

## S.R. 471

FROM C 478A TO CR 730/NW 10TH AVENUE

## COMPLETE STREETS STUDY

JUNE 2022

## S.R. 471 complete streets study

## EXECUTIVE SUMMARY

A Complete Streets Study has been prepared for the 1.25 -mile State Road (S.R.) 471 corridor from C 478 A to CR 730/ NW $10^{\text {th }}$ Avenue in the City of Webster in Sumter County, Florida. The City of Webster requested a study to assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor. The project is funded by the Florida Department of Transportation (FDOT) through the Lake-Sumter Metropolitan Planning Organization (MPO) and is managed by the Sumter County Public Works Department. S.R. 471 is also maintained by FDOT. The study consists of public involvement, data collection, existing and future conditions analysis, development of improvement options, and recommendations.

The S.R. 471 corridor is a minor north-south arterial roadway and is the main travel route through the City of Webster. It is a two-lane undivided roadway with on-street parking present along the majority of the study corridor. The existing uses along the corridor include the Sumter County Farmers Market on the west side of the corridor south of NW $6^{\text {th }}$ Avenue, and Webster Elementary School on the east side of the corridor south of SE $3^{\text {rd }}$ Avenue.

Various public involvement and stakeholder meetings were held to identify issues and needs for the corridor. The main needs identified for the corridor were improvements to the bicycle and pedestrian facilities, removal of on-street parking, traffic calming, crosswalks, golf cart crossings, landscaping, and lighting. In addition, previous studies along and in the general vicinity of S.R. 471 were reviewed to identify any programmed improvements being implemented by others. Improvements identified include the updated signage and extension/installation of ingress turn lanes at Webster Elementary School, and a 10 -foot shared use path being installed along the western side of the corridor from south of C 478A to C 478/NW $4^{\text {th }}$ Avenue as part of the South Sumter Connector Trail Project.

This study evaluated existing conditions along the corridor including bicycle and pedestrian level of service (LOS), a review of historical crashes along the corridor, analysis of the travel speeds and traffic composition, utilization of onstreet parking, and intersection operational analyses. The following are the results of the existing conditions analyses:

- The overall bicycle LOS along the corridor is LOS F.
- The overall pedestrian LOS along the corridor is LOS D.
- Common contributing factors to crashes included dark conditions, wet conditions, and distracted driving.
- Heavy vehicles, including buses, recreational vehicles, and semi-trucks, account for approximately onequarter of the vehicles on the roadway.
- Speeds along the corridor tended to be higher on typical weekdays when compared to a Market Monday.
- The $85^{\text {th }}$ percentile speed and 10 mile per hour ( mph ) pace were all greater than the posted speed limit of 35 mph.
- Throughout the entire corridor, on-street parking is underutilized, with a majority of on-street parking being vacant throughout the day.
- The stop-controlled approaches at the main two-way stop-controlled intersections along the corridor operate at LOS C or better during the AM and PM peak hours.
A needs assessment was performed and identified the following items to be considered in the improvement alternatives for the S.R. 471 corridor:
- Bicycle and pedestrian facilities
- Removal of on-street parking
- Traffic calming
- Crosswalks
- Golf cart crossings
- Landscaping
- Lighting



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Two improvement options were developed based on the needs assessment. Both options implemented the improvements identified in the South Sumter Connector Trail project and the Webster Elementary School Study.
Option 1 includes the following improvements:

- Extension of the 10 -foot shared use path to the north to CR 730/NW 10th Avenue
- Two additional crosswalks along the corridor
- Improvements to the existing crosswalk near Webster Elementary School
- Improvements to the programmed crosswalk from the South Sumter Connector Trail Project
- Two designated golf cart crossing locations, separate from the pedestrian crosswalks, to allow for golf carts to legally cross S.R. 471
- Landscaping and lighting improvements for safety and beautification purposes
- Removal of on-street parking, as needed to implement the improvements in Option 1

Option 2 includes all the improvements listed for Option 1 and the following additional improvements:

- Removal of all on-street parking allowing for the travel lanes to be narrowed
- Widening the eastern sidewalk to 6 feet
- Increased separation between roadway and eastern sidewalk

Both improvement options are anticipated to result in overall bicycle LOS and pedestrian LOS for the corridor of LOS C.
Planning-level order of magnitude cost estimates were developed for the improvement option concepts based upon current industry standards and general trends in construction costs per linear mile. It should be noted that cost estimates are based on information known at the time of this study and are subject to change based upon further engineering analyses and design. The total cost for Option 1 is estimated to be approximately $\$ 3.0$ million. The total cost for Option 2 is estimated to be approximately $\$ 4.6$ million.
Option 2 is the recommended improvement option as it best accomplishes the goals of this Complete Streets Study, and implements improvements that address each of the items listed within the needs assessment.


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### 1.0 INTRODUCTION

This Complete Streets Study focuses on the 1.25 -mile State Road (S.R.) 471 corridor from C 478 A to CR $730 / \mathrm{NW} 10^{\text {th }}$ Avenue in the City of Webster in Sumter County, Florida. S.R. 471 is a minor north-south arterial roadway and is the main travel route through the City of Webster. The study corridor is shown in Figure 1-1.


The purpose of this study is to assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor. This project is funded by the Florida Department of Transportation (FDOT) through the Lake-Sumter Metropolitan Planning Organization (MPO) and is managed by the Sumter County Public Works Department. This Complete Streets Study includes a review of existing and future conditions along the study corridor to identify needs and opportunities. The study consists of the following items:

- Public Involvement
- Data Collection
- Existing and Future Conditions Analysis
- Development of Improvement Options
- Recommendations


Figure 1-1: Study Corridor Map

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### 2.0 PUBLIC INVOLVEMENT AND DATA COLLECTION

### 2.1 KICK-OFF MEETING

A project kick-off meeting with representatives from the LakeSumter MPO, Sumter County, City of Webster, FDOT, and KimleyHorn was held on May 12, 2021. Topics discussed included an overview of the project scope, corridor vision, available data, previous studies and plans, and the project schedule. The main items resulting from the meeting included obtaining previous studies, developing an updated schedule based on data collection and field reviews in the Fall, and obtaining key stakeholder contact information. Meeting minutes were recorded and are included in Appendix A.

### 2.2 COMMUNITY WORKSHOP

A community workshop was held on Wednesday, June 9, 2021 at 6:00 PM at the Webster Community Hall. Attendees included local residents interested in providing input on the project, and representatives from the City of Webster, Sumter County, the LakeSumter MPO, and project consultant Kimley-Horn. Approximately 20 people attended the meeting. The meeting included a presentation by Kimley-Horn and a breakout session for the public. The presentation covered key project items such as the Project Corridor, Project Objectives and Areas of Focus, Project Scope/Schedule, and Previous Studies/Crash Data. The breakout session gave attendees an opportunity to provide input in two ways: 1) providing comments on boards with aerial maps to identify locations of need along the corridor and 2) voting for improvements on a board showing 12 Complete Streets improvements elements. Project team members answered questions from the public and encouraged them to participate in an online survey and fill out comment cards to provide additional input. The main issues/needs identified for the corridor were travel speeds/traffic calming, crosswalks with push buttons, and removal of the on-street parking. Similarly, the top Complete Streets elements identified were traffic calming, crosswalks, shading/trees, and golf cart crossings. A detailed summary of the community workshop is provided in Appendix A.



## STAKEHOLDERS

- City of Webster
- Lake-Sumter MPO
- Sumter County
- Florida Department of Transportation
- Scenic Sumter Heritage Byway
- Sumter County Farmers Market
- City of Webster Business Owners
- City of Webster Residents


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### 2.3 PREVIOUS STUDIES AND PLANS

Several previous studies and conceptual plans for programmed projects on or near the study corridor were identified and gathered. These include the South Sumter Connector Trail Project Development \& Environment (PD\&E) Study, a School Zone Safety Study for Webster Elementary School, and a Traffic Impact Analysis (TIA) for a Recreational Vehicle (RV) Park in Webster. Excerpts from the reports and plans associated with these studies are included in Appendix B.

## South Sumter Connector Trail

The South Sumter Connector Trail PD\&E Study evaluated a shared use trail for non-motorized transportation modes. The South Sumter Connector Trail runs from the Good Neighbor Trail in Hernando County extending approximately 20 miles east to the Van Fleet Trail in Sumter County. The Study evaluated potential impacts to the
 CONNECTOR TRAIL cultural, natural, social, and physical resources associated with the trail improvements. A segment of the South Sumter Connector Trail runs along the length of the study corridor from the intersection of S.R. 471 and S.R. 50 to the intersection of S.R. 471 and C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue. The recommended alternative of the PD\&E study was a 12 -foot shared use path along the entirety of the 20 -mile extents of the study. After the completion of the PD\&E study, design plans were prepared for the segment of the South Sumter Connector Trail along S.R. 471 from S.R. 50 to C 478/NW $4^{\text {th }}$ Avenue (FPID 435471-2). The contract plans for FPID 435471-2 include a 10-foot shared use path along the west side of S.R. 471. The project is scheduled for construction in May 2023. This shared use path could serve most of the anticipated pedestrian and bicyclist needs along the study corridor. In addition, the proposed design includes milling and resurfacing along the corridor as well as a new pedestrian crossing south of Central Avenue/NE $1^{\text {st }}$ Avenue.


## Webster Elementary School

A study was performed for the Webster Elementary school zone along S.R. 471 to evaluate the safety and performance
 of the area. The study recommended several improvements to the surrounding area including extending the northbound rightturn lane on S.R. 471 to enter Webster Elementary School, installing a southbound left-turn lane on S.R. 471 to enter Webster Elementary School at the middle and southern driveways, and replacing signs and pavement markings within the school zone to meet current standards.

## Webster RV Park TIA

The Webster RV Park TIA was identified as a previous study during the project kick-off meeting. The TIA evaluated a proposed development consisting of 547 RV lots located east of the S.R. 471 study corridor on the north side of C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue. The subject RV park was completed and operational at the time of the data collection for this study.

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### 2.4 DATA COLLECTION



## Right-of-Way Data

FDOT right-of-way maps were gathered to review the existing right-of-way along the S.R. 471 Study Corridor. The detailed right-of-way maps for S.R. 471 are included in Appendix C. The maps show the total right-of-way on S.R. 471 is 125 feet from C 478A to just south of Webster Elementary School, then transitions to 80 feet for the remainder of the corridor.

## Crash Data

Detailed crash data within the study area from 2016 to 2021 were obtained from the University of Florida's Signal Four Analytics web application and from the FDOT Crash Analysis Reporting System (CARS) online database. The crash data included long and short form reports. The historical crash data is included in Appendix C. A review of the crash trends is included in Section 3.2 of this study.

## Traffic Data

Traffic data was collected to evaluate the existing conditions along the S.R. 471 study corridor. The results of the traffic data collection are included in Section 3.3 of this study.

Data for 24-hour traffic volumes, vehicle speed, and vehicle type were collected on a typical weekday and a "Market Monday" when the Sumter County Farmers Market was open (Monday, October 25, 2021 and Tuesday, October 26, 2021) at the following locations:

- S.R. 471 - South of NW $6{ }^{\text {th }}$ Avenue
- S.R. 471 - North of Central Avenue/NE $1^{\text {st }}$ Avenue

- S.R. 471 - Between SE $1^{\text {st }}$ Avenue and C 478A


Turning movement volumes were collected on Tuesday, October 19, 2021 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00PM at the following intersections:

- S.R. 471 and C 478/NW $4^{\text {th }}$ Avenue
- S.R. 471 and Central Avenue/NE $1^{\text {st }}$ Avenue
- S.R. 471 and C 478/SE $1^{\text {st }}$ Avenue
- S.R. 471 and SE $3^{\text {rd }}$ Avenue

On-street parking counts were also collected along the S.R. 471 study corridor to evaluate utilization of the existing on-street parking. Parking counts were collected for 12 hours from 7:00 AM to 7:00 PM on Monday, October 18, 2021, Tuesday, October 19, 2021, and Saturday, October 23, 2021. Traffic data is included in Appendix C.
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### 2.5 FIELD REVIEWS

Two field reviews were conducted to document existing conditions along the corridor. The field reviews were conducted during the peak traffic periods on a typical weekday and a "Market Monday" when the Sumter County Farmers Market was open. The first field review was conducted on Tuesday, October 19, 2021 and the second field review was conducted on Monday, October 25, 2021. Observations were documented via photographs and notes. The notes from the field reviews are summarized below and additional photographs are included in Appendix D.

## Typical Section

The typical section along the majority of the corridor includes two 12foot travel lanes, one in each direction, with 6.5 -foot parking lanes, curb and gutter, a landscaped utility strip, and sidewalks on both sides of the roadway. However, the section from C 478A to Webster Elementary School has a flush shoulder (in lieu of a curb and gutter) with no on-street parking and sidewalk only present on the west side of the roadway, and the section north of the Sumter County Farmers Market has a flush shoulder (in lieu of curb and gutter) with no
 several locations where the on-street parking is tapered down to provide for a center turn lane. The posted speed limit on the corridor is 35 miles per hour ( mph ) with the exception of the southern portion from C 478A to Webster Elementary School and the northern portion from 800 feet south of CR 730/NW $10^{\text {th }}$ Avenue to the northern project limit, which both have posted speed limit of 45 mph . Signs prohibiting golf carts on S.R. 471 were observed on several of the side street approaches along the corridor.

## Pedestrian Facilities

The typical sidewalks along the corridor measured approximately 5 feet in width with separation from the back of curb to the edge of sidewalk ranging from 5 feet to 15 feet throughout the corridor. Vegetation has overtaken the edges of many of the sidewalks as well as some of the joints in between slabs. A few of the curb ramps present throughout the corridor featured drop-offs between the edge of the ramp and the street. There were also several locations where individual
 sidewalk slabs had lifted due to tree roots with some showing evidence of having been grinded down to reduce the drop-off between slabs. Detectable warning surfaces were present at all curb ramps throughout the corridor except for the curb ramps at SE $3^{\text {rd }}$ Avenue.

Throughout the length of the S.R. 471 corridor, there is only one marked crosswalk for pedestrians crossing S.R. 471 which is in front of Webster Elementary School. In the morning period of the field reviews, several vehicles were observed failing to stop to allow pedestrians to cross at this crosswalk. There are pedestrian crossing signs at the crosswalk; however, there are not any in-street signs typical for a mid-block crosswalk or a rectangular rapid flashing beacon to indicate the presence of a pedestrian with the intent to cross.

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There are three marked crosswalks across driveways along the study corridor: two across the Webster Elementary School driveways and one across a private concrete driveway.

Overall, the highest concentrations of pedestrian activity were observed near the school during both field review days and near the Sumter County Farmers Market on the Market Monday. There were also several pedestrians observed along the corridor and crossing S.R. 471 between C $478 /$ NW $4^{\text {th }}$ Avenue and NW $3^{\text {td }}$ Avenue near the gas stations.
During the peak period field reviews on a typical weekday, there was no on-street parking activity observed. During the Market Monday field review, there were a few vehicles parked in the on-street spaces in front of the Sumter County Farmers Market; however, most of the market patrons were observed parking onsite or in the private off-street parking areas near the


The signed crosswalk in front of Webster Elementary School does not feature in-street signs or flashing indicators to alert drivers to the presence of pedestrians. market.

There were no bicycle facilities or public bicycle parking observed along the corridor. During the field reviews, there was one bicyclist observed on the typical weekday and a few bicyclists observed on the Market Monday.


A school bus stop to pick-up students along the S.R. 471 study corridor.


Patrons of the Sumter County Farmers Market cross S.R. 471 on a Market Monday.

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### 2.6 STAKEHOLDER MEETINGS

Five meetings were held with key stakeholders regarding project details. The key stakeholders include the Scenic Sumter Heritage Byway, Lake-Sumter MPO Technical Advisory Committee, Lake-Sumter MPO Community Advisory Committee, Lake-Sumter MPO Board, and the City of Webster City Council.

## Scenic Sumter Heritage Byway

The presentation to the Scenic Sumter Heritage Byway was included as part of their regularly scheduled meeting on June 15, 2021 and covered key topics such as Project Objectives and Areas of Focus, Project Scope/Schedule, and Previous Studies/Crash Data. The presentation for this meeting is provided in Appendix A.

## Lake-Sumter MPO Technical Advisory Committee

The presentation to the Lake-Sumter MPO Technical Advisory Committee was included as part of their regularly scheduled meeting on April 13, 2022 and covered key topics such as Project Objectives and Areas of Focus, Public Involvement, Field Observations, Existing Conditions, Future Programmed Conditions, Needs Assessment, and Improvement Options. The presentation for this meeting is provided in Appendix A. Attendees from this meeting generally agreed with the removal of all on-street parking, favoring the wider separation between vehicle and pedestrian facilities, and narrower travel lanes as a traffic calming measure.

## Lake-Sumter MPO Community Advisory Committee

The presentation to the Lake-Sumter MPO Community Advisory Committee was included as part of their regularly scheduled meeting on April 13, 2022 and covered key topics such as Project Objectives and Areas of Focus, Public Involvement, Field Observations, Existing Conditions, Future Programmed Conditions, Needs Assessment, and Improvement Options. The presentation for this meeting is provided in Appendix A. Attendees from the meeting expressed concern for pedestrian safety along the corridor and emphasized its importance in the improvement options. The implementation of Rectangular Rapid Flashing Beacons (RRFB) at proposed crosswalk locations was supported among the attendees of the meeting.

## Lake-Sumter MPO Board

The presentation to the Lake-Sumter MPO Board was included as part of their regularly scheduled meeting on April 27, 2022 and covered key topics such as Project Objectives and Areas of Focus, Public Involvement, Field Observations, Existing Conditions, Future Programmed Conditions, Needs Assessment, and Improvement Options. The presentation for this meeting is provided in Appendix A.

## City of Webster City Council

The presentation to the City of Webster City Council was included as part of their regularly scheduled meeting on June 16, 2022 and covered key topics such as Project Objectives and Areas of Focus, Public Involvement, Field Observations, Existing Conditions, Future Programmed Conditions, Needs Assessment, Improvement Options, and Recommendations. The presentation for this meeting is provided in Appendix A. Council members and residents at the meeting expressed the need for a crosswalk across S.R. 471 near the Sumter County Farmers Market.


