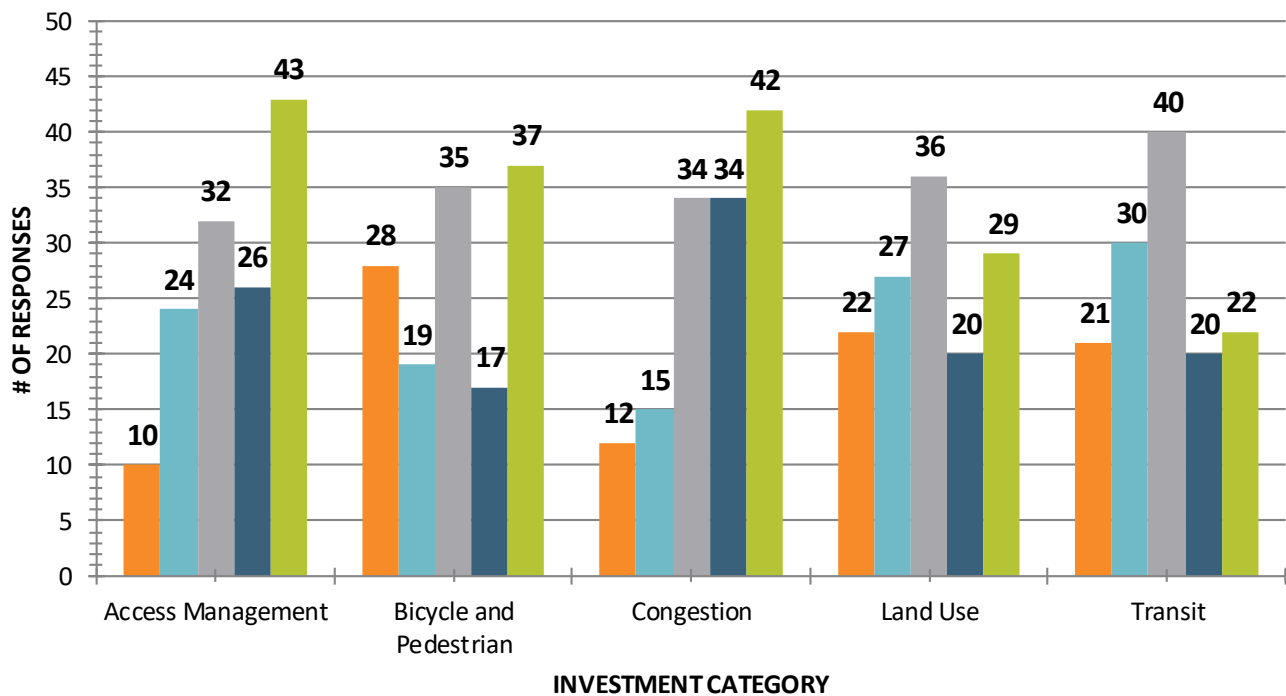
Investment Strategies

For each segment, survey respondents were asked to rank various investment strategies from 1 to 5 stars with 1 being lowest and 5 being highest. For Segment 1 the total count of each strategies' rating is shown in the figure below. The table below shows the total number of times each strategy was ranked and the average rank.

Segment 4 – Investment Strategy Ranking Summary

Investment Strategy	Number of Time Ranked	Average Rank
Access Management	136	3.485
Bicycle and Pedestrian	137	3.109
Congestion	138	3.587
Land Use	135	3.037
Transit	134	2.925

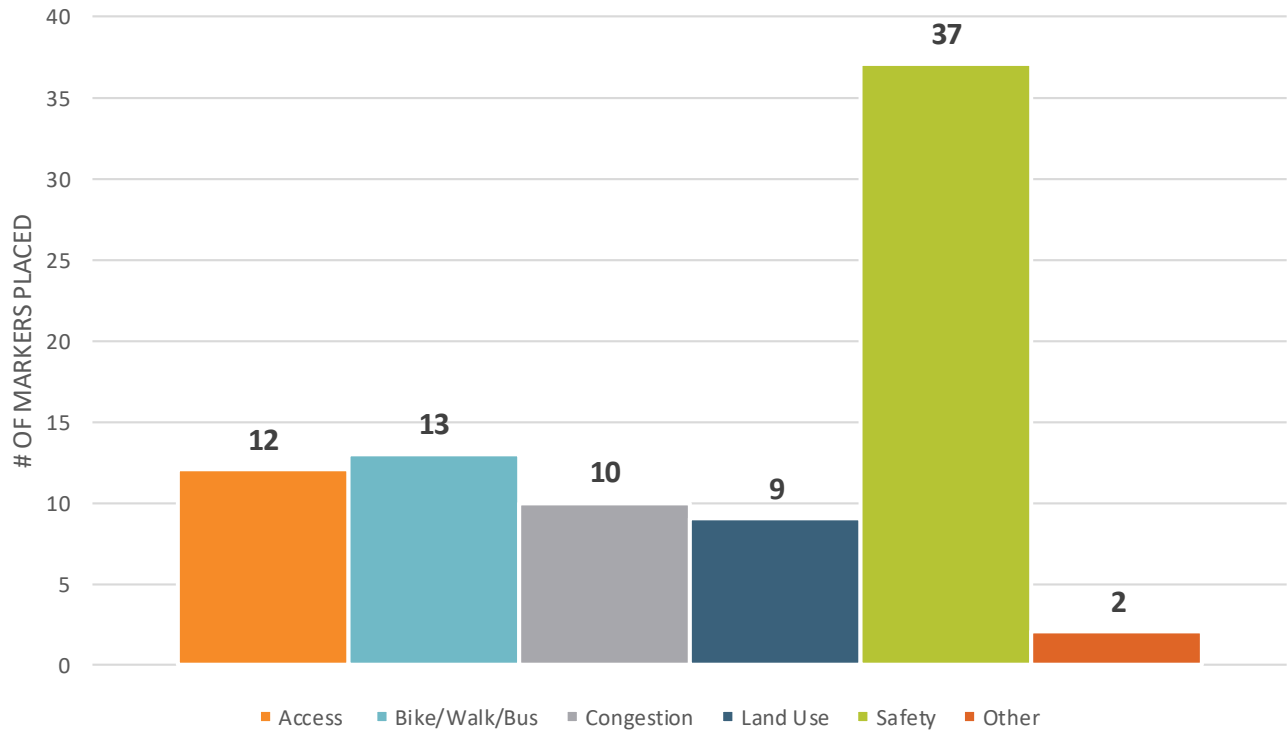
Segment 4 – Investment Strategies



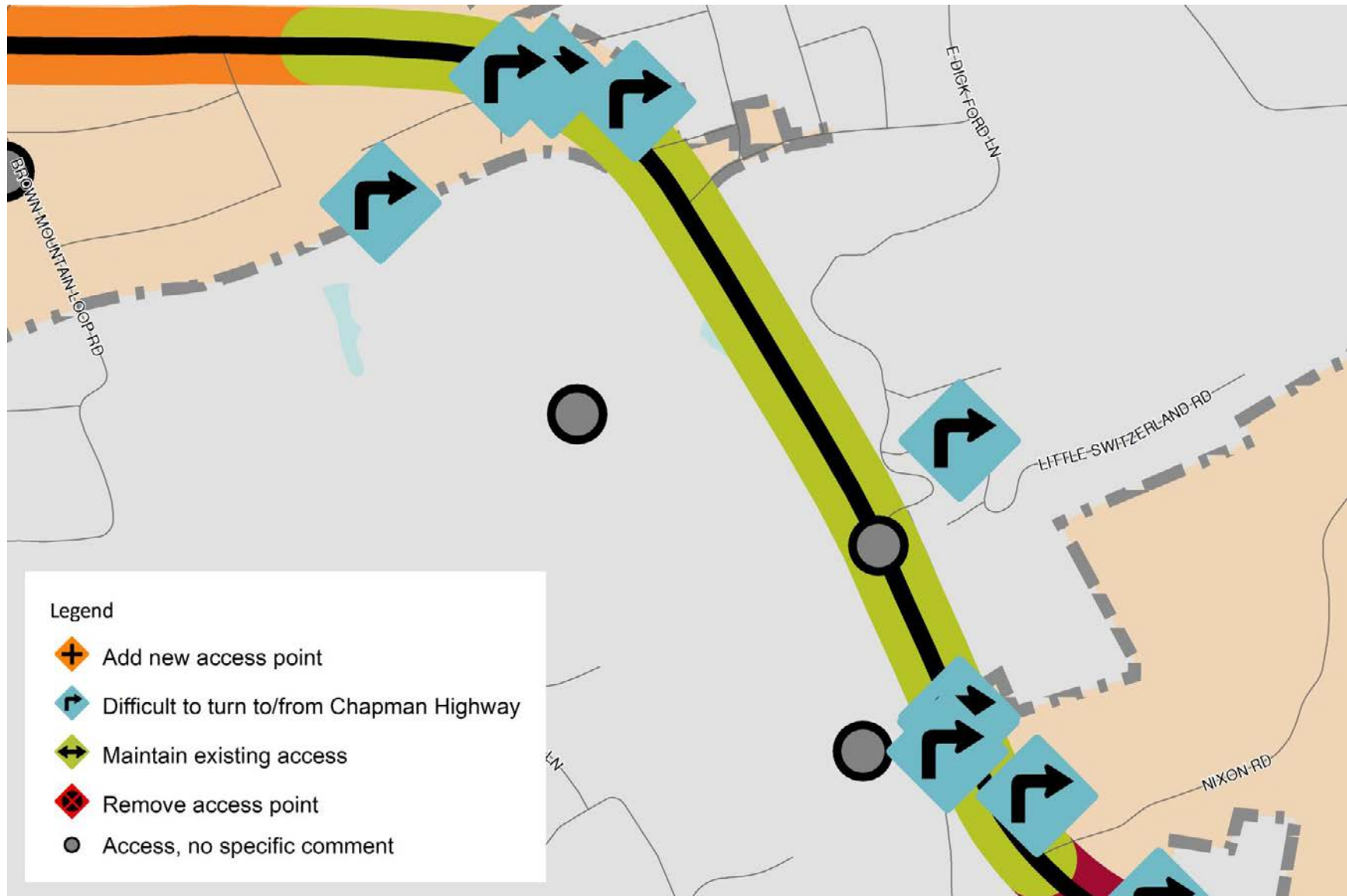
Map Markers

Segment 4, Chapman Ford Crossing to Nixon Road, accounted for 9% of all map markers placed in the mapping exercise. The most popular marker was safety, with all other categories being significantly lower. The chart below shows the full breakdown of marker types placed. The pages that follow outline where markers were placed along segment 4. All comments are provided as an appendix to this document.

Count of Marker Types Placed Along Segment 4



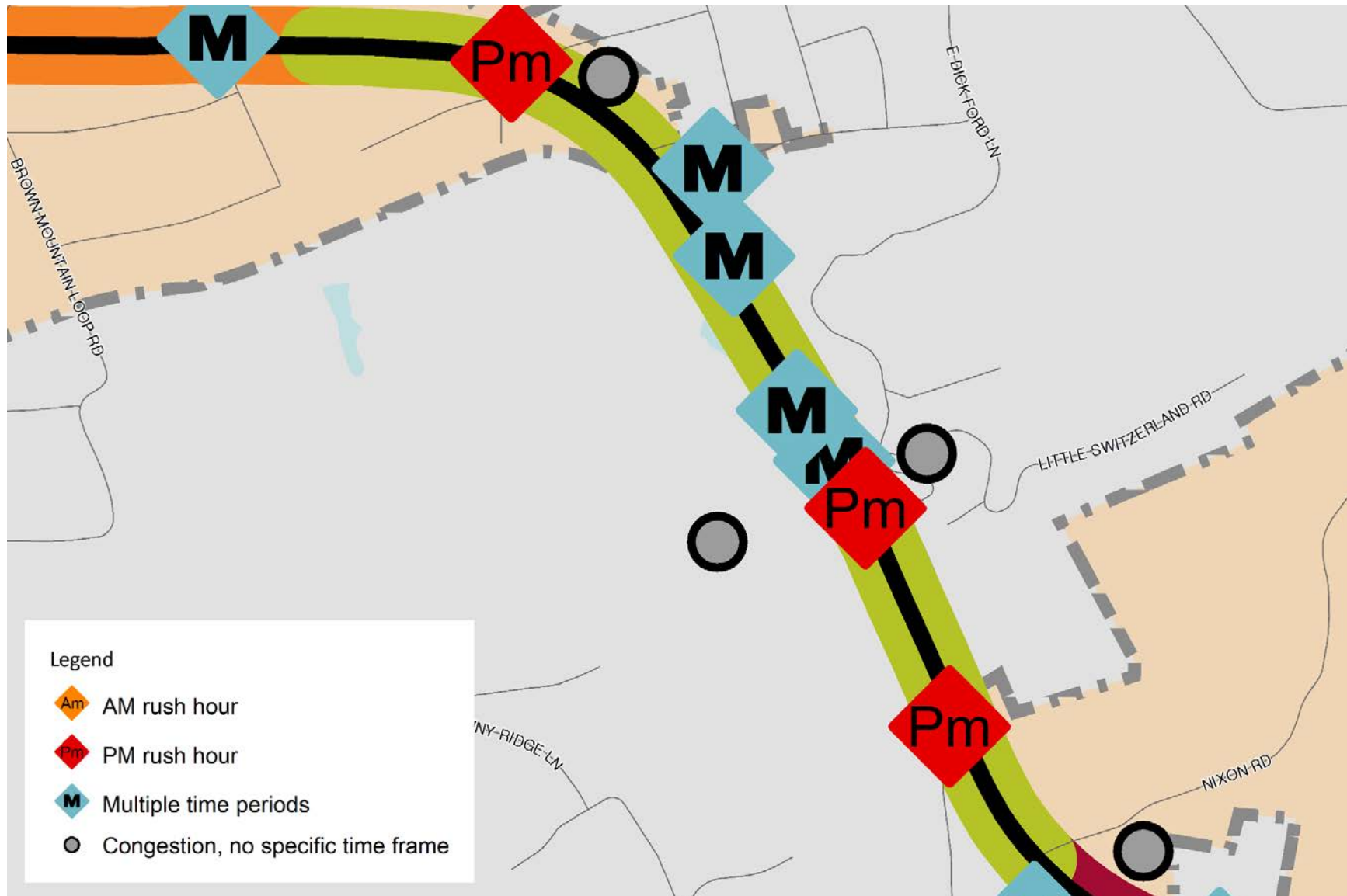
Segment 4 - Access Map Markers and Comments



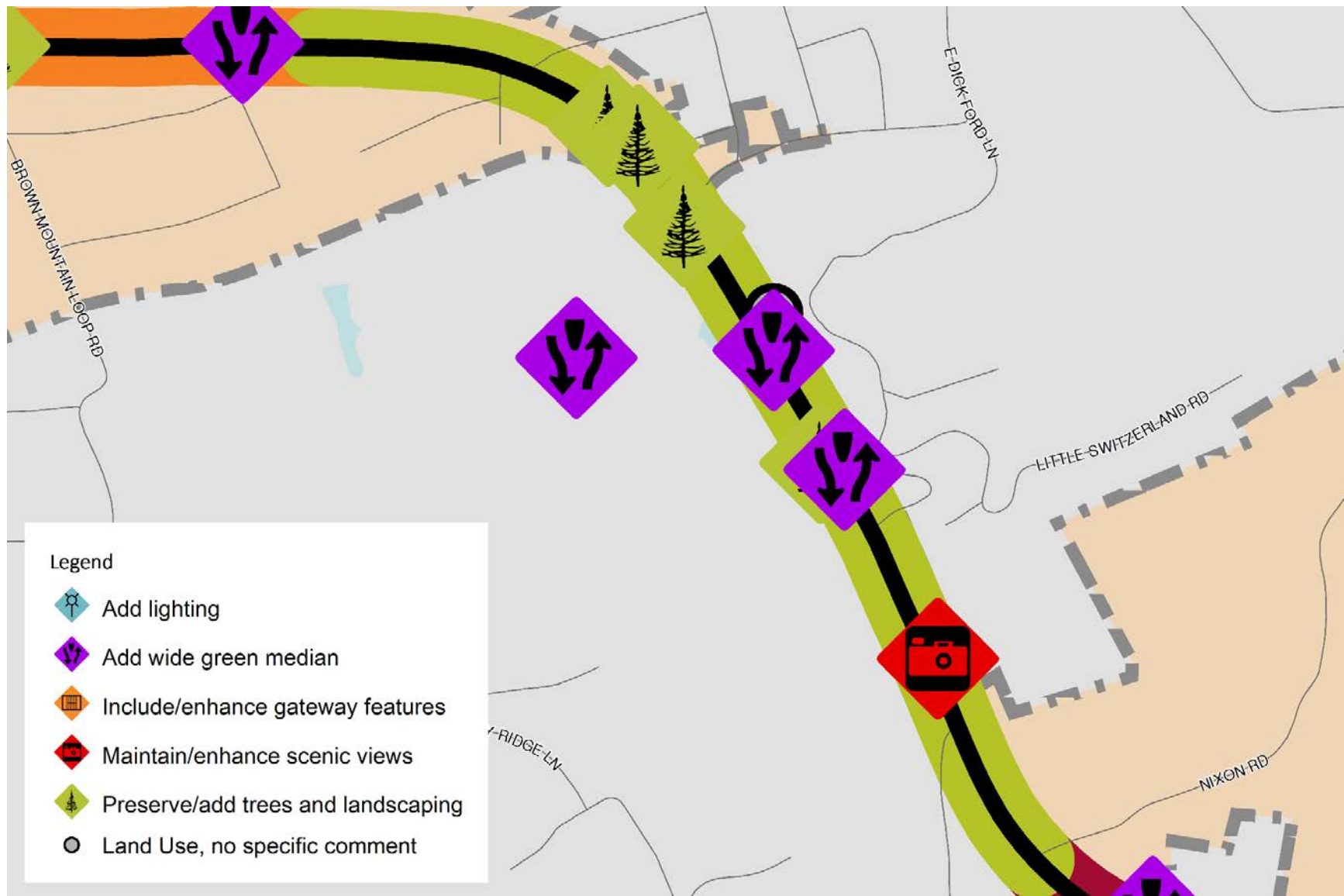
Segment 4 – Bike/Walk/Bus Map Markers and Comments



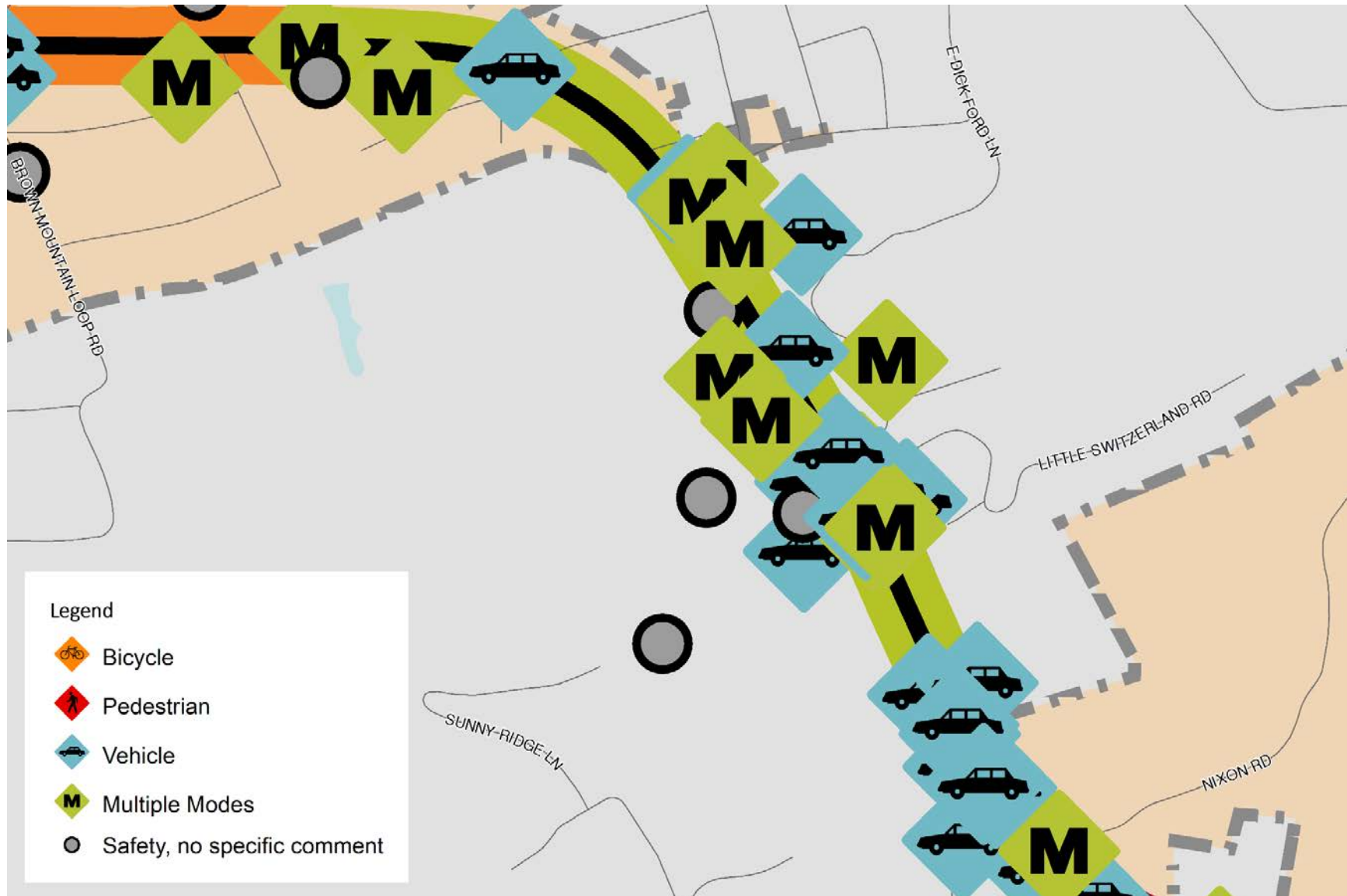
Segment 4—Congestion Map Markers and Comments



Segment 4—Land Use Map Markers and Comments



Segment 4 – Safety Map Markers and Comments



Segment 4 – Other Map Markers and Comments

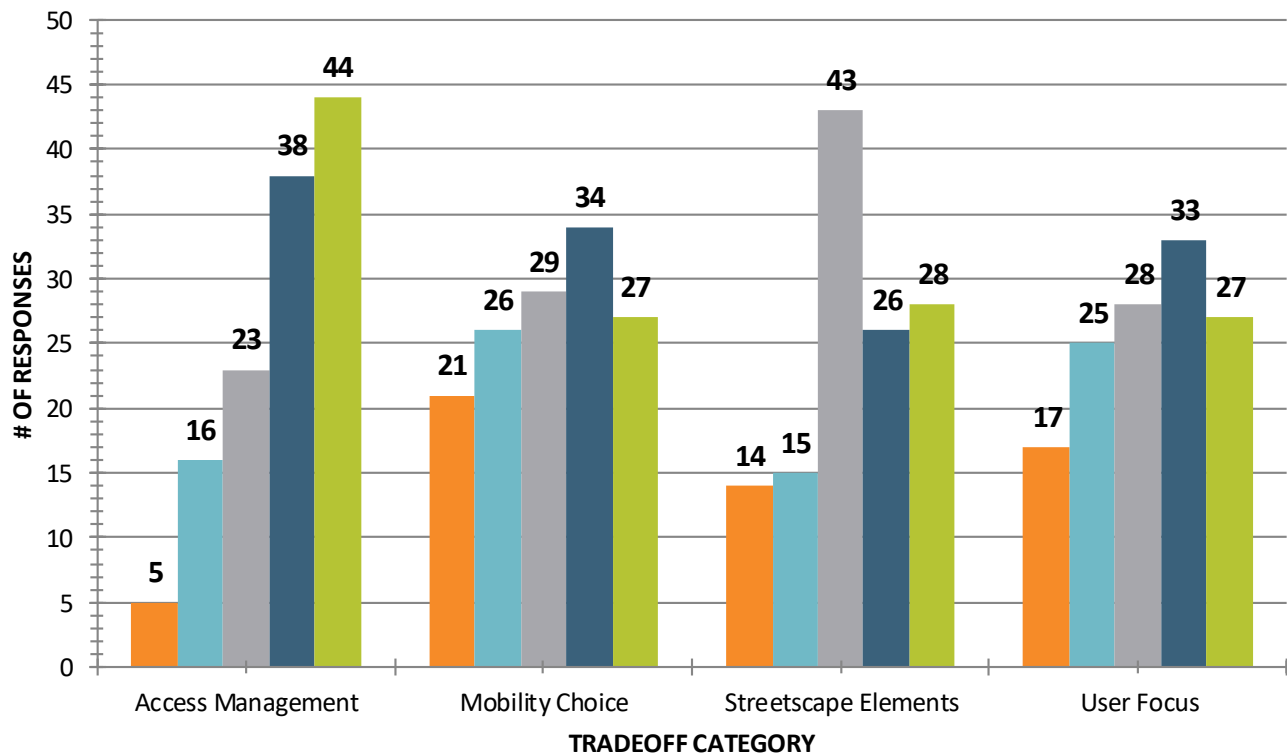


SEGMENT 5: NIXON ROAD TO MOUNTAIN GROVE DRIVE

Tradeoffs

For each segment, survey respondents were asked to consider tradeoffs associated with user focus, streetscape, mobility choices, and access management. This activity helped participants understand that tradeoffs are inevitable when considering transportation improvements. The figure below shows the results of this exercise for Segment 5.