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### 2.7 ONLINE SURVEY

An online survey was created to obtain data and input from the users of the S.R. 471 study corridor regarding typical usage and potential improvements. The survey was provided at the community workshop and distributed by the Lake-Sumter MPO. A total of five people responded to the online survey. The survey included qualitative and quantitative questions regarding the use of the S.R. 471 corridor as well as current issues and desired improvements. Survey responses regarding perceived issues along S.R. 471 are illustrated in Figure 21.

One of the questions asked users to identify issues they observed along the corridor. Users were then asked to rank potential improvement options in order of most important to least important on a scale from 1 to 10 , with 10 being the most important and 1 being the least important. The results from this question indicated that the top three infrastructure improvements users considered important were traffic calming, wide sidewalks, and lighting. Traffic calming was the highest ranked with an average score of 6.4 out of 10, as shown in Figure 2-2.

A detailed summary of survey results is provided in Appendix E.


Infrastructure Ranking Among Survey Respondents


Figure 2-2: Infrastructure Ranking Among Survey Respondents


Figure 2-1: Survey Responses Regarding Issues Along S.R. 471


### 3.0 EXISTING AND FUTURE CONDITIONS ANALYSIS

### 3.1 BICYCLE AND PEDESTRIAN LEVEL OF SERVICE

A planning level bicycle and pedestrian level of service analysis was prepared using ARTPLAN software. The bicycle and pedestrian level of service were calculated for different subsegments along the corridor depending on the typical section of S.R. 471 and characteristics of the bicycle and pedestrian facilities. The evaluation gives the facilities a Level of Service (LOS) Score ranging from A to F, with A representing the best user experience. ARTPLAN outputs are included in Appendix F.

Characteristics that affect the bicycle LOS along the S.R. 471 corridor include the width of the outside vehicle travel lane, pavement condition, and the presence of a paved shoulder or a separated bike path. The results of the bicycle LOS evaluation are illustrated in Figure 3-1. Both directions of the S.R. 471 study corridor operate at LOS F.

Characteristics that affect the pedestrian LOS along the S.R. 471 corridor include the presence of sidewalk, the separation of road and sidewalk (limited to three categories: adjacent [less than 3 feet of separation], typical [3 to 8 feet of separation], and wide [greater than 8 feet of separation]), and the presence of a protective barrier. It is important to note that the evaluation does not consider the condition or the width of the sidewalks, noted in Section 2.5 of this report, so it is possible that the actual user experience varies from the results of the evaluation. The results of pedestrian LOS evaluation are illustrated in Figure 3-2. From the southern end of the corridor to approximately 550 feet north of C 478A, the western side of the corridor operates at LOS B and the eastern side of the corridor operates at LOS D. From approximately 550 feet north of C 478A to SE $3^{\text {rd }}$ Avenue, the western side of the corridor operates at LOS C and the eastern side of the corridor operates at LOS B. From SE $3^{\text {rd }}$ Avenue to Central Avenue/NE $1^{\text {st }}$ Avenue, both sides of the corridor operate at LOS B. From Central Avenue/NE $1^{\text {st }}$ Avenue to C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue, both sides of the corridor operate at LOS B. From C $478 /$ NW $4^{\text {th }}$ Avenue to approximately 1,100 feet north of C $478 /$ NW $4^{\text {th }}$ Avenue, both sides of the corridor operate at LOS C. From approximately 1,100 feet north of C 478/NW $4^{\text {th }}$ Avenue to the northern end of the study corridor, both sides of the corridor operate at LOS E. On average, both sides of the corridor operate at LOS D.


Figure 3-1: Existing Conditions Bicycle LOS Map


Figure 3-2: Existing Conditions Pedestrian LOS Map

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### 3.2 CRASH ANALYSIS

Detailed crash data within the study area from 2016 to 2021 were reviewed and evaluated. The crash data included long and short form reports and were obtained from the Signal Four Analytics web application and CARS. The historical crash data is included in Appendix C. For every crash included in the analysis, the corresponding crash report narrative was reviewed to gain a better understanding of the crash and to ensure the details of the crash were coded correctly. Crashes along the project corridor and


Figure 3-3: Crash Frequency (2016-2021)
S.R. 471 approached the intersection with W Central Avenue/NE $1^{\text {st }}$ Avenue and struck a pedestrian riding an electric wheelchair. The conditions at the time of the crash were dark and unlighted with a dry roadway surface. The driver of the vehicle was unable to see the pedestrian crossing S.R. 471 from the west and struck the pedestrian, ejecting the pedestrian from their wheelchair.

COMMON CONTRIBUTING FACTORS

- Dark conditions
- Wet conditions
- Distracted driving adjacent intersections were the focus of this evaluation.

There were 42 crashes along the corridor during the six years of crash history, as shown in Figure 3-3. Figure 3-4 illustrates the types of crashes that comprise the 42 crashes along the corridor.
 Of the 42 crashes, there were 30 property damage only (PDO) crashes,11 injury crashes, and one fatal crash, as shown in Figure 3-5.

Figure 3-4: Crash Type (2016-2021)


Figure 3-5: Crash Severity (2016-2021)

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### 3.3 EXISTING CONDITIONS ANALYSIS

## Traffic Volumes

The two graphs (Figure 3-6 and Figure 3-7) to the right illustrate the traffic volumes during peak periods throughout the day along the S.R. 471 study corridor. As seen in Figure 3-6, northbound volumes are below capacity (as defined in the FDOT Q/LOS Handbook, June 2020) with a maximum volume-to-capacity ratio of $76 \%$. The northbound traffic volume is at its highest along the central segment of the corridor during the AM peak hour of a typical weekday. As seen in Figure 3-7, the southbound volumes on a Market Monday start to approach capacity along the central segment of the corridor during the midday and PM peak hour periods, with a maximum volume-to-capacity ratio of $88 \%$. The difference in southbound traffic volumes on a Market Monday compared to a typical weekday is much more significant than the difference in northbound traffic volumes.


## On-Street Parking

Currently, the S.R. 471 study corridor has approximately 70


Figure 3-6: Volume Comparison (Northbound)


Figure 3-7: Volume Comparison (Southbound) total on-street parking spaces on both sides of the roadway combined. As shown in Figures 3-8, 3-9, and 3-10, on-street parking along the S.R. 471 has a maximum utilization rate of $9 \%$ during peak hours on Market Mondays. The utilization
 rate decreases to $4 \%$ on a Saturday, and $0 \%$ on a typical weekday.

## Intersection Operations

Study area intersections were evaluated using the Synchro (version 11) software package. All study area intersections operate at LOS C or better, meaning that the average delay experienced on the stop-controlled approaches is less than 25 seconds, under existing conditions during the AM and PM peak hours on a typical weekday. More detailed Synchro analysis reports can be found in Appendix G.

## S.R. 471 complete streets study



Figure 3-8: On-Street Parking Map (Market Monday)

## S.R. 471 complete streets study

CR 730/NW 10th Ave

## C 478/SE 1st Ave

## Legend

Occupied Parking Space(s)

Day: Tuesday, October 19, 2021
Peak Hour: N/A
Number of Available Parking Spaces: 70 Number of Occupied Parking Spaces: 0

Figure 3-9: On-Street Parking Map (Typical Weekday)

## S.R. 471 complete streets study



## Legend

- Occupied Parking Space(s)

Day: Saturday, October 23, 2021
Peak Hour: 3:00PM - 4:00PM
Number of Available Parking Spaces: 70 Number of Occupied Parking Spaces: 3

Figure 3-10: On-Street Parking Map (Saturday)
S.R. 471 COMPLETE STREETS STUDY

## Speed

Figure 3-11 illustrates the $85^{\text {th }}$ percentile speed and the 10 mph pace at the three data collection locations along the S.R. 471 study corridor. Per the FDOT Speed Zoning for Highways, Roads and Streets in Florida Manual, August 2018, the posted speed limit should not differ from the $85^{\text {th }}$ percentile speed or upper limit of the 10 mph pace (whichever is less) by more than 3 mph . The context classification for S.R. 471 from C 478 A to C $478 /$ NW $4^{\text {th }}$ Avenue is C2T -Rural Town and from C 478/NW $4^{\text {th }}$ Avenue to CR 730/NW $10^{\text {th }}$ Street is C3C -Suburban Commercial. The target speed for these two context classifications along S.R. 471 is 35 mph . The posted speed limit along the majority of the study corridor is 35 mph with the exception of the southern end of the corridor south of Webster Elementary and the northern end of the corridor north of NW $6^{\text {th }}$ Avenue which are posted at 45 mph . As evidenced in Figure 3-11, the S.R. 471 study corridor experiences speeds above the posted speed limit on both Market Monday and a typical weekday. The $85^{\text {th }}$ percentile speed is higher on a typical weekday than a Market Monday. The speeds towards the southern and northern limits of the study corridor tend to be higher than the central location.


Figure 3-11: Speed Comparison by Location

## Traffic Stream Composition

As shown in Figure 3-12, heavy vehicles make up approximately onequarter of the traffic on a typical weekday indicating that this is a welltraveled freight corridor. Heavy vehicles consist of vehicles larger than a pick-up truck including buses, recreational vehicles, and semitrucks. During Market Mondays, the percentage of heavy vehicles is reduced to about 20\% of the traffic stream. It should be noted that the decrease in percentage of heavy vehicles does not mean the quantity of trucks decreased, only that the influx of passenger vehicles during Market Monday increased.



Figure 3-12: Traffic Composition by Location

## S.R. 471 complete streets study

### 3.4 FUTURE PROGRAMMED CONDITIONS

Based on the information provided in the South Sumter Connector Trail project, a 10 -foot paved shared use path will replace the sidewalk from C 478 A to C $478 /$ NW $4^{\text {th }}$ Avenue. This section is part of a larger trail project connecting the Florida Trail to the Withlacoochee State Trail. In addition to the shared use path, a crosswalk with a rectangular rapid flashing beacon is programmed to be installed on the south leg of the intersection of S.R. 471 and Central Avenue. The project reduces travel lanes to 11 -feet and removes on-street parking from the southbound travel way from Central Avenue to C $478 /$ NW $4^{\text {th }}$ Avenue. The construction for the South Sumter Connector Trail Project is planned to begin in Spring 2023.

Based on the information provided by the Webster Elementary School Zone Study, the school zone limit will be shortened in the northbound direction by approximately 300 feet and signage will be updated throughout the school zone. Additionally, a southbound left-turn lane will be constructed at the southern and middle entrances to Webster Elementary School, and the northbound right-turn lane will be extended to accommodate queuing during the afternoon pick-up times.

### 3.5 NEEDS ASSESSMENT

Based on the input from the community workshop, online survey, and stakeholder meetings, the following items were identified to be considered in the improvement alternatives for the S.R. 471 corridor:

- Bicycle and pedestrian facilities
- Continuation of shared-use path on the west side of the corridor north of C $478 /$ NW $4^{\text {th }}$ Avenue to connect to proposed South Sumter Connector Trail to the south
- Enhancement of existing sidewalk on the east side of the corridor
- Removal of on-street parking
- The on-street parking is underutilized, and this space could be used for accomplishing the goals of this Complete Streets Study
- Traffic Calming
- The removal of on-street parking and narrowing of the roadway's typical section can assist in lowering vehicle speeds along the corridor

- Crosswalks
- Crosswalks are needed toward the northern portion of the corridor in addition to the existing crosswalk at Webster Elementary school and the proposed crosswalk at W Central Avenue
- Crosswalks should be supplemented with bulb outs to reduce the crossing distance
- While motorists are legally required to stop for pedestrians in any crosswalk, Rectangular Rapid Flashing Beacons (RRFB) should be included to bring more visibility to the marked crosswalk and help pedestrians who need to cross
- Golf Cart Crossings
- Golf cart use is prevalent on the side streets that intersect the S.R. 471 corridor; however, per Section 316.212, Florida Statutes (F.S.), golf carts are not legally allowed to travel on or cross the State Highway System including S.R. 471
- Section 316.212, F.S., and the FDOT Traffic Engineering Manual (TEM) provide provisions for designated golf cart crossing locations across the State Highway System. If approved by FDOT, designated golf cart crossing locations, separate from pedestrian crosswalks, would allow for golf carts to legally cross S.R. 471, providing cross access were none currently exists
- Landscaping
- Landscaping can help beautify the corridor in addition to creating a physical and visual barrier between pedestrians and vehicles and also help with traffic calming
- Lighting
- Common contributing factors to crashes along the corridor included dark conditions
- The addition of lighting can improve safety along the corridor


### 4.0 DEVELOPMENT OF IMPROVEMENT OPTIONS

### 4.1 IMPROVEMENT OPTIONS

Based on the needs assessment and input from key stakeholders, two improvement options were developed for the S.R. 471 study corridor. Both improvement options include the programmed improvements from the South Sumter Connector Trail and the Webster Elementary School Study. Figure 4-1 through Figure 4-14 illustrate the proposed improvements associated with Option 1 and Option 2.

## Option 1

Option 1 proposes the extension of the 10 -foot shared use path to the north from C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue to CR $730 / \mathrm{NW}$ $10^{\text {th }}$ Avenue where there is currently no existing sidewalk north of the central driveway for the Sumter County Farmers Market.

Two golf cart crossings are proposed along the S.R. 471 corridor. One crossing is proposed at the intersection of S.R. 471 and Central Avenue and the other is proposed at the intersection of S.R. 471 and C $478 /$ NW $4^{\text {th }}$ Avenue. Golf cart crossings across a state road are subject to review and approval by FDOT's District Traffic Operations Engineer based on the following criteria in the FDOT TEM:
a) Side street maximum vehicular volume 1,200 ADT and AM/PM Peak Hour not to exceed 110 vehicles per hour single direction.
b) Main street posted speed limit or $85^{\text {th }}$ percentile intersection approach speed is 35 mph or less.
c) Maximum crossing distance for undivided roadways shall be equal to three (3) lanes or less not including any right turn lanes, bike lanes and crosswalks. For divided roadways of four (4) lanes or less, a minimum of twenty-two (22) feet median width is required.
d) Side street approaches should have an exclusive left turn lane and shared through-right turn lane. Other lane approach configurations will be considered on case-by-case basis.
e) Side street intersection alignment shall be a 90 degree (not more than 105 degree) angle to the mainline tangent. Skewed or offset intersections are not recommended for golf cart crossings.
f) Approach stop signs and pavement marking shall be in accordance with MUTCD and Standard Plans, Index 711-001.
g) Golf Cart signs (W11-11) should be placed on the mainline approach as shown in Figure 5.1-3 and Figure 5.1-4 of the FDOT Traffic Engineering Manual.

All of these criteria are anticipated to be met by the two proposed location with the exception of Item d) above; however, as noted, other side street approach configurations are allowed on a case-by-case basis.

The existing crosswalk near Webster Elementary School is proposed to be improved to include a median refuge and a RRFB. In addition to the improvement of the existing crosswalk and the programmed crosswalk location from the South Sumter Connector Trail Project, two additional crosswalk locations are proposed along S.R. 471. One crosswalk location is proposed at C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue. This location would include a RRFB and in-street signs. The other crosswalk location is proposed at the entrance of the Sumter County Farmers Market. This location would include a RRFB and bulb -outs/curb extensions to shorten the distance pedestrians are required to cross.

Landscaping and lighting are proposed to be enhanced where necessary for safety and beautification purposes and to facilitate slower travel speeds along the corridor.

As needed, on-street parking is proposed to be removed to provide space within the right-of-way for the improvements described above.

## Option 2

Option 2 builds upon the improvements developed in Option 1 with some key differences. All on-street parking is proposed to be removed allowing for the curb line to be brought in, increasing the separation between the roadway and the eastern sidewalk, this additional space will also allow the sidewalk to be widened to six feet in width. Bringing the curb line in will also shorten the crossing distance for pedestrians.

### 4.2 CONCEPTUAL IMPROVEMENT EXHIBITS

Figure 4-1 through Figure 4-14 illustrate the improvement options along the S.R. 471 corridor including an aerial view and cross sections at five locations along the corridor.

### 4.3 ORDER OF MAGNITUDE COST ESTIMATES

Planning-level order of magnitude cost estimates were developed for the improvement option concepts based upon current industry standards and general trends in construction costs per linear mile. It should be noted that cost estimates are based on information known at the time of this study and are subject to change based upon further engineering analyses and design. Table 4-1 summarizes the planning-level order of magnitude cost estimates for each improvement option concept. Planning level cost information is included in Appendix H.

Table 4-1: Planning Level Order of Magnitude Cost Estimates

| Category | Option 1 | Option 2 |
| :--- | ---: | ---: |
| Construction | $\$ 2,350,000.00$ | $\$ 3,612,000.00$ |
| Survey | $\$ 50,000.00$ | $\$ 50,000.00$ |
| Design | $\$ 353,000.00$ | $\$ 542,000.00$ |
| CEI | $\$ 235,000.00$ | $\$ 361,000.00$ |
| Total | $\$ 2,988,000.00$ | $\$ 4,565,000.00$ |

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## S.R. 471 complete streits studr

Existing


Option 2


Figure 4-1: Improvement Options Aerial - C 478 A to SE 3rd Avenue

## S.R. 471 complete streits studr

Existing




Option 2


Figure 4-2: Improvement Options Aerial - SE 3rd Avenue to W Central Avenue


Figure 4-3: Improvement Options Aerial - W Central Avenue to C 478/NW 4th Avenue

## S.R. 471 complete streets studr

## Existing



## Option 1



Figure 4-4: Improvement Options Aerial - C 478/NW 4th Avenue to NW 6th Avenue

## S.R. 471 complete s strets stuor

Existing


Option 1


Option 2


Figure 4-5: Improvement Options Aerial - NW 6th Avenue to CR 730/NW 10th Avenue

## (hi) S.R. 471 complete streets studr



Figure 4-6: Option 1 Cross Section- At Webster Elementary School


Figure 4-7: Option 2 Cross Section- At Webster Elementary School

## (3.).R. 471 complete streets study



Figure 4-8: Option 1 Cross Section-At W Central Avenue

EXISTING SIDEWALK


Figure 4-9: Option 2 Cross Section-At W Central Avenue

## S.R. 471 complete streets study



Figure 4-10: Option 1 Cross Section-At C 478/NW $4^{\text {th }}$ Avenue


Figure 4-11: Option 2 Cross Section—At C 478/NW $4^{\text {th }}$ Avenue

## (3.) S.R. 471 complete streets study



Figure 4-12: Option 1 Cross Section- At Farmers Market Entrance


Figure 4-13: Option 2 Cross Section-At Farmers Market Entrance

## S.R. 471 complete streets study



Figure 4-14: Option 1 and 2 Cross Section— North of Farmers Market Entrance

## S.R. 471 complete streets study

### 4.4 BICYCLE AND PEDESTRIAN LEVEL OF SERVICE

For each improvement option, the bicycle and pedestrian level of service were calculated for different subsegments along the corridor depending the typical section of S.R. 471 and characteristics of the improved bicycle and pedestrian facilities. The evaluation follows the same methodology and evaluation metrics as outlined in Section 3.1.

## Option 1

The results of the bicycle LOS evaluation considering Option 1 improvements are illustrated in Figure 4-15. From the southern end of the corridor to W Central Avenue, the western side of the corridor would operate at LOS B and the eastern side of the corridor would operate at LOS F. From W Central Avenue to the northern end of the corridor, the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS F. It is important to note that the eastern side of the corridor does not have a bicycle facility; it is anticipated that bicyclists would utilize the shared use path on the western side of the corridor.

The results of the pedestrian LOS evaluation considering Option 1 improvements are illustrated in Figure 4-16. From the southern end of the corridor to SE $3^{\text {rd }}$ Avenue, the western side of the corridor would operate at LOS B and the eastern side of the corridor would operate at LOS D. From SE $3^{\text {rd }}$ Avenue to C $478 /$ NW $4^{\text {th }}$ Avenue, the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS B. From C 478/NW $4^{\text {th }}$ Avenue to NW $6^{\text {th }}$ Avenue, both sides of the corridor would operate at LOS C. From NW $6^{\text {th }}$ Avenue to CR $730 / \mathrm{NW} 10^{\text {th }}$ Avenue the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS E. For the segment of NW $6^{\text {th }}$ Avenue to CR $730 /$ NW $10^{\text {th }}$ Avenue, there is no sidewalk or pedestrian facility on the eastern side of the road. On average, both sides of the corridor would operate at LOS C improving upon existing conditions where both sides of the corridor would operate at LOS D.


Figure 4-15: Option 1 Bicycle LOS Map


Figure 4-16: Option 1 Pedestrian LOS Map

## S.R. 471 complete streets study

## Option 2

The results of the bicycle LOS evaluation considering Option 2 improvements are illustrated in Figure 4-17. From the southern end of the corridor to W Central Avenue, the western side of the corridor would operate at LOS B and the eastern side of the corridor would operate at LOS F. From W Central Avenue, to the northern end of the corridor the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS F. It is important to note that the eastern side of the corridor does not have a bicycle facility; it is anticipated that bicyclists would utilize the shared use path on the western side of the corridor.

The results of the pedestrian LOS evaluation considering Option 2 improvements are illustrated in Figure 4-18. From the southern end of the corridor to SE $3^{\text {rd }}$ Avenue, the western side of the corridor would operate at LOS B and the eastern side of the corridor would operate at LOS D. From SE $3^{\text {rd }}$ Avenue to C 478/NW $4^{\text {th }}$ Avenue, the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS B. From C 478/NW $4^{\text {th }}$ Avenue to NW $6^{\text {th }}$ Avenue, both sides of the corridor would operate at LOS C. From NW $6^{\text {th }}$ Avenue to CR $730 / \mathrm{NW} 10^{\text {th }}$ Avenue, the western side of the corridor would operate at LOS C and the eastern side of the corridor would operate at LOS E. For the segment of NW $6^{\text {th }}$ Avenue to CR 730/NW $10^{\text {th }}$ Avenue there is no sidewalk or pedestrian facility on the eastern side of the road. On average, both sides of the corridor would operate at LOS C. It is important to note that even though both options improve the corridor's bicycle LOS and pedestrian LOS, there are distinct differences between the two options that were not considered in the planning level evaluation including the sidewalk width and the separation between the sidewalk and roadway.


Figure 4-17: Option 2 Bicycle LOS Map


Figure 4-18: Option 2 Pedestrian LOS Map

### 5.0 RECOMMENDATIONS

Based upon the potential of each improvement option to meet the items outlined in the needs assessment, it is recommended that Option 2 be implemented. Option 2 continues the shared use path on the west side of the corridor north of C 478/NW $4^{\text {th }}$ Avenue to connect to the proposed South Sumter Connector Trail to the south and enhances the existing sidewalk on the east side of the corridor. Option 2 also removes all of the on -street parking along the corridor and narrows the roadway's typical section to aid in lowering vehicle speeds along the corridor. Crosswalks would be provided at four locations along the corridor: the existing crosswalk at Webster Elementary School would be enhanced with an RRFB and in-street signage; two crosswalks with RRFBs would be added at C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue and at the Sumter County Farmers Market; and the South Sumter Connector Trail project includes a crosswalk with an RRFB at Central Avenue. Golf cart crossings are proposed at the intersection of S.R. 471 and Central Avenue and at the intersection of S.R. 471 and C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue. Landscaping and lighting will also be enhanced for safety and beautification purposes and to facilitate traffic calming.
There are currently two (2) FDOT construction projects planned along the study corridor: the South Sumter Connector Trail project (FM 435471-2) and an upcoming FDOT resurfacing project along S.R. 471 north of C $478 / \mathrm{NW} 4^{\text {th }}$ Avenue that is currently being scoped (FM 4452951). To minimize costs, labor efforts, and disruption to residents and traffic along the S.R. 471 corridor, it is recommended that the


Figure 5-1: Programmed and Recommended Improvements Map implementation of the improvements from this project be combined, where feasible, with construction efforts of the other planned construction projects along the corridor. At the time of this report, coordination between these improvement efforts is ongoing and the feasibility of extending the limits and scope of the upcoming resurfacing project (FM 445295-1) is being evaluated. As the construction of the resurfacing project is likely to be several years in the future, it is recommended that a crosswalk at the Sumter County Farmers Market be implemented as a standalone project in the meantime. Per coordination with FDOT, it is recommended that the City of Webster make an official request to FDOT for this crosswalk including the preferred location.

All programmed and recommended improvements are illustrated in Figure 5-1.

## APPENDICES

## Kimley»»Horn

## SR 471 Complete Streets Study <br> Kick-Off Meeting - May 12, 2021 <br> Agenda

1. Introductions
2. Scope Overview
3. Corridor Vision
4. Available data, previous studies and plans (Task 1A)
a. Right-of-way information from FDOT
b. Traffic data - FDOT Florida Traffic Online
c. Crash data - FDOT CARS and UF Signal Four
d. South Sumter Connector Trail PD\&E - FDOT FM 435471-1
e. Safe Routes to School Study
f. Complete Streets Program - Lake-Sumter MPO Transportation 2040
g. Others?
5. Schedule
a. Task 1 - Public Involvement and Data
i. Data collection/field reviews - May 2021; dates below to be discussed
6. 48 -Hour Counts - Monday and Tuesday $-5 / 17 \& 5 / 18$
7. Turning Movement Counts - typical weekday $-5 / 18$
8. Parking Counts - Monday, typical weekday, and weekend day $-5 / 17$, 5/18, \& $5 / 22$
9. Field Reviews - Monday and typical weekday $-5 / 24 \& 5 / 25$
ii. Community workshop
iii. Stakeholder meetings
10. Scenic Sumter Heritage Byway
11. Sumter County Farmers Market
12. MPO Technical Advisory Committee
b. Task 2 - Existing and Future Conditions Analysis
c. Task 3 - Development of Improvement Options
d. Task 4 - Corridor Recommendations and Options
e. Completion by June 30, 2022
f. Schedule will be sent out with minutes from this meeting
13. Questions/Comments

## SR 471 Complete Streets Study

Kick-Off Meeting - May 12, 2021
Meeting Minutes

1. Introductions
a. Michael Woods - Lake~Sumter MPO
b. Deanna Naugler - City of Webster
c. Ali Brighton - Kimley-Horn
d. Jim Wood - Kimley-Horn
e. Amber Gartner - Kimley-Horn
f. Vincent Spahr - Kimley-Horn
g. Deborah Snyder - Sumter County
h. Steven Cohoon - Sumter County
i. Ennis Davis - FDOT, Planning/Environmental Management Office
j. Chad Lingenfelter - FDOT Traffic Operations
2. Scope Overview
a. SR 471 through Webster
b. Purpose: Complete Streets, Review Existing and Future Conditions, Focus on Multimodal Safety and Mobility
c. Tasks:
i. Public Involvement and Data Collection
3. Data - Deanna: Note that traffic and pedestrians are nearly double during winter months (September through March)
4. Field Reviews
a. Monday during Farmer's Market
b. Typical Weekday
ii. Community Workshop
iii. Existing/Future Conditions Analyses
iv. Development of Improvement Options
v. Corridor Recommendations
5. Corridor Vision
a. Deanna - City's goals/thoughts:
i. Eliminate on-street parking. Already very narrow thoroughfare through the City.
ii. Convert crosswalks to be golf cart accessible
iii. Beautification
iv. Traffic calming
b. Sumter County - supports the City's goals, but golf carts are not allowed on Countymaintained roadways
c. FDOT - supports the City's goals
i. Has had previous requests to extend the school zone, but school zones are in place for crossings, not to improve access to driveways (Deanna indicated that the City has received this request as well)
ii. Although the City wants to remove the on-street parking, this acts as traffic calming
6. Deanna indicated that the on-street parking is a safety concern with opening of doors into traffic.

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2. FDOT noted that there may be a balance of removing on-street parking in specific areas.
iii. FDOT is very supportive of traffic calming and beautification.
iv. FDOT noted that the City would need to pursue permission to provide golf cart crossing on a state road. They are not allowed along state roads.
3. Deanna agrees and would like to see that in this study.
d. LSMPO is supportive
i. South Sumter Connector Trail funded for construction, ends in downtown Webster
4. Available data, previous studies and plans (Task 1A)
a. Right-of-way information from FDOT
i. Ennis to send FDOT R/W contact to Kimley-Horn via email
b. Traffic data - FDOT Florida Traffic Online
c. Crash data - FDOT CARS and UF Signal Four
d. South Sumter Connector Trail PD\&E - FDOT FM 435471-1
e. Safe Routes to School Study
f. Complete Streets Program - Lake-Sumter MPO Transportation 2040
g. Others?
i. FDOT completing a safety study at the Elementary School - Steven to provide information, including a draft with potential improvement recommendations
ii. Deanna -
5. 480-site RV park
6. 42 acres across from Elementary School will likely have some commercial + single-family homes
7. Deanna to provide a traffic study for RV park, but one has not been completed yet for the commercial/single-family site since it is still in progress
8. Schedule
a. Task 1 - Public Involvement and Data
i. Data collection/field reviews - dates to be discussed
9. 48-Hour Counts - Monday and Tuesday
10. Turning Movement Counts - typical weekday
11. Parking Counts - Monday, typical weekday, and weekend day
12. Field Reviews - Monday and typical weekday
13. Should we wait until at least September to collect data/perform field reviews?
a. If waiting would hinder Kimley-Horn's ability to complete the study, data could be collected and extrapolated to peak season conditions
b. Kimley-Horn to evaluate schedule and determine how long Kimley-Horn can wait to collect data, coordinate with City and County to determine best course of action
ii. Community workshop
14. Do not need to wait to hold community workshop. The year-round residents are more likely to attend and contribute.
iii. Stakeholder meetings
15. Scenic Sumter Heritage Byway
a. Dawn Cary - Deborah to provide contact info
16. Sumter County Farmers Market

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a. Contact: Mark Harrel - Deanna to provide contact info
3. MPO Technical Advisory Committee
a. Next meeting in June, they meet every other month. Deborah suggests August to provide some more background information for feedback.
b. Not likely to be 'vision' input, more technical in nature (funding, etc)
c. May be best to push this meeting out beyond Task 1, possibly after development of improvement options (Task 3)
b. Task 2 - Existing and Future Conditions Analysis
c. Task 3 - Development of Improvement Options
d. Task 4 - Corridor Recommendations and Options
e. Completion by June 30, 2022

Action Items:

- Ennis to send FDOT R/W contact to Kimley-Horn via email.
- Steven to provide information on a safety study at the Elementary School, including a draft with potential improvement recommendations.
- Deanna to provide the traffic study for RV park to Kimley-Horn.
- Kimley-Horn to provide updated schedule based on data collection/field reviews in the Fall. Schedule included with minutes.
- Deborah to send Scenic Sumter Heritage Byway contact to Kimley-Horn via email. - Sent on 5/13/2021.
- Deanna to send Sumter County Farmers Market contact to Kimley-Horn via email.


## SR 471 Complete Streets Study

Community Workshop - June 9, 2021
Workshop Summary

The purpose of this summary is to document SR 471 Complete Streets Study Community Workshop held on Wednesday, June 9, 2021 at 6:00 PM. Approximately 20 people attended the meeting. A copy of the sign-in sheet is included in Attachment A. The meeting included a presentation by Kimley-Horn and a breakout session for the public. The following members of the project team were in attendance:

- Ali Brighton - Kimley-Horn
- Amber Gartner - Kimley-Horn
- Vincent Spahr - Kimley-Horn
- Caleb Reed - Kimley-Horn
- Deanna Naugler - City of Webster
- Deborah Snyder - Sumter County
- Steven Cohoon - Sumter County
- Michael Woods - Lake~Sumter MPO


## PRESENTATION

Ali Brighton provided an initial presentation to introduce the project to the public. A copy of the presentation is included in Attachment B. Key items covered in the presentation included:

- Project Corridor
- Project Objectives \& Areas of Focus
- Project Scope/Schedule
- Previous Studies/Crash Data


## BREAKOUT SESSION

Following the presentation, four (4) breakout stations were opened with display boards. Three (3) of the breakout stations included an aerial map of the corridor and the members of the public were asked to identify locations of need along the corridor using sticky notes. The fourth board included 12 Complete Streets improvement elements and the members of the public were asked to use stickers to vote for the top three infrastructure treatments that they would like to see implemented along the corridor. Project team members answered questions from the public and encouraged them to participate in the online survey and fill out comment cards to provide additional details on what they would like to see implemented along the corridor. Copies of the display boards are included in Attachment C.

The meeting ended at approximately 7:30 PM.

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## ATTACHMENT A: SIGN-IN SHEETS




## Kimley»)Horn

## ATTACHMENT B: WORKSHOP PRESENTATION



## GOMPLETE STREETS STUDY

Community Workshop - June 9, 2021


Lake-Sumter


FDOT


## Agenda

- Project Objectives \& Areas of Focus
- Project Scope/Schedule
- Previous Studies/ Crash Data
- Breakout Session


## Project Comidor

- SR 471 from CR 478A to CR 730



## Project Objectives \& Areas of Focus

- Objective: Assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor.
- Areas of Focus:
- Existing and future traffic patterns
- Speeding traffic
- Bicycle/ pedestrian modes
- Crosswalks
- On-street parking
- Beautification


## Project Scope/Schedule

|  | $\begin{aligned} & \text { N } \\ & \text { O} \\ & \text { N } \\ & \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { O} \\ & \text { N } \\ & \text { Nin } \end{aligned}$ |  |  | $\begin{aligned} & \text { N} \\ & \text { N } \\ & \text { N} \\ & \dot{0} \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { N} \\ & \text { N } \\ & \text { N} \\ & \bar{\phi} \\ & \text { है } \\ & 0 \\ & \text { Z } \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { O } \\ & \text { N } \\ & \text { © } \\ & \text { E } \\ & 0 \end{aligned}$ |  | $\begin{aligned} & \text { N } \\ & \text { O } \\ & \text { N } \\ & \text { N } \\ & \text { N} \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \mathbb{N} \\ & \text { O } \\ & \text { N} \\ & \text { N} \\ & \text { N } \end{aligned}$ | N N N N - | $\begin{aligned} & \text { N } \\ & \text { N } \\ & \text { N } \\ & \text { N } \end{aligned}$ | $\begin{aligned} & \underset{N}{N} \\ & \underset{\sim}{0} \\ & \tilde{y} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Community Workshop and Stakeholder M eetings |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Literature and Crash Data Review |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Online Survey |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Data Collection and Field Reviews |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Existing and Future Conditions Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Development of Improvement Options |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corridor Recommendations |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Study Complete |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Previous Studies



## Breakout Session

- Two Sets of Boards:
- Corridor Aerial M aps
- Identify locations of need
- Improvement Elements
- Vote for top 3 elements you would like to see implemented along the corridor
- Comment cards available to provide more detail.
- Online survey also available for input. https://www.surveymonkey.com/r/SR471



## Staff

- Ali Brighton, P.E. - Kimley-Horn and Associates Inc. - Project M anager
- Vincent Spahr, P.E. - Kimley-Horn and Associates, Inc. - Project Engineer
- Amber Gartner, P.E. - Kimley-Horn and Associates, Inc. - Project Engineer
- Caleb Reed - Kimley-Horn and Associates, Inc. - Project Analyst


## Kimley»)Horn

## ATTACHMENT C: BREAKOUT SESSION BOARDS





## Improvement Elements

With the stickers provided, indicate the top three infrastructure treatments that you would like to see implemented along the corridor.