Segment 5 – Tradeoffs Results by Category



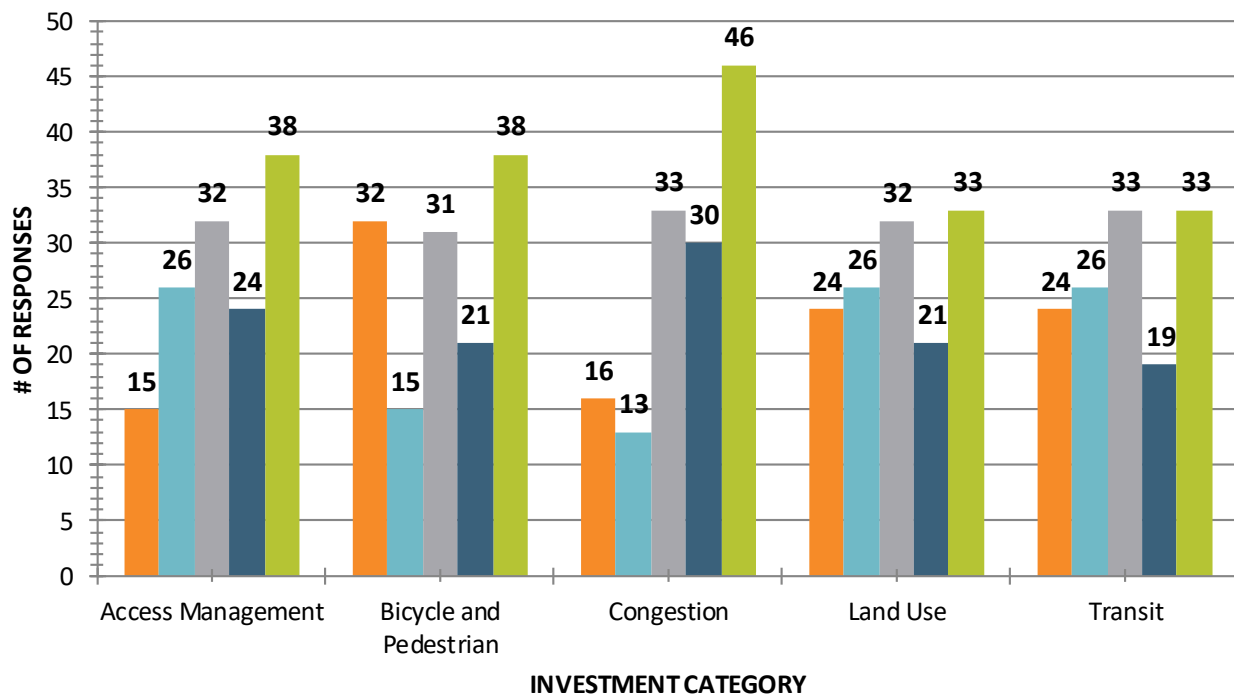
Investment Strategies

For each segment, survey respondents were asked to rank various investment strategies from 1 to 5 stars with 1 being lowest and 5 being highest. For Segment 5 the total count of each strategies' rating is shown in the figure below. The table below shows the total number of times each strategy was ranked and the average rank.

Segment 5 – Investment Strategy Ranking Summary

Investment Strategy	Number of Time Ranked	Average Rank
Access Management	136	3.309
Bicycle and Pedestrian	138	3.123
Congestion	139	3.568
Land Use	137	3.080
Transit	136	3.066

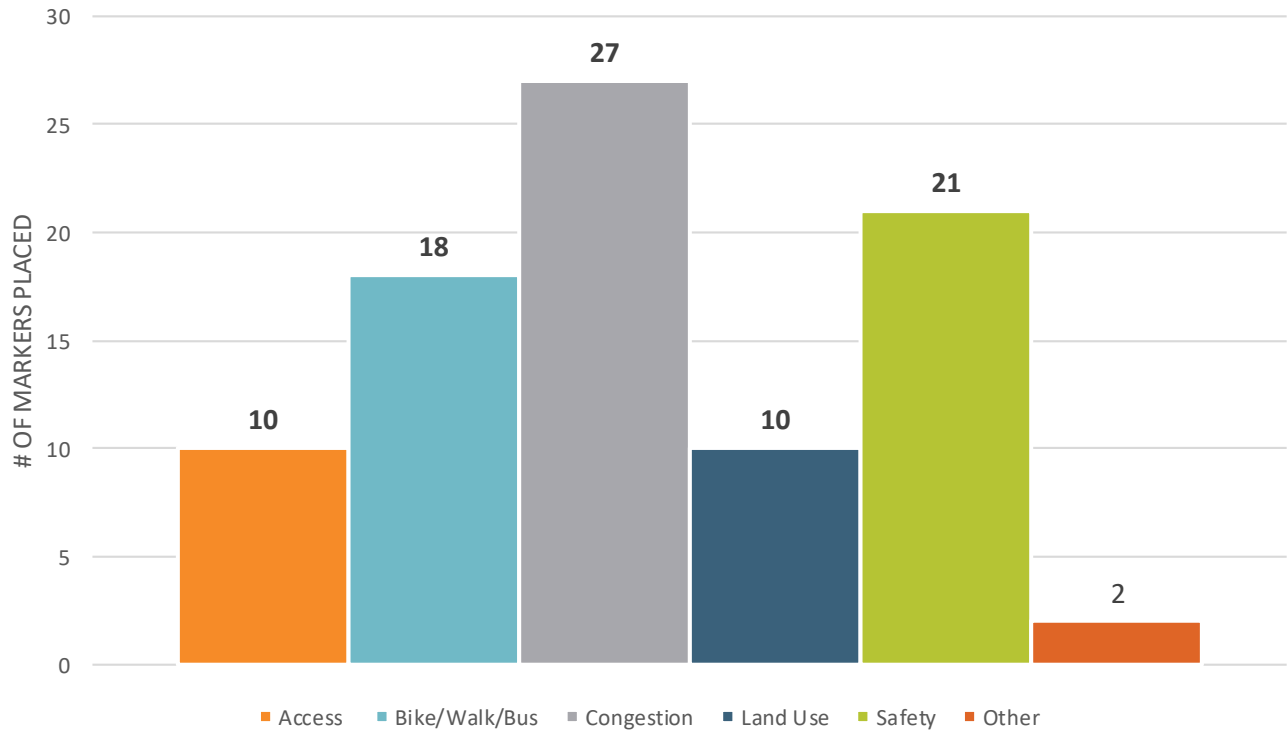
Segment 5 – Investment Strategies



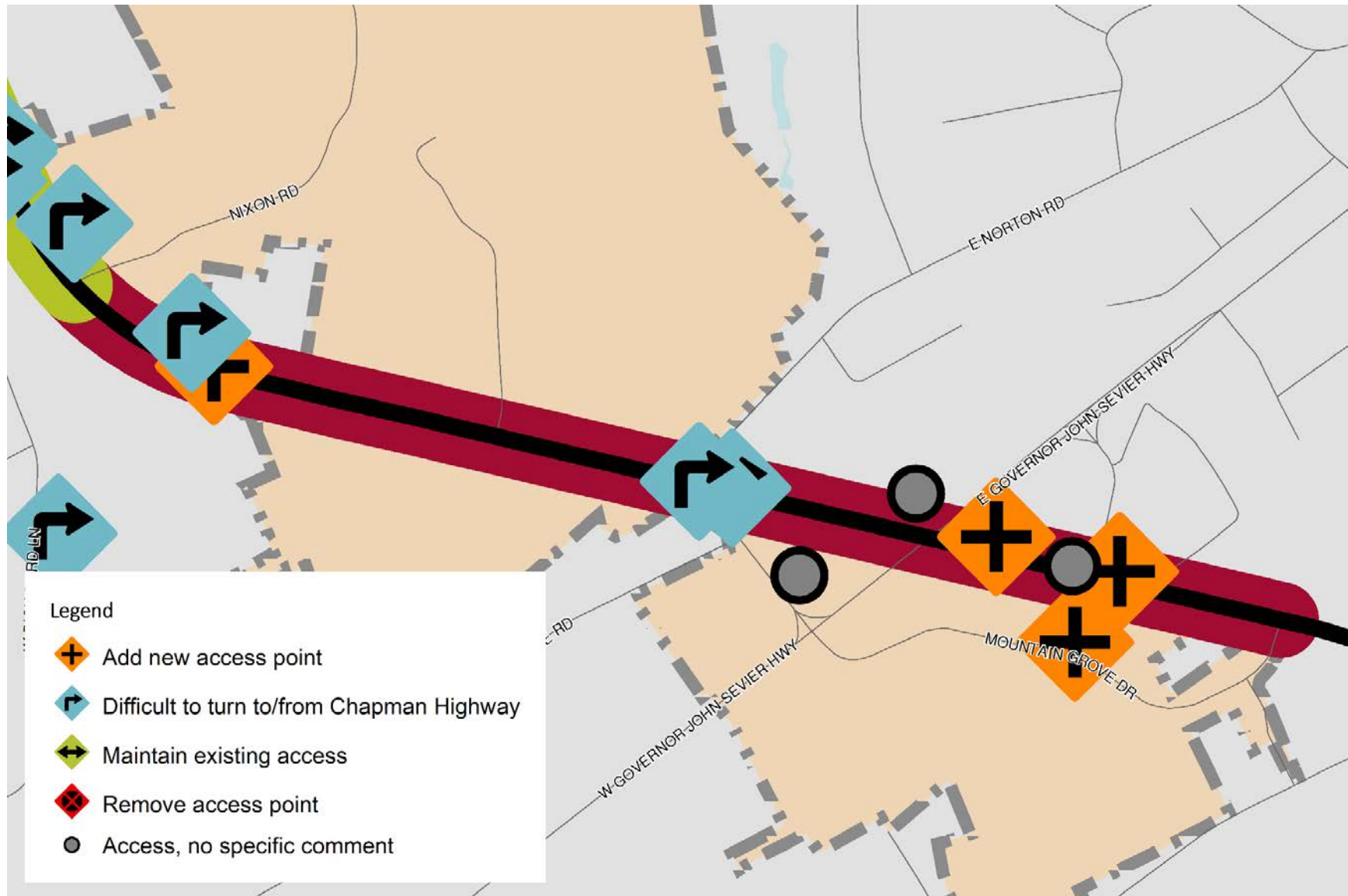
Map Markers

Segment 5, from Nixon Road to Mountain Grove Drive, accounted for 10% of all map markers placed in the mapping exercise. The most popular marker types were congestion and safety, followed closely by bike/walk/bus. The chart below shows the full breakdown of marker types placed. The pages that follow outline where markers were placed along segment 4. All comments are provided as an appendix to this document.

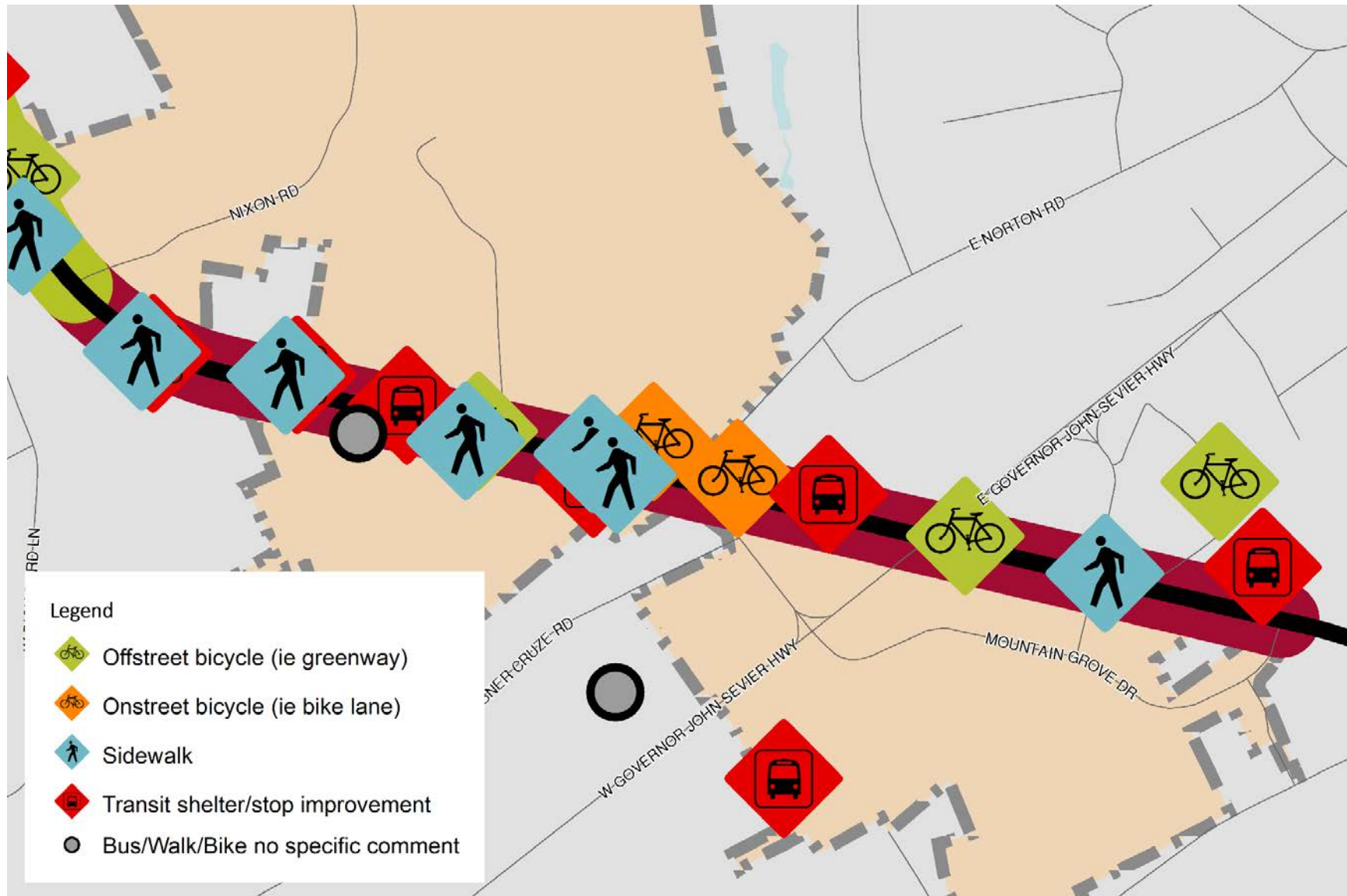
Count of Marker Types Placed Along Segment 5



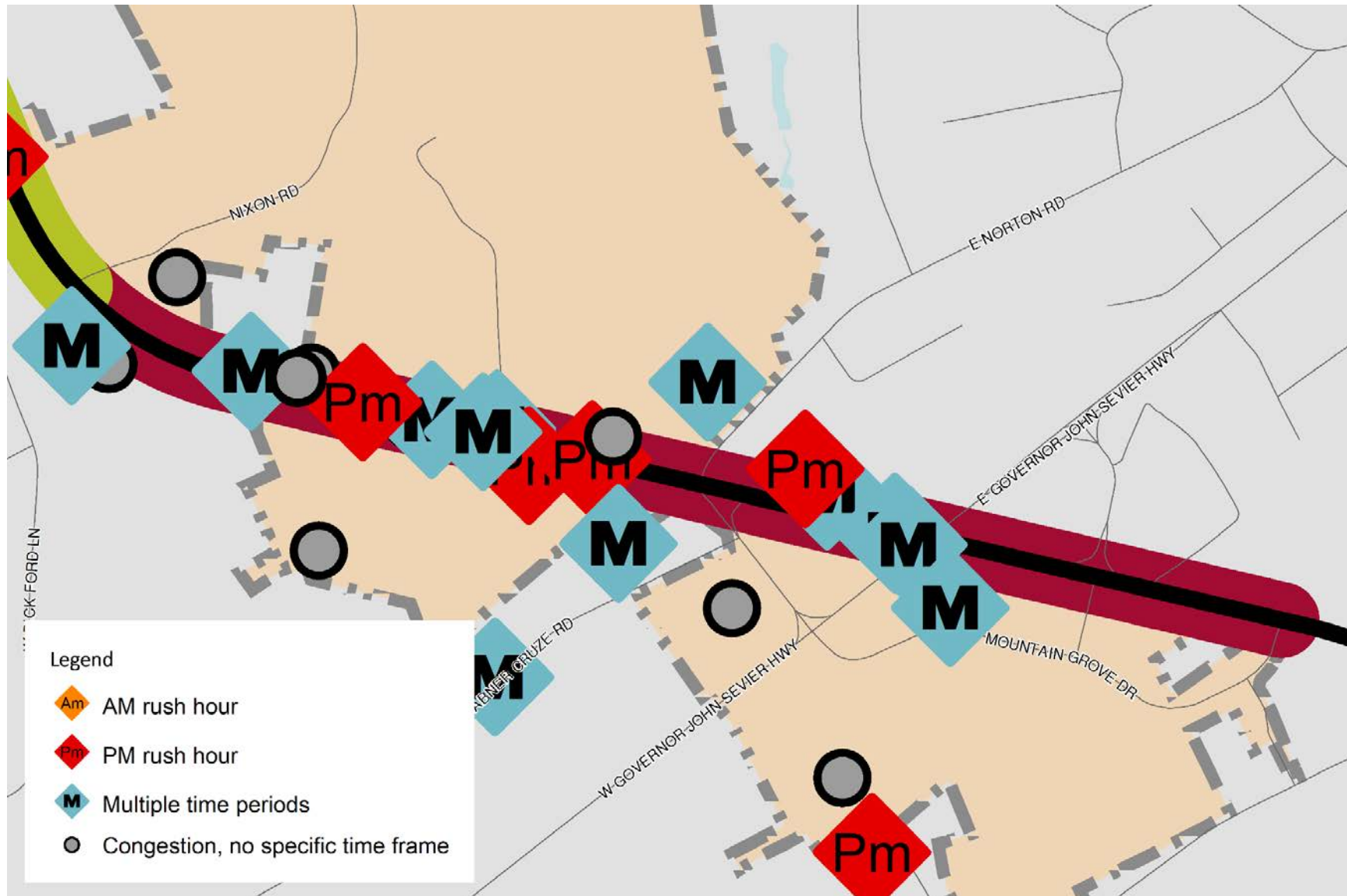
Segment 5 - Access Map Markers and Comments



Segment 5 – Bike/Walk/Bus Map Markers and Comments



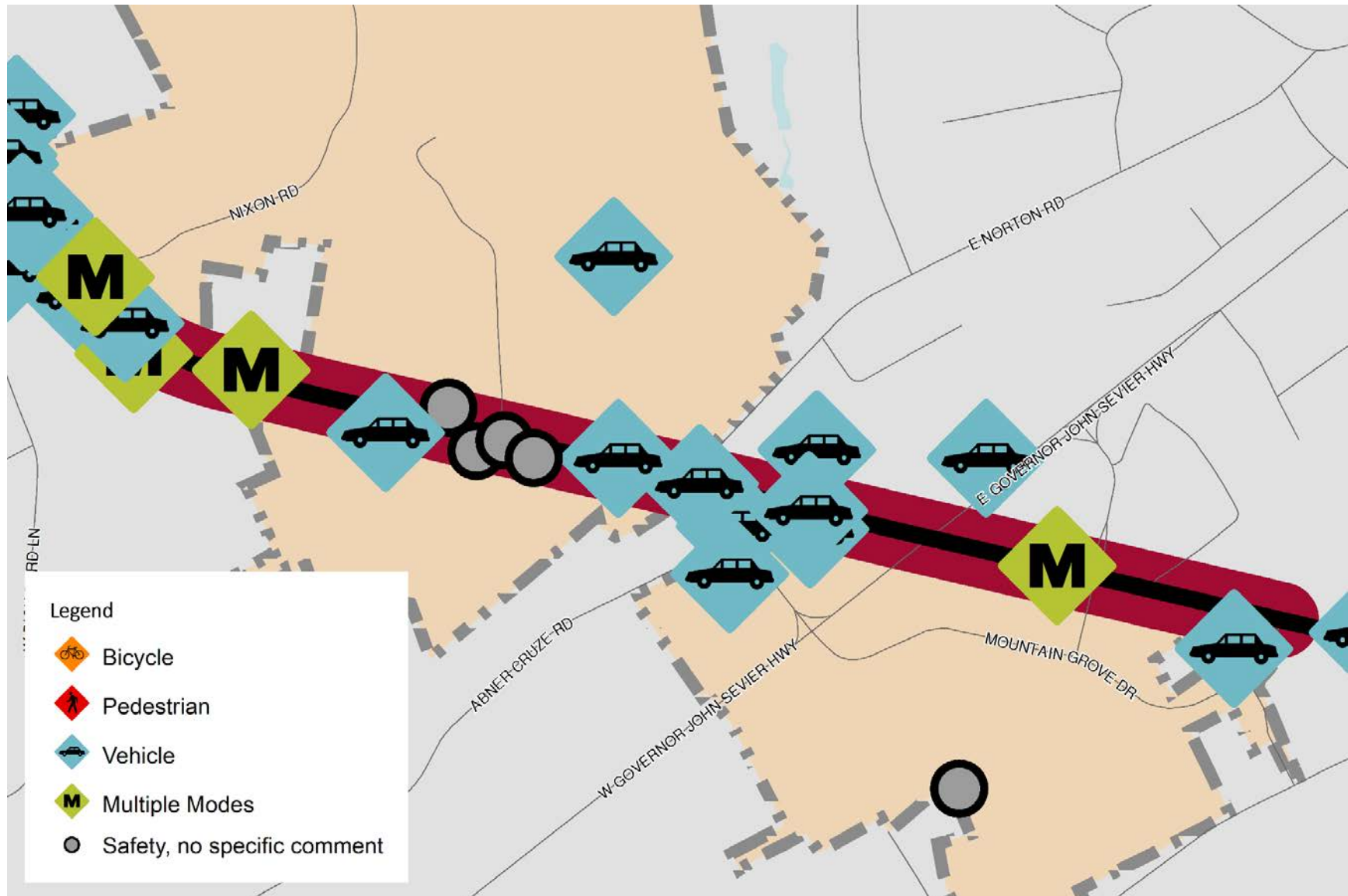
Segment 5 –Congestion Map Markers and Comments



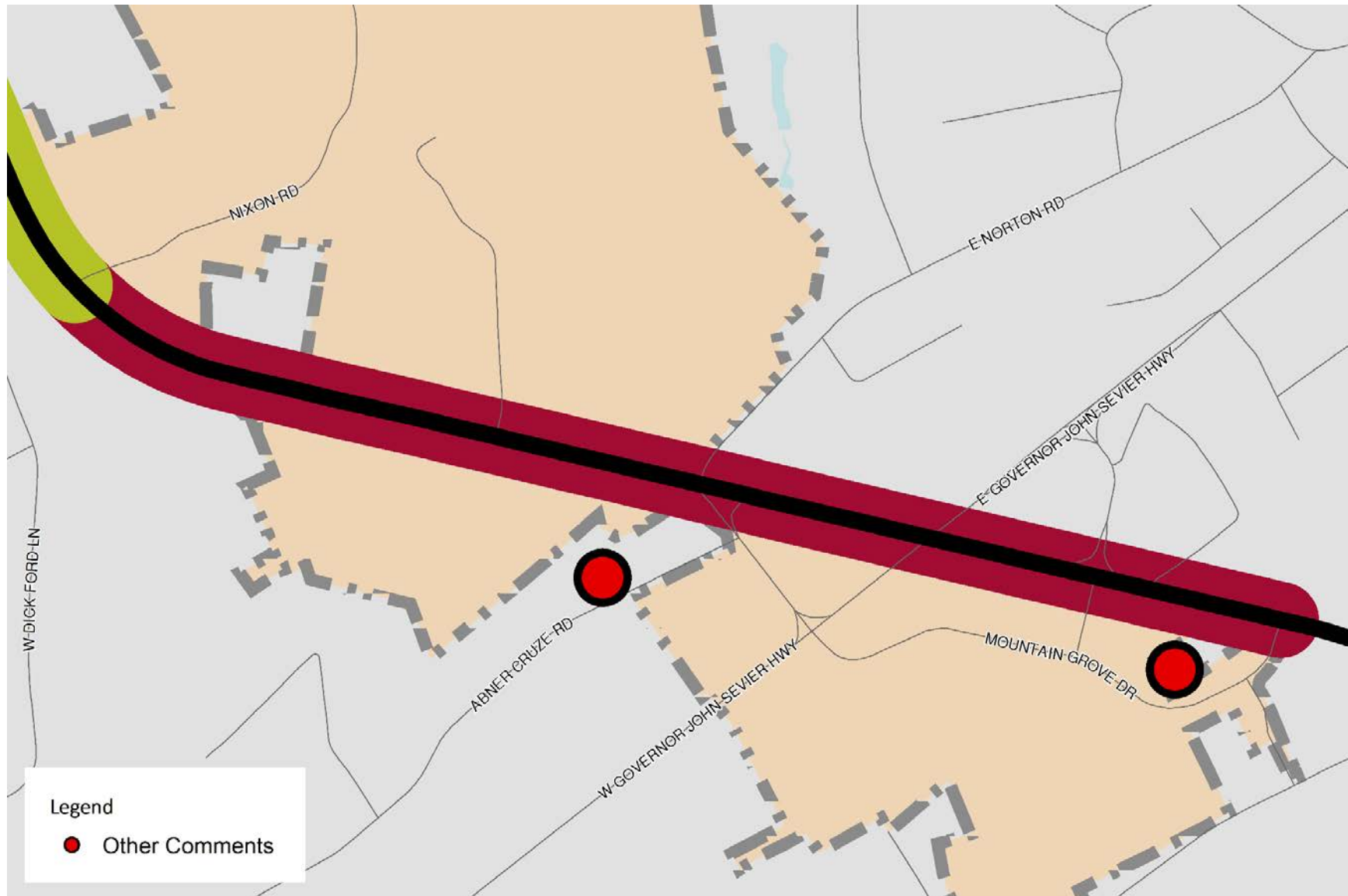
Segment 5—Land Use Map Markers and Comments