## Agenda

- Project Objectives \& Areas of Focus
- Project Scope/Schedule
- Previous Studies/Crash Data
- Input from Group



## Project Objectives \& Areas of Focus

- Objective: Assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor.
- Areas of Focus:
- Existing and future traffic patterns
- Speeding traffic
- Bicycle/pedestrian modes
- Crosswalks
- On-street parking
- Beautification


Input from Stakeholders

- Open discussion for comments and questions
- Online survey also available for input. https://www.surveymonkey.com/r/SR471




## Project Objectives \& Areas of Focus

- Objective: Assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor.
- Areas of Focus:
- Existing and future traffic patterns
- Speeding traffic
- Bicycle/pedestrian modes
- Crosswalks
- On-street parking
- Beautification


Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe

Existing Conditions - On-Street Parking


Existing Conditions - Volumes and Traffic Composition


| maximum Corridor vc Ratios |  |  |
| :---: | :---: | :---: |
|  | Market Monday | Typical Weekday |
| Northbound | 0.76 | 0.77 |
| Southbund | 0.88 | 0.72 |




Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe


Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe


Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe


Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe


## Improvement Options - Summary

- Option 1
- Includes programmed improvements from South Sumter Trail and Webster Elementary School Study
- Extends $10^{\prime}$ shared use path from CR $478 / \mathrm{N} 4^{\text {th }}$ Avenue to CR $730 / \mathrm{N} 10^{\text {th }}$ Avenue
- Adds crosswalks with bulb outs and RRFB at 2 additional locations
- Removes on-street parking where necessary to implement improvements above
- Includes 2 golf cart crossing locations
- Includes lighting and landscaping enhancements
- Option 2
- Builds on Option 1
- Removes all on-street parking for narrower roadway section
(2) - Provides wider separation from roadway to sidewalk on east side of corridor
- Includes wider 6' sidewalk on east side of corridor


Appendix A-4: Lake-Sumter MPO Technical Advisory Committee and Citizen Advisory Committe


## Project Objectives \& Areas of Focus

- Objective: Assess the feasibility of and develop concepts for improved multimodal safety and mobility along the corridor.
- Areas of Focus:
- Existing and future traffic patterns
- Speeding traffic
- Bicycle/pedestrian modes
- Crosswalks
- On-street parking
- Beautification


Existing Conditions - On-Street Parking


Existing Conditions - Speed \& Traffic Composition


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## Improvement Options - Summary

- Option 1
- Includes programmed improvements from South Sumter Trail and Webster Elementary School Study
- Extends 10 ' shared use path from CR $478 / \mathrm{N} 4^{\text {th }}$ Avenue to CR $730 / \mathrm{N} 10^{\text {th }}$ Avenue
- Adds crosswalks with bulb outs and RRFB at 2 additional locations
- Removes on-street parking where necessary to implement improvements above
- Includes 2 golf cart crossing locations
- Includes lighting and landscaping enhancements
- Option 2
- Builds on Option 1
- Removes all on-street parking for narrower roadway section
(4) - Provides wider separation from roadway to sidewalk on east side of corridor
- Includes wider 6' sidewalk on east side of corridor






## Field Observations



- Patrons of the Farmers Market cross at unmarked locations


Multiple school bus stops along the corridor
ts

Existing Conditions - Crash Analysis


Larger concentration of pedestrians near Webster Elementary

Only crosswalk across corridor is at school

Existing Conditions - On-Street Parking


Existing Conditions - Speed \& Traffic Composition


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Existing Conditions - Volumes and Traffic Composition




## Needs Assessment

Removal of On-Street Parking

- Bicycle and Pedestrian Facilities
- Segment North of 478
- East side of corridor
- Traffic Calming
- Crosswalks with bulb outs
- Rectangular Rapid Flashing Beacons (RRFB)
- Lighting
- Golf Cart Crossings
- Landscaping/Shade Trees

Rectangular Rapid Flashing Beacon (RRFB)


## Improvement Options - Summary

## - Option 1

- Includes programmed improvements from South Sumter Trail and Webster Elementary School Study
- Extends $10^{\prime}$ shared use path from CR $478 / \mathrm{N} 4^{\text {th }}$ Avenue to CR $730 / \mathrm{N} 10^{\text {th }}$ Avenue
- Adds crosswalks with bulb outs and RRFB at 2 additional locations
- Removes on-street parking where necessary to implement improvements above
- Includes 2 golf cart crossing locations
- Includes lighting and landscaping enhancements
- Option 2
- Builds on Option 1
- Removes all on-street parking for narrower roadway section
- Provides wider separation from roadway to sidewalk on east side of corridor
- Includes wider 6' sidewalk on east side of corridor


## Improvement Options





Improvement Options
Planning Level Order of Magnitude Cost Estimates


| Category | Option 1 | Option 2 |
| :--- | ---: | ---: |
| Construction | $\$ 2,350,000.00$ | $\$ 3,612,000.00$ |
| Survey | $\$ 50,000.00$ | $\$ 50,000.00$ |
| Design | $\$ 235,000.00$ | $\$ 361,000.00$ |
| CEI | $\$ 235,000.00$ | $\$ 361,000.00$ |
| Total | $\$ 2,870,000.00$ | $\$ 4,384,000.00$ |

## Recommendations

- Option 2
- Best accomplishes goals of the Complete Streets Study
- Includes:
- Removal of all on-street parking
- Continuation of shared use path
- Wide of shared use path
- Widening of sideva
- Additional crosswalks
- Landscaping
- Lighting
- Coordinate improvements, where feasible
- Upcoming FDOT SR 471 resurfacing project

South Sumter Trail Project



COMPLETE STREETS STUDY


## South Sumter Connector Trail

## Project Background



## The SUN Trail Network



The South Sumter Connector Trail is just one small element of the "Shared-Use Nonmotorized" or "SUN" Trail Network. the SUN Trail network was initiated through Governor and legislative support and includes existing and proposed trails across the state of Florida.
The Coast-to-Coast Trail, which the South Sumter Connector Trail is apart of, was identified in 2015 as the first SUN regional trail. It extends approximately 250 miles across Florida, from the Gulf of Mexico in St. first SUN regional trail. It extends approximate.
Petersburg to the Atlantic Ocean in Titusville.

The Coast-to-Coast Trail is a non-motorized, paved multi-use trail, meaning it provides accommodations for all users wishing to walk, bike, or roll!


## South Sumter Connector Trail



Download this exhibit on the project website www.CFLRoads-com/project/435471-2

Sumter County, Florida
Financial Project Identification (FPID) No. 435471-2



Appendix B-1: South Sumter Connector Trail
Page 3 of 16


Appendix B-1: South Sumter Connector Trail


Appendix B-1: South Sumter Connector Trail
Page 5 of 16


Appendix B-1: South Sumter Connector Trail
Page 6 of 16


Appendix B-1: South Sumter Connector Trail


Appendix B-1: South Sumter Connector Trail


Appendix B-1: South Sumter Connector Trail
Page 9 of 16


Appendix B-1: South Sumter Connector Trail


Appendix B-1: South Sumter Connector Trail


Appendix B-1: South Sumter Connector Trail

# 6.0 DESIGN FEATURES OF THE RECOMMENDED ALTERNATIVE 

### 6.1 Engineering Details of the Recommended Alternative

The Trail is divided into four segments presented in Table 6-1.
Table 6-1. South Sumter Connector Trail Segments

| Segment | Description | Connectivity | Length | Bridge |
| :---: | :--- | :--- | :---: | :---: |
| A | Forest Section | Withlacoochee and Good Neighbor Trails to C.R. 673 | 2.9 | Yes |
| B | C.R. 673 \& U.S. 301 | Forest Section to C.R. 478 | 3.4 | Yes |
| C | C.R. 478 | U.S. 301 to S.R. 471 | 4.9 | No |
| D | S.R. 471 | S.R. 471 to S.R. 50 | 4 | No |

### 6.1.1 Typical Sections

The typical section for Segment A includes a 12-foot wide paved trail with 2-foot level natural shoulders and side slopes to meet existing grade.

The typical section for Segment B includes a 12-foot wide paved trail with 2-foot level shoulders and side slopes of 1:4 (max). A roadside ditch is located between the trail and C.R. 673. The clear zone from the inside edge of the trail to the outside edge of the travel lanevaries between 14 and 18-feet. The trail requires a minimum ROW of 28 -feet which is proposed to be located within existing or future ROW.

The typical section for the U.S. 301 section of Segment $B$ includes a 12 -foot wide paved trail with 2 -foot level shoulders and side slopes of 1:4 (max). A roadside ditch is located between the trail and U.S. 301. The clear zone from the inside edge of the trail to the outside edge of the travel lane is 18 -feet. The trail requires a minimum ROW of 23 -feet which is proposed to be located within future ROW.

The typical section for Segment $\mathbf{C}$ includes a 12 -foot wide paved trail with 2 -foot level shoulders and side slopes of 1:4 (max). A roadside ditch is located between the trail and C.R. 478. The clear zone from the inside edge of the trail to the outside edge of the travel lane is 18feet. The trail requires a minimum ROW of 28 -feet which is proposed to be located within existing or future ROW.

The typical section for Segment D from C.R. 478 to south of Webster Elementary School includes a 12-foot wide paved trail with 2-foot level shoulders that meet existing grade. This
section of Segment $D$ includes existing curb and gutter along S.R. 471. The typical border width is 20 -feet and is proposed to be located within existing ROW.

The typical section for Segment D from Webster Elementary School south to S.R. 50 includes a 12 -foot wide paved trail with 2 -foot level shoulders that meet existing grade. A roadside ditch is located between the trail and S.R. 471. The clear zone from the inside edge of the trail to the outside edge of the travel lane is 18 -feet. The trail requires a minimum ROW of 28 -feet which is proposed to be located within existing or future ROW.

The typical section package is included in Appendix B.

### 6.1.2 Bridges and Structures

As a result of the VE study conducted for this PD\&E Study, VE Recommendation S1-07 which suggested replacement of the proposed concrete bridge crossing the Withlacoochee River with a steel truss bridge to mimic the appearance of the iron bridge that once crossed the Withlacoochee River near the proposed bridge location. This VE recommendation provides opportunities to reduce substructure elements placed within the river by utilizing longer spans and increase safety by providing a redundant structure.

FDOT accepted this VE recommendation resulting in a prefabricated steel pedestrian box truss bridge crossing the Withlacoochee River. The proposed bridge structure consists of a 12-12'4" paved trail on concrete bridge piers. The approach and structure would include railings and fencing for user safety and generally be $12^{\prime} 11^{\prime \prime}$ in width (Figure 6-1 and 6-2).


SOUTH SUMTER TRAIL ALONG SR 471 (URBAN) FROM CR 478 TO WEBSTER ELEMENTARY SCHOOL


Appendix B-1: South Sumter Connector Trail


SOUTH SUMTER TRAIL ALONG SR 471 (RURAL)
FROM WEBSTER ELEMENTARY SCHOOL TO SR 50

| REVISIONS |  |  |  | GAIL L. WOODS, P.E.P.E. LICENSE NUIMER 4524TANSESTEMS CORPORATION CONSULTANTS200 EAST ROBINSON STREET, SUITE 600OREAND, FL 32801CERTIFICATE OF AUTHORIZATION: 7503 | STATE OF FLORIDADEPARTMENT OF TRANSPORTATION |  |  | TYIPICAL SECTION | SHEET NO. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | DESCRIPTIION |  | DESCRIPTION |  |  |  |  |  |  |
|  |  |  |  |  | ROAD NO. | COUNTY | FINANCIAL PROJECT ID |  |  |
|  |  |  |  |  |  | SUMTER | 435471-1-22-01 |  | 7 |

Appendix B-1: South Sumter Connector Trail

## Composite Study

Qualitative Assessment
8-Hour TMC
Collision Analysis

## SR 471 (S Market Boulevard) at Webster Elementary School

Section 18030000 - MP 7.664
Sumter County
Prepared for:
THE FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 5 TRAFFIC OPERATIONS

719 South Woodland Boulevard
DeLand, Florida 32720


Districtwide Continuing Services for Traffic Operations
Contract Number: C-9R23
Metric Project No. 4.2326
Task Work Order No. 89
Study 1
Prepared by:
Metric Engineering, Inc.
525 Technology Park, Suite 153
Lake Mary, Florida 32746
July 26, 2021

## Study Location Map



## Summary of Existing Conditions

| Feature | Description |
| :---: | :---: |
| Major Street | - SR 471 (S Market Boulevard) |
| Minor Street | - Webster Elementary School |
| Area Location | - The intersection is in the city of Webster in Sumter County, Florida |
| Land Uses at Intersection | - Southwest - Undeveloped <br> - Northwest - Residential <br> - Northeast - Webster Elementary School, Residential <br> - Southeast - Webster Elementary School |
| Traffic Control | - The unsignalized intersection is a crosswalk in a school zone. Traffic on SR 471 is freeflowing with school flashers operating during the start and end of school. |
| Adjacent Signalized Intersections | - North Approach - CR 48 ( $16,100^{\prime} / 3.05$ miles to the north) <br> - South Approach - SR 50 ( $18,400^{\prime} / 3.48$ miles to the south $)$ <br> - East Approach - N/A <br> - West Approach - N/A |
| SR 471 (S Market Boulevard) (north and south legs of intersection) | - Cross Section - Two lane rural minor arterial with $12^{\prime}$ travel lanes, 6 ' paved shoulders, and $2^{\prime}$ curb and gutters. <br> - Posted Speed Limit - $35 \mathrm{MPH} ; 20 \mathrm{MPH}$ when school flashers are on <br> - North Approach Lanes - One through lane <br> - South Approach Lanes - One through lane <br> - Alignment-Straight, flat <br> - Overhead Utilities - Along the east side of SR 471 <br> - Street Lighting - Along the east side of SR 471 <br> - Sidewalk - Along both sides of SR 471 |
| Pedestrian Generators | - Webster Elementary School |
| 24-Hour Volume | - AADT - SR 471: 8,100 veh (Site: 181001) |

## COMPOSITE STUDY

Metric Engineering, Inc. was retained on behalf of the Florida Department of Transportation (FDOT) to conduct a Qualitative Assessment at the intersection of SR 471 (S Market Boulevard) at Webster Elementary School. The intersection is in the city of Webster in Sumter County, Florida, as shown in the Study Location Map on Page 1.

The analysis methods used in completing this study are consistent with the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), FDOT Manual on Uniform Traffic Studies (MUTS), FDOT Traffic Engineering Manual (TEM), and engineering judgement. This report documents existing conditions, vehicle counts, collision analysis, qualitative assessment, and recommendations.

Request: FDOT District 5 requested a study be done to evaluate the school zone and ensure the sign placements meet the current standards as stated in the FDOT Speed Zoning Manual. This study will verify the school zone meets current standards in addition to other measures to improve operation and safety through the school zone.

Operations: Includes the efficiency of operation and interaction of motor vehicles, pedestrians, and bicycles at the intersection. Following are the observations relating to these factors:

- SR 471 (S Market Boulevard) is a two-lane rural minor arterial with one 12 -foot travel lane in each direction. The shoulder widens to eight (8) feet at the crosswalk with partial on-street parking on both sides of SR 471 to the north and south of the school zone.
- The crosswalk is 12 feet wide and 40 feet in length. Sidewalk parallels both sides of SR 471.
- The intersection is free-flowing on SR 471 with post-mounted school flashers operating during the start and end of school.
- The posted speed limit on SR 471 is 35 MPH at the crosswalk. The speed limit reduces to 20 MPH when the school flashers are on.
- Overhead utility and light poles are present along the east side of SR 471.

Eight hours of turning movement counts (TMC) were collected from 7:00AM to 9:00AM, 11:00AM to 1:00PM, and from 2:00PM to 6:00PM on a weekday. The TMC's were collected at the student pickup/drop-off entrance, which is the furthest south entrance into Webster Elementary. Due to reduced traffic volumes related to the COVID-19 pandemic, the TMC may not be representative of typical traffic. The AM peak hour occurs from 7:00AM to 8:00AM, the MD peak hour occurs from 11:00AM to 12:00PM, and the PM peak hour occurs from 4:30PM to 5:30PM. Vehicular, pedestrian, and bicyclist movement summaries are provided in the Appendix. Peak hour turning movement counts are shown in the following table:

| Peak Hour Turning Movement Counts |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Peak Hour | SR 471 |  |  |  |  |  | Webster Elementary South Entrance |  |  |  |  |  | Total |
|  | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |  |
| AM (7:00-8:00) | 1 | 242 | 65 | 86 | 130 | 0 | 0 | 0 | 0 | 20 | 0 | 2 | 546 |
| MD (11:00-12:00) | 0 | 169 | 1 | 2 | 169 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 345 |
| PM (4:30-5:30) | 0 | 223 | 2 | 2 | 285 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 517 |

*Left turn movements include U-turns

Qualitative Assessment: The intersection of SR 471 (S Market Boulevard) at Webster Elementary School was observed by a registered engineer during the morning (7:30AM to $8: 30 \mathrm{AM}$ ) and the afternoon (2:15PM to $3: 15 \mathrm{PM}$ ) school peak periods to assess existing operating conditions and review the need for any operational improvements.

## General Observations:

- Chapter 15 of the Speed Zoning Manual, which was revised in August 2018, has requirements for the placement of school zone signs. For a typical school zone with a school crossing mid-block on a two-lane road and a speed limit of 45 MPH or less, the following signs are required: an S1-1 "School Crossing" sign with a W16-9P "Ahead" plaque, an S5-1 "School Speed Limit XX When Flashing" sign with a flashing beacon, an FTP-38-06 "Speeding Fines Doubled" sign, an S1-1 "School Crossing" sign with a W16-7PL "Down Arrow" plaque, and an FTP-34-06 "End School Zone" sign.
- At the Webster Elementary school zone, the "School Speed Limit XX When Flashing" sign is 244 feet from the "School Crossing" sign with the "Down Arrow" plaque in the northbound direction and 227 feet from the corresponding sign in the southbound direction. Both of these meet the 200 -foot requirement as stated in the Speed Zoning Manual.
- The "Speeding Fines Doubled" sign is 122 feet from the "School Crossing" sign with the "Down Arrow" plaque in the northbound direction and 91 feet from the same sign in the southbound direction. The "Speeding Fines Doubled" sign in the southbound direction should be relocated to ensure a 100 -foot separation as stated in the Speed Zoning Manual.
- The "School Crossing" sign with the "AHEAD" plaque is 692 feet from the "School Speed Limit XX When Flashing" sign in the northbound direction and 312 feet from the same sign in the southbound direction. Based on a 35 MPH posted speed limit and a 20 MPH School Speed Limit, this distance should be at least 100 feet, so both directions easily meet this requirement.
- The Speed Zoning Manual states that the "End School Zone" sign and the "School" pavement marking should be aligned with the "School Speed Limit XX When Flashing" sign in each direction. The "End School Zone" sign in the northbound direction and the "School" pavement marking in both directions should be relocated to meet this requirement.
- There is an S4-5 "Reduced School Speed Limit Ahead" sign 92 feet past the "School Crossing" sign with the "Ahead" plaque in the northbound direction.
- All of the "School Crossing" signs, "School Speed Limit XX When Flashing" signs, "Ahead" plaques, and "Down Arrow" plaques except for the "School Crossing" sign and "Down Arrow" plaque in the southbound direction are orange and should be replaced with fluorescent yellow-green colored signs.
- There is a solar-powered changeable message sign 132 feet in front of the "End School Zone" sign in the southbound direction. The sign flashes "School Zone" twice, "Put it Down" twice, and "Hands Free" twice in rotation.
- The speed limit on SR 471 northbound changes from 45 MPH to 35 MPH 500 feet south of the crosswalk at Webster Elementary. The speed limit on SR 471 southbound changes from 35 MPH to 45 MPH 585 feet south of the crosswalk.


## AM Peak Hour Observations:

- Traffic on SR 471 was light to moderate and typically random arrival during the AM peak hour. The southbound movement was heavier in the beginning of the AM peak and the northbound movement was heavier later in the AM peak.
- There were 30 southbound left turns and 21 northbound right turns into the south entrance into Webster Elementary. At times a queue in the southbound direction would build due to southbound motorists waiting for a gap in northbound traffic to turn left into the school. The max queue was five (5) vehicles which occurred once.
- The school flashers were on in each direction when the AM peak started and turned off at 8:00AM. Most motorists respected the 20 MPH school speed limit while the flashers were on. Several motorists were observed braking as they approached the school zone to get to an appropriate speed. Only one (1) motorist was observed speeding through the school zone.
- At the beginning of the AM peak hour, the majority of traffic into Webster Elementary was at the south entrance. As mainline traffic lessened, most of the traffic into the school occurred at the middle entrance. Almost all traffic out of the school happened from the middle entrance. Only five (5) vehicles used the north exit to leave the school.
- Only two (2) pedestrians used the crosswalk during the AM peak hour. The two (2) walked together eastbound into the school.


## PM Peak Hour Observations:

- Traffic on SR 471 was observed to be light to moderate during the PM peak hour and fairly similar to the AM peak hour. Traffic lessened halfway through the peak hour. The southbound direction appeared to be the heavier mainline movement.
- There were 29 southbound left turns and 29 northbound right turns into the south entrance into Webster Elementary. At times a queue in the southbound direction would build due to southbound motorists waiting for a gap in northbound traffic to turn left into the school. The max queue was six (6) vehicles which occurred once.
- Vehicles began lining up in the parent pickup/drop-off (south) entrance into the school at about 1:30PM. The queue of vehicles waiting to pick up students at the school built up to a point where vehicles were spilling into the right turn lane on SR 471 and even the grass behind the right turn lane at its peak.
- There were nine (9) southbound motorists that did an illegal U-turn south of the school and one (1) southbound motorist that did an illegal U-turn at CR 478A to get in the queue of vehicles in the northbound right turn lane. One motorist attempting to exit the school from the south entrance was blocked by the vehicles in the parent pickup queue.
- School let out at 2:30PM and by $2: 40 \mathrm{PM}$ the queue was no longer spilling into the northbound right turn lane. By 3:00PM the entire queue was gone and had left the school. The majority of traffic out of the school used the middle entrance. Only three (3) vehicles used the north exit to leave the school.
- The school flashers turned on at 2:15PM and turned off at 3:00PM. No pedestrians or bicyclists were observed using the crosswalk during the PM peak.

Safety: Vehicle, pedestrian, and bicycle safety at the intersection are assessed through review of crash reports, identification of significant crash trends, then correlation to field conditions.

Crash data was obtained from the University of Florida Signal 4 Analytics for the intersection of SR 471 (S Market Boulevard) at Webster Elementary School for the 45-month period from January 1, 2017 to October 1, 2020. A table summary of the collision data as well as a Collision Diagram can be found on Pages 11 through 13. There were only two (2) crashes identified, one (1) ran off road and one (1) left turn collision. Neither of the crashes resulted in an injury. Both of the crashes occurred under dark conditions, one at night on a wet roadway surface and one at dawn on a dry roadway surface. There was approximately $\$ 11,200$ in estimated property damage.

The ran off road collision involved a motorist driving west on SE Third Avenue approaching SR 471 who disregarded the stop sign and crashed into a fence west of the intersection. The motorist was driving under the influence at the time. This occurred 200 feet north of the crosswalk at Webster Elementary. The left turn crash involved a motorist turning left out of the furthest south entrance into Webster Elementary. The motorist failed to yield right-of-way to a southbound vehicle on SR 471 and crashed into the left rear side of the southbound vehicle.

Maintenance: In addition to observing operational and safety conditions, correctable maintenance items were also given consideration during the field review. The signing, pavement markings, and pavement are in good condition along SR 471 (S Market Boulevard) at Webster Elementary School. Maintenance items are listed in the recommendations section.

Recommendations: Based on the vehicle counts, intersection geometry, field observations, and crash history, the following are recommendations being made as a result of this study:

Create a Maintenance Work Order for the following:

- Relocate the "End School Zone" sign in the northbound direction 300 feet to the south. The Speed Zoning Manual states the "End School Zone" sign should be aligned with the "School Speed Limit XX When Flashing" sign in the opposite direction.
- Relocate the "School" pavement marking in the northbound direction 220 feet to the north, and the "School" pavement marking in the southbound direction 210 feet to the south. The Speed Zoning Manual states the "School" pavement marking aligned with the "School Speed Limit XX When Flashing" sign in the same direction.
- Relocate the "Speeding Fines Doubled" sign in the southbound direction to ensure 100' spacing. The sign is currently 91 feet in front of the school crossing and should be at least 100 feet in front per the Speed Zoning Manual.
- Relocate the 35 MPH "Speed Limit" sign in the northbound direction 340 feet to the south to extend the 35 MPH speed zone. This sign should be relocated to where the existing "School Speed Zone Ahead" sign is.
- Relocate the "School Speed Zone Ahead " warning sign in the northbound direction 100 feet to the north. This sign should be located 100 feet downstream of the relocated 35 MPH "Speed Limit" sign.
- Replace the "School Crossing" sign with the "AHEAD" plaque in both directions, the "School Speed Limit XX When Flashing" sign in both directions, and the "School Crossing" sign with the "Down Arrow" plaque in the northbound direction. These school zone signs are orange and should be replaced with fluorescent yellow-green signs per the Speed Zoning Manual.

Coordinate with Work Program to develop projects for the following:

- Extend the northbound right turn lane at the south entrance into Webster Elementary School by 80 feet. This will help keep the queue of vehicles from extending into the grass behind the right turn lane.
- Install a southbound left turn lane with a 50 -foot taper starting south of the crosswalk to allow left turn access into the middle and south entrances into Webster Elementary. This will improve operation of southbound traffic by avoiding southbound queues and southbound U-turns by vehicles trying to get into the northbound right turn lane.


## North Approach Photographs



Looking south into the crosswalk along SR 471 (S Market Boulevard)


Looking north from the crosswalk along SR 471 (S Market Boulevard)

## South Approach Photographs



Looking north into the crosswalk along SR 471 (S Market Boulevard)


Looking south from the crosswalk along SR 471 (S Market Boulevard)

## Crosswalk Photographs



Looking east into the crosswalk at Webster Elementary School


Looking west into the crosswalk at Webster Elementary School


Appendix B-3: Webster Elementary School
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Appendix B-3: Webster Elementary School
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Appendix B-3: Webster Elementary School
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Appendix B-3: Webster Elementary School
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Appendix B-3: Webster Elementary School
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## APPENDIX

## 8 HOUR TMC

SR 471 @ Webster Elementary
Section 18030000 - M.P. 7.696
Sumter County

Prepared for:

## THE FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 5 TRAFFIC OPERATIONS

719 South Woodland Boulevard
DeLand, Florida 32720


Districtwide Continuing Services Contract for Traffic Operations
Financial Project ID: 237987-1-32-15
Contract No.: C-92R23
Metric Project No.: 4.2326
Task Work Order: 89
Study 1

Prepared by:
Metric Engineering, Inc.
525 Technology Park, Suite 153
Lake Mary, FL 32746

October 20, 2020

Professional Engineer: Christopher Dew, P.E.
P.E. Number: 83840


## Project Location Map

## SUMMARY OF VEHICLE MOVEMENTS

| Location: | SR 471 @ Webster Elementary | Section: | 18030000 |
| :--- | :--- | :--- | :--- |
| North/ / South Street: | SR 471 | M.P. | 7.696 |
| East/ West Street: | Webster Elementary | City: | Webster |
| Observer(s): | Jesus Lopez | County: | Sumter |
| Weather: | Good | Date: | October 13, 2020 |

## Road Condition: Good

## Remarks:

$\qquad$
$\qquad$
$\qquad$

SB Street Name: SR 471



WB Street Name: Webster Elementary South Entrance

NB Street Name: SR 471

| Time | Northbound |  |  |  |  | Southbound |  |  |  |  | Total | Eastbound |  |  |  |  | Westbound |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Begin/End | L | T | R | U | Total | L | T | R | U | Total | N/S | L | T | R | U | Total | L | T | R | U | Total | E/W |
| 7-8 | 1 | 242 | 65 | 0 | 308 | 86 | 130 | 0 | 0 | 216 | 524 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 2 | 0 | 22 | 22 |
| 8-9 | 0 | 208 | 6 | 0 | 214 | 2 | 160 | 0 | 0 | 162 | 376 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 11-12 | 0 | 169 | 1 | 0 | 170 | 2 | 169 | 0 | 0 | 171 | 341 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 12-1 | 0 | 143 | 4 | 0 | 147 | 4 | 162 | 0 | 0 | 166 | 313 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 2-3 | 1 | 183 | 25 | 0 | 209 | 32 | 226 | 2 | 0 | 260 | 469 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 7 | 0 | 18 | 18 |
| 3-4 | 0 | 219 | 0 | 0 | 219 | 3 | 229 | 0 | 0 | 232 | 451 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 8 | 8 |
| 4-5 | 0 | 222 | 3 | 0 | 225 | 2 | 250 | 0 | 0 | 252 | 477 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 7 | 7 |
| 5-6 | 0 | 182 | 0 | 0 | 182 | 0 | 309 | 0 | 0 | 309 | 491 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 5 | 6 |
| Total | 2 | 1568 | 104 | 0 | 1674 | 131 | 1635 | 2 | 0 | 1768 | 3442 | 1 | 0 | 0 | 0 | 1 | 42 | 0 | 27 | 0 | 69 | 70 |

## PEDESTRIAN VOLUME SHEET

|  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Location: | SR 471 @ Webster Elementary | Section: | 18030000 |
| North/ South Street: | SR 471 | M.P. | 7.696 |
| East/ West Street: | Webster Elementary | City: | Webster |
| Observer(s): | Jesus Lopez | County: | Sumter |
| Weather: | Good | Date: | October 13, 2020 |
| Remarks: |  |  |  |

SB Street Name: SR 471


NB Street Name: SR 471

|  |  |  |  |
| :--- | :--- | :--- | :--- |
| Location: | SR 471 @ Webster Elementary | Section: | 18030000 |
| North/ South Street: | SR 471 | M.P. | City: |
| East/ West Street: | Webster Elementary | Webster |  |
| Observer(s): | Jesus Lopez | County: | Sumter |
| Weather: | Good | Date: | October 13, 2020 |
| Remarks: |  |  |  |
|  |  |  |  |

SB Street Name: SR 471


NB Street Name: SR 471

# Metric Engineering Inc. <br> 525 Technology Park <br> Suite 153 

Location:
SR-471 @ Webster Elementary
File Name : SR 471 @ Webster Elementary - 8 Hr TMC
Site Code : 00000000
Start Date : 10/13/2020
Page No : 1

Groups Printed- Autos - Trucks

|  | SR-471 <br> Southbound |  |  |  |  | Webster Elementary Entrance Westbound |  |  |  |  | SR-471 <br> Northbound |  |  |  |  | N/A Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Int. Total |
| 07:00 AM | 4 | 30 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 1 | 66 | 7 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 108 |
| 07:15 AM | 25 | 27 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 11 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 119 |
| 07:30 AM | 44 | 39 | 0 | 0 | 83 | 9 | 0 | 1 | 0 | 10 | 0 | 65 | 37 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 195 |
| 07:45 AM | 13 | 34 | 0 | 0 | 47 | 11 | 0 | 1 | 0 | 12 | 0 | 55 | 10 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 124 |
| Total | 86 | 130 | 0 | 0 | 216 | 20 | 0 | 2 | 0 | 22 | 1 | 242 | 65 | 0 | 308 | 0 | 0 | 0 | 0 | 0 | 546 |
| 08:00 AM | 0 | 39 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 4 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 107 |
| 08:15 AM | 0 | 42 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 1 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 92 |
| 08:30 AM | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 1 | 0 | 1 | 0 | 51 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 95 |
| 08:45 AM | 2 | 36 | 0 | 0 | 38 | 0 | 0 | 3 | 0 | 3 | 0 | 44 | 1 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 86 |
| Total | 2 | 160 | 0 | 0 | 162 | 0 | 0 | 4 | 0 | 4 | 0 | 208 | 6 | 0 | 214 | 0 | 0 | 0 | 0 | 0 | 380 |


| 11:00 AM | 1 | 45 | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 103 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11:15 AM | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 1 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 75 |
| 11:30 AM | 1 | 37 | 0 | 0 | 38 | 0 | 0 | 1 | 0 | 1 | 0 | 33 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 72 |
| 11:45 AM | 0 | 52 | 0 | 0 | 52 | 0 | 0 | 3 | 0 | 3 | 0 | 40 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 95 |
| Total | 2 | 169 | 0 | 0 | 171 | 0 | 0 | 4 | 0 | 4 | 0 | 169 | 1 | 0 | 170 | 0 | 0 | 0 | 0 | 0 | 345 |
| 12:00 PM | 0 | 26 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 55 |
| 12:15 PM | 2 | 40 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 76 |
| 12:30 PM | 2 | 42 | 0 | 0 | 44 | 1 | 0 | 0 | 0 | 1 | 0 | 43 | 2 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 90 |
| 12:45 PM | 0 | 54 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 2 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 93 |
| Total | 4 | 162 | 0 | 0 | 166 | 1 | 0 | 0 | 0 | 1 | 0 | 143 | 4 | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 314 |


| $02: 00 ~ P M$ | 5 | 42 | 0 | 0 | 47 | 0 | 0 | 3 | 0 | 3 | 1 | 36 | 4 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 91 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $02: 15 \mathrm{PM}$ | 11 | 60 | 1 | 0 | 72 | 2 | 0 | 3 | 0 | 5 | 0 | 52 | 11 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 140 |
| $02: 30 \mathrm{PM}$ | 14 | 66 | 1 | 0 | 81 | 4 | 0 | 0 | 0 | 4 | 0 | 47 | 7 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 139 |
| $02: 45 \mathrm{PM}$ | 2 | 58 | 0 | 0 | 60 | 5 | 0 | 1 | 0 | 6 | 0 | 48 | 3 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 117 |
| Total | 32 | 226 | 2 | 0 | 260 | 11 | 0 | 7 | 0 | 18 | 1 | 183 | 25 | 0 | 209 | 0 | 0 | 0 | 0 | 0 | 487 |


| 03:00 PM | 1 | 41 | 0 | 0 | 42 | 2 | 0 | 0 | 0 | 2 | 0 | 54 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 98 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 03:15 PM | 0 | 64 | 0 | 0 | 64 | 0 | 0 | 1 | 0 | 1 | 0 | 62 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 127 |
| 03:30 PM | 1 | 54 | 0 | 0 | 55 | 3 | 0 | 1 | 0 | 4 | 0 | 54 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 113 |
| 03:45 PM | 1 | 70 | 0 | 0 | 71 | 1 | 0 | 0 | 0 | 1 | 0 | 49 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 121 |
| Total | 3 | 229 | 0 | 0 | 232 | 6 | 0 | 2 | 0 | 8 | 0 | 219 | 0 | 0 | 219 | 0 | 0 | 0 | 0 | 0 | 459 |


| 04:00 PM | 0 | 78 | 0 | 0 | 78 | 2 | 0 | 0 | 0 | 2 | 0 | 49 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 129 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 04:15 PM | 0 | 62 | 0 | 0 | 62 | 0 | 0 | 2 | 0 | 2 | 0 | 52 | 1 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 117 |
| 04:30 PM | 1 | 57 | 0 | 0 | 58 | 1 | 0 | 2 | 0 | 3 | 0 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 127 |
| 04:45 PM | 1 | 53 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 2 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 111 |
| Total | 2 | 250 | 0 | 0 | 252 | 3 | 0 | 4 | 0 | 7 | 0 | 222 | 3 | 0 | 225 | 0 | 0 | 0 | 0 | 0 | 484 |


| 05:00 PM | 0 | 90 | 0 | 0 | 90 | 0 | 0 | 1 | 0 | 1 | 0 | 58 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 149 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05:15 PM | 0 | 85 | 0 | 0 | 85 | 1 | 0 | 0 | 0 | 1 | 0 | 44 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 130 |
| 05:30 PM | 0 | 66 | 0 | 0 | 66 | 0 | 0 | 2 | 0 | 2 | 0 | 40 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 108 |
| 05:45 PM | 0 | 68 | 0 | 0 | 68 | 0 | 0 | 1 | 0 | 1 | 0 | 40 | 0 | 0 | 40 | 1 | 0 | 0 | 0 | 1 | 110 |
| Total | 0 | 309 | 0 | 0 | 309 | 1 | 0 | 4 | 0 | 5 | 0 | 182 | 0 | 0 | 182 | 1 | 0 | 0 | 0 | 1 | 497 |
| Grand Total | 131 | 1635 | 2 | 0 | 1768 | 42 | 0 | 27 | 0 | 69 | 2 | 1568 | 104 | 0 | 1674 | 1 | 0 | 0 | 0 | 1 | 3512 |
| Apprch \% | 7.4 | 92.5 | 0.1 | 0 |  | 60.9 | 0 | 39.1 | 0 |  | 0.1 | 93.7 | 6.2 | 0 |  | 100 | 0 | 0 | 0 |  |  |
| Total \% | 3.7 | 46.6 | 0.1 | 0 | 50.3 | 1.2 | 0 | 0.8 | 0 | 2 | 0.1 | 44.6 | 3 | 0 | 47.7 | 0 | 0 | 0 | 0 | 0 |  |
| Autos | 129 | 1317 | 2 | 0 | 1448 | 42 | 0 | 23 | 0 | 65 | 2 | 1225 | 102 | 0 | 1329 | 1 | 0 | 0 | 0 | 1 | 2843 |
| \% Autos | 98.5 | 80.6 | 100 | 0 | 81.9 | 100 | 0 | 85.2 | 0 | 94.2 | 100 | 78.1 | 98.1 | 0 | 79.4 | 100 | 0 | 0 | 0 | 100 | 81 |
| Trucks | 2 | 318 | 0 | 0 | 320 | 0 | 0 | 4 | 0 | 4 | 0 | 343 | 2 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 669 |
| \% Trucks | 1.5 | 19.4 | 0 | 0 | 18.1 | 0 | 0 | 14.8 | 0 | 5.8 | 0 | 21.9 | 1.9 | 0 | 20.6 | 0 | 0 | 0 | 0 | 0 | 19 |