Segment 5 –Safety Map Markers and Comments

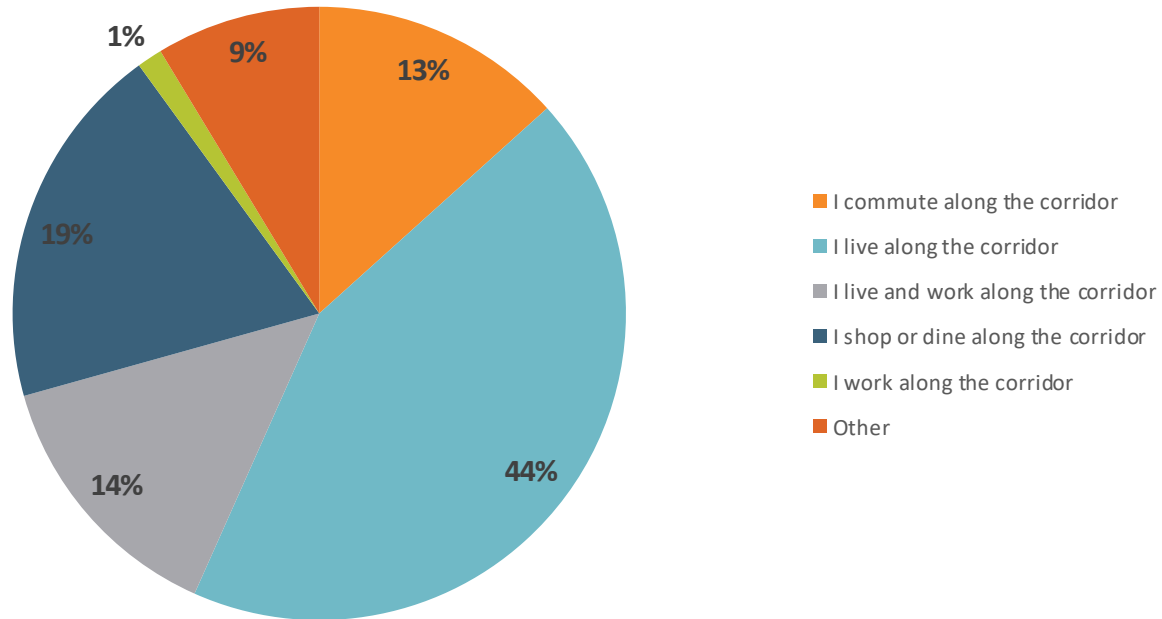


Segment 5 – Other Map Markers and Comments

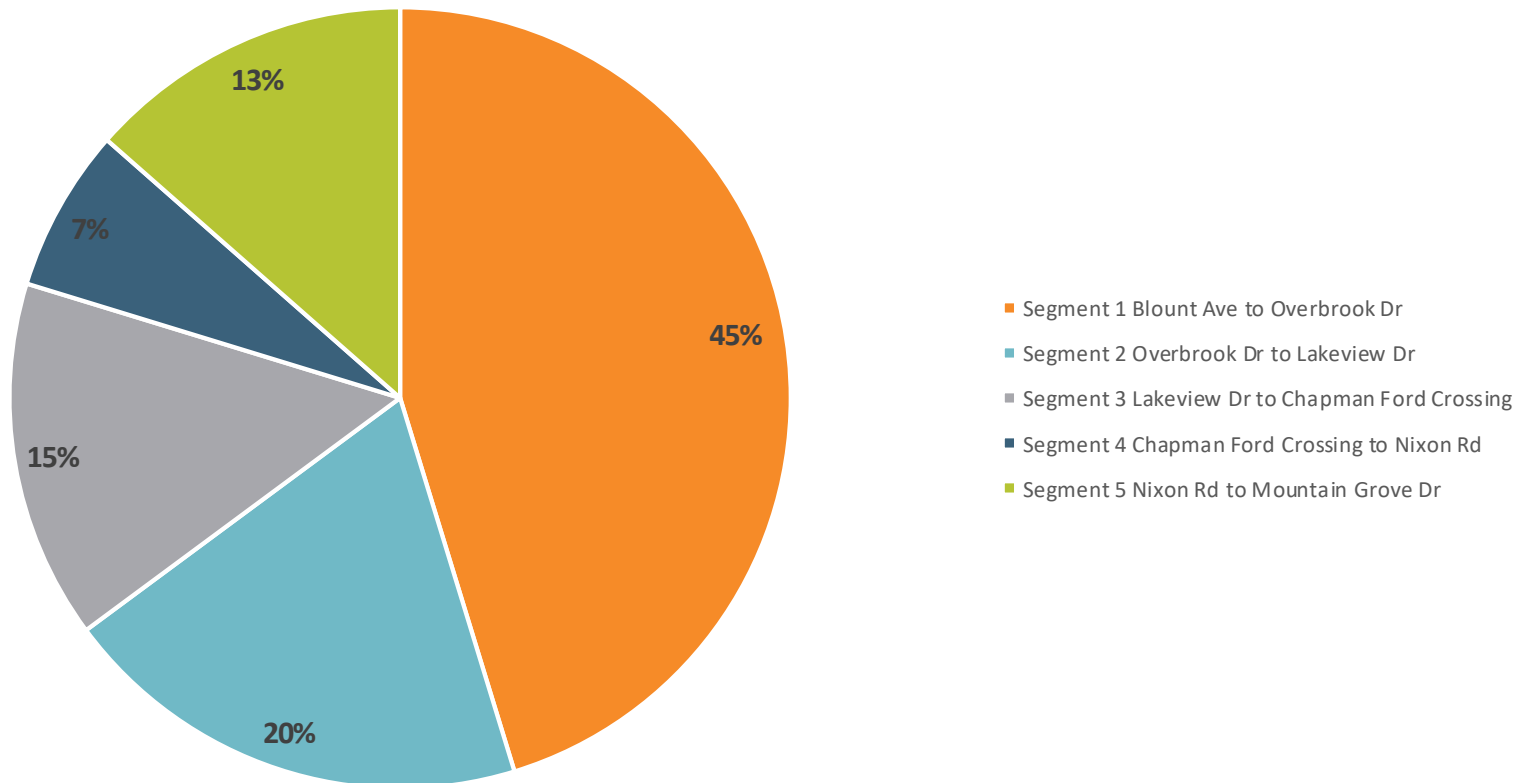


WRAP UP QUESTIONS

What is your primary interest in Chapman Highway?



Which segment is most important to you?



What is your work/school zip code?

Zip Code	Count
37920	35
37902	18
37919	10
37917	10
37922	8
37921	8
37996	7
37909	6
37914	5
37916	4
37923	3
37901	3
37932	2
37912	2
37865	2
37863	2
39191	1
38909	1
37931	1
37924	1
37915	1
37876	1
37868	1
37830	1
37738	1

What is your home zip code?

Zip Code	Count
37920	122
37917	5
37919	5
37865	3
37915	2
37820	1
37875	1
37876	1
37902	1
37912	1
37914	1
37934	1



APPENDIX J

MOBILITY NEEDS ASSESSMENT

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

Chapman Highway Task 3: Mobility Needs Assessment

November 27, 2018



MOBILITY NEEDS ASSESSMENT

Mobility needs assessments are completed in order to identify transportation needs and barriers to equitable mobility along a corridor or region. The assessments help in understanding users and how infrastructure can impact their mobility and access to destinations. The assessments use existing data, public participation processes, and technical analysis to quantify results, which can then be used to create a list of potential projects.

A needs assessment of Chapman Highway was generated through a series of analysis of data and public input in the form of community workshops, steering committee input and an online survey (MetroQuest). Using the data, a list of general needs was created to understand and address all modes of transportation. The lists are detailed below by segment.

Segment 1A-1C

- Pedestrian facility upgrades
- Bicycle facility
 - Physically separated with a buffer from vehicle travel at 35mph or higher
- Bike/Ped Network Connections
 - South Doyle Middle School
 - Mary Vestal Park
 - Fort Dickerson Park
 - Suttree Landing Park
 - Stanley Lippencott Park
 - Kroger and Chapman Square Shopping Center
- Intersections
 - Signal timing to minimize unnecessary congestion
 - Bicycle and pedestrian signals
 - High visibility crosswalks
 - Intersection sight distance
- Access Management
 - Explore center median – either concrete or landscape
 - Interparcel connectivity
 - Consolidation of driveways
 - Reestablishment of roadway edge
- Transit Facilities
 - Bus shelters at stops (None present at this time)
 - Connectivity and ADA Accessibility at all stops (None present at this time)

- Visible signage and wayfinding to route

Segment 2A-2B

- Pedestrian facility upgrades
- Pedestrian facility
 - Six-foot preferred minimum sidewalk with physical separation from the roadway
- Bicycle facility
 - Physically separated with a buffer from vehicle travel at 35mph or higher
- Bike/Ped Network Connections
 - William Hastie Natural Area
 - Marie Myers Park
 - Charter E. Doyle Park
 - Underwood Park
- Intersections
 - Signal timing to minimize unnecessary congestion
 - Bicycle and pedestrian signals
 - High visibility crosswalks
 - Sightlines
- Access Management
 - Explore center median – either concrete or landscape
 - Interparcel connectivity
 - Consolidation of driveways
 - Reestablishment of roadway edge
- Transit Facilities
 - Bus shelters at stops (None present at this time)
 - Connectivity and ADA Accessibility at all stops (None present at this time)
 - Visible signage and wayfinding to route

Segment 3

- Pedestrian facility – None currently present
 - Six-foot preferred minimum sidewalk with physical separation from the roadway.
- Bicycle facility – None currently present
 - Physically separated with a buffer from vehicle travel at 35mph or higher
- Intersections
 - Signal timing to minimize unnecessary congestion
 - Bicycle and pedestrian signals

- High visibility crosswalks
 - Sightlines
- Access Management
 - Explore center median – either concrete or striped
 - Interparcel connectivity
 - Consolidation of driveways
 - Reestablishment of roadway edge
- Transit Facilities
 - Bus shelters at stops (None present at this time)
 - Connectivity and ADA Accessibility at all stops (None present at this time)
 - Visible signage and wayfinding to route

Segment 4

- Pedestrian facility – None currently present
 - Six-foot preferred minimum sidewalk with physical separation from the roadway.
- Bicycle facility – None currently present
 - Physically separated with a buffer from vehicle travel at 35mph or higher
- Intersections
 - Bicycle and pedestrian signals
 - High visibility crosswalks
 - Sightlines
- Access Management
 - Explore center median – either concrete or Stripped
 - Consolidation of driveways
 - Explore the development of median bulb outs to accommodate turn lanes as needed.
- Transit Facilities
 - Bus shelters at stop (None present at this time)
 - Connectivity and ADA Accessibility at stop (None present at this time)
 - Visible signage

Segment 5

- Pedestrian facility – None currently present
 - Six-foot preferred minimum sidewalk with physical separation from the roadway.
- Bicycle facility – None currently present
 - Physically separated with a buffer from vehicle travel at 35mph or higher

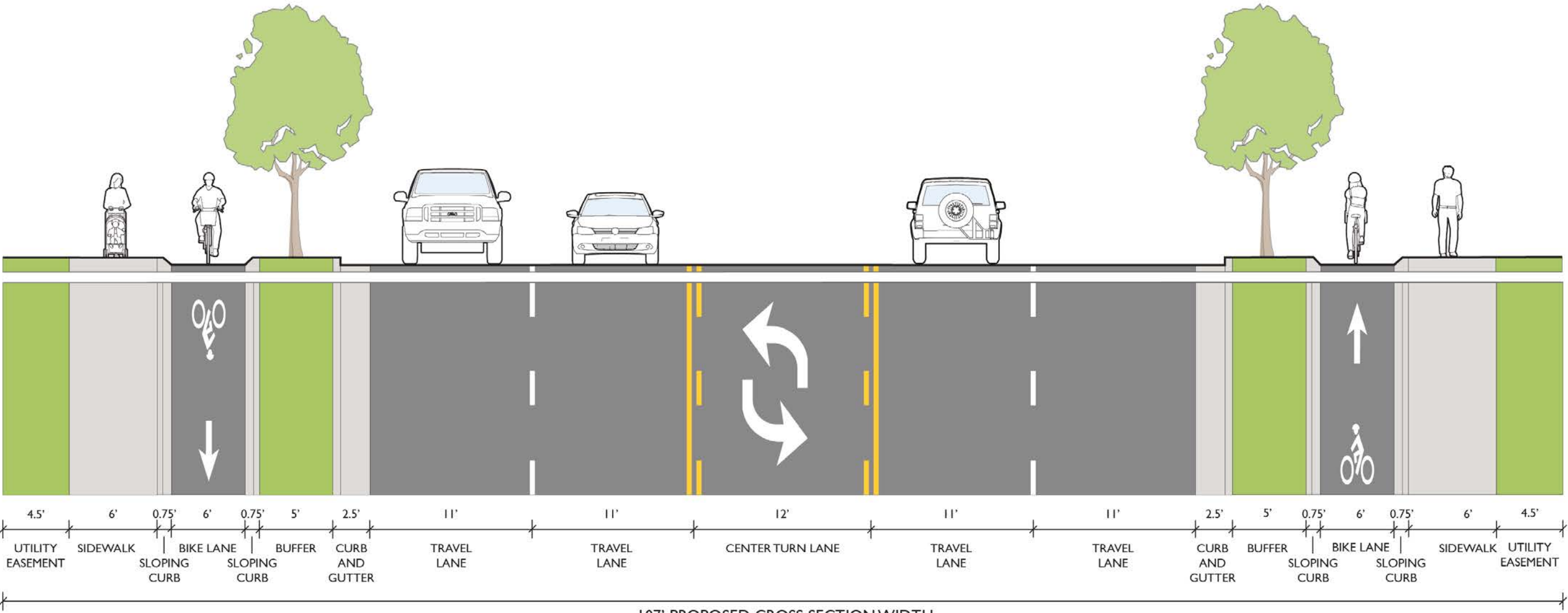
- Bike/Ped Network Connections
 - Chapman Plaza Shopping Center and Medical Center
 - Elavon
 - Walmart and Home Depot Shopping Center
 - Lowes and Food City Shopping Center
- Intersections
 - Signal timing to minimize unnecessary congestion
 - Bicycle and pedestrian signals
 - High visibility crosswalks
 - Sightlines
- Access Management
 - Explore center median – either concrete or landscape
 - Interparcel connectivity
 - Consolidation of driveways
 - Reestablishment of roadway edge
- Transit Facilities
 - Bus shelters at stops (None present at this time)
 - Connectivity and ADA Accessibility at all stops (None present at this time)
 - Visible signage and wayfinding to route