# Metric Engineering Inc. <br> 525 Technology Park <br> Suite 153 

Location:
SR-471 @ Webster Elementary
File Name : SR 471 @ Webster Elementary - 8 Hr TMC
Site Code : 00000000
Start Date : 10/13/2020
Page No : 2

|  | SR-471 <br> Southbound |  |  |  |  | Webster Elementary Entrance Westbound |  |  |  |  | SR-471 <br> Northbound |  |  |  |  | N/A <br> Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 07:00 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07:00 AM | 4 | 30 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 1 | 66 | 7 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 108 |
| 07:15 AM | 25 | 27 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 11 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 119 |
| 07:30 AM | 44 | 39 | 0 | 0 | 83 | 9 | 0 | 1 | 0 | 10 | 0 | 65 | 37 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 195 |
| 07:45 AM | 13 | 34 | 0 | 0 | 47 | 11 | 0 | 1 | 0 | 12 | 0 | 55 | 10 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 124 |
| Total Volume | 86 | 130 | 0 | 0 | 216 | 20 | 0 | 2 | 0 | 22 | 1 | 242 | 65 | 0 | 308 | 0 | 0 | 0 | 0 | 0 | 546 |
| \% App. Total | 39.8 | 60.2 | 0 | 0 |  | 90.9 | 0 | 9.1 | 0 |  | 0.3 | 78.6 | 21.1 | 0 |  | 0 | 0 | 0 | 0 |  |  |
| PHF | . 489 | . 833 | . 000 | . 000 | . 651 | . 455 | . 000 | . 500 | . 000 | . 458 | . 250 | . 917 | . 439 | . 000 | . 755 | . 000 | . 000 | . 000 | . 000 | . 000 | . 700 |



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|  | SR-471 <br> Southbound |  |  |  |  | Webster Elementary Entrance Westbound |  |  |  |  | SR-471 <br> Northbound |  |  |  |  | N/A <br> Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 11:00 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11:00 AM | 1 | 45 | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 103 |
| 11:15 AM | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 1 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 75 |
| 11:30 AM | 1 | 37 | 0 | 0 | 38 | 0 | 0 | 1 | 0 | 1 | 0 | 33 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 72 |
| 11:45 AM | 0 | 52 | 0 | 0 | 52 | 0 | 0 | 3 | 0 | 3 | 0 | 40 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 95 |
| Total Volume | 2 | 169 | 0 | 0 | 171 | 0 | 0 | 4 | 0 | 4 | 0 | 169 | 1 | 0 | 170 | 0 | 0 | 0 | 0 | 0 | 345 |
| \% App. Total | 1.2 | 98.8 | 0 | 0 |  | 0 | 0 | 100 | 0 |  | 0 | 99.4 | 0.6 | 0 |  | 0 | 0 | 0 | 0 |  |  |
| PHF | . 500 | . 813 | . 000 | . 000 | . 822 | . 000 | . 000 | . 333 | . 000 | . 333 | . 000 | . 741 | . 250 | . 000 | . 746 | . 000 | . 000 | . 000 | . 000 | . 000 | . 837 |



## Metric Engineering Inc. <br> 525 Technology Park <br> Suite 153

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Page No : 4

|  | SR-471 <br> Southbound |  |  |  |  | Webster Elementary Entrance Westbound |  |  |  |  | SR-471 <br> Northbound |  |  |  |  | N/A Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | u-Turn | App. Total | Int. Total |
| Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 04:30 PM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 04:30 PM | 1 | 57 | 0 | 0 | 58 | 1 | 0 | 2 | 0 | 3 | 0 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 127 |
| 04:45 PM | 1 | 53 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 2 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 111 |
| 05:00 PM | 0 | 90 | 0 | 0 | 90 | 0 | 0 | 1 | 0 | 1 | 0 | 58 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 149 |
| 05:15 PM | 0 | 85 | 0 | 0 | 85 | 1 | 0 | 0 | 0 | 1 | 0 | 44 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 130 |
| Total Volume | 2 | 285 | 0 | 0 | 287 | 2 | 0 | 3 | 0 | 5 | 0 | 223 | 2 | 0 | 225 | 0 | 0 | 0 | 0 | 0 | 517 |
| \% App. Total | 0.7 | 99.3 | 0 | 0 |  | 40 | 0 | 60 | 0 |  | 0 | 99.1 | 0.9 | 0 |  | 0 | 0 | 0 | 0 |  |  |
| PHF | . 500 | . 792 | . 000 | . 000 | . 797 | . 500 | . 000 | . 375 | . 000 | 417 | . 000 | . 845 | . 250 | . 000 | . 852 | . 000 | . 000 | . 000 | . 000 | . 000 | . 867 |



# Metric Engineering Inc. <br> 525 Technology Park <br> Suite 153 

Location:
SR-471 @ Webster Elementary

File Name : SR 471 @ Webster Elementary - 8 Hr TMC
Site Code : 00000000
Start Date : 10/13/2020
Page No : 1

Groups Printed- Trucks

|  | SR-471 <br> Southbound |  |  |  |  | Webster Elementary Entrance Westbound |  |  |  |  | SR-471 <br> Northbound |  |  |  |  | N/A <br> Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | U-Turn | App. Total | Int. Total |
| 07:00 AM | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 18 |
| 07:15 AM | 1 | 8 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 17 |
| 07:30 AM | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 17 |
| 07:45 AM | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 25 |
| Total | 1 | 33 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 1 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 77 |
| 08:00 AM | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 19 |
| 08:15 AM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 13 |
| 08:30 AM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 21 |
| 08:45 AM | 1 | 11 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 1 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 24 |
| Total | 1 | 39 | 0 | 0 | 40 | 0 | 0 | 1 | 0 | 1 | 0 | 36 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 77 |


| $11: 00 \mathrm{AM}$ | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 28 |
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| $11: 15 \mathrm{AM}$ | 0 | 14 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 26 |
| $11: 30 \mathrm{AM}$ | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 21 |
| $11: 45 \mathrm{AM}$ | 0 | 20 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 26 |
| Total | 0 | 56 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 101 |


| 12:00 PM | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12:15 PM | 0 | 17 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 30 |
| 12:30 PM | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 23 |
| 12:45 PM | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 24 |
| Total | 0 | 51 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 95 |


| $02: 00 ~ P M$ | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 2 | 0 | 2 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 23 |
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| $02: 15 \mathrm{PM}$ | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 1 | 0 | 17 | 1 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 29 |
| $02: 30 \mathrm{PM}$ | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 21 |
| $02: 45 \mathrm{PM}$ | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 22 |
| Total | 0 | 42 | 0 | 0 | 42 | 0 | 0 | 3 | 0 | 3 | 0 | 49 | 1 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 95 |


| 03:00 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 21 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 03:15 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 33 |
| 03:30 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 15 |
| 03:45 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 22 |
| Total | 0 | 30 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 91 |


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| 04:00 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 23 |
| $04: 15 \mathrm{PM}$ | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 16 |
| $04: 30 \mathrm{PM}$ | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 23 |
| $04: 45 \mathrm{PM}$ | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 20 |
| Total | 0 | 40 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 82 |


| 05:00 PM | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05:15 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 11 |
| 05:30 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 11 |
| 05:45 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 51 |


| Grand Total | 2 | 318 | 0 | 0 | 320 | 0 | 0 | 4 | 0 | 4 | 0 | 343 | 2 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 669 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Apprch \% | 0.6 | 99.4 | 0 | 0 |  | 0 | 0 | 100 | 0 |  | 0 | 99.4 | 0.6 | 0 |  | 0 | 0 | 0 | 0 |  |  |
| Total \% | 0.3 | 47.5 | 0 | 0 | 47.8 | 0 | 0 | 0.6 | 0 | 0.6 | 0 | 51.3 | 0.3 | 0 | 51.6 | 0 | 0 | 0 | 0 | 0 |  |



Appendix B-3: Webster Elementary School
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## Traffic Impact Analysis - REVISED

 RV ParkWebster, Florida


##  <br> GROUP, LLC

## Executive Summary

## Project Description

The Webster RV Park is a proposed development in Webster, Florida. The proposed development will consist of 547 RV lots. The site is on the north side of CR 478, immediately east of Webster Apartments. Access to the site is proposed via a full-access driveway to CR 478.

Sumter County requires a Major Land Development Traffic Assessment (LDTA) for developments generating 1,000 daily trips or more. A methodology statement was reviewed by County staff prior to analysis.

This REVISED TIA incorporates a change in the proposed number of lots, includes a site plan, and addresses other comments provided by Sumter County during review.

## Trip Generation

The proposed new development is expected to generate 2,735 daily trips, with 44 new entering trips and 98 new exiting trips in the AM peak hour, and 156 new entering and 96 new exiting trips in the PM peak hour.

## Traffic Impacts

## Roadway Segments

Analysis of future conditions shows that the segment of $S R 471$ in Webster between its south intersection with CR 478 and its north intersection of CR 478 is expected to operate at LOS D, which is below its adopted LOS standard of C. All other roadway segments are projected to operate within their adopted capacity.

Intersection Capacity

Analysis of SR 471 \& CR 478 shows that the intersection is projected to continue to operate acceptably under Full Build 2026 conditions.

The intersection of CR 478 \& Project Access is also projected to function acceptably.

## Turn Lanes/Intersection Sight Distance

A site visit confirmed that there are no obstructions to intersection sight distance. Due to low volumes on CR 478, it is not recommended to construct turn lanes at the driveway. However, Sumter County requires an eastbound left-turn lane at the project access.

##  <br> GROUP, LLC

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##  <br> GROUP, LLC

## I. Introduction

An RV Park is proposed to be developed on a parcel in Webster. The site is located on north side of CR 478, immediately east of Webster Apartments.

The development is proposed to consist of 547 RV lots. Access to the property will be via a full access driveway to CR 478.

Sumter County requires a Major Land Development Traffic Assessment (LDTA) for developments generating 1,000 daily trips or more. A methodology statement was reviewed by County staff prior to analysis.

This REVISED TIA incorporates a change in the proposed number of lots, includes a site plan, and addresses other comments provided by Sumter County during review.

The study area included the following intersections:

- CR 478 \& Project Access
- $\quad$ SR 471 \& CR 478

The study area included the following roadway segments:

- CR 478 - between US 301 and CR 48
- SR 471 - between US 301 and CR 478
- US 301 - between CR 656 and CR 478
- CR 673 - between CR 674 and US 301
- CR 469 - between CR 48 and CR 478

The study analyzed the following scenarios:

- Full Build 2026 Conditions

The AM peak hour and PM peak hour were analyzed.
Figure 1 A shows the project vicinity map. Figure 1 B shows the site plan.


Appendix B-3: Webster RV Park TIA
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##  <br> GROUP, LLC

## II. Existing Conditions

## A. EXISTING ROADWAY CONDITIONS

CR 478 is a two-lane undivided roadway with a functional classification of rural Minor Collector and a posted speed limit of 35 mph in the Town of Webster and 45 mph at the project location. It has an AADT of 1,596 vehicles per day.

## B. EXISTING INTERSECTION GEOMETRY

SR 471 (Market Boulevard) \& CR 478 (SE 1st Avenue) is a stop-controlled T-intersection. The westbound and northbound approaches consist of a single lane. The southbound approach has a left-turn lane.

The project access will be located east of the driveway to Webster Apartments.

## C. TRAFFIC VOLUMES

AM and PM peak hour and daily volumes for CR 478 were retrieved from the 2018 Sumter County Traffic County Program Report. Turning movement counts were performed at the intersection of SR 471 \& CR 478 on December 4-5, 2018.

FDOT produces Peak Season Correction Factors (PSCF) to account for seasonal variations in traffic volumes. The PSCF for the week of December 3rd in Sumter County is 0.99 . Sumter County does not allow for PSCF below 1.0 for design volumes, so existing traffic counts were not modified for this analysis.

Figure 2 shows existing traffic volumes. These volumes can be found in the Appendix.


Appendix B-3: Webster RV Park TIA
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##  <br> GROUP, LLC

## III. Methodology

## A. BASE ASSUMPTIONS

Intersection capacity analysis was conducted using Synchro v10.0. Trip generation was calculated using the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Right-turn and left-turn lanes were examined using the National Cooperative Highway Research Program (NCHRP) Report No. 279 Intersection Channelization Design Guide.

## B. BACKGROUND GROWTH

Calculations show that the background growth on CR 478 is $-0.79 \%$ per year. These calculations can be found in the Appendix.

Sumter County has directed this analysis to use 1\% per year to estimate background growth for Full Build 2026 conditions.

## C. TRIP GENERATION

The development is proposed to consist of 547 RV lots.
The ITE Trip Generation Manual, 10th Edition was used to estimate the projected trips by this development.

Table 3.1 contains the summary of the land uses and sizes used for trip generation estimates.

| Average Weekday Driveway Volumes |  |  |  |  | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | ITE Code |  | Size | Daily <br> Trips | Enter | Exit | Enter | Exit |
| Mobile Home Park | 240 | 547 | Dwelling Units | 2735 | 44 | 98 | 156 | 96 |

## D. TRIP DISTRIBUTION

Trips for this proposed development were assigned to the surrounding roadway network based on Florida Standard Urban Transportation Model Structure (FSUTMS) using Central Florida Regional Planning Model (CFRPM) version 6. The proposed trip distribution for this project can be found in Figure 3.

Projected site trips are shown in Figure 4 and Full Build 2026 volumes are shown in Figure 5.

## E. STUDY AREA

The traffic impact analysis study area was based on the Sumter County Guidelines. Intersection analysis is required for major intersections within 1,000 feet of the project access. This analysis also includes the intersection of SR $471 \&$ CR 478 as requested by FDOT.

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Impacted roadways include roadways on which project traffic is greater than $3 \%$ of the generalized peak hour two-way maximum service volume or more than 70 peak hour two-way trips. Maximum service volumes are provided by the Lake Sumter MPO

Table 3.2 shows a summary of the study area calculations based on County criteria.

| Table 3.2 - Study Area of Significant Impact |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Roadway | From | To | Lanes | Two-Way <br> Peak Hour <br> Service <br> Volume <br> Max | Trip Dist Percent | PM <br> TwoWay Peak Hour Trips | $\begin{gathered} \text { Project \% } \\ \text { of } \\ \text { Capacity } \end{gathered}$ | Significant impact |
| US 301 | CR 470 (N) | SR 471 | 2 | 1340 | 11\% | 28 | 2.05\% | no |
| SR 471 | US 301 | CR 476 | 2 | 860 | 11\% | 28 | 3.20\% | YES |
|  | CR 476 | CR 48 | 2 | 860 | 15\% | 38 | 4.36\% | YES |
|  | CR 48 | CR 722 | 2 | 860 | 20\% | 50 | 5.81\% | YES |
|  | CR 722 | CR 478/NE <br> 4th Ave | 2 | 860 | 34\% | 85 | 9.88\% | YES |
|  | CR 478/NE 4th Ave | $\begin{array}{\|l} \hline \text { CR 478/SE } \\ \text { 1st Ave } \\ \hline \end{array}$ | 2 | 860 | 59\% | 148 | 17.15\% | YES |
|  | CR 478/SE 1st Ave | CR 478A | 2 | 860 | 5\% | 13 | 1.45\% | no |
| CR 48 | CR 747 | SR 471 | 2 | 1206 | 9\% | 23 | 1.87\% | no |
|  | SR 471 | CR 567 | 2 | 1206 | 0\% | 0 | 0.00\% | no |
| CR 478 | US 301 | CR 747 | 2 | 1350 | 19\% | 48 | 3.52\% | YES |
|  | CR 747 | SR 471 | 2 | 1350 | 19\% | 48 | 3.52\% | YES |
|  | SR 471 | access | 2 | 1350 | 71\% | 178 | 13.15\% | YES |
|  | access | CR 707 | 2 | 1350 | 29\% | 73 | 5.37\% | YES |
|  | CR 707 | CR 48 | 2 | 1350 | 20\% | 50 | 3.70\% | YES |
| US 301 | CR 656 | CR 478 | 2 | 1340 | 18\% | 45 | 3.36\% | YES |
|  | Hernando County | CR 656 | 2 | 1340 | 0\% | 0 | 0.00\% | no |
| CR 673 | CR 674 | US 301 | 2 | 1206 | 17\% | 43 | 3.52\% | YES |
| CR 469 | CR 48 | CR 478 | 2 | 1332 | 18\% | 45 | 3.38\% | YES |
|  | CR 728 | SR 50 | 2 | 1332 | 3\% | 8 | 0.56\% | no |
| CR 48 | CR 469 | CR 469 | 2 | 1584 | 15\% | 38 | 2.37\% | no |




Appendix B-3: Webster RV Park TIA
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Appendix B-3: Webster RV Park TIA
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## 

## IV. Capacity Analysis

## A. ROADWAY SEGMENT ANALYSIS

The most recent records for the roadway segments in the study area were retrieved from the 2018 Sumter County Annual Traffic Counts or the Lake-Sumter MPO TMS Segment Report. Adopted Levels of Service (LOS) for the roadway segments have been determined by the MPO.