APPENDIX K

PROPOSED TYPICAL SECTIONS

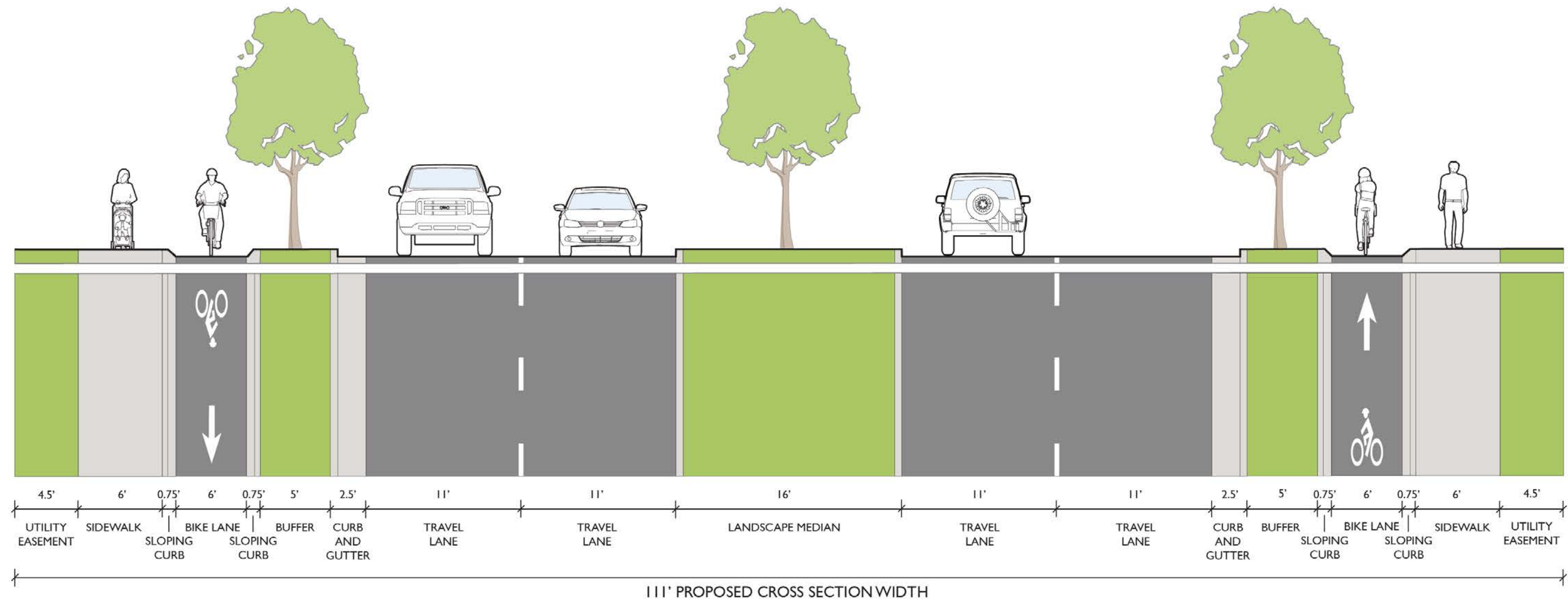
Typical Section - Exhibit 1



107' PROPOSED CROSS SECTION WIDTH

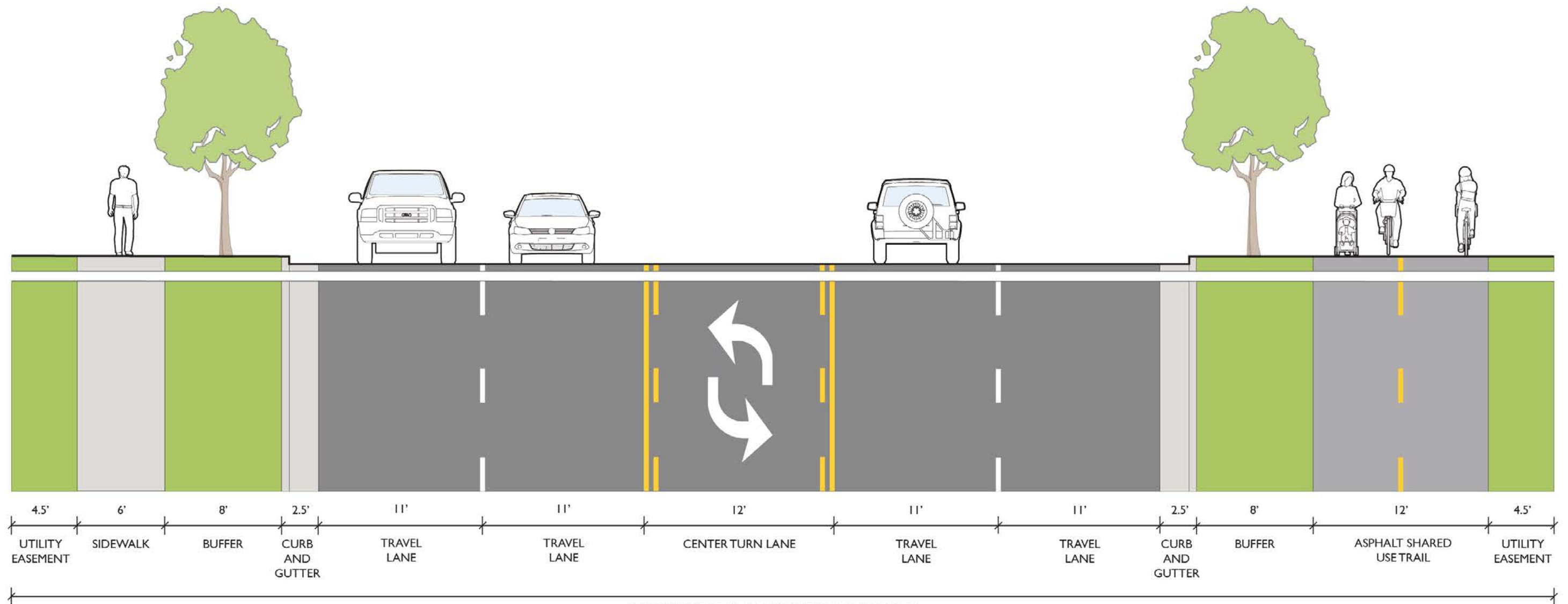
CHAPMAN HIGHWAY
SEGMENT I

Typical Section - Exhibit 2



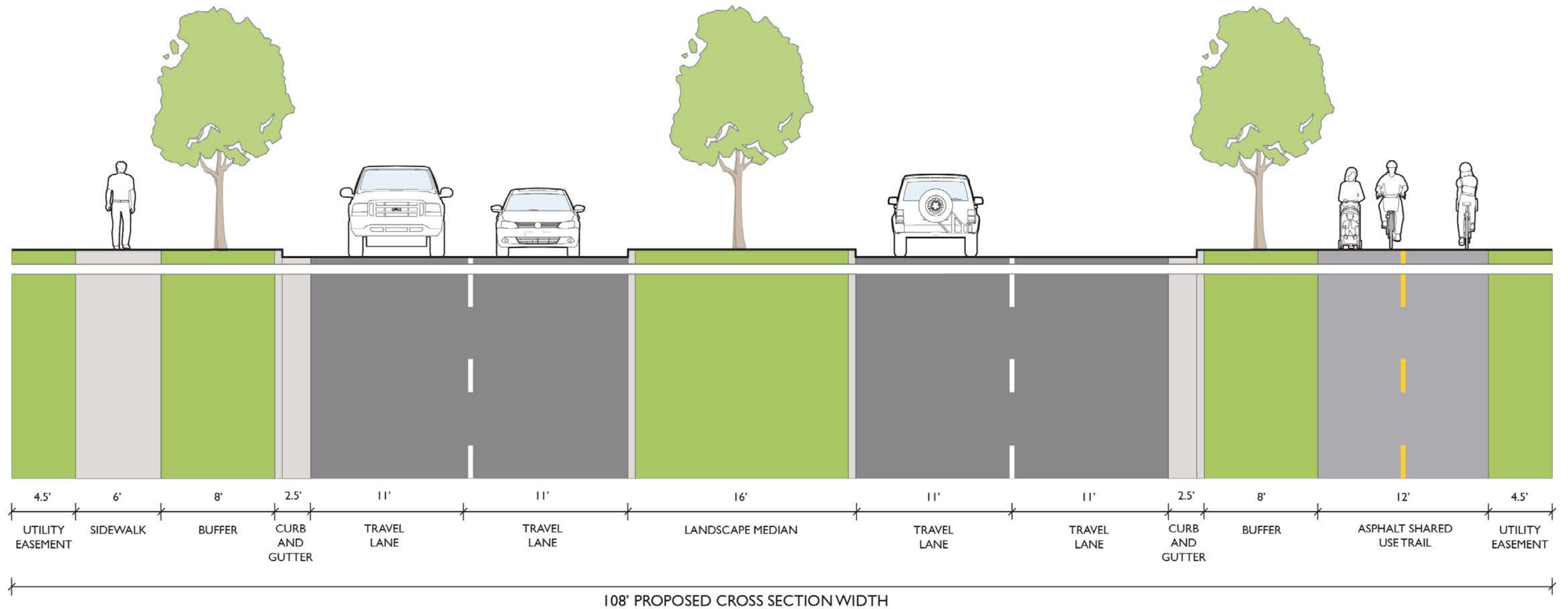
CHAPMAN HIGHWAY
SEGMENT I

Typical Section - Exhibit 3



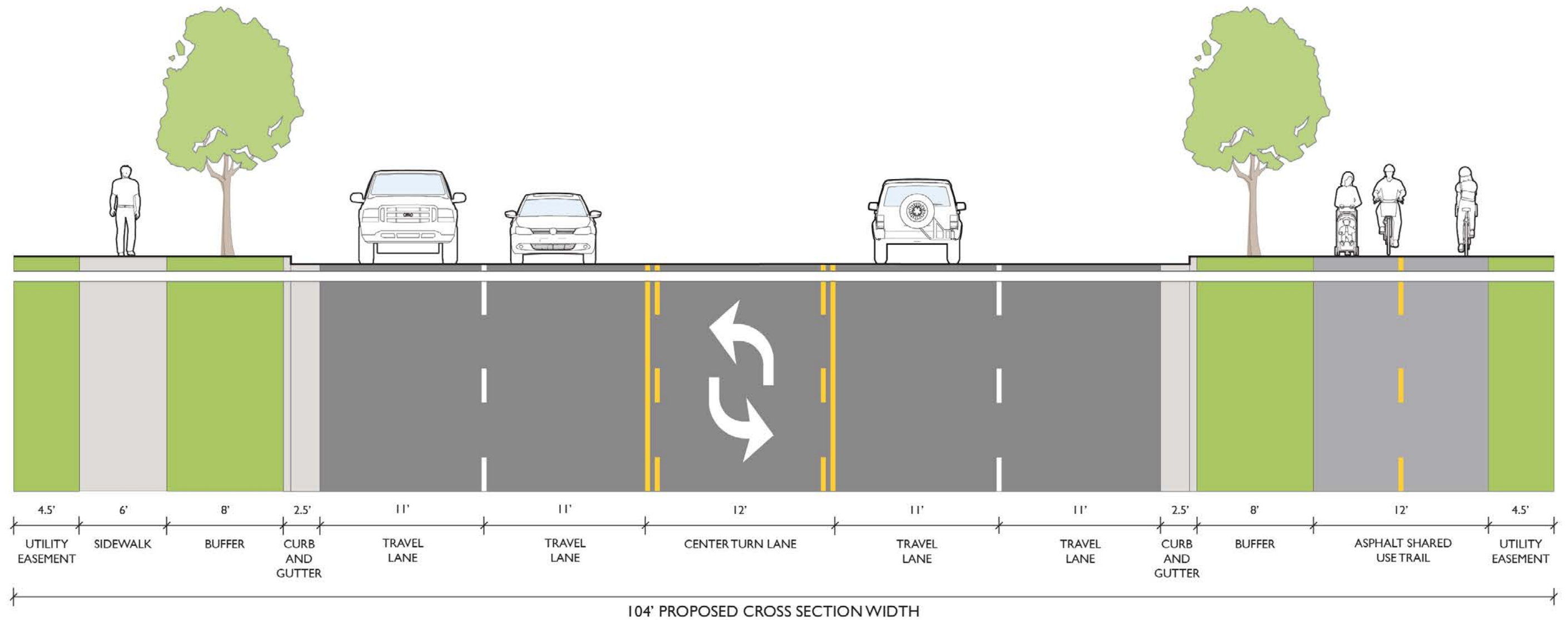
CHAPMAN HIGHWAY
SEGMENT 2

Typical Section - Exhibit 4



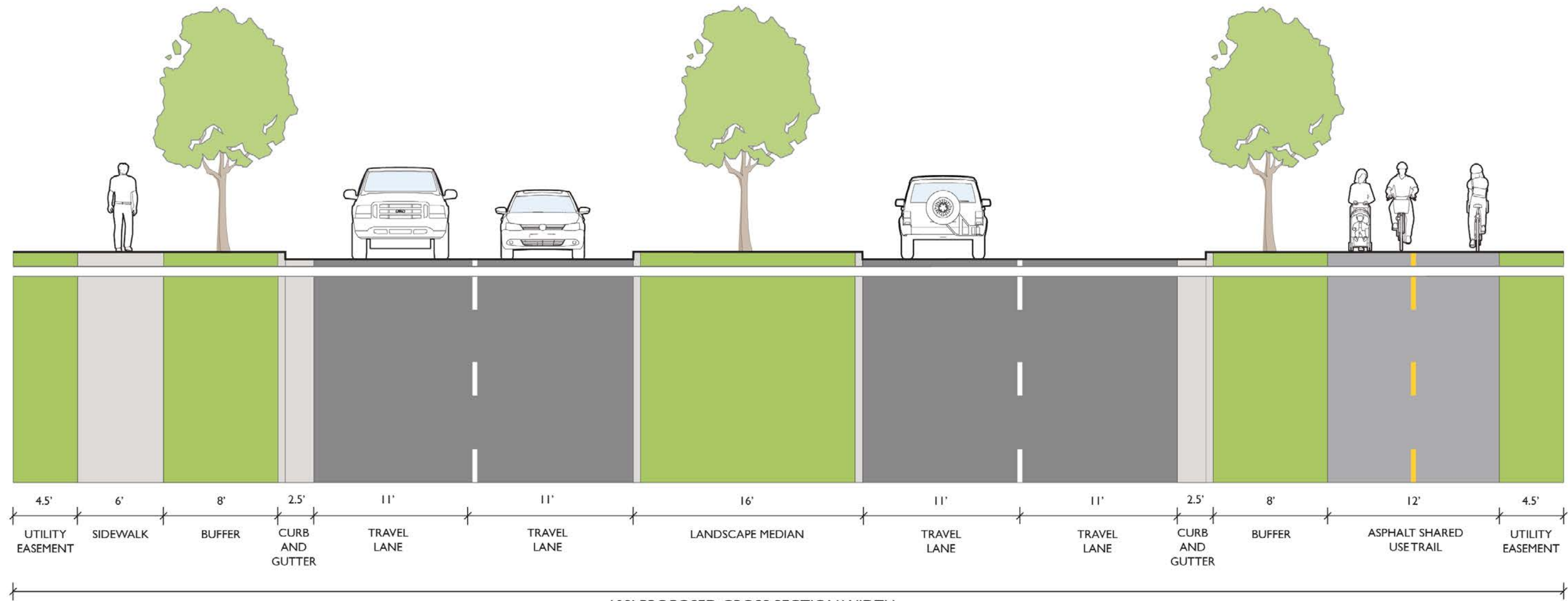
CHAPMAN HIGHWAY
SEGMENT 2

Typical Section - Exhibit 5



CHAPMAN HIGHWAY
SEGMENT 3

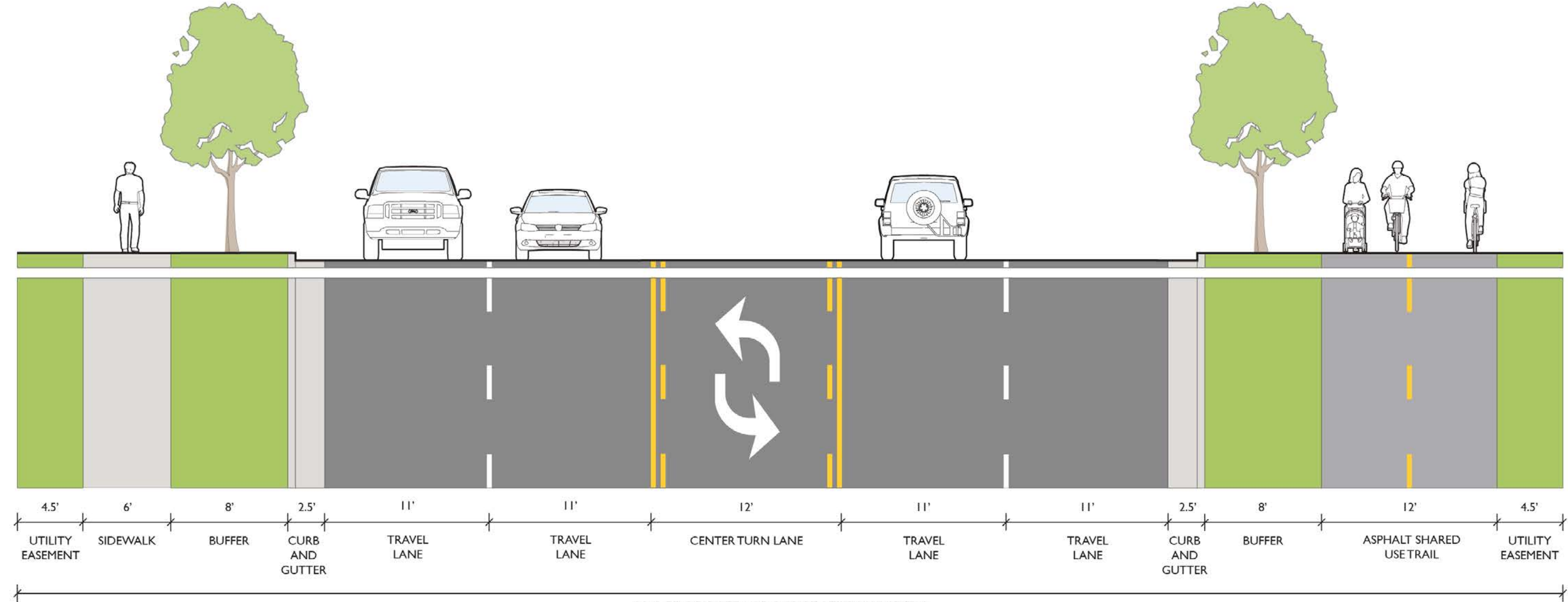
Typical Section - Exhibit 6



108' PROPOSED CROSS SECTION WIDTH

CHAPMAN HIGHWAY
SEGMENT 3

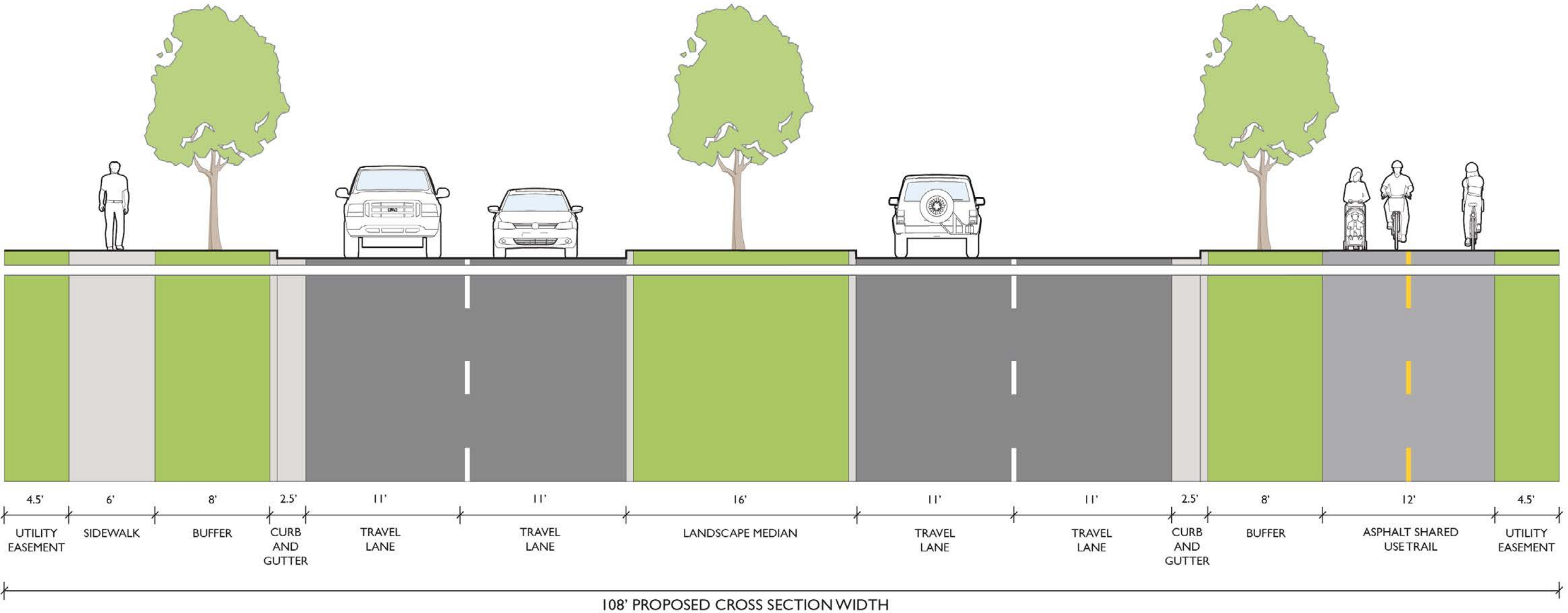
Typical Section - Exhibit 7



104' PROPOSED CROSS SECTION WIDTH

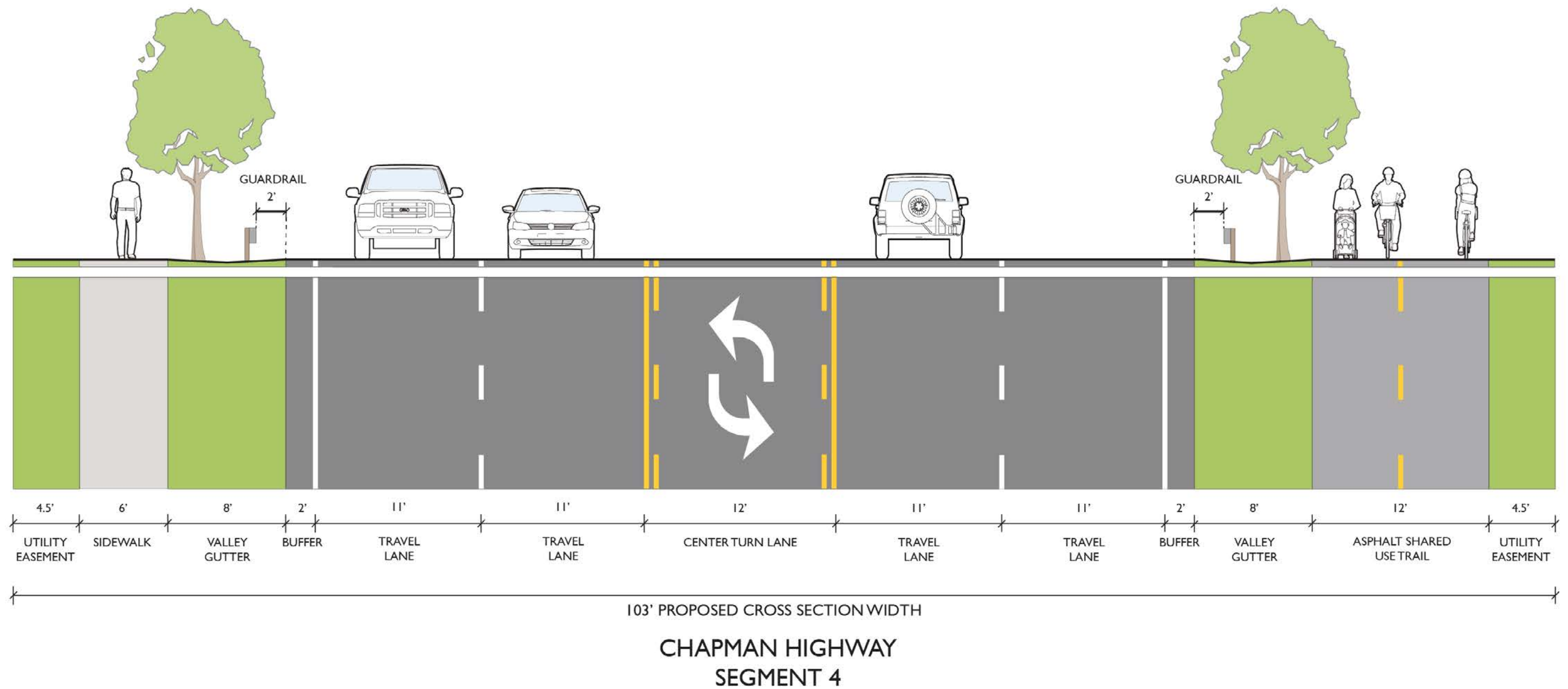
CHAPMAN HIGHWAY
SEGMENT 4

Typical Section - Exhibit 8

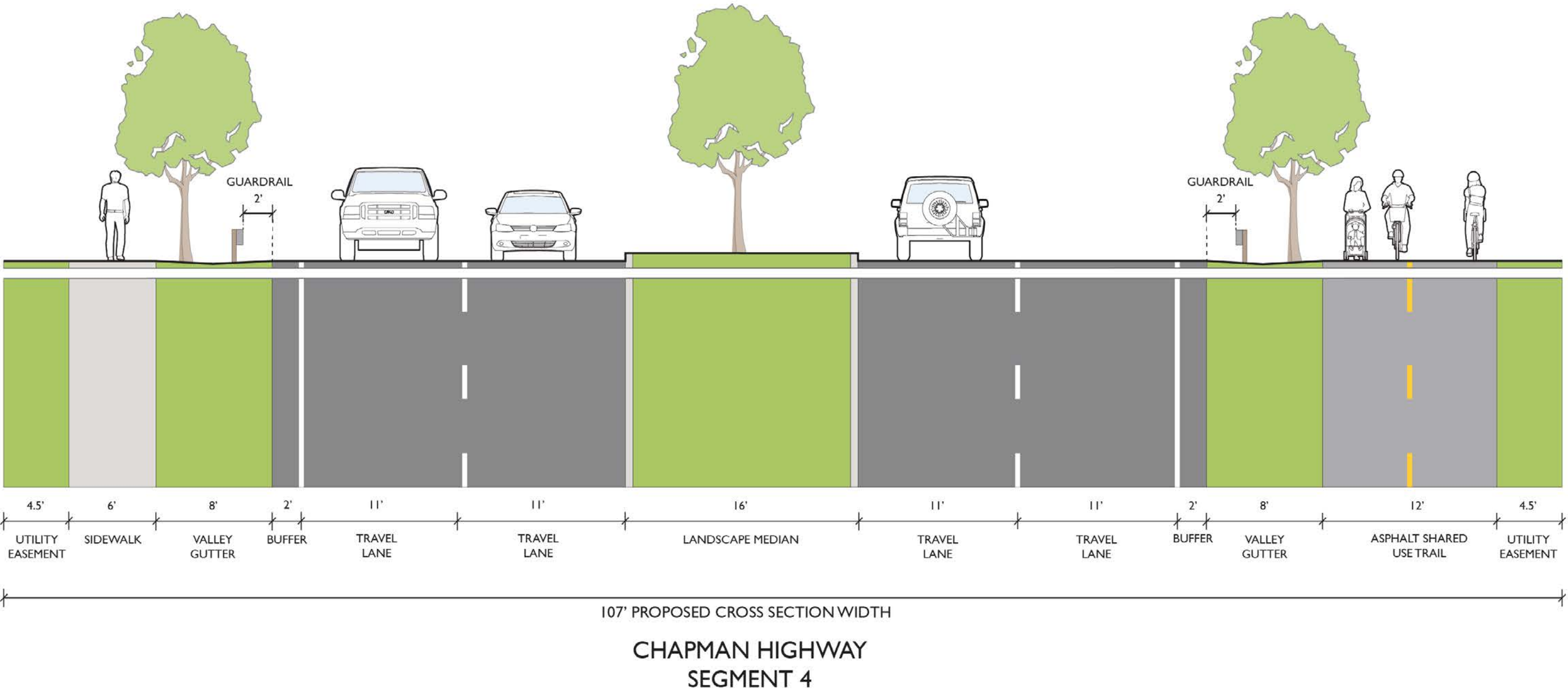


CHAPMAN HIGHWAY
SEGMENT 4

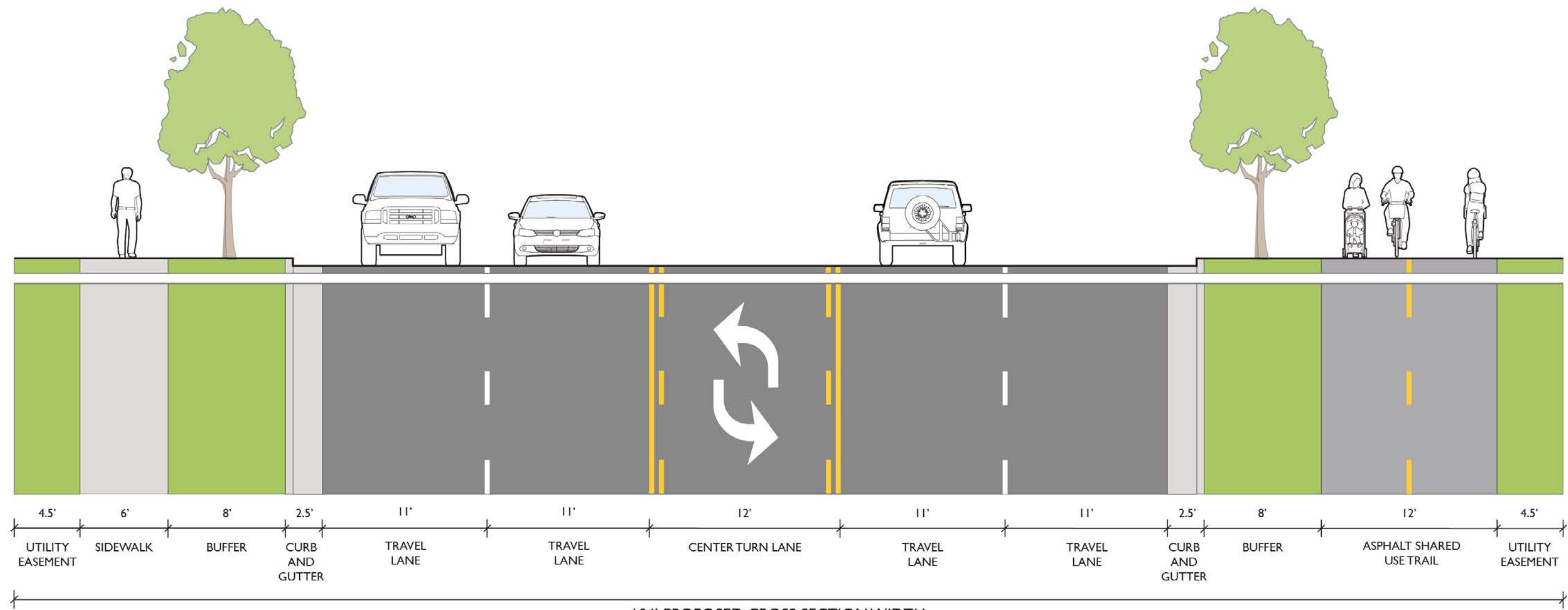
Typical Section - Exhibit 9



Typical Section - Exhibit 10

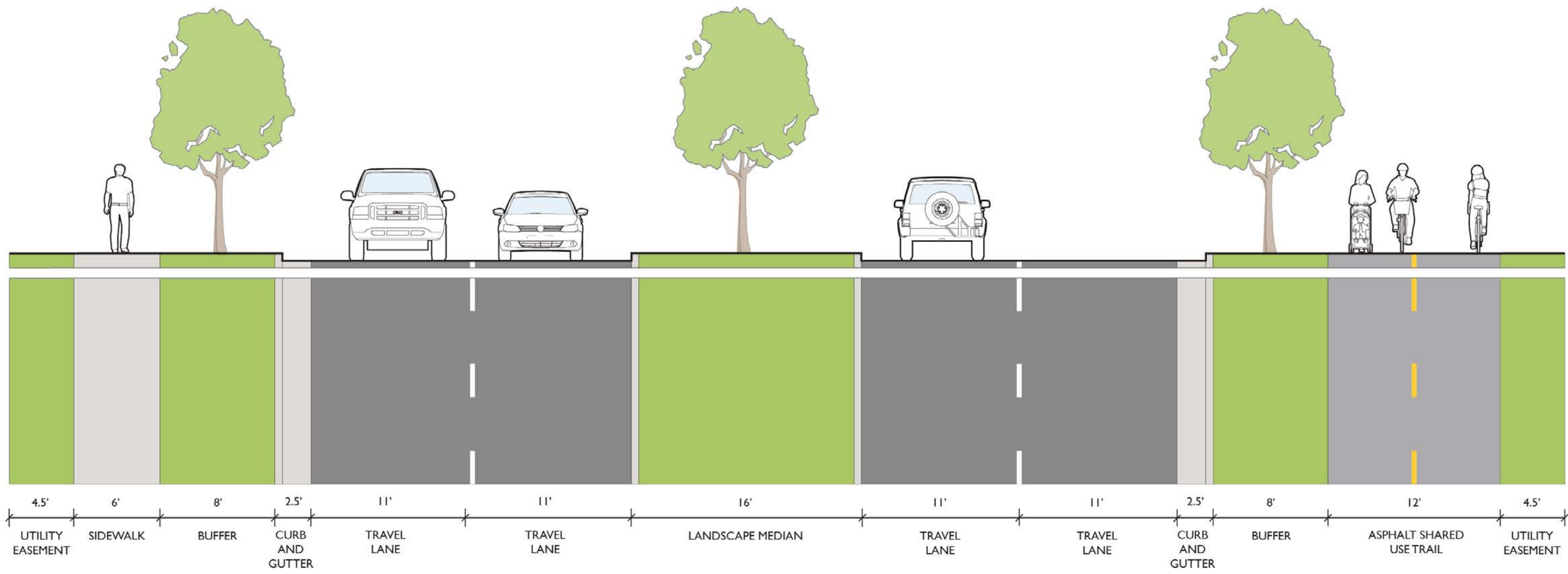


Typical Section - Exhibit 11



CHAPMAN HIGHWAY
SEGMENT 5

Typical Section - Exhibit 12



108' PROPOSED CROSS SECTION WIDTH

CHAPMAN HIGHWAY
SEGMENT 5



APPENDIX L

PRIORITIZATION CRITERIA

PRIORITIZATION CRITERIA

(as of 03/04/2019)