Table 4.1 summarizes the existing peak hour volumes on the study area roadway segments and estimated development peak hour trips.

| Table 4.1 - Roadway Segment Analysis - PM Peak Hour Two-way |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Roadway | From | To | Lanes |  | Existing Volumes | LOS | Develop Pk Hr Volumes | 2026 Full <br> Build Pk <br> Hr Vol | LOS | Avail Cap |
| SR 471 | US 301 | CR 476 | 2 | 860 | 366 | C | 28 | 394 | C | yes |
|  | CR 476 | CR 48 | 2 | 860 | 297 | C | 38 | 335 | C | yes |
|  | CR 48 | CR 722 | 2 | 860 | 359 | C | 50 | 409 | C | yes |
|  | CR 722 | CR 478/ <br> NE 4th Ave | 2 | 860 | 634 | C | 85 | 719 | C | yes |
|  | CR 478/ <br> NE 4th Ave | CR 478/ SE 1st Ave | 2 | 860 | 752 | C | 148 | 900 | D | NO |
| CR 478 | US 301 | CR 747 | 2 | 1350 | 209 | C | 48 | 257 | C | yes |
|  | CR 747 | SR 471 | 2 | 1350 | 151 | C | 48 | 199 | C | yes |
|  | SR 471 | access | 2 | 1350 | 141 | C | 178 | 319 | C | yes |
|  | access | CR 707 | 2 | 1350 | 141 | C | 73 | 214 | C | yes |
|  | CR 707 | CR 48 | 2 | 1350 | 101 | C | 50 | 151 | C | yes |
| US 301 | CR 656 | CR 478 | 2 | 1340 | 354 | C | 45 | 399 | C | yes |
| CR 673 | CR 674 | US 301 | 2 | 1206 | 147 | C | 43 | 190 | C | yes |
| CR 469 | CR 48 | CR 478 | 2 | 1332 | 227 | C | 45 | 272 | C | yes |

Analysis shows that all segments in the study area meet transportation concurrency standards except the section of SR 471 in the Town of Webster. That section of roadway will function at LOS D.

## 

## B. INTERSECTION CAPACITY ANALYSIS

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" (LOS) to measure how traffic operates in intersections. There are currently six levels of service ranging from A to F. Level of Service "A" represents the best conditions and Level of Service "F" represents the worst. Synchro software was used to determine the level of service for intersections in the study area. All worksheet reports from the analyses can be found in the Appendix.

Table 4.2 shows the control delay per vehicle associated with LOS A through $F$ for signalized and unsignalized intersections.

| Table 4.2 - Highway Capacity Manual Levels of Service and Control Delay |  |  |  |
| :---: | :---: | :---: | :---: |
| Signalized Intersection |  | Unsignalized Intersection |  |



SR 471 \& CR 478 - looking north

## 

## SR 471 (Market Boulevard) \& CR 468 (SE 1st Avenue)

SR 471 (Market Boulevard) \& CR 478 (SE 1st Avenue) is a stop-controlled T-intersection. The westbound and northbound approaches consist of a single lane. The southbound approach has a left-turn lane.

Table 4.3 shows the current LOS, control delay, and 95th percentile queue length for existing conditions.

| Intersection | Approach | Movement | AM |  |  | PM |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOS | Delay | Queue | LOS | Delay | Queue |
| SR 471 \& CR 478 | WB | LT | B | 12.0 | 10' | B | 12.7 | 13' |
|  |  | RT |  |  |  |  |  |  |
|  | NB | TH | Free |  |  |  |  |  |
|  |  | RT |  |  |  |  |  |  |  |  |  |  |  |
|  | SB | LT | A | 8.2 | - | A | 7.9 | - |
|  |  | TH | Free |  |  |  |  |  |

Table 4.4 shows the expected LOS, control delay, and 95 th percentile queue length for Full Build 2026 conditions.

| Intersection | Approach | Movement | AM |  |  | PM |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOS | Delay | Queue | LOS | Delay | Queue |
| SR 471 \& CR 478 | WB | LT | B | 12.8 | 23' | B | 14.7 | 28' |
|  |  | RT |  |  |  |  |  |  |
|  | NB | TH | Free |  |  |  |  |  |
|  |  | RT |  |  |  |  |  |  |  |  |  |  |  |
|  | SB | LT | A | 8.3 | - | A | 8.2 | 10' |
|  |  | TH | Free |  |  |  |  |  |

Analysis shows that the intersection is expected to continue to operate acceptably under Full Build 2020 conditions.

## 

## CR 468 \& Project Access

The project access will be located east of the Webster Apartments driveway.
Table 4.5 shows the expected LOS, control delay, and 95th percentile queue length for Full Build 2026 conditions.

| Intersection | Approach | Movement | AM |  |  | PM |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOS | Delay | Queue | LOS | Delay | Queue |
| CR 478 \& Project Access | EB | LT | Free |  |  |  |  |  |
|  |  | TH |  |  |  |  |  |  |
|  | WB | TH | Free |  |  |  |  |  |
|  |  | RT |  |  |  |  |  |  |
|  | SB | LT | A | 9.6 | 10' | B | 10.2 | 10' |
|  |  | RT |  |  |  |  |  |  |

## V. Turn Lanes and Sight Distance

## A. RIGHT-TURN LANES

The National Cooperative Highway Research Program (NCHRP) Report 279 Intersection Channelization Design Guide was used to determine right-turn lane and left-turn lane warrants for this study.

For public officials that do not have formal thresholds for determining when new access requires turn lane treatments, the NCHRP Report 279 is a very useful tool in assisting the impacts from development. Specifically, this report allows the traffic engineering professional to input roadway type, posted speed, advancing volume (and opposing volume for left-turns), and number of turning vehicles. The result is a plot on a graph defined by the above inputs as either recommending turn lanes or not.

Based on Full Build 2026 volumes, no turn lanes from CR 478 are required for the project driveway. These calculations can be found in the Appendix.

## B. LEFT-TURN LANES

Based on Full Build 2026 volumes, the projected number of left-turning vehicles falls below the threshold for a turn lane based on advancing and opposing volumes and vehicle speed. See graph below and the calculations can be found in the Appendix.


Based on the above graph and due to the low volumes on CR 478, it is not recommended to construct a left-turn lane on CR 478. However, during review, Sumter County provided comments that an eastbound left-turn lane is required for the project access.

##  <br> GROUP, LLC

## C. INTERSECTION SIGHT DISTANCE

An ISD analysis shows that the intersection of CR 478 and the project access will not have sight distance concerns as proposed. CR 478 has a posted speed limit of 45 mph , which requires an ISD of 500 feet. There are no sight distance obstructions that obscure the view of driveway vehicles.


CR 478 \& Project Access - looking west

##  <br> GROUP, LLC

## VI. Summary and Conclusion

This study serves as an analysis of the traffic impacts from the proposed Webster RV Park development.

This analysis was necessary due to Sumter County guidelines that require a Major Land Development Traffic Assessment (LDTA) for developments generating 1,000 daily trips or more. A methodology statement was reviewed by County staff prior to analysis.

The proposed new development is expected to generate 44 new entering trips and 98 new exiting trips in the AM peak hour, and 156 new entering and 96 new exiting trips in the PM peak hour.

Analysis of future conditions shows that the segment of SR 471 in Webster between its south intersection with CR 478 and its north intersection of CR 478 is expected to operate at LOS D, which is below its adopted LOS standard of C. All other roadway segments are projected to operate within their adopted capacity.

Analysis of SR $471 \& C R 478$ shows that the intersection is projected to continue to operate acceptably under Full Build 2026 conditions.

The intersection of CR 478 \& Project Access is also projected to function acceptably.
During review, Sumter County provided comments that an eastbound left-turn lane is required at the project access.

APPENDIX C: DATA COLLECTION





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Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data


Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data


Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data
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Appendix C-1: FDOT Right-of-Way Data


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Appendix C-1: FDOT Right-of-Way Data
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FORM ：70－02 STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY PARCEL REGISTER

（1）SWD．QCD，Lease，Mtg．，Etc．
（2）P（Purchase），O．T．（Order of Taking），S（Stipulation），
D．（Donstion），F．J．（Final Judgment）
 $109-151$

| Dot No． |  | DOCUMENT <br> （1） | EXECUTED <br> \＆RET＇D | RECORDED |  | METHOD <br> （2） | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Book | Page |  |  |
| 1 | Bd．County Comm． | Contract | 8－18－52 |  |  |  |  |
| 1 | Sumter County | Resolution | $8-1-52$ |  |  |  |  |
| 2 | F．R．Akins \＆wife | Deed | 2－2－53 | 137 | 394 |  |  |
| 3 | Hairman Farmex | Deed | 10－2，－52 | 136 | 364 |  |  |
| 4 | C．C．Gideons \＆Wif | －Deed | 20－17－52 | 136 | 366 |  |  |
| 5 | Marion G．Dentom，el | － 11 Deed | 10－21－52 | 136 | 368 |  |  |
| 6 | Bertie Johnson \＆Husb | bb．Deed | 10－21－52 | 136 | 370 |  |  |
| 7 | W．T．Howeli \＆Wife | Deed | 10－21－52 | 136 | 372 |  |  |
| 8 | A．K．Shanks \＆Wife | Deed | 10－17－52 | 136 | 384 |  |  |
| 9 | John H．Salley \＆Wif | Ee Deed | $10-21-52$ | 1.36 | 374 |  |  |
| 10 | Amos R．Pruett \＆Wi | e Deed | 10－17－52 | 136 | 376 |  |  |
| 11 | John W．BArber \＆Wi＝ | Ee Deed | 10－17－52 | 136 | 378 |  |  |
| 12 | Mike Smith | Deed | 10－17－52 | 136 | 383 |  |  |
| 19 | Florida BAnk，Bushne | 1 Mortgage | 10－20－52 | 18 | 143 |  |  |
| 14 | no instrument in fi | e Deed | Eリオ141 7 | 30－5 |  |  | QT扛 $41 \quad 4-23-54$ |
| 15 | John Whitney | Deed | 10－18－52 | 136 | 382 |  | 20－41－4．323－54 |
| 16 | John Hayes | Deed | 10－19－54 | 140 | 259 |  |  |
| 17 | Mrs．Jennie Beville | \＆Hus．Dee | 10－17－52 | 136 | 396 |  |  |
| 18 | W．J．Barfield $\xi$ Wif | E Deed | 10－25－52 | 336 | 388 |  |  |
| 19 | C．E．Tompkins \＆Wi | Fe Deed | 10－17－52 | 136 | 390 |  |  |
|  | Mrs．H．C．Parish | Deed | 10－17－52 | 136 | 392 |  |  |
| 21 | Mrs．Vista Joiner | Deed | 10－21－52 | 136 | 394 |  |  |
| 22 | J．F．Hayes，et al | Deed | 7－9－53 | 138 | 586 |  |  |
| 23 | C．C．Gideons \＆Wif | Deed | 10－17－52 | 136 | 396 |  |  |
| 24 | Roy Caruthers \＆Wifl | Deed | 10－21－52 | 136 | 398 |  |  |
| 25 | Edward L．Franklin | Wife Deed | 10－17－52 | 136 | 400 |  |  |
| 20 | G． C ．Hayes | Deed | 10－17－52 | 1.36 | 402 |  |  |
| 27 | Norman B ．Wheeler \＆ | Wife Deed | 10－17－52 | $1-36$ | 404 |  |  |
| 28 | Ist Fed．S\＆L Assn． 1 | Lake Co．Mtg | －10－23－52 | 18 | 144 |  |  |
| 29 | Orr M．Wheeler | Deed | 10－17－52 | 136 | 406 |  |  |
| 30 | Horace Hewitt \＆Wiff | Deed | 10－21－52 | 136 | 414 |  |  |
| 31 | Horace Hewitt \＆Wif | Deed | 10－21－52 | 136 | 416 |  |  |
| 32 | D．D．Stephens \＆Wif | e Deed | 10－21－52 | 136 | 418 |  |  |
| 33 | L．L．Gidaens．et a | Deed | 10－17－52 | 136 | 420 |  |  |
| 34 | C．L．Clemons \＆Wif | Deed | 10－20－52 | 136 | 422 |  |  |
|  | Date Prepared＿＿＿＿＿ | roral |  |  |  | － | （1）SWD．QCD，Lease，Mig．，Etc． <br> （2）P（Purchase），O．T．（Order of Taking），S（Stipulation）， <br> D．（Doustion），F．J．（Final Judgment） |

Job Description
FORM
$8-73$
Section No. $\frac{1803}{471} \quad$ Job $\quad 109(151)$
Road No. $\frac{47}{S u m t e x}$
County

## DOT No.

 6

FOR1M 170-02
5-73
FORM 170.02 STAFE OFFLLORIDA DEPARTMENT OF FRANSPORTATION
RIGHT OF WAY PARCEL REGISTER

| METHOD (2) | REMARKS |
| :---: | :---: |
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|  | drainage part reconveyed |
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|  | drasnage paxt reconveyed |
|  | drainage part reconveyed |
| OT\#141 |  |
| - $\quad 1.1$ | 4-23-54 reconveyed 4-1-64 |
|  | drainage part reconveyed |
|  | drainage part reconveyed |
| OT\# 1.41 | 4-23-54 reconveved 4-1-64 |
|  | drainage part reconveyed |
|  | drainage part reconveyed |
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|  | not needed |
|  | Paxt reconveyed |
|  | drainage part reconveyed |
|  | advance funds |
|  | improve crossing |
|  |  |
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|  |  |
|  |  |
|  |  |
| , | (1) SWD. QCD, Lease, Mtg, Etc. <br> (2) P(Purchase), O.T. (Order of Taking), S (Stipulation), <br> D. (Donation), F.I. (Final Judgment) | D. (Donation), F.I. (Final Judgment)



Appendix C-1: FDOT Right-of-Way Data
Page 25 of 26


| No. | HSMV No. | Location | Date | Day of Week | Time | Type | \# of Fatalities | \# of Injuries | Severity | Lighting | Wet/Dry | Alcohol/Drugs | Distracted Driving |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 86543266 | SR-471 200' South from CR-478 (NW 4TH AVE) | 9/1/2016 | Thursday | 16:35 | Rear End | 0 | 0 | PDO | Daylight | Wet | No | No |
| 2 | 86799566 | SR-471 100' South from C-478A | 2/6/2017 | Monday | 14:37 | Other | 0 | 0 | PDO | Daylight | Dry | No | No |
| 3 | 86799937 | SR-471 500' South from CR-724 | 4/6/2017 | Thursday | 10:11 | Off Road | 0 | 0 | PDO | Daylight | Dry | No | No |
| 4 | 85487336 | SR-471 at SE 1ST AVE | 4/27/2017 | Thursday | 23:00 | Right Angle | 0 | 1 | Injury | Dark - Lighted | Dry | No | No |
| 5 | 87349076 | SR-471 10' South from CR-478 (NW 4TH AVE) | 8/1/2017 | Tuesday | 12:22 | Off Road | 0 | 1 | Injury | Daylight | Dry | No | No |
| 6 | 86331832 | CR-478 (NW 4TH AVE) 500 ' East from SR-471 | 9/11/2017 | Monday | 20:30 | Off Road | 0 | 0 | PDO | Dark - Not Lighted | Wet | No | No |
| 7 | 86799515 | SR-471 50' South from E CENTRAL AVE | 12/16/2017 | Saturday | 10:50 | Rear End | 0 | 0 | PDO | Daylight | Dry | Yes | Yes |
| 8 | 87690845 | SR-471 50' South from W CENTRAL AVE | 2/3/2018 | Saturday | 12:32 | Left Leaving | 0 | 0 | PDO | Daylight | Dry | No | No |
| 9 | 87690927 | SE 1ST AVE at SR-471 | 2/16/2018 | Friday | 12:45 | Off Road | 0 | 0 | PDO | Daylight | Dry | No | No |
| 10 | 87691256 | SR-471 120' South from CR-478 (NW 4TH AVE) | 4/9/2018 | Monday | 07:35 | Rear End | 0 | 0 | PDO | Dawn | Dry | No | Yes |
| 11 | 84811977 | CR-730 50' West from SR-471 | 5/28/2018 | Monday | 08:06 | Off Road | 0 | 0 | PDO | Daylight | Dry | No | Yes |
| 12 | 86799293 | SR-471 50' South from NW 10TH AVE | 5/28/2018 | Monday | 09:13 | Rear End | 0 | 0 | PDO | Daylight | Dry | No | No |
| 13 | 87964359 | SR-471 10' West from | 8/16/2018 | Thursday | 14:43 | Pedestrian | 0 | 1 | Injury | Daylight | Dry | No | No |
| 14 | 87964580 | SR-471 at NW 10TH AVE | 10/31/2018 | Wednesday | 14:41 | Other | 0 | 1 | Injury | Daylight | Dry | No | No |
| 15 | 87964746 | SR-471 25' North from CR-478 (SE 1ST AVE) | 11/2/2018 | Friday | 19:05 | Left Entering | 0 | 0 | PDO | Dark - Lighted | Wet | No | No |
| 16 | 88930235 | SR-471 0' West from E CENTRAL AVE | 12/14/2018 | Friday | 15:19 | Rear End | 0 | 0 | PDO | Daylight | Wet | No | Yes |
| 17 | 88930271 | SR-471 at CR-478 (NW 4TH AVE) | 12/31/2018 | Monday | 13:12 | Right Angle | 0 | 2 | Injury | Daylight | Dry | No | No |
| 18 | 88930378 | SR-471 100' North from NW 6TH AVE | 1/14/2019 | Monday | 12:59 | Rear End | 0 | 1 | Injury | Daylight | Dry | No | Yes |
| 19 | 88930489 | SR-471 at | 2/2/2019 | Saturday | 22:40 | Off Road | 0 | 0 | PDO | Dark - Lighted | Wet | Yes | No |
| 20 | 88930844 | W CENTRAL AVE at SR-471 | 3/28/2019 | Thursday | 07:06 | Left Rear | 0 | 0 | PDO | Dusk | Dry | No | No |
| 21 | 84884483 | SR-471 at TO WEBSTER ELEM SCHOOL | 4/16/2019 | Tuesday | 06:48 | Left Rear | 0 | 0 | PDO | Dawn | Dry | No | No |
| 22 | 88931625 | SR-471 at CR-478 (NW 4TH AVE) | 9/12/2019 | Thursday | 07:00 | Off Road | 0 | 0 | PDO | Daylight | Dry | No | No |
| 23 | 88144231 | SR-471 at W CENTRAL AVE | 12/4/2019 | Wednesday | 17:55 | Pedestrian | 1 | 0 | PDO | Dark - Not Lighted | Dry | No | No |
| 24 | 84810800 | SR-471 at NE 1ST AVE | 12/6/2019 | Friday | 10:30 | Right Angle | 0 | 0 | PDO | Daylight | Dry | No | Yes |
| 25 | 88930416 | SR-471 200' East from | 2/17/2020 | Monday | 11:13 | Same Direction Sideswipe | 0 | 0 | PDO | Daylight | Dry | No | No |
| 26 | 89811585 | SR-471 at CENTRAL AVE | 3/9/2020 | Monday | 09:12 | Right Angle | 0 | 0 | PDO | Daylight | Dry | No | No |
| 27 | 89812335 | SR-471 at CR-478 (NW 4TH AVE) | 5/17/2020 | Sunday | 09:02 | Right Angle | 0 | 0 | PDO | Daylight | Dry | No | No |
| 28 | 89812508 | SR-471 1320' South from | 7/1/2020 | Wednesday | 11:11 | Off Road | 0 | 0 | PDO | Daylight | Dry | No | No |
| 29 | 88931451 | SE 3RD AVE 50' North from SR-471 | 7/23/2020 | Thursday | 16:20 | Rear End | 0 | 0 | PDO | Daylight | Wet | No | No |
| 30 | 88310392 | SR-471 at CR-478 (NW 4TH AVE) | 8/8/2020 | Saturday | 00:00 | Left Entering | 0 | 0 | PDO | Dark - Not Lighted | Dry | No | Yes |
| 31 | 89812834 | SR-471 at W CENTRAL AVE | 9/5/2020 | Saturday | 11:45 | Left Entering | 0 | 2 | Injury | Daylight | Dry | No | No |
| 32 | 88930879 | SR-471 at NW 6TH AVE | 11/6/2020 | Friday | 15:21 | Rear End | 0 | 0 | PDO | Daylight | Dry | No | No |
| 33 | 88402540 | SR-471 50' East from CR-478 (NW 4TH AVE) | 11/13/2020 | Friday | 00:04 | Off Road | 0 | 1 | Injury | Dark - Not Lighted | Dry | No | No |
| 34 | 89813245 | SR-471 10' South from NE 2ND AVE | 11/15/2020 | Sunday | 06:00 | Rear End | 0 | 0 | PDO | Dawn | Dry | No | No |
| 35 | 89813249 | SR-471 at NW 4TH | 11/23/2020 | Monday | 11:00 | Head On | 0 | 2 | Injury | Daylight | Dry | No | Yes |
| 36 | 88448984 | CR-478A 16' West from COUNTY ROAD 471 | 3/23/2021 | Tuesday | 18:53 | Rear End | 0 | 2 | Injury | Daylight | Dry | Yes | No |
| 37 | 24456048 | SR-471 494' South from NW 4TH AVE. | 5/10/2021 | Monday | 12:55 | Left Entering | 0 | 0 | PDO | Daylight | Dry | No | No |
| 38 | 24456406 | SR-471 4' North from NW 6TH AVE | 7/5/2021 | Monday | 11:10 | Rear End | 0 | 0 | PDO | Daylight | Dry | No | No |
| 39 | 24456315 | NW 10TH AVE at SR-471 | 715/2021 | Monday | 13:00 | Rear End | 0 | 0 | PDO | Daylight | Dry | No | No |
| 40 | 24456683 | SR-471 at C 478 | 8/12/2021 | Thursday | 15:30 | Right Angle | 0 | 0 | PDO | Daylight | Dry | No | No |
| 41 | 24457222 | CR-478 at SR 471 | 11/4/2021 | Thursday | 15:55 | Pedestrian | 0 | 0 | PDO | Daylight | Dry | No | No |
| 42 | 24456589 | SR-471 at SE 1ST AVE | 12/11/2021 | Saturday | 21:21 | Bicycle | 0 | 1 | Injury | Dark - Lighted | Dry | No | No |