Criteria	Rationale	Scoring Methods	Maximum Score
Safety	➤ Crash Rate	➤ Project Located near High Crash Rate – 10 ➤ Project Located near Moderate Crash Rate – 5	30
	➤ Crash Severity	➤ Project Located near High Crash Severity – 10 ➤ Project Located near Moderate Crash Severity – 5	
	➤ Forecasted Crash Mitigation	➤ Forecasted High Crash Mitigation – 10 ➤ Forecasted Moderate Crash Mitigation – 5	
Transit	➤ Accessibility to Transit	➤ Adjacent to Existing Transit Stop – 10 ➤ Within 1/4 Mile of Existing Transit Stop – 7 ➤ Within 1/2 Mile of Existing Transit Stop – 5	10
Land Use	➤ Proximity to Parks / Schools	➤ Adjacent to Key Land Uses – 10	10
	➤ Proximity to Multifamily Residential	➤ Within 1/4 Mile of Key Land Uses – 7	
	➤ Proximity to Commercial	➤ Within 1/2 Mile of Key Land Uses – 5	
Equity	➤ Percent in Poverty	➤ Project Located near Area of High Concern – 10 ➤ Project Located near Area of Low Concern – 5	10
	➤ Households with No Vehicle		
	➤ Percent under 18		
	➤ Percent over 65		
Bicycle / Pedestrian	➤ Proximity to Existing Bicycle Facilities	➤ Adjacent to Existing Bicycle Facility – 10 ➤ Within 1/4 Mile of Existing Bicycle Facility – 7 ➤ Standalone Proposed Bicycle Facility – 5	20
	➤ Proximity to Existing Sidewalk	➤ Adjacent to Existing Sidewalk – 10 ➤ Within 1/4 Mile of Existing Sidewalk – 7 ➤ Standalone Proposed Sidewalk – 5	
Vehicle Congestion	➤ Level of Service	➤ Improvement to Level of Service – 5	20
	➤ Left-Turn Lane	➤ Addition of Left-Turn Lane – 5	
	➤ Access Management	➤ Manage Location of Turning Movements – 5	
	➤ Parallel Route Connectivity	➤ Improvement to Parallel Routes – 5	
TOTAL			100



APPENDIX M

STEERING COMMITTEE MEETING #3

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

December 12, 2018 – 1:30 PM Eastern

AGENDA

- Review of Community Input
 - September 5th Workshop
 - MetroQuest Survey
- DRAFT Ultimate Typical Sections
 - These ultimate typical sections will depict the future vision of Chapman Highway, while establishing an objective that capital projects can strive toward.
- DRAFT Prioritization Criteria
 - These prioritization criteria will serve as the categories for scoring/weighting the capital projects along Chapman Highway.
- DRAFT List of Projects
 - These capital projects will allow for incremental improvements along Chapman Highway that ultimately fulfill the future vision depicted in the ultimate typical sections.
- Future Opportunities for Outreach
 - Next Steering Committee Meeting (late January / early February 2019)
 - Community Workshop #2 (late January / early February 2019)

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

December 12, 2018 – 1:30 PM Eastern

SUMMARY

- There were 19 attendees:
 - 1 from Knoxville Regional TPO
 - 1 from Knoxville-Knox County Planning
 - 6 from City of Knoxville
 - 1 from Urban Wilderness (City of Knoxville)
 - 4 from Tennessee DOT
 - 1 from Knoxville Area Transit
 - 1 from Knox County
 - 4 from the consultant team
- A summary was provided of the results from the community workshop on September 5.
- A summary was provided of the results from the MetroQuest online survey that was open between September 5 and October 19.
- The draft ultimate typical sections for Chapman Highway were reviewed and discussed.
 - TDOT indicated a preference for providing a gutter pan beyond the vehicle travel lane, as opposed to a paved-over gutter pan that is included within the vehicle travel lane.
 - The ‘shy distance’ needs to be evaluated to understand what is required for a raised concrete median.
 - Segment 4 proposes valley gutter (drainage ditch) instead of curb and gutter, but the required clear zone needs to be further evaluated.
 - There may be a need for guardrail between the roadway and sidewalk / shared use trail.

- The draft list of capital projects along Chapman Highway were reviewed and discussed.
 - The closure of unsignalized intersection closures of public roads along Chapman Highway should consider the impact to vehicle circulation and access for emergency vehicles, school buses, and garbage trucks.
 - The closure of intersections with public roads and additional traffic signals along Chapman Highway should be considered as interconnected projects. Additional traffic signals could be considered if public road intersections are closed, and public road intersections could be closed if additional traffic signals are considered.
 - The concept of a protected intersection (also known as a Dutch junction) was presented.
 - There are examples of Pedestrian Hybrid Beacons (PHBs) / High-intensity Activated crossWALK (HAWK) beacons along state routes in Tennessee. Athens, TN was mentioned (location: Green Street / SR-30, near Tennessee Wesleyan University). Cleveland, TN was also mentioned (location: unknown).
- The draft prioritization criteria for the capital projects along Chapman Highway were reviewed and discussed.
 - Safety scoring method needs to be modified such that ‘moderate crash severity’ is worth 5 points.
 - Bicycle and Pedestrian Connectivity scoring method needs to be modified such that the maximum score is 15 points. *UPDATE: Since the 12/12/2018 meeting, it has been determined that the ‘long crossing’ criteria should be removed, since every pedestrian crossing across Chapman Highway likely exceeds 36 feet. This edit also resolves the scoring total.*
 - There was discussion on whether anticipated costs for implementing each project should be considered within the prioritization criteria. The consultant team offered that the preference is to determine prioritization by need – without considering anticipated costs – but the timeframe for implementation may vary from the final prioritization (e.g. Priority #4 is significantly less expensive than Priority #1, #2, and #3, and/or there is a grant funding opportunity for Priority #4).
- The meeting concluded.

STEERING COMMITTEE MEETING

December 12, 2018 – 1:30 PM Eastern

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APPENDIX N

STAKEHOLDER WORKSHOP #2

STAKEHOLDER WORKSHOP

Dogwood Elementary School

December 12, 2018 – 4:30 PM Eastern

AGENDA

- Review of Community Input
 - September 5th Workshop
 - MetroQuest Survey
- DRAFT Ultimate Typical Sections
 - These ultimate typical sections will depict the future vision of Chapman Highway, while establishing an objective that capital projects can strive toward.
- DRAFT Prioritization Criteria
 - These prioritization criteria will serve as the categories for scoring/weighting the capital projects along Chapman Highway.
- DRAFT List of Projects
 - These capital projects will allow for incremental improvements along Chapman Highway that ultimately fulfill the future vision depicted in the ultimate typical sections.
- Future Opportunities for Outreach
 - Next Steering Committee Meeting (late January / early February 2019)
 - Community Workshop #2 (late January / early February 2019)

STAKEHOLDER WORKSHOP

Dogwood Elementary School

705 Tipton Avenue – Library

December 12, 2018 – 4:30 PM Eastern

SUMMARY

- There were 14 attendees:
 - 7 from the neighborhoods and businesses within South Knoxville
 - 1 from Knoxville Regional TPO
 - 2 from City of Knoxville
 - 4 from the consultant team
- A summary was provided of the results from the community workshop on September 5.
- A summary was provided of the results from the MetroQuest online survey that was open between September 5 and October 19.
- The draft ultimate typical sections for Chapman Highway were reviewed and discussed.
 - There are concerns on how these ultimate typical sections can be implemented, due to right-of-way and topography.
 - There is a desire to provide pedestrian/bicycle connections with the Urban Wilderness project.
 - Some participants expressed a desire to maintain the existing rock formations along Chapman Highway, because they represent South Knoxville. However, other participants indicated they would prefer improved safety even if it meant impacting the rock formations.
 - Participants provided positive feedback regarding the amount of green space and trees shown in the ultimate typical sections. However, the participants also recognized this would require increased maintenance and that implementation would impact right-of-way and topography.
 - A map-based exhibit depicting the existing rock formations along Chapman Highway will be prepared.

- The ultimate typical sections for Chapman Highway were compared to the recently-completed Cumberland Avenue project.
- The draft list of capital projects along Chapman Highway were reviewed and discussed.
 - There was much discussion on the concept of closing unsignalized intersections of public roads along Chapman Highway and installing a few additional traffic signals. The participants identified both 'pros' and 'cons' for installing additional traffic signals along Chapman Highway.
 - The concept of a protected intersection (also known as a Dutch junction) was presented.
- The draft prioritization criteria for the capital projects along Chapman Highway were reviewed and discussed.
 - This was briefly reviewed.
 - There was discussion on whether anticipated costs for implementing each project should be considered within the prioritization criteria. The consultant team offered that the preference is to determine prioritization by need – without considering anticipated costs – but the timeframe for implementation may vary from the final prioritization (e.g. Priority #4 is significantly less expensive than Priority #1, #2, and #3, and/or there is a grant funding opportunity for Priority #4).
- The meeting concluded.



APPENDIX O

TDOT REGION 1 MEETING

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

Tennessee Department of Transportation – Region 1

7345 Region Lane – Conference Room

March 8, 2019 – 9:30 AM Eastern

SUMMARY

- There were 12 attendees:
 - Steve Borden, TDOT
 - Amanda Snowden, TDOT
 - Christie Brown, TDOT
 - Dexter Justis, TDOT
 - Andy Padgett, TDOT
 - Nathan Vatter, TDOT
 - Jeff Welch, Knoxville Regional TPO
 - Mike Conger, Knoxville Regional TPO
 - Jim Hagerman, City of Knoxville
 - Bryan Berry, City of Knoxville
 - Cindy Pionke, Knox County
 - Brad Waldschmidt, Kimley-Horn
- A presentation was delivered to TDOT. The content included:
 - Focus on City of Knoxville section of Chapman Highway (approx. 6.2 miles)
 - Segmentation of Chapman Highway – 5 segments with different 1) visions, 2) opportunities, and 3) challenges
 - Traffic Data
 - Crash Data; Crash Rates
 - Steering Committee involvement (Knoxville Regional TPO, City of Knoxville, TDOT, Knoxville Area Transit, Knox County)
 - Community Engagement
 - Proposed Typical Sections for Chapman Highway

(Continued on the Next Page)

- TDOT shared that for a 1-mile section of Chapman Highway near Seymour, the anticipated costs are approximately \$10,000,000 per mile. This particular 1-mile section does not include sidewalk.
- Without a curb/gutter, there would need to be a physical barrier between the vehicle traveled way and the bicyclist/pedestrian traveled way.
- The traffic data and traffic analysis from this Implementation Plan can be shared with TDOT to consider appropriate locations for right-turn lanes along Chapman Highway.
- TDOT communicated that for the full 10.3-mile section of Chapman Highway, as part of the IMPROVE Act, the planning document (being prepared by the Strategic Transportation Investments Division) should be completed around July/August 2019.
 - For the entire 10.3-mile section, TDOT is considering either a non-traversable center median or a traversable center two-way left-turn lane.
 - TDOT is leaning toward a traversable center two-way left-turn lane.
 - TDOT is OK if the public/community is aware that TDOT is considering these 2 options as part of the IMPROVE Act project.
 - TDOT typically does not promote fluctuating between these 2 median types along the same corridor.
 - TDOT will be able to incorporate access management retrofits such as 1) addressing open frontage access, 2) reducing the number of driveways in some locations, and 3) aligning skewed intersections.

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- **TDOT provided the following comments regarding the Proposed Typical Sections:**
 - A center two-way left-turn lane should be a minimum width of 12 feet, but the travel lanes can have 11-foot widths.
 - If a non-traversable center median was considered, the minimum width would be 8 feet (4 feet minimum island, 2 feet of curb/gutter on each side). However, this would be wider at locations with left-turn lanes.
 - TDOT's paramount considerations for improvements are incorporating a median (traversable or non-traversable) to provide separation of traffic for safety, and maintaining adequate drainage.
 - To establish ROW boundaries, TDOT provides 4.5 feet for a utility easement beyond the back of sidewalk.
 - A paved shoulder is required with ditch, but not with curb/gutter.
 - It is possible that some segments may have curb/gutter on one side, and paved shoulder with ditch on the other side. This may be something to consider for Segment 4 (near Ye Olde Steak House).
 - While constructing curb/gutter typically has a higher construction cost compared to paved shoulder and ditch, the curb/gutter allows for a narrower ROW width compared to the ditch. Typically, a ditch extends the ROW width to approximately 21 feet from the edge of pavement.

(Continued on the Next Page)

- TDOT developed 3 typical sections on an exhibit:
 - The top represents the typical section that TDOT considers for 5-lane with curb/gutter and sidewalk on both sides, using TDOT design standards. The anticipated ROW is 80 feet. However, during the meeting, the addition of a 2.5-foot buffer between curb/gutter and sidewalk was mentioned. This would increase the anticipated ROW from 80 feet to 85 feet.
 - The middle represents the Proposed Typical Section with buffer-separated bicycle lanes and sidewalks on both sides, but with the incorporation of TDOT design standards. The anticipated ROW increases from 97 feet to 111 feet.
 - The bottom represents the Proposed Typical Section with a sidewalk on one side and a shared use trail on the other side, but with the incorporation of TDOT design standards. The anticipated ROW increases from 86 feet to 100 feet.
- During a 03/12/2019 phone call with Christie Brown and others from TDOT, the following topics were discussed regarding the typical sections:
 - Instructional Bulletin 19-05, which was distributed via e-mail on 03/11/2019, regarding multimodal design. The revised standard drawings MM-TS-1 and MM-TS-2 provide updates to TDOT's minimum and preferred lateral offset widths between the roadway and bike lanes, sidewalks, and shared use paths.
 - These revised standards may override what was discussed during the meeting, specifically in regard to the lateral offset and buffer widths.
 - Since Chapman Highway predominantly has a posted speed limit of 45 MPH or 50 MPH, it appears the minimum buffer width is 12.5 feet and the preferred buffer width is 16.5 feet. This width can consist of a paved shoulder, 2.5-foot curb/gutter, and a grass strip (that must be 2 feet minimum).
 - Some portions of Chapman Highway may require paved shoulder, even with the presence of curb/gutter. TDOT will contemplate and follow-up on this topic.
 - The City and TDOT will continue to coordinate on these typical section topics, so that the City's proposed typical sections along Chapman Highway can be revised accordingly.



APPENDIX P

STEERING COMMITTEE MEETING #4

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

April 16, 2019 – 1:00 PM Eastern

AGENDA

- Meeting with TDOT Region 1 – 03/08/2019
 - Presentation
 - Feedback
- Revisions since 12/12/2018
 - Proposed Typical Sections
 - Prioritization Criteria
 - Improvement Projects
- Anticipated Project Costs
- Preview of Public Engagement
 - Community Workshop
 - MetroQuest Survey

STEERING COMMITTEE MEETING

City of Knoxville Public Works Service Center

3131 Morris Avenue – Community Room (2nd Floor)

April 16, 2019 – 1:00 PM Eastern

SUMMARY

- There were 19 attendees:
 - 2 from Knoxville Regional TPO
 - 1 from Knoxville-Knox County Planning
 - 4 from City of Knoxville
 - 1 from Urban Wilderness (City of Knoxville)
 - 4 from Tennessee DOT
 - 1 from Knox County
 - 6 from the consultant team
- A summary was provided of the 03/08/2019 meeting with TDOT Region 1, including the content that was presented and the feedback that was received.
- Since there have been revisions to proposed improvements since the 12/12/2018 Steering Committee meeting, these revisions were presented:
 - Proposed Typical Sections
 - Prioritization Criteria
 - Improvement Projects
- The proposed improvement projects were evaluated using the prioritization criteria, and the resulting list of prioritized projects was reviewed.
- The City of Knoxville asked TDOT Region 1 about the process for pursuing a decrease in posted speed limit along Chapman Highway. TDOT Region 1 replied that the City of Knoxville has the ability to modify speed limits along Chapman Highway, since they're within municipality boundaries, as long as the MUTCD and FHWA's USLIMITS2 web based tool are considered.
 - The City of Knoxville may evaluate the possibility of reducing the posted speed limit along Chapman Highway, for Segment 1, from 45 MPH to 35 MPH.

- The City of Knoxville has already evaluated Segment 5 of Chapman Highway, and will likely reduce the posted speed limit from 50 MPH to 45 MPH.
- TDOT Region 1 explained the consideration given to determining the location of median openings along a roadway that contains a raised median.
 - Intersections with public roads typically receive median openings, then TDOT's standard spacing for median openings govern.
 - Within an urban area, the minimum spacing is 440 feet and the desired spacing is 660 feet.
 - Within a rural area, the minimum spacing is 880 feet and the desired spacing is 1,320 feet.
- The consultant team shared that a 2nd MetroQuest survey was now online and accessible from the TPO project webpage. It is anticipated that the survey will remain online until 05/03/2019, providing 2.5 weeks of online input opportunity.
- The Community Workshop (scheduled for later that evening) was previewed, so the Steering Committee could understand the presentation content and desired input from the participants:
 - Handout (for participants to take when they leave)
 - Scorecard (for participants to rate projects and provide input and return before they leave)
 - "What We've Heard" station, presenting results from the 09/05/2018 Community Workshop and the 1st MetroQuest online survey.
 - Proposed Typical Sections for Segments 1-5, each with a center left-turn lane option and a raised median option.
 - Aerial imagery layouts for Segments 1-5 that conceptually illustrate the improvement projects, with tables that provide more detail regarding each improvement project.
- TDOT Region 1 provided an update of TDOT's work along Chapman Highway.
 - \$30,000,000 has already been invested on three (3) 1-mile projects along Chapman Highway, beyond the City of Knoxville.
 - An additional \$45,000,000 for the IMPROVE Act project will include the City of Knoxville section, but extends to Seymour.
 - TDOT shared that the IMPROVE Act project likely would not be able to implement everything on this list, and also cannot guarantee that highly rated projects from the Implementation Plan can be implemented by TDOT as part of the IMPROVE Act project.
 - The TPO stated that one of the purposes of this Implementation Plan is to provide information to TDOT.

- The Steering Committee discussed how the various efforts on Chapman Highway should be properly messaged to the public.
 - Mike Conger prepared a handout with some 'FAQ' that facilitated dialogue.
 - TDOT Region 1 expressed a desire to avoid inaccurate messaging that may lead the public to think that TDOT's IMPROVE Act project will fund and fix everything resulting from this Implementation Plan.
 - Jeff Welch and Mike Conger described their attempts to coordinate with TDOT's Strategic Transportation Investments Division, but the TPO/City have not received any response from TDOT to discuss Chapman Highway.
- Jim Hagerman mentioned he has met with KFD and KPD regarding the improvement projects that would restrict access or close intersections to existing public roads along Chapman Highway.
- The meeting concluded.

STEERING COMMITTEE MEETING

April 16, 2019 – 1:00 PM Eastern

	NAME	AGENCY	EMAIL
✓	Jeff Welch	Knoxville Regional TPO	jeff.welch@knoxtrans.org
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	NAME	AGENCY	EMAIL
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APPENDIX Q

COMMUNITY WORKSHOP #2

COMMUNITY WORKSHOP #2

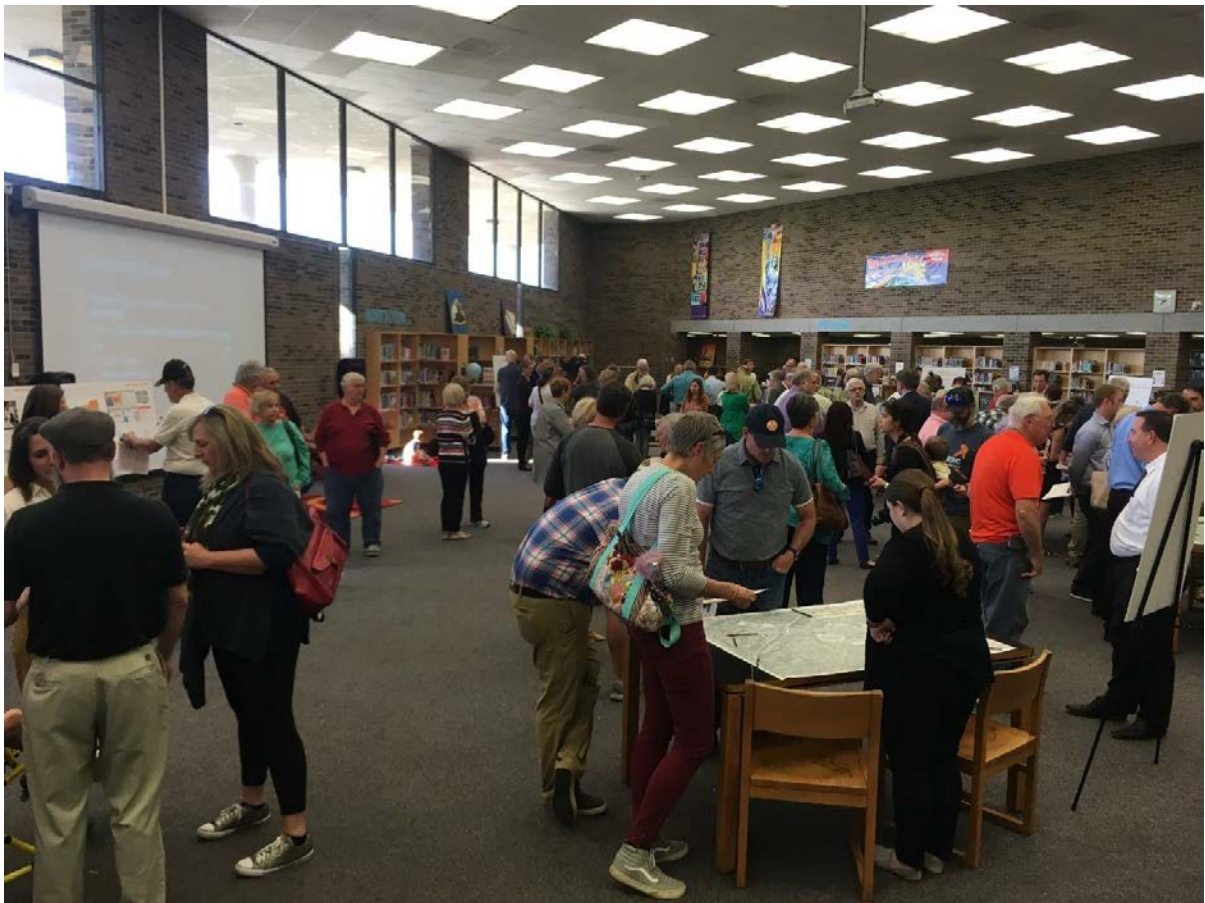
South Doyle Middle School (Library)

April 16, 2019 – 5:00 PM – 7:00 PM

WORKSHOP SUMMARY

Overall Summary

- 157 people signed in for this workshop, although it is believed that the total attendance may have been closer to 175 people.
- Each attendee was provided a Handout (to take home when they leave) and a Scorecard (to provide feedback and return before leaving); both are included as an attachment.
- Also in attendance were 3 representatives from Knoxville-Knox County Planning, 4 representatives from the City of Knoxville, and 6 representatives from the consultant team.



What we've Heard

- Boards summarizing the results from the 09/05/2018 Community Workshop as well as the 1st iteration of the MetroQuest online survey were presented to attendees.

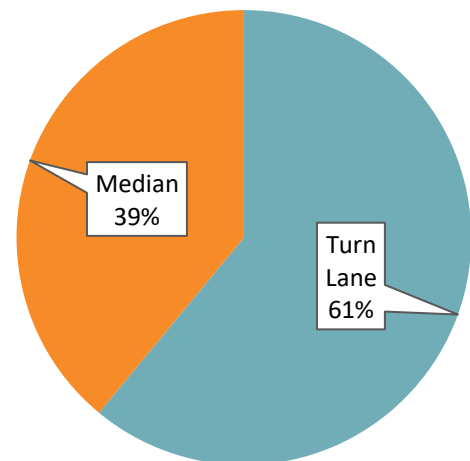


Scorecard Exercise

- Participants were asked to record their top projects for each of the five (5) Chapman Highway segments as well as identify their preference for a Center Turn Lane or a Raised Median for each segment of Chapman Highway. The scorecard also included an area for participants to provide comments.
 - Segment 1 – Participants could select up to seven (7) projects.
 - Segment 2 – Participants could select up to three (3) projects.
 - Segment 3 – Participants could select up to five (5) projects.
 - Segment 4 – Participants could select up to three (3) projects.
 - Segment 5 – Participants could select up to three (3) projects.
- There were five (5) workshop stations, one for each segment of Chapman Highway. Each workshop station included a Proposed Cross-Section board and a Project Priorities map.
 - The Proposed Cross-Section board displayed the two proposed cross section options: center turn lane and landscaped median.
 - The Project Priorities map displayed each segment's proposed projects with a color-coded key.
- Scorecards were collected from participants. 114 scorecards were collected, although the level of completion varied amongst the 114 scorecards.

Center Turn Lane vs. Raised Median Results

Segment #	Center Turn Lane	Raised Median
1	59%	41%
2	59%	41%
3	62%	38%
4	58%	42%
5	65%	35%
TOTAL	61%	39%



<< Continued on the Next Page >>

Scorecard Voting Results

- Each project marked on a participant's scorecard was awarded one (1) point.
- Once all the points were calculated for each project within each segment, the need for an adjustment factor was identified. The highest scoring project in Segments 2, 3, 4, and 5 were all significantly higher than the highest scoring project in Segment 1. This can be attributed to the parameters by which participants were asked to complete the scorecard.
 - For example, Segment 1 includes 23 projects with 7 voting opportunities. By contrast, Segment 4 includes 4 projects with 3 voting opportunities. Each project within Segment 4 therefore has a higher probability of receiving a vote than each project within Segment 1.
- To account for the varying number of projects in each segment, and the subsequent variation between each of the five (5) segments for a project's probability to receive a vote, the average count per project (for each segment) was divided by the average count per project (total of all segments). The resulting quotient provides a specific adjustment factor for each segment which was applied to the count value of each segment. These adjustment factors are shown in the following table and were used to provide an 'apples-to-apples' comparison between all five (5) segments.

Segment	Projects	Count	Avg.	Adjust.
1	23	364	15.83	1.6012
2	6	203	33.83	0.7490
3	9	269	29.89	0.8478
4	4	179	44.75	0.5663
5	5	176	35.20	0.7199
TOTAL	47	1191	25.34	

- A summary of the total adjusted count each project received, ranked by highest to lowest, attached to this document.

Project #	Roadway	Segment	Type	Location	Description	Unadjusted Count	Adjustment Factor	Adjusted Score
A-1	Chapman Highway	1	Median	Blount Avenue to Woodlawn Pike North / Fort Dickerson Road	Widen for Landscaped Median	35	1.601180734	56
BP-2	Chapman Highway	1	Bike/Ped	Blount Avenue to Woodlawn Pike North / Fort Dickerson Road	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	30	1.601180734	48
A-7	Chapman Highway	1	Access Management	a. East Martin Mill Pike (north) b. East Martin Mill Pike (south)	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	30	1.601180734	48
A-43	Chapman Highway	5	Median	Nixon Road to Mountain Grove Drive	Maintain Center Left-Turn Lane and Widen Under Gov. John Sevier Hwy. (or Convert to Landscaped Median)	66	0.719898453	48
A-30	Chapman Highway	3	Median	Lakeview Drive to Chapman Ford Crossing	Widen for Center Left-Turn Lane (or Landscaped Median)	54	0.847820929	46
A-24	Chapman Highway	2	Median	Overbrook Drive / Fronda Lane to Lakeview Drive	Widen for Center Left-Turn Lane (or Landscaped Median)	60	0.748978095	45
I-12	Chapman Highway	1	Intersection	Maryville Pike, Martin Mill Pike	Evaluate Realignment/Consolidation of Two (2) Intersections	25	1.601180734	40
A-39	Chapman Highway	4	Median	Chapman Ford Crossing to Nixon Road	Widen for Center Left-Turn Lane (or Landscaped Median)	66	0.566266492	37
I-34	Chapman Highway	3	Intersection	Lindy Drive	a. Realign Lindy Drive b. Install Traffic Signal	41	0.847820929	35
T-19	Chapman Highway	1	Transit	Between Moody Avenue and Young High Pike	Transit Super Stop (for Improved Headways and Transfers)	21	1.601180734	34
BP-10	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road to Moody Avenue	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	20	1.601180734	32
BP-17	Chapman Highway	1	Bike/Ped	Young High Pike to Overbrook Drive / Fronda Lane	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail (A portion has been funded by a TDOT Multimodal Access Grant)	19	1.601180734	30
N-21	Parallel Road	1	Non-Chapman	Young High Pike to Woodlawn Pike South	Create a Backage Road to Shopping Center	19	1.601180734	30
I-32	Chapman Highway	3	Intersection	East Lake Forest Drive (south)	Realign Across from Colonial Drive at Existing Traffic Signal	35	0.847820929	30
I-36	Chapman Highway	3	Intersection	West Ford Valley Road / East Ford Valley Road	Install Traffic Signal	33	0.847820929	28
BP-16	Chapman Highway	1	Bike/Ped	Moody Avenue to Young High Pike	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	17	1.601180734	27
T-23	Chapman Highway	1	Transit	Blount Avenue to Young High Pike	Enhance Bus Stops; Convert to Bus Shelters	17	1.601180734	27
BP-3	Chapman Highway	1	Bike/Ped	Blount Avenue	Convert to Protected Intersection	16	1.601180734	26
I-26	Chapman Highway	2	Intersection	Stone Road	Construct Left-Turn Lanes (This would serve as an interim project)	35	0.748978095	26
A-29	Chapman Highway	2	Access Management	a. West Red Bud Road b. East Red Bud Road c. West Lake Forest Drive d. East Lake Forest Drive (north) e. Brandau Drive f. Lake Shore Road g. Mayflower Drive h. Lakeview Drive	Evaluate the Feasibility / Benefits if each Intersection: 1. Becomes Signalized (Install Traffic Signal) 2. Remains Full-Movement (Left-Turns Allowed) 3. Is Restricted to Right-In / Right-Out 4. Becomes Entirely Closed to Vehicles	35	0.748978095	26
BP-31	Chapman Highway	3	Bike/Ped	Lakeview Drive to Chapman Ford Crossing	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	29	0.847820929	25

Project #	Roadway	Segment	Type	Location	Description	Unadjusted Count	Adjustment Factor	Adjusted Score
BP-44	Chapman Highway	5	Bike/Ped	Nixon Road to Mountain Grove Drive	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	35	0.719898453	25
A-33	Chapman Highway	3	Access Management	Eastwood Drive	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	28	0.847820929	24
I-42	Chapman Highway	4	Intersection	West Dick Ford Lane	Install Traffic Signal	42	0.566266492	24
T-45	Chapman Highway	5	Transit	Nixon Road to Mountain Grove Drive	Enhance Bus Stops; Convert to Bus Shelters	32	0.719898453	23
A-14	Chapman Highway	1	Access Management	Druid Drive (east)	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	14	1.601180734	22
BP-8	Chapman Highway	1	Bike/Ped	Lippencott Street	Convert to Protected Intersection	13	1.601180734	21
BP-40	Chapman Highway	4	Bike/Ped	Chapman Ford Crossing to Nixon Road	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	37	0.566266492	21
BP-25	Chapman Highway	2	Bike/Ped	Overbrook Drive / Fronda Lane to Lakeview Drive	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail (A portion has been funded by a TDOT Multimodal Access Grant)	27	0.748978095	20
BP-27	Chapman Highway	2	Bike/Ped	Stone Road	Convert to Protected Intersection	26	0.748978095	19
A-41	Chapman Highway	4	Access Management	a. Longvale Drive b. Deva Drive c. Little Switzerland Road	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	34	0.566266492	19
N-22	Overbrook Drive	1	Non-Chapman	Overbrook Drive	Extend Overbrook Drive to Shopping Center	12	1.601180734	19
BP-47	W Norton Road / Mountain Grove Drive	5	Bike/Ped	W Norton Road/Mountain Grove Drive	Shared Use Path (alternative to Chapman Highway)	27	0.719898453	19
BP-18	Chapman Highway	1	Bike/Ped	Moody Avenue	Convert to Protected Intersection	11	1.601180734	18
BP-35	Chapman Highway	3	Bike/Ped	Lindy Drive	Convert to Protected Intersection (in conjunction with Traffic Signal)	21	0.847820929	18
N-13	W Blount Avenue	1	Non-Chapman	W Blount Avenue at Maryville Pike	Single Lane Roundabout	11	1.601180734	18
BP-4	Chapman Highway	1	Bike/Ped	KXHR Crossing -OR- Hawthorne Avenue	Midblock Crossing with Pedestrian Hybrid Beacon	10	1.601180734	16
A-15	Chapman Highway	1	Access Management	Childress Street	Right-in Right-Out Only	10	1.601180734	16
A-28	Chapman Highway	2	Access Management	a. Judith Drive b. Larry Drive	Evaluate the Feasibility / Benefits if each Intersection: 1. Remains Full-Movement (Left-Turns Allowed) 2. Is Restricted to Right-In / Right-Out 3. Becomes Entirely Closed to Vehicles	20	0.748978095	15
BP-9	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road	Convert to Protected Intersection	9	1.601180734	14
BP-20	Chapman Highway	1	Bike/Ped	Young High Pike	Convert to Protected Intersection	9	1.601180734	14
BP-37	Chapman Highway	3	Bike/Ped	West Ford Valley Road / East Ford Valley Road	Convert to Protected Intersection (in conjunction with Traffic Signal)	17	0.847820929	14
N-6	Parallel Road	1	Non-Chapman	Fort Avenue to Private Development	Create a Backage Road to Shopping Center	9	1.601180734	14
N-46	Quaker Way	5	Non-Chapman	Quaker Way	Extend Quaker to West Dick Ford Lane	16	0.719898453	12
N-38	W Ford Valley Road	3	Non-Chapman	West Ford Valley Road at Old Valley Road	Single Lane Roundabout	11	0.847820929	9
N-5	Hawthorne Avenue	1	Non-Chapman	Hawthorne Avenue at Augusta Avenue	Intersection Redesign / Consolidation	4	1.601180734	6
BP-11	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road to Moody Avenue	Restripe Roadway to Accommodate Interim Bike Lanes (This would serve as an interim project)	3	1.601180734	5

WHAT IS THE CHAPMAN HIGHWAY IMPLEMENTATION PLAN?

The Chapman Highway Implementation Plan, led by the Knoxville-Knox County Planning and the City of Knoxville, will identify and prioritize improvements for the six-mile section of Chapman Highway within the city limits that runs from Blount Avenue to just south of Governor John Sevier Highway. This effort involves evaluating previous studies, collecting new data, and developing an actionable strategy for corridor improvements. The study is anticipated to wrap up this summer.

WHAT ARE WE PRESENTING AT TONIGHT'S WORKSHOP?

A list of several proposed projects has been generated for your review and input. The projects are intended to address problems and needs we heard from the input we received at our first public workshop and survey last fall as well as from analyzing updated data for information such as traffic counts, crashes and speeds on Chapman Highway. We are here tonight to hear your feedback on the proposed projects and find out which ones you think are the highest priority for implementation.

OVERVIEW OF PROJECTS BEING PROPOSED

While there are many individual projects being proposed they all improve safety and generally fall under one of the following major categories:

- » Add median/center turn lane - These projects would install either a median or continuous center turn lane in sections where one does not exist now.
- » Bicycle/Pedestrian/Transit - These projects would improve safety for non-motorists such as adding sidewalks, a greenway trail or bus shelters.
- » Access Management - These projects involve reducing conflict points by consolidating access.
- » Intersections - These are spot locations identified for improvement such as a new traffic signal

Please see the other side of this handout for illustrated examples of these project types.

WHAT IS NOT BEING PROPOSED

- » **There are no projects to either add more travel lanes or reduce travel lanes (road diet) in any location of Chapman Highway in our study limits.**

OTHER PROJECTS

COMPLETED AND ONGOING INITIATIVES

The City has already implemented projects and have others underway that improve the safety and operations for all modes. Some examples are:

- » Fort Dickerson intersection realignment
- » Chapman Highway at Blount Avenue intersection
- » Signalization improvement for the entire corridor

TDOT'S IMPROVE ACT

Chapman Highway is a Tennessee Department of Transportation (TDOT) state route. While the City is taking an active role in studying and improving the road, roadway improvements require partnership with TDOT and are subject to their approval. Improvements to Chapman Highway will require resources beyond those available to local governments acting alone. The City will be actively pursuing funding for the projects that result from this Implementation Plan and will be engaging with TDOT as they determine specific projects that will utilize the \$45 million that have been committed for Chapman Highway in the State's IMPROVE Act.

YOUR INPUT AT THIS WORKSHOP IS IMPORTANT!

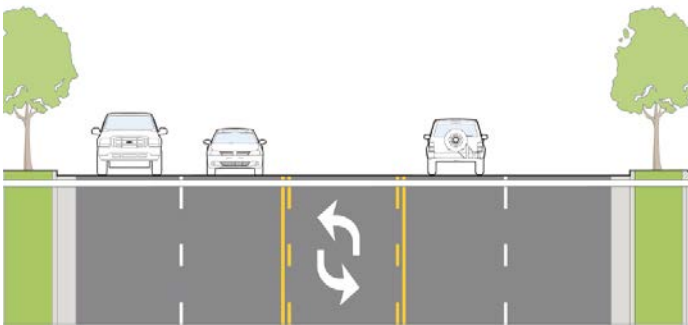
Your input in the planning process is invaluable and will be used to help drive future decisions and priorities.

STAY INVOLVED

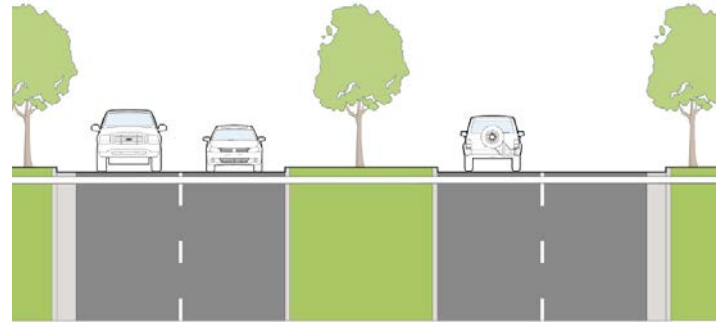
In addition to the workshop tonight, you can provide additional feedback using the project's second online survey. Help spread the word, by encouraging your family and friends to take the survey as well. For project updates, summaries of previous outreach events, and to access the online survey, please visit:

<https://knoxtrans.org/chapman-highway>

MEDIAN OR CENTER TURN LANE



CENTER TURN LANE



LANDSCAPED MEDIAN

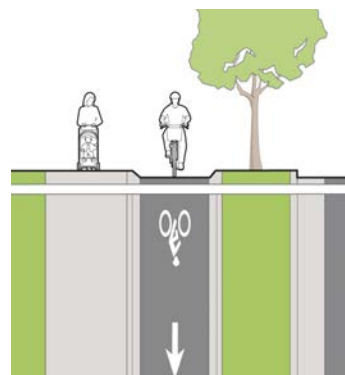
BICYCLE, PEDESTRIAN, AND TRANSIT



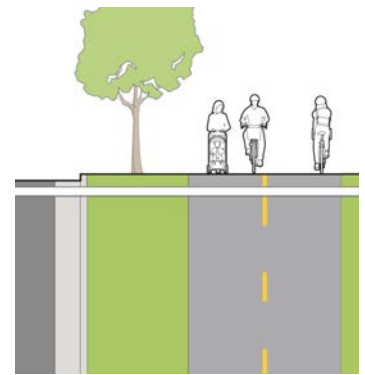
PROTECTED INTERSECTION



BUS SHELTERS AND SUPER STOPS

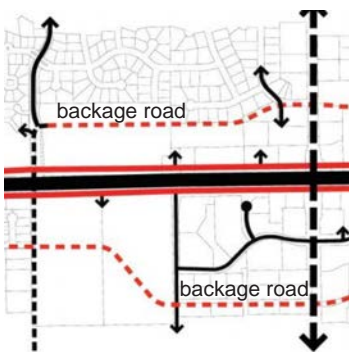


SEPARATED BIKE LANE AND SIDEWALK

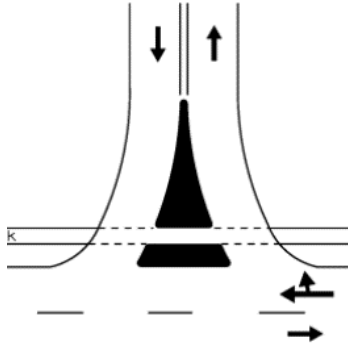


SHARED USE TRAIL (GREENWAY)

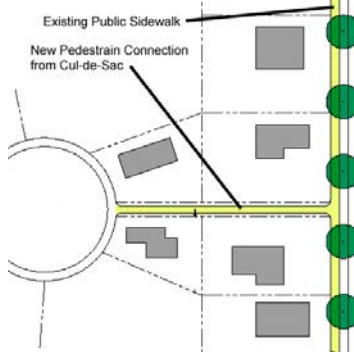
ACCESS MANAGEMENT



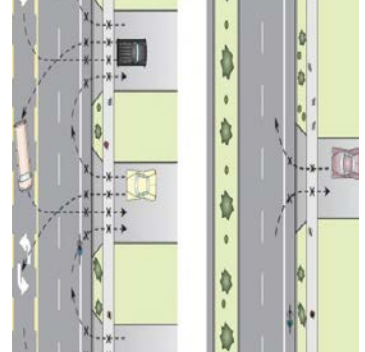
BACKAGE ROAD AND ROAD EXTENSIONS



RIGHT-IN, RIGHT-OUT INTERSECTION

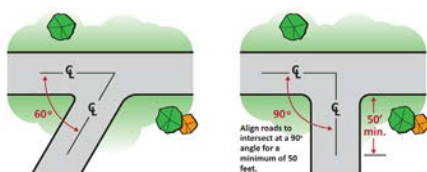


CUL-DE-SAC WITH PEDESTRIAN ACCESS



INTERSECTION CLOSURE

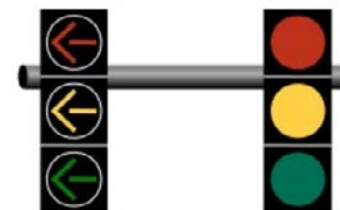
INTERSECTIONS



INTERSECTION REALIGNMENT



LEFT TURN LANE



TRAFFIC SIGNAL







CHAPMAN HIGHWAY IMPLEMENTATION PLAN

As you visit each station tonight, use this scorecard to record your answers to the questions below. Any additional thoughts you would like to leave with the project team can be left on the back of this page.

Record your top projects below by listing the Project # Code.

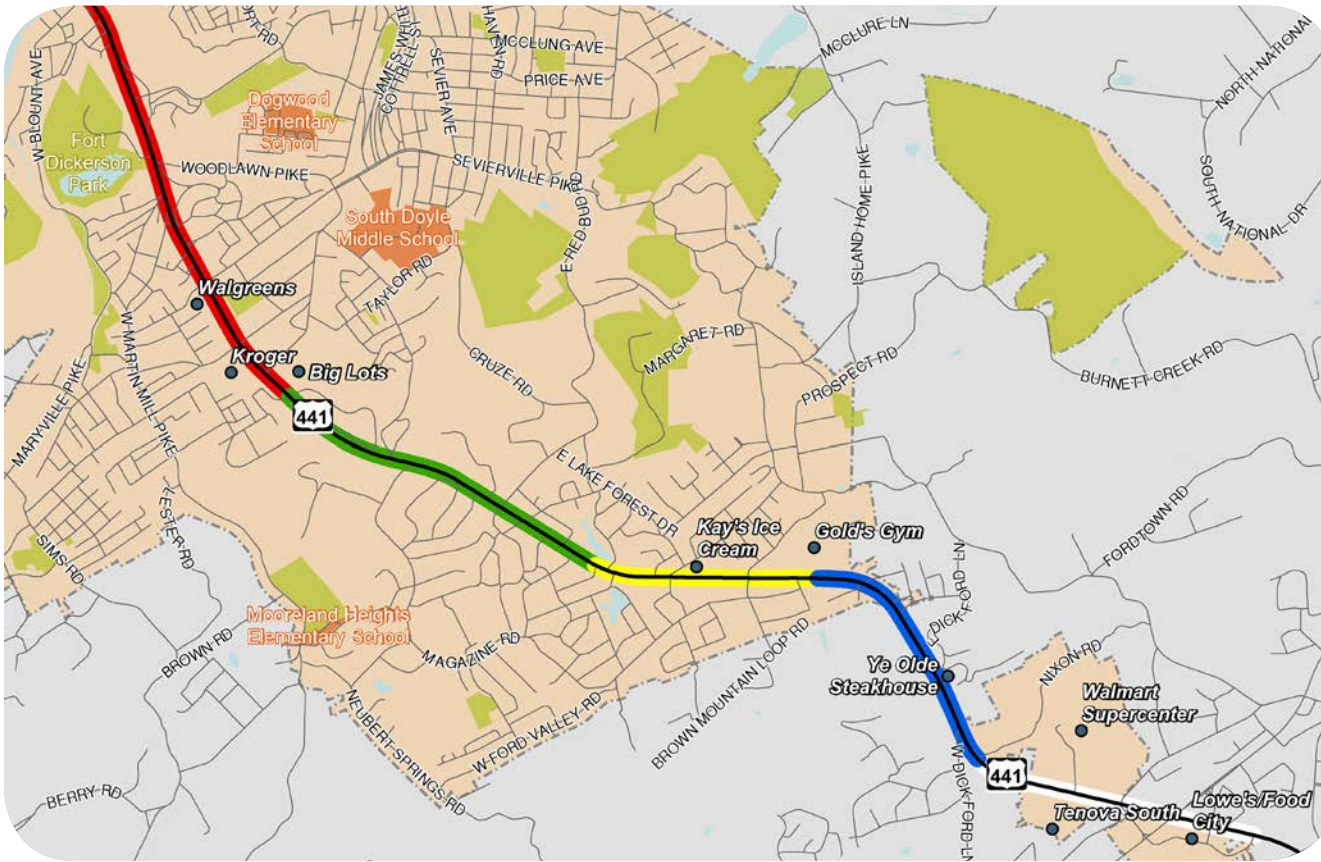
SEGMENT 1 <i>Blount Avenue to Overbrook Drive/Frona Lane</i>		SEGMENT 2 <i>Overbrook Drive/Frona Lane to Lakeview Drive</i>		SEGMENT 3 <i>Lakeview Drive to Chapman Ford Crossing</i>		SEGMENT 4 <i>Chapman Ford Crossing to Nixon Road</i>		SEGMENT 5 <i>Nixon Road to Mountain Grove Drive</i>	
1		1		1		1		1	
2		2		2		2		2	
3		3		3		3		3	
4		<input type="radio"/> Center Turn Lane OR <input type="radio"/> Raised Median	4		<input type="radio"/> Center Turn Lane OR <input type="radio"/> Raised Median	<input type="radio"/> Center Turn Lane OR <input type="radio"/> Raised Median	<input type="radio"/> Center Turn Lane OR <input type="radio"/> Raised Median		
5			5						
6									
7									

☐ Center Turn Lane
OR
☐ Raised Median

LEGEND
 BIKE/PEDESTRIAN
 TRANSIT
 MEDIAN
 NON-CHAPMAN
 ACCESS MANAGEMENT
 INTERSECTION

MORE INFORMATION
CAN BE FOUND ON THE
BACK OF THIS PAGE.

CHAPMAN HIGHWAY IMPLEMENTATION PLAN



- Segment 1
Blount Ave to Overbrook Dr/Frona Ln
- Segment 2
Overbrook Dr/Frona Ln to Lakeview Dr
- Segment 3
Lakeview Dr to Chapman Ford Crossing shopping center
- Segment 4
Chapman Ford Crossing shopping center to Nixon Rd
- Segment 5
Nixon Rd to Mountain Grove Dr

ADDITIONAL COMMENTS:



APPENDIX R

METROQUEST SURVEY #2

MetroQuest Summary

OVERVIEW

As the Chapman Highway Implementation Plan progressed, a second online survey was designed to ascertain additional input from the community regarding potential projects along the corridor. The survey launched April 16, 2019 and was available online for participation through May 6, 2019. Through the MetroQuest survey platform, the new survey allowed participants to identify projects that should be prioritized along Chapman Highway.

The MetroQuest survey included five screens that guided participants through the process of learning about the implementation plan, becoming informed of the various projects and project types, and providing feedback. The purpose of the survey was to gain insight on which projects the public believes should be prioritized, and conversely, which projects should not be prioritized. Additionally, participants were given the opportunity to identify their preference between a raised median or a center turn lane.

This summary includes the following major elements:

- Screenshots of Survey Slides
- Participation Recap
- Project Selection
 - Segment 1
 - Segment 2 / Segment 3
 - Segment 4 / Segment 5
- Wrap Up Questions
 - Median Treatment Preference
- Home and Work Locations of Respondents by Zip Code

SCREENSHOTS OF SURVEY SLIDES

1

WELCOME

Your input is important!

Thanks for taking the time to tell us what you think!

The **Chapman Highway Implementation Plan**, led by Knoxville-Knox County Planning and City of Knoxville, will identify and prioritize improvements for the six-mile section of Chapman Highway within the city limits that runs from Blount Avenue to just south of Governor John Sevier Highway.

[STUDY AREA MAP](#)

[Begin](#)

CHAPMAN HIGHWAY IMPLEMENTATION PLAN

This effort will evaluate previous studies, confirm their recommendations, identify new issues, and develop a strategy for corridor improvements.

2

SEGMENT 1

Segment 1 Project Selection

This map includes 14 projects for autos, bikes and pedestrians, and transit between Blount Ave and Overbrook Dr/Fronda Ln. Note if each proposed project should be a priority or not. You can select 7 priority projects. There is room to leave comments on each tab!

[Approve any 7 projects on the map.](#)

[Comment](#)

0 / 7 Projects Selected

3

SEGMENTS 2 AND 3

Segments 2/3 Project Selection

This map includes 10 projects for autos, bikes, and pedestrians between Overbrook Dr/Fronda Ln and Chapman Ford Crossing. Note if each proposed project should be a priority or not. You can select 5 priority projects. There is room to leave comments on each tab!

[Approve any 5 projects on the map.](#)

[Comment](#)

0 / 5 Projects Selected

4

SEGMENTS 4 AND 5

Segments 4/5 Project Selection

This map includes 7 projects for autos, bikes & pedestrians, & transit between Chapman Ford Crossing and Mountain Grove Dr. Note if each proposed project should be a priority or not. You can select 5 priority projects. There is room to leave comments on each tab!

[Approve any 5 projects on the map.](#)

[Comment](#)

0 / 5 Projects Selected

5

WRAP UP

Wrap Up

Thank You!

Thank you for providing input! Your participation is critical to the success of the process and we want to stay in touch!

Be sure to check our project website for updates!
<https://knoxtrans.org/chapman-highway>

Final Questions

Which do you prefer?
Select...

Do you have any other project ideas?
Type...

Which segment needs the most improvement?
Select...

What is your home zipcode?
Type...

What is your work/school zipcode?
Type...

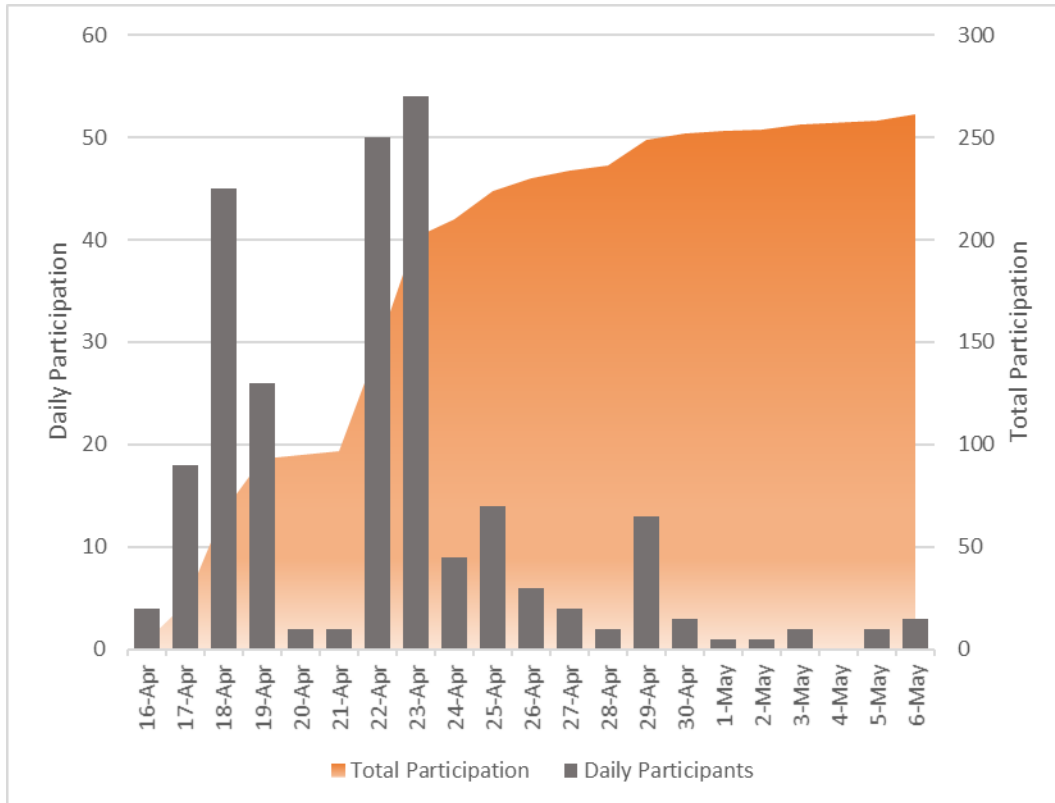
Email Address
Type...

[Submit Final Questions](#) [Skip](#)

PARTICIPATION RECAP

In total, 261 people participated in the survey between April 16, 2019 and May 6, 2019. Participants provided more than 4,000 data points for analysis and 391 written comments. Three major activity spikes – April 17, April 22, and April 23 – correspond with the survey’s initial launch, a release in the City’s Office of Neighborhoods newsletter, and the mayor’s weekly E-letter.

Survey Participation Overview



PROJECT SELECTION

The first step of the online survey asked participants to select projects along the corridor and identify if the selected project should be a priority or not. Screens 2, 3, and 4 presented the same activity for Segment 1, Segments 2/3, and Segments 4/5, respectively. However, the maximum number of select projects varied by segment:

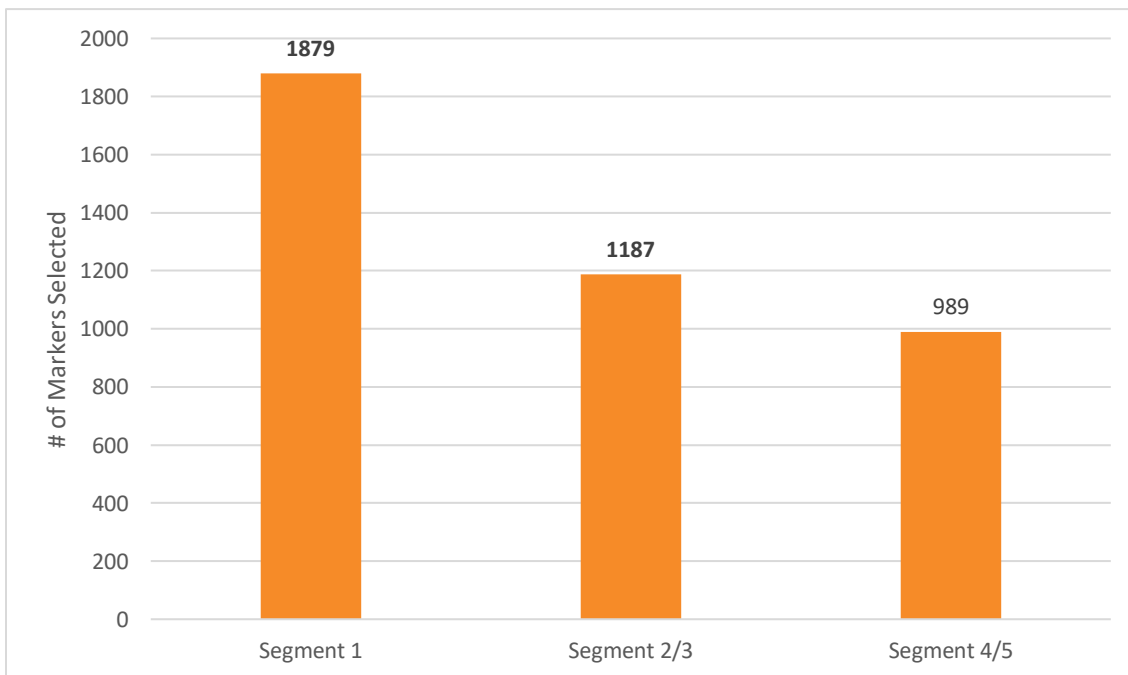
- Segment 1 – Participants could select up to seven (7) projects.
- Segment 2/3 – Participants could select up to five (5) projects.
- Segment 4/5 – Participants could select up to five (5) projects.

Furthermore, participants were provided the opportunity to leave a comment for each project they selected. Each screen could display a maximum of 15 projects, therefore some of the prioritized projects were combined to accommodate the limit. For example, Segment 1 includes 23 projects – but several of the bicycle/pedestrian projects were combined to satisfy the MetroQuest survey's limitation on the number of projects per screen.

Participants selected:

- 1,879 markers on Screen 2 (Segment 1)
- 1,187 markers on Screen 3 (Segments 2/3)
- 989 markers on Screen 4 (Segments 4/5)

Count of Marker Selections Along Chapman Highway by Screen



Within the MetroQuest online survey platform, each participant was given the opportunity to perform one (1) of three (3) actions for each project:

- A project should be prioritized; for the purposes of scoring, one (1) point was added to this project.
- A project should not be prioritized; for the purposes of the scoring, one (1) point was subtracted from this project.
- A project was not selected; for the purposes of scoring, zero (0) points were awarded to this project.

The sum of these three (3) scoring categories represents the unadjusted scoring count for each project. To account for the varying number of projects in each segment and screen, and the subsequent variation between each of the five (5) segments for a projects probability to receive a vote, the average count per project (for each screen) was divided by the average count per project (total of all screens). The resulting quotient provides a specific adjustment factor for each segment which was applied to the count value of each segment. These adjustment factors are shown in the following tables and were used to provide an “apples-to-apples” comparison between all five (5) segments.

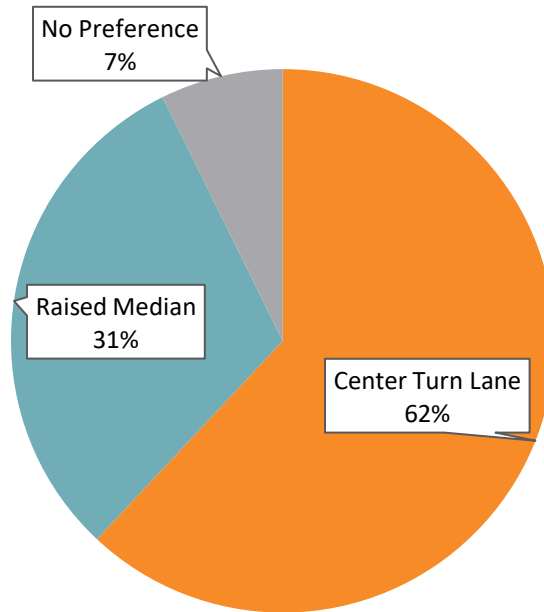
Screen	Segment	Projects	Count	Avg.	Adjust.
2	1	16	593	37.06	1.3425
3	2	12	656	54.67	0.9102
	3				
4	4	9	592	65.78	0.7564
	5				
	TOTAL	37	1841	49.76	

A summary of the total adjusted count each project received, ranked by highest to lowest, is attached to this document.

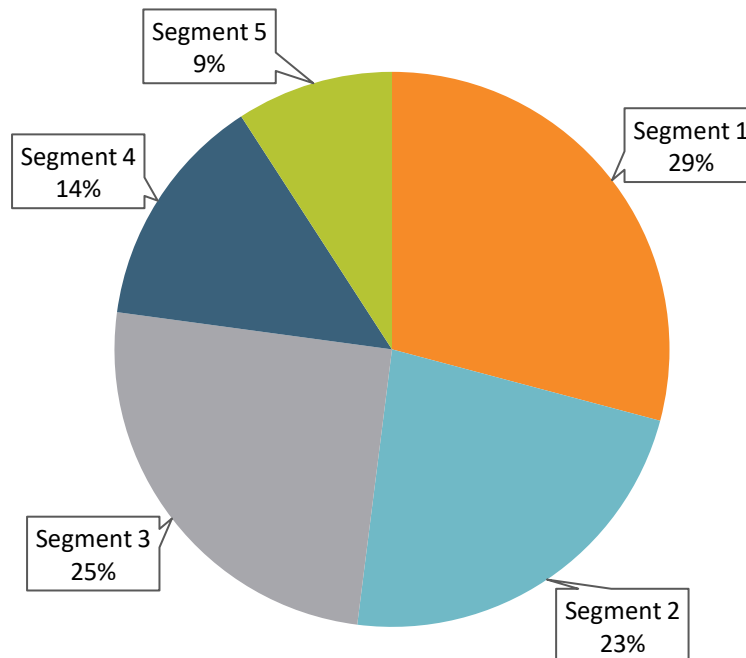
WRAP UP QUESTIONS

Which do you prefer?

On the final screen, participants were asked to identify their preference for a Center Turn Lane, Raised Median, or No Preference. A summary of the responses is displayed below.



Which segment needs the most improvement?



What is your home zip code?

Zip Code	Count
37920	119
37865	29
37919	5
37876	3
37917	3
37918	3
37921	2
37924	2
37354	1
37721	1
37754	1
37769	1
37801	1
37803	1
37861	1
37886	1
37902	1
37914	1
37931	1
37932	1
37934	1
37938	1
37998	1
38917	1

What is your work/school zip code?

Zip Code	Count
37920	63
37902	16
37865	13
37919	11
37996	10
37917	7
37921	7
37932	5
37909	4
37830	3
37849	3
37701	2
37716	2
37777	2
37918	2
37922	2
37924	2
37934	2
37756	1
37796	1
37801	1
37803	1
37820	1
37831	1
37886	1
3791	1
37916	1
37923	1
37929	1
37930	1
37931	1
93720	1
NA	1

Project #	Roadway	Segment	Type	Location	Description	Unadjusted Count	Adjustment Factor	Adjusted Score
I-12	Chapman Highway	1	Intersection	Maryville Pike, Martin Mill Pike	Evaluate Realignment/Consolidation of Two (2) Intersections	105	1.342509457	141
I-26	Chapman Highway	2	Intersection	Stone Road	Construct Left-Turn Lanes (This would serve as an interim project)	148	0.910184575	135
A-43	Chapman Highway	5	Median	Nixon Road to Mountain Grove Drive	Maintain Center Left-Turn Lane and Widen Under Gov. John Sevier Hwy. (or Convert to Landscaped Median)	151	0.75643718	114
A-30	Chapman Highway	3	Median	Lakeview Drive to Chapman Ford Crossing	Widen for Center Left-Turn Lane (or Landscaped Median)	125	0.910184575	114
A-24	Chapman Highway	2	Median	Overbrook Drive / Fronda Lane to Lakeview Drive	Widen for Center Left-Turn Lane (or Landscaped Median)	125	0.910184575	114
A-39	Chapman Highway	4	Median	Chapman Ford Crossing to Nixon Road	Widen for Center Left-Turn Lane (or Landscaped Median)	151	0.75643718	114
T-19	Chapman Highway	1	Transit	Between Moody Avenue and Young High Pike	Transit Super Stop (for Improved Headways and Transfers)	82	1.342509457	110
T-23	Chapman Highway	1	Transit	Blount Avenue to Young High Pike	Enhance Bus Stops; Convert to Bus Shelters	71	1.342509457	95
BP-2	Chapman Highway	1	Bike/Ped	Blount Avenue to Woodlawn Pike North / Fort Dickerson Road	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	55	1.342509457	74
BP-10	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road to Moody Avenue	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	55	1.342509457	74
BP-16	Chapman Highway	1	Bike/Ped	Moody Avenue to Young High Pike	Provide Landscaped Buffer, Separated Bicycle Lanes, and Sidewalks	55	1.342509457	74
A-1	Chapman Highway	1	Median	Blount Avenue to Woodlawn Pike North / Fort Dickerson Road	Widen for Landscaped Median	49	1.342509457	66
BP-17	Chapman Highway	1	Bike/Ped	Young High Pike to Overbrook Drive / Fronda Lane	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail (A portion has been funded by a TDOT Multimodal Access Grant)	48	1.342509457	64
A-29	Chapman Highway	2	Access Management	a. West Red Bud Road b. East Red Bud Road c. West Lake Forest Drive d. East Lake Forest Drive (north) e. Brandau Drive f. Lake Shore Road g. Mayflower Drive h. Lakeview Drive	Evaluate the Feasibility / Benefits if each Intersection: 1. Becomes Signalized (Install Traffic Signal) 2. Remains Full-Movement (Left-Turns Allowed) 3. Is Restricted to Right-In / Right-Out 4. Becomes Entirely Closed to Vehicles	68	0.910184575	62
N-21	Parallel Road	1	Non-Chapman	Young High Pike to Woodlawn Pike South	Create a Backage Road to Shopping Center	41	1.342509457	55
N-22	Overbrook Drive	1	Non-Chapman	Overbrook Drive	Extend Overbrook Drive to Shopping Center	41	1.342509457	55
I-34	Chapman Highway	3	Intersection	Lindy Drive	a. Realign Lindy Drive b. Install Traffic Signal	56	0.910184575	51
T-45	Chapman Highway	5	Transit	Nixon Road to Mountain Grove Drive	Enhance Bus Stops; Convert to Bus Shelters	70	0.75643718	53
I-32	Chapman Highway	3	Intersection	East Lake Forest Drive (south)	Realign Across from Colonial Drive at Existing Traffic Signal	56	0.910184575	51
I-42	Chapman Highway	4	Intersection	West Dick Ford Lane	Install Traffic Signal	62	0.75643718	47
I-36	Chapman Highway	3	Intersection	West Ford Valley Road / East Ford Valley Road	Install Traffic Signal	40	0.910184575	36

Project #	Roadway	Segment	Type	Location	Description	Unadjusted Count	Adjustment Factor	Adjusted Score
N-6	Parallel Road	1	Non-Chapman	Fort Avenue to Private Development	Create a Backage Road to Shopping Center	27	1.342509457	36
BP-31	Chapman Highway	3	Bike/Ped	Lakeview Drive to Chapman Ford Crossing	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	38	0.910184575	35
BP-25	Chapman Highway	2	Bike/Ped	Overbrook Drive / Fronda Lane to Lakeview Drive	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail (A portion has been funded by a TDOT Multimodal Access Grant)	38	0.910184575	35
A-41	Chapman Highway	4	Access Management	a. Longvale Drive b. Deva Drive c. Little Switzerland Road	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	43	0.75643718	33
BP-44	Chapman Highway	5	Bike/Ped	Nixon Road to Mountain Grove Drive	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	36	0.75643718	27
BP-40	Chapman Highway	4	Bike/Ped	Chapman Ford Crossing to Nixon Road	Provide Landscaped Buffer, Sidewalk, and Shared Use Trail	36	0.75643718	27
A-15	Chapman Highway	1	Access Management	Childress Street	Right-in Right-Out Only	19	1.342509457	26
BP-47	W Norton Road / Mountain Grove Drive	5	Bike/Ped	W Norton Road/Mountain Grove Drive	Shared Use Path (alternative to Chapman Highway)	26	0.75643718	20
A-7	Chapman Highway	1	Access Management	a. East Martin Mill Pike (north) b. East Martin Mill Pike (south)	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	15	1.342509457	20
N-46	Quaker Way	5	Non-Chapman	Quaker Way	Extend Quaker to West Dick Ford Lane	17	0.75643718	13
A-28	Chapman Highway	2	Access Management	a. Judith Drive b. Larry Drive	Evaluate the Feasibility / Benefits if each Intersection: 1. Remains Full-Movement (Left-Turns Allowed) 2. Is Restricted to Right-In / Right-Out 3. Becomes Entirely Closed to Vehicles	10	0.910184575	9
N-13	W Blount Avenue	1	Non-Chapman	W Blount Avenue at Maryville Pike	Single Lane Roundabout	4	1.342509457	5
BP-3	Chapman Highway	1	Bike/Ped	Blount Avenue	Convert to Protected Intersection	0	1.342509457	0
BP-8	Chapman Highway	1	Bike/Ped	Lippencott Street	Convert to Protected Intersection	0	1.342509457	0
BP-27	Chapman Highway	2	Bike/Ped	Stone Road	Convert to Protected Intersection	0	0.910184575	0
BP-18	Chapman Highway	1	Bike/Ped	Moody Avenue	Convert to Protected Intersection	0	1.342509457	0
BP-35	Chapman Highway	3	Bike/Ped	Lindy Drive	Convert to Protected Intersection (in conjunction with Traffic Signal)	0	0.910184575	0
BP-4	Chapman Highway	1	Bike/Ped	KXHR Crossing -OR- Hawthorne Avenue	Midblock Crossing with Pedestrian Hybrid Beacon	0	1.342509457	0
BP-9	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road	Convert to Protected Intersection	0	1.342509457	0
BP-20	Chapman Highway	1	Bike/Ped	Young High Pike	Convert to Protected Intersection	0	1.342509457	0
BP-37	Chapman Highway	3	Bike/Ped	West Ford Valley Road / East Ford Valley Road	Convert to Protected Intersection (in conjunction with Traffic Signal)	0	0.910184575	0
BP-11	Chapman Highway	1	Bike/Ped	Woodlawn Pike North / Fort Dickerson Road to Moody Avenue	Restripe Roadway to Accommodate Interim Bike Lanes (This would serve as an interim project)	0	1.342509457	0
A-14	Chapman Highway	1	Access Management	Druid Drive (east)	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	-8	1.342509457	-11
A-33	Chapman Highway	3	Access Management	Eastwood Drive	Close Intersection; Create Cul-de-sac with Bike/Ped Connectivity	-18	0.910184575	-16
N-38	W Ford Valley Road	3	Non-Chapman	West Ford Valley Road at Old Valley Road	Single Lane Roundabout	-30	0.910184575	-27
N-5	Hawthorne Avenue	1	Non-Chapman	Hawthorne Avenue at Augusta Avenue	Intersection Redesign / Consolidation	-66	1.342509457	-89



APPENDIX S

PRIORITIZED IMPLEMENTATION

Chapman Highway Implementation Plan - Prioritization

Project #	Project Code	Location	Description	Segment	Type	(X-Axis)	(Y-Axis)	(X+Y)	50%	
						Stakeholder Scoring	Quantitative Scoring	TOTAL	Workshop Scoring	MetroQuest Scoring
12	I-12	Maryville Pk, Martin Mill Pk	Evaluate Realignment / Consolidation of Two (2) Intersections	1	Intersection	91	66	157	40	141
26	I-26	Stone Rd	Construct Left-Turn Lanes (Interim project)	2	Intersection	81	63	144	26	135
30	M-30	Lakeview Dr to Chapman Ford Crossing	Widen for Center Left-Turn Lane (or Landscaped Median)	3	Median	80	60	140	46	114
43	M-43	Nixon Rd to Mountain Grove Dr	Maintain Center Left-Turn Lane (or Convert to Landscaped Median)	5	Median	81	58	139	48	114
24	M-24	Overbrook Dr to Lakeview Dr	Widen for Center Left-Turn Lane (or Landscaped Median)	2	Median	80	56	136	45	114
39	M-39	Chapman Ford Crossing to Nixon Rd	Widen for Center Left-Turn Lane (or Landscaped Median)	4	Median	76	56	132	37	114
2	BP-2	Blount Ave to Fort Dickerson Rd	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	61	71	132	48	74
19	T-19	Between Moody Ave and Young High Pk	Transit Super Stop (for Improved Headways and Transfers)	1	Transit	72	60	132	34	110
1	M-1	Blount Ave to Fort Dickerson Rd	Widen for Landscaped Median	1	Median	61	62	123	56	66
10	BP-10	Fort Dickerson Rd to Moody Ave	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	53	68	121	32	74
16	BP-16	Moody Ave to Young High Pk	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	51	70	121	27	74
17	BP-17	Young High Pk to Overbrook Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	1	Bike/Ped	47	68	115	30	64
29	A-29	Red Bud Rd to Lakeview Dr	Evaluate Vehicle Access at Eight (8) Intersections	2	Access Management	44	63	107	26	62
7	A-7	E Martin Mill Pk	Close Two (2) Intersections to Vehicles: Provide Bike/Ped Connection	1	Access Management	34	67	101	48	20
34	I-34	Lindy Dr	Realign Lindy Drive and Install Traffic Signal	3	Intersection	43	57	100	35	51
21	N-21	Young High Pk to Woodlawn Pk (south)	Create Backage Road to Shopping Center	1	Non-Chapman	43	56	99	30	55
23	T-23	Blount Ave to Young High Pk	Enhance Bus Stops and Provide Bus Shelters	1	Transit	61	33	94	27	95
32	I-32	E Lake Forest Dr (south)	Realign across from Colonial Drive at Existing Traffic Signal	3	Intersection	41	50	91	30	51
36	I-36	Fort Valley Rd	Install Traffic Signal	3	Intersection	32	57	89	28	36
31	BP-31	Lakeview Dr to Chapman Ford Crossing	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	3	Bike/Ped	30	53	83	25	35
42	I-42	W Dick Ford Ln	Install Traffic Signal	4	Intersection	36	47	83	24	47
15	A-15	Childress St	Convert to Right-In / Right-Out	1	Access Management	21	61	82	16	26
25	BP-25	Overbrook Dr to Lakeview Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	2	Bike/Ped	28	54	82	20	35
41	A-41	Longvale Dr to Little Switzerland Rd	Close Three (3) Intersections to Vehicles: Provide Bike/Ped Connection	4	Access Management	26	48	74	19	33
6	N-6	Fort Ave	Create Backage Road to Shopping Center	1	Non-Chapman	25	48	73	14	36
22	N-22	Overbrook Dr	Extend Overbrook Drive to Shopping Center	1	Non-Chapman	37	32	69	19	55
14	A-14	Druid Dr (east)	Close One (1) Intersection to Vehicles: Provide Bike/Ped Connection	1	Access Management	6	61	67	22	-11
45	T-45	Nixon Rd to Mountain Grove Dr	Enhance Bus Stops and Provide Bus Shelters	5	Transit	38	27	65	23	53
28	A-28	Judith Dr to Larry Dr	Evaluate Vehicle Access at Two (2) Intersections	2	Access Management	12	51	63	15	9
44	BP-44	Nixon Rd to Mountain Grove Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	5	Bike/Ped	26	37	63	25	27
40	BP-40	Chapman Ford Crossing to Nixon Rd	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	4	Bike/Ped	24	37	61	21	27
33	A-33	Eastwood Dr	Close One (1) Intersection to Vehicles: Provide Bike/Ped Connection	3	Access Management	4	49	53	24	-16
13	N-13	W Blount Ave at Maryville Pk	Single Lane Roundabout	1	Non-Chapman	12	40	52	18	5
47	BP-47	W Norton Rd/Mountain Grove Dr	Shared Use Path (alternative to Chapman Highway)	5	Bike/Ped	20	27	47	19	20
46	N-46	Quaker Way	Extend Quaker Way to West Dick Ford Lane	5	Non-Chapman	13	27	40	12	13
38	N-38	West Ford Valley Rd at Old Valley Rd	Single Lane Roundabout	3	Non-Chapman	-9	27	18	9	-27
5	N-5	Hawthorne Ave at Augusta Ave	Intersection Redesign / Consolidation	1	Non-Chapman	-42	40	-2	6	-89

Chapman Highway Implementation Plan - Prioritization

Project #	Project Code	Location	Description	Segment	Type	(X-Axis)	(Y-Axis)	(X+Y)	50%	
						Stakeholder Scoring	Quantitative Scoring	TOTAL	Workshop Scoring	MetroQuest Scoring
30	M-30	Lakeview Dr to Chapman Ford Crossing	Widen for Center Left-Turn Lane (or Landscaped Median)	3	Median	80	60	140	46	114
43	M-43	Nixon Rd to Mountain Grove Dr	Maintain Center Left-Turn Lane (or Convert to Landscaped Median)	5	Median	81	58	139	48	114
24	M-24	Overbrook Dr to Lakeview Dr	Widen for Center Left-Turn Lane (or Landscaped Median)	2	Median	80	56	136	45	114
39	M-39	Chapman Ford Crossing to Nixon Rd	Widen for Center Left-Turn Lane (or Landscaped Median)	4	Median	76	56	132	37	114
1	M-1	Blount Ave to Fort Dickerson Rd	Widen for Landscaped Median	1	Median	61	62	123	56	66
29	A-29	Red Bud Rd to Lakeview Dr	Evaluate Vehicle Access at Eight (8) Intersections	2	Access Management	44	63	107	26	62
7	A-7	E Martin Mill Pk	Close Two (2) Intersections to Vehicles; Provide Bike/Ped Connection	1	Access Management	34	67	101	48	20
15	A-15	Childress St	Convert to Right-In / Right-Out	1	Access Management	21	61	82	16	26
41	A-41	Longvale Dr to Little Switzerland Rd	Close Three (3) Intersections to Vehicles; Provide Bike/Ped Connection	4	Access Management	26	48	74	19	33
14	A-14	Druid Dr (east)	Close One (1) Intersection to Vehicles; Provide Bike/Ped Connection	1	Access Management	6	61	67	22	-11
28	A-28	Judith Dr to Larry Dr	Evaluate Vehicle Access at Two (2) Intersections	2	Access Management	12	51	63	15	9
33	A-33	Eastwood Dr	Close One (1) Intersection to Vehicles; Provide Bike/Ped Connection	3	Access Management	4	49	53	24	-16
2	BP-2	Blount Ave to Fort Dickerson Rd	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	61	71	132	48	74
10	BP-10	Fort Dickerson Rd to Moody Ave	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	53	68	121	32	74
16	BP-16	Moody Ave to Young High Pk	Provide Landscaped Buffer, Separated Bicycle Lanes, Sidewalks	1	Bike/Ped	51	70	121	27	74
17	BP-17	Young High Pk to Overbrook Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	1	Bike/Ped	47	68	115	30	64
31	BP-31	Lakeview Dr to Chapman Ford Crossing	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	3	Bike/Ped	30	53	83	25	35
25	BP-25	Overbrook Dr to Lakeview Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	2	Bike/Ped	28	54	82	20	35
44	BP-44	Nixon Rd to Mountain Grove Dr	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	5	Bike/Ped	26	37	63	25	27
40	BP-40	Chapman Ford Crossing to Nixon Rd	Provide Landscaped Buffer, Sidewalk, Shared Use Trail	4	Bike/Ped	24	37	61	21	27
47	BP-47	W Norton Rd/Mountain Grove Dr	Shared Use Path (alternative to Chapman Highway)	5	Bike/Ped	20	27	47	19	20
12	I-12	Maryville Pk, Martin Mill Pk	Evaluate Realignment / Consolidation of Two (2) Intersections	1	Intersection	91	66	157	40	141
26	I-26	Stone Rd	Construct Left-Turn Lanes (Interim project)	2	Intersection	81	63	144	26	135
34	I-34	Lindy Dr	Realign Lindy Drive and Install Traffic Signal	3	Intersection	43	57	100	35	51
32	I-32	E Lake Forest Dr (south)	Realign across from Colonial Drive at Existing Traffic Signal	3	Intersection	41	50	91	30	51
36	I-36	Fort Valley Rd	Install Traffic Signal	3	Intersection	32	57	89	28	36
42	I-42	W Dick Ford Ln	Install Traffic Signal	4	Intersection	36	47	83	24	47
21	N-21	Young High Pk to Woodlawn Pk (south)	Create Backage Road to Shopping Center	1	Non-Chapman	43	56	99	30	55
6	N-6	Fort Ave	Create Backage Road to Shopping Center	1	Non-Chapman	25	48	73	14	36
22	N-22	Overbrook Dr	Extend Overbrook Drive to Shopping Center	1	Non-Chapman	37	32	69	19	55
13	N-13	W Blount Ave at Maryville Pk	Single Lane Roundabout	1	Non-Chapman	12	40	52	18	5
46	N-46	Quaker Way	Extend Quaker Way to West Dick Ford Lane	5	Non-Chapman	13	27	40	12	13
38	N-38	West Ford Valley Rd at Old Valley Rd	Single Lane Roundabout	3	Non-Chapman	-9	27	18	9	-27
5	N-5	Hawthorne Ave at Augusta Ave	Intersection Redesign / Consolidation	1	Non-Chapman	-42	40	-2	6	-89
19	T-19	Between Moody Ave and Young High Pk	Transit Super Stop (for Improved Headways and Transfers)	1	Transit	72	60	132	34	110
23	T-23	Blount Ave to Young High Pk	Enhance Bus Stops and Provide Bus Shelters	1	Transit	61	33	94	27	95
45	T-45	Nixon Rd to Mountain Grove Dr	Enhance Bus Stops and Provide Bus Shelters	5	Transit	38	27	65	23	53




APPENDIX T

OPINION OF PROBABLE COST

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #1</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$262,600
Asphalt Paving	\$0	\$0	\$0	\$646,200
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$1,297,100
Appurtenances	\$0	\$0	\$0	\$574,400
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$0
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$397,700
Clearing and Grubbing	\$0	\$0	\$0	\$132,200
Seeding & Sodding	\$0	\$0	\$0	\$47,800
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$46,700
Signing	\$0	\$0	\$0	\$10,500
Pavement Markings	\$0	\$0	\$0	\$85,100
Maintenance of Traffic	\$0	\$0	\$0	\$235,200
Mobilization (5%)	\$0	\$0	\$0	\$188,800
Other Items = 10%	\$0	\$0	\$0	\$396,400
Const. Contingency = 15%	\$0	\$0	\$0	\$648,100
Construction Estimate	\$0	\$0	\$0	\$5,008,300
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$494,200
Utilities	\$0	\$0	\$0	\$994,700
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$649,700
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$649,700
Total Project Cost	\$0	\$0	\$0	\$ 7,797,000

% Contribution
6.96%
17.12%
0.00%
34.36%
15.22%
1.05%
0.00%
0.00%
0.00%
10.54%
3.50%
1.27%
0.00%
1.24%
0.28%
2.25%
6.23%

Per Mile Cost
\$ 10,680,821.92

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #2</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$3,200
Asphalt Paving	\$0	\$0	\$0	\$713,700
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$1,017,800
Appurtenances	\$0	\$0	\$0	\$779,900
Structures	\$0	\$0	\$0	\$272,000
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$610,400
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$436,900
Clearing and Grubbing	\$0	\$0	\$0	\$132,200
Seeding & Sodding	\$0	\$0	\$0	\$55,100
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$88,700
Signing	\$0	\$0	\$0	\$11,200
Pavement Markings	\$0	\$0	\$0	\$60,500
Maintenance of Traffic	\$0	\$0	\$0	\$246,300
Mobilization (5%)	\$0	\$0	\$0	\$221,400
Other Items = 10%	\$0	\$0	\$0	\$464,900
Const. Contingency = 15%	\$0	\$0	\$0	\$726,300
Construction Estimate	\$0	\$0	\$0	\$5,840,500
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$587,000
Utilities	\$0	\$0	\$0	\$994,700
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$742,200
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$742,200
Total Project Cost	\$0	\$0	\$0	\$ 8,907,000

% Contribution
0.07%
16.12%
0.00%
22.99%
17.61%
6.14%
0.00%
13.79%
0.00%
9.87%
2.99%
1.24%
0.00%
2.00%
0.25%
1.37%
5.56%

Per Mile Cost
\$ 6,100,684.93

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #10</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$195,200
Asphalt Paving	\$0	\$0	\$0	\$652,800
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$842,900
Appurtenances	\$0	\$0	\$0	\$605,800
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$433,800
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$258,400
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$75,200
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$65,700
Signing	\$0	\$0	\$0	\$3,200
Pavement Markings	\$0	\$0	\$0	\$62,200
Maintenance of Traffic	\$0	\$0	\$0	\$235,700
Mobilization (5%)	\$0	\$0	\$0	\$176,800
Other Items = 10%	\$0	\$0	\$0	\$371,300
Const. Contingency = 15%	\$0	\$0	\$0	\$606,800
Construction Estimate	\$0	\$0	\$0	\$4,691,400
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$295,800
Utilities	\$0	\$0	\$0	\$695,600
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$568,300
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$568,300
Total Project Cost	\$0	\$0	\$0	\$ 6,819,000

% Contribution
5.52%
18.46%
0.00%
23.83%
17.13%
1.12%
0.00%
12.27%
0.00%
7.31%
1.87%
2.13%
0.00%
1.86%
0.09%
1.76%
6.66%

Per Mile Cost
\$ 6,685,294.12

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #16</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$126,300
Asphalt Paving	\$0	\$0	\$0	\$377,000
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$564,400
Appurtenances	\$0	\$0	\$0	\$407,600
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$265,000
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$214,600
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$21,800
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$38,200
Signing	\$0	\$0	\$0	\$2,100
Pavement Markings	\$0	\$0	\$0	\$26,000
Maintenance of Traffic	\$0	\$0	\$0	\$223,000
Mobilization (5%)	\$0	\$0	\$0	\$118,600
Other Items = 10%	\$0	\$0	\$0	\$249,000
Const. Contingency = 15%	\$0	\$0	\$0	\$405,000
Construction Estimate	\$0	\$0	\$0	\$3,144,200
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$154,400
Utilities	\$0	\$0	\$0	\$388,400
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$368,700
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$368,700
Total Project Cost	\$0	\$0	\$0	\$ 4,424,000

% Contribution
5.33%
15.90%
0.00%
23.80%
17.19%
1.67%
0.00%
11.17%
0.00%
9.05%
2.79%
0.92%
0.00%
1.61%
0.09%
1.10%
9.40%

Per Mile Cost
\$ 7,761,403.51

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #17</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$207,200
Asphalt Paving	\$0	\$0	\$0	\$155,100
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$336,400
Appurtenances	\$0	\$0	\$0	\$173,900
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$265,000
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$308,100
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$17,500
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0
Signing	\$0	\$0	\$0	\$1,600
Pavement Markings	\$0	\$0	\$0	\$9,400
Maintenance of Traffic	\$0	\$0	\$0	\$216,200
Mobilization (5%)	\$0	\$0	\$0	\$89,800
Other Items = 10%	\$0	\$0	\$0	\$188,600
Const. Contingency = 15%	\$0	\$0	\$0	\$305,200
Construction Estimate	\$0	\$0	\$0	\$2,379,600
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$408,800
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$278,800
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$278,800
Total Project Cost	\$0	\$0	\$0	\$ 3,346,000

% Contribution
11.54%
8.64%
0.00%
18.73%
9.68%
2.20%
0.00%
14.76%
0.00%
17.15%
3.68%
0.97%
0.00%
0.00%
0.09%
0.52%
12.04%

Per Mile Cost
\$ 11,153,333.33

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #24</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$303,200
Asphalt Paving	\$0	\$0	\$0	\$1,302,200
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$905,600
Appurtenances	\$0	\$0	\$0	\$592,000
Structures	\$0	\$0	\$0	\$823,300
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$1,164,100
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$767,700
Clearing and Grubbing	\$0	\$0	\$0	\$264,400
Seeding & Sodding	\$0	\$0	\$0	\$102,400
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$149,900
Signing	\$0	\$0	\$0	\$13,500
Pavement Markings	\$0	\$0	\$0	\$90,600
Maintenance of Traffic	\$0	\$0	\$0	\$263,700
Mobilization (5%)	\$0	\$0	\$0	\$337,100
Other Items = 10%	\$0	\$0	\$0	\$708,000
Const. Contingency = 15%	\$0	\$0	\$0	\$1,044,700
Construction Estimate	\$0	\$0	\$0	\$8,832,400
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$1,907,700
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 9%	\$0	\$0	\$0	\$993,300
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$1,074,000
Total Project Cost	\$0	\$0	\$0	\$ 12,807,000

% Contribution
4.50%
19.31%
0.00%
13.43%
8.78%
12.21%
0.00%
17.26%
0.00%
11.39%
3.92%
1.52%
0.00%
2.22%
0.20%
1.34%
3.91%

Per Mile Cost
\$ 9,147,857.14

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #25</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$14,400
Asphalt Paving	\$0	\$0	\$0	\$180,000
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$115,100
Appurtenances	\$0	\$0	\$0	\$387,700
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$0
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$112,500
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$53,000
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0
Signing	\$0	\$0	\$0	\$8,100
Pavement Markings	\$0	\$0	\$0	\$5,900
Maintenance of Traffic	\$0	\$0	\$0	\$144,100
Mobilization (5%)	\$0	\$0	\$0	\$56,300
Other Items = 10%	\$0	\$0	\$0	\$118,300
Const. Contingency = 15%	\$0	\$0	\$0	\$189,200
Construction Estimate	\$0	\$0	\$0	\$1,490,200
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$187,500
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$167,800
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$167,800
Total Project Cost	\$0	\$0	\$0	\$ 2,013,000

% Contribution
1.28%
15.98%
0.00%
10.22%
34.42%
3.51%
0.00%
0.00%
0.00%
9.99%
5.87%
4.71%
0.00%
0.00%
0.72%
0.52%
12.79%

Per Mile Cost
\$ 1,437,857.14

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #30</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$140,000
Asphalt Paving	\$0	\$0	\$0	\$831,900
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$594,800
Appurtenances	\$0	\$0	\$0	\$334,600
Structures	\$0	\$0	\$0	\$610,100
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$730,300
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$257,600
Clearing and Grubbing	\$0	\$0	\$0	\$79,400
Seeding & Sodding	\$0	\$0	\$0	\$28,600
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$54,700
Signing	\$0	\$0	\$0	\$10,800
Pavement Markings	\$0	\$0	\$0	\$69,500
Maintenance of Traffic	\$0	\$0	\$0	\$238,000
Mobilization (5%)	\$0	\$0	\$0	\$199,000
Other Items = 10%	\$0	\$0	\$0	\$417,900
Const. Contingency = 15%	\$0	\$0	\$0	\$598,100
Construction Estimate	\$0	\$0	\$0	\$5,195,300
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$1,199,100
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$639,400
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$639,400
Total Project Cost	\$0	\$0	\$0	\$ 7,673,000

% Contribution
3.52%
20.90%
0.00%
14.94%
8.41%
15.33%
0.00%
18.35%
0.00%
6.47%
1.99%
0.72%
0.00%
1.37%
0.27%
1.75%
5.98%

Per Mile Cost
\$ 8,719,318.18

COST ESTIMATE SUMMARY

Route:				
Description:	Project #31			
County:				
Length:				
Date:				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$9,100
Asphalt Paving	\$0	\$0	\$0	\$114,500
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$17,500
Appurtenances	\$0	\$0	\$0	\$267,500
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$0
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$112,500
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$33,500
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0
Signing	\$0	\$0	\$0	\$7,800
Pavement Markings	\$0	\$0	\$0	\$5,100
Maintenance of Traffic	\$0	\$0	\$0	\$39,900
Mobilization (5%)	\$0	\$0	\$0	\$35,700
Other Items = 10%	\$0	\$0	\$0	\$74,900
Const. Contingency = 15%	\$0	\$0	\$0	\$117,600
Construction Estimate	\$0	\$0	\$0	\$941,200
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$150,000
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$109,100
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$109,100
Total Project Cost	\$0	\$0	\$0	\$ 1,309,000

% Contribution
1.28%
16.06%
0.00%
2.45%
37.52%
5.54%
0.00%
0.00%
0.00%
15.78%
9.27%
4.70%
0.00%
0.00%
1.09%
0.72%
5.60%

Per Mile Cost
\$ 1,487,500.00

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #39</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$194,900
Asphalt Paving	\$0	\$0	\$0	\$1,024,700
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$884,800
Appurtenances	\$0	\$0	\$0	\$351,200
Structures	\$0	\$0	\$0	\$1,053,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$867,600
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$527,700
Clearing and Grubbing	\$0	\$0	\$0	\$132,200
Seeding & Sodding	\$0	\$0	\$0	\$67,900
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$130,100
Signing	\$0	\$0	\$0	\$12,300
Pavement Markings	\$0	\$0	\$0	\$48,300
Maintenance of Traffic	\$0	\$0	\$0	\$110,000
Mobilization (5%)	\$0	\$0	\$0	\$270,300
Other Items = 10%	\$0	\$0	\$0	\$567,600
Const. Contingency = 15%	\$0	\$0	\$0	\$778,400
Construction Estimate	\$0	\$0	\$0	\$7,021,500
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$1,767,300
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$878,900
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$878,900
Total Project Cost	\$0	\$0	\$0	\$ 10,547,000

% Contribution
3.61%
18.96%
0.00%
16.37%
6.50%
19.49%
0.00%
16.05%
0.00%
9.76%
2.45%
1.26%
0.00%
2.41%
0.23%
0.89%
2.04%

Per Mile Cost
\$ 10,239,805.83

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #40</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$9,100
Asphalt Paving	\$0	\$0	\$0	\$125,500
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$19,500
Appurtenances	\$0	\$0	\$0	\$266,400
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$0
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$112,500
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$39,200
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0
Signing	\$0	\$0	\$0	\$7,800
Pavement Markings	\$0	\$0	\$0	\$6,000
Maintenance of Traffic	\$0	\$0	\$0	\$36,400
Mobilization (5%)	\$0	\$0	\$0	\$36,400
Other Items = 10%	\$0	\$0	\$0	\$76,400
Const. Contingency = 15%	\$0	\$0	\$0	\$120,200
Construction Estimate	\$0	\$0	\$0	\$961,000
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$150,000
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$111,100
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$111,100
Total Project Cost	\$0	\$0	\$0	\$ 1,333,000

% Contribution
1.25%
17.24%
0.00%
2.68%
36.59%
5.43%
0.00%
0.00%
0.00%
15.45%
9.08%
5.38%
0.00%
0.00%
1.07%
0.82%
5.00%

Per Mile Cost
\$ 1,294,174.76

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #43</u>				
County: _____				
Length: _____				
Date: _____				




DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$560,700
Asphalt Paving	\$0	\$0	\$0	\$1,299,900
Concrete Pavement	\$0	\$0	\$0	\$30,400
Drainage	\$0	\$0	\$0	\$729,000
Appurtenances	\$0	\$0	\$0	\$375,400
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$0
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$300,300
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$47,200
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$72,000
Signing	\$0	\$0	\$0	\$10,600
Pavement Markings	\$0	\$0	\$0	\$53,500
Maintenance of Traffic	\$0	\$0	\$0	\$97,600
Mobilization (5%)	\$0	\$0	\$0	\$184,100
Other Items = 10%	\$0	\$0	\$0	\$386,600
Const. Contingency = 15%	\$0	\$0	\$0	\$632,000
Construction Estimate	\$0	\$0	\$0	\$4,884,900
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$1,553,400
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$643,800
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$643,800
Total Project Cost	\$0	\$0	\$0	\$ 7,726,000

% Contribution
15.23%
35.30%
0.83%
19.80%
10.19%
1.07%
0.00%
0.00%
0.00%
8.16%
1.80%
1.28%
0.00%
1.96%
0.29%
1.45%
2.65%

Per Mile Cost
\$ 6,777,192.98

COST ESTIMATE SUMMARY

Route: _____				
Description: <u>Project #44</u>				
County: _____				
Length: _____				
Date: _____				



DESCRIPTION	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Construction Items				
Pavement Removal	\$0	\$0	\$0	\$9,100
Asphalt Paving	\$0	\$0	\$0	\$144,200
Concrete Pavement	\$0	\$0	\$0	\$0
Drainage	\$0	\$0	\$0	\$24,800
Appurtenances	\$0	\$0	\$0	\$290,000
Structures	\$0	\$0	\$0	\$39,500
Fencing	\$0	\$0	\$0	\$0
Signalization	\$0	\$0	\$0	\$948,200
Railroad Crossing or Separation	\$0	\$0	\$0	\$0
Earthwork	\$0	\$0	\$0	\$112,500
Clearing and Grubbing	\$0	\$0	\$0	\$66,100
Seeding & Sodding	\$0	\$0	\$0	\$43,300
Rip-Rap or Slope Protection	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0
Signing	\$0	\$0	\$0	\$8,800
Pavement Markings	\$0	\$0	\$0	\$9,100
Maintenance of Traffic	\$0	\$0	\$0	\$82,900
Mobilization (5%)	\$0	\$0	\$0	\$88,900
Other Items = 10%	\$0	\$0	\$0	\$186,700
Const. Contingency = 15%	\$0	\$0	\$0	\$302,200
Construction Estimate	\$0	\$0	\$0	\$2,356,300
Interchanges & Unique Intersections				
Roundabouts	\$0	\$0	\$0	\$0
Interchanges	\$0	\$0	\$0	\$0
Right-of-Way & Utilities	LOCAL	STATE	FEDERAL	TOTAL
	0%	0%	0%	
Right-of-Way	\$0	\$0	\$0	\$102,900
Utilities	\$0	\$0	\$0	\$187,500
Preliminary & Construction Engineering and Inspection				
Prelim. Eng. 10%	\$0	\$0	\$0	\$264,700
Const. Eng. & Inspec. 10%	\$0	\$0	\$0	\$264,700
Total Project Cost	\$0	\$0	\$0	\$ 3,176,000

% Contribution
0.51%
8.11%
0.00%
1.39%
16.31%
2.22%
0.00%
53.31%
0.00%
6.33%
3.72%
2.43%
0.00%
0.00%
0.49%
0.51%
4.66%

Per Mile Cost
\$ 2,785,964.91