Prepared by NDS/ATD
Prepared by National Data \& Surveying Services

## VOLUME

SR 471 S/O NW 6th Ave

Day: Monday
Date: 10/25/2021

City: Webster
Project \#: FL21_130241_001





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[^0]Day：Monday
Date： $10 / 25 / 2021$
outh Bound


Appendix C－3：Traffic Data
Page 3 of 41
Day: Monday
Date: 10/25/2021
City: Webster
Project \#: FL21_130241_001n


[^1]SR 471 S/O NW 6th Ave
Proj


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City: Webster
Project \#: FL21_130241_001n
Day: Monday
SR 471 S/O NW 6th Ave
Project \#: FL21_130241_001s



[^2]City: Webster
Date: 10/25/2021


| Totals |
| ---: |
| $\%$ of Totals |

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Appendix C-3: Traffic Data
Page 5 of 41

City：Webster

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Direction


[^3]SR 471 S/O NW 6th Ave
Day: Tuesday
Date: 10/26/2021
Project \#: FL21_130241_001s



Appendix C-3: Traffic Data
Page 9 of 41
Day: Tuesday
Date: 10/26/2021



[^4]Project \#: FL21_130241_001
SR 471 S/O NW 6th Ave

City: Webster |  |
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Appendix C-3: Traffic Data

Prepared by NDS/ATD
Prepared by National Data \& Surveying Services

## VOLUME

SR 471 N/O Central Ave

Day: Monday
Date: 10/25/2021

City: Webster
Project \#: FL21_130241_002


Day: Monday
Date: $10 / 25 / 2021$
orth Bound
Time 0:00 AM $00: 00$
01:00
02:00
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05:00
06:00


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Day: Monday
Date: 10/25/2021
Project \#: FL21_130241_002n



[^6]Day: Monday
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[^7]Appendix C-3: Traffic Data

Prepared by NDS/ATD
Prepared by National Data \& Surveying Services

## VOLUME

SR 471 N/O Central Ave

Day: Tuesday
Date: 10/26/2021

City: Webster
Project \#: FL21_130241_002




Direction

| North Bound |
| ---: |
| South Bound |




[^8]South Bound
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01:00
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Appendix C-3: Traffic Data
Day: Tuesday
Date: 10/26/2021
Project \#: FL21_130241_002n



[^9]CLASSIFICATION
SR 471 N/O Central Ave
SR 471 N/O Central Ave

[^10]SR 471 N/O Central Ave
Day: Tuesday
Date: 10/26/2021
Project \#: FL21_130241_002s
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Prepared by National Data \& Surveying Services

## VOLUME

SR 471 Bet. SE 1st Ave \& C478A

Day: Monday
Date: 10/25/2021

City: Webster
Project \#: FL21_130241_003


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Direction
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SR 471 Bet. SE 1st Ave \& C478A



[^11]Day: Monday
CLASSIFICATION
SR 471 Bet. SE 1st Ave \& C478A
City: Webster
Project \#: FL21_130241_003n



[^12]Prepared by National Data \& Surveying Services
Proje
Day: Monday
City: Webster
Project \#: FL21_130241_003s
 \# 11


[^13]Prepared by National Data \& Surveying Services

## VOLUME

SR 471 Bet. SE 1st Ave \& C478A

Day: Tuesday
Date: 10/26/2021

City: Webster
Project \#: FL21_130241_003



[^14]SR 471 Bet. SE 1st Ave \& C478A


Day: Tuesday SR 471 Bet. SE 1st Ave \& C478A
City: Webster
Project \#: FL21_130241_003n


| AM Volumes | 18 | 665 | 442 | 35 | 69 | 36 | 2 | 30 | 216 | 13 | 2 | 5 | 0 | 1533 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% AM | 1\% | 20\% | 13\% | 1\% | 2\% | 1\% | 0\% | 1\% | 6\% | 0\% | 0\% | 0\% |  | 46\% |
| AM Peak Hour | 08:00 | 07:00 | 08:00 | 06:00 | 11:00 | 10:00 | 07:00 | 09:00 | 10:00 | 06:00 |  | 09:00 |  | 08:00 |
| Volume | 6 | 117 | 78 | 7 | 15 | 9 | 1 | 7 | 44 | 4 | 1 | 2 |  | 232 |
| PM Volumes | 31 | 839 | 471 | 24 | 104 | 31 | 1 | 27 | 259 | 6 | 2 | 3 | 0 | 1798 |
| \% PM | 1\% | 25\% | 14\% | 1\% | 3\% | 1\% | 0\% | 1\% | 8\% | 0\% | 0\% | 0\% |  | 54\% |
| PM Peak Hour | 12:00 | 16:00 | 17:00 | 15:00 | 14:00 | 12:00 | 16:00 | 14:00 | 13:00 | 12:00 | 14:00 | 12:00 |  | 16:00 |
| Volume | 6 | 120 | 66 | 5 | 17 | 7 | 1 | 5 | 40 | 2 | 1 | 1 |  | 248 |
| Directional Peak Periods All Classes |  |  | AM 7-9 |  |  | NOON 12-2 |  |  | PM 4-6 |  |  | Off Peak Volumes |  |  |
|  |  |  | Volume $457$ |  | $\%$ | Volume |  | $\begin{gathered} \% \\ \text { 12\% } \end{gathered}$ | Volume $466$ |  | $\begin{gathered} \% \\ 14 \% \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Volume } \\ & 2007 \end{aligned}$ | $\longleftrightarrow$ | $\begin{gathered} \% \\ 60 \% \end{gathered}$ |

[^15]Prepared by National Data \& Surveying Servic
Date: 10/26/2021
Day: Tuesday
CLASSIFICATION
SR 471 Bet. SE 1st Ave \& C478A
City: Webster
Project \#: FL21_130241_003s
Prepared by National Data $\&$ Surveying Services
 411
플

Time



[^16]SR 41 Bet. SE 1 st Ave \&
Date: 10/26/2021 -


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```
Location: SR 471 Between CR 478A \& CR 730/NW 10th Ave
Date: 10/18/2021
city: Webster, FL
Day: Monday
```

| Segment | From | то | $\begin{gathered} \text { Side } \\ \text { of the Street } \end{gathered}$ | Restriction | Measurement <br> (ft.) | Approximate Space (Measurement divided by 20') | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | 6:00 PM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | NW 10th Ave | NW 6th Ave | E | No Parking on Right of Way | ${ }^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | NW 6th Ave | NE 4th Ave | E | No Restriction | $80^{\prime}$ | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | NE 4th Ave | NE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | NE 3rd Ave | NE 2nd Ave | E | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | NE 2nd Ave | ECentral Ave | E | No Restriction | 131 | 7 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 6 | ECentral Ave | SE 1st Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | SE 1st Ave | SE 2nd Ave | E | No Restriction | 150' | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | SE 2nd Ave | SE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | SE 3rd Ave | CR 478A | E | No Restriction | 231 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | CR 478A | SE 3rd Ave | W | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | SE 3rd Ave | SE 2nd Ave | w | No Restriction | $41^{1}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | SE 2nd Ave | SE 1st Ave | w | No Restriction | $53^{\prime}$ | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | SE 1st Ave | W Central Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | W Central Ave | NE 2nd Ave | w | No Restriction | 245 | 13 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | NE 2nd Ave | NW 3rd Ave | w | No Restriction | 208' | 11 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | NW 3rd Ave | NW 4th Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | NW 4th Ave | NW 6th Ave | w | No Restriction | 197' | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | NW 6th Ave | NW 10th Ave | w | No Parking on Right of Way | $0^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

```
Location: SR 471 Between CR 478A \& CR 730/NW 10th Ave
Date: 10/19/2021
city: Webster, FL
Day: Tuesday
```

| Segment | From | то | $\begin{gathered}\text { Side } \\ \text { of the Street }\end{gathered}$ | Restriction | Measurement <br> (ft.) | Approximate Space (M easurement divided by 20') | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | 6:00 PM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | NW 10th Ave | NW 6th Ave | E | No Parking on Right of Way | ${ }^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | NW 6th Ave | NE 4th Ave | E | No Restriction | $80^{\prime}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | NE 4th Ave | NE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | NE 3rd Ave | NE 2nd Ave | E | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | NE 2nd Ave | ECentral Ave | E | No Restriction | 131 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | ECentral Ave | SE 1st Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | SE 1st Ave | SE 2nd Ave | E | No Restriction | 150' | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | SE 2nd Ave | SE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | SE 3rd Ave | CR 478A | E | No Restriction | 231 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | CR 478A | SE 3rd Ave | W | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | SE 3rd Ave | SE 2nd Ave | w | No Restriction | $41^{1}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | SE 2nd Ave | SE 1st Ave | w | No Restriction | $53^{\prime}$ | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | SE 1st Ave | W Central Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | W Central Ave | NE 2nd Ave | w | No Restriction | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | NE 2nd Ave | NW 3rd Ave | w | No Restriction | 208' | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | NW 3rd Ave | NW 4th Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | NW 4th Ave | NW 6th Ave | w | No Restriction | 197' | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | NW 6th Ave | NW 10th Ave | w | No Parking on Right of Way | $0^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

```
Location: SR 471 Between CR 478A \& CR 730/NW 10th Ave
Date: 10/23/2021
Day: Saturday
```

| Segment | From | то | $\begin{gathered}\text { Side } \\ \text { of the Street }\end{gathered}$ | Restriction | Measurement <br> (ft.) | Approximate Space (M easurement divided by 20') | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | 6:00 PM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | NW 10th Ave | NW 6th Ave | E | No Parking on Right of Way | ${ }^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | NW 6th Ave | NE 4th Ave | E | No Restriction | $80^{\prime}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | NE 4th Ave | NE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | NE 3rd Ave | NE 2nd Ave | E | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | NE 2nd Ave | ECentral Ave | E | No Restriction | 131 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 6 | ECentral Ave | SE 1st Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | SE 1st Ave | SE 2nd Ave | E | No Restriction | 150' | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 8 | SE 2nd Ave | SE 3rd Ave | E | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | SE 3rd Ave | CR 478A | E | No Restriction | 231 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | CR 478A | SE 3rd Ave | W | (No Parking Space Available) | $0 \cdot$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | SE 3rd Ave | SE 2nd Ave | w | No Restriction | $41^{1}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | SE 2nd Ave | SE 1st Ave | w | No Restriction | $53^{\prime}$ | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | SE 1st Ave | W Central Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | W Central Ave | NE 2nd Ave | w | No Restriction | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 15 | NE 2nd Ave | NW 3rd Ave | w | No Restriction | 208' | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | NW 3rd Ave | NW 4th Ave | w | (No Parking Space Available) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | NW 4th Ave | NW 6th Ave | w | No Restriction | 197' | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | NW 6th Ave | NW 10th Ave | w | No Parking on Right of Way | $0^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX D: FIELD REVIEWS


Photograph 1: SR 471-facing south adjacent to Sumter County Farmers M arket Entrance


Photograph 3: SR 471-facing north towards Webster Elementary School with view of existing signage


Photograph 5: SR 471-facing south from Webster Elementary school with posted 45 mph speed limit


Photograph 2: SR 471-facing northwest towards Webster Elementary School


Photograph 4: SR 471-facing north from CR 478A with view of existing school zone signage


Photograph 6: SR 471-facing north on western side of corridor adjacent to SE $3^{\text {rd }}$ Avenue


Photograph 7: SR 471—facing north at end of sidewalk on western side of corridor


Photograph 9: SR 471—facing north, south of NE $2^{\text {nd }}$ Avenue


Photograph 11: SR 471-facing east from SE $3^{\text {rd }}$ Avenue


Photograph 8: SR 471—facing north at end of sidewalk on eastern side of corridor


Photograph 10: SR 471—facing south, north of Webster Elementary School with view of existing school zone signage and on-street parking


Photograph 12: Existing crosswalk in front of Webster Elementary School


Photograph 13: Existing crosswalk curb ramp on western side of road in front of Webster Elementary School


Photograph 15: SR 471-facing towards southern entrance of Webster Elementary School


Photograph 17: Flashing school zone sign north of Webster Elementary School on SR 471


Photograph 14: Existing sidewalk in front of Webster Elementary


Photograph 16: SR 471—facing north, towards middle entrance to Webster Elementary School


Photograph 18: Access conditions along the eastern side of SR 471, facing south, north of CR 478

## S.R. 471 complete streets stuor



Photograph 19: Existing sidewalk along eastern side of SR 471, facing south from SE $1^{\text {st }}$ Avenue


Photograph 21: Existing southern curb ramp at the intersection of SR 471 SE 2 ${ }^{\text {nd }}$ Avenue


Photograph 23: Existing signage along eastern side of SR 471, north of CR 478


Photograph 20: Signage along the eastern side of SR 471 facing north, south of SE $1^{\text {st }}$ Avenue


Photograph 22: Existing signage along eastern side of SR 471, south of CR 478


Photograph 24: Existing northern curb ramp at the intersection of SR 471 and NE $2^{\text {nd }}$ Avenue


Photograph 25: Existing northern curb ramp at the intersection of SR 471 and NE $3^{\text {rd }}$ Avenue


Photograph 27: Gap between sidewalk slabs in front of Webster Elementary School


Photograph 29: Queueing in the northbound leftturn lane at the intersection of SR 471 and CR 478


Photograph 26: Existing southern curb ramp at the intersection of SR 471 and NE $4^{\text {th }}$ Avenue


Photograph 28: Visible tire marks extending beyond northbound right-turn lane at southern entrance to Webster Elementary School

D-2: OCTOBER 25, 2021



Photograph 1: Queuing in in the southbound direction near the southern entrance to Webster Elementary School


Photograph 3: Patrons of the Sumter County Farmers M arket crossing at an unmarked location


Photograph 5: Parking and scooter rental sign north of CR 478


Photograph 2: Paid parking signage for the Sumter County Farmers M arket


Photograph 4: A vehicle parking in on-street parking on western side of road adjacent to Sumter County Farmers M arket


Photograph 6: School bus stopping in the northbound direction, north of NE $3^{\text {rd }}$ Avenue

## S.R. 471 complete streets study



Photograph 7: Grade of northern curb ramp at intersection of SR 471 and eastbound Central Ave-
nue

Photograph 9: Cyclist attempting to cross SR 471 at an unmarked location


Photograph 8: Cyclist utilizing sidewalk along SR 471


APPENDIX E:
ONLINE SURVEY RESULTS

## Q1 The SR 471 Corridor area is where I ... (check all that apply)



Q2 When you are working or shopping along the SR 471 Corridor, how do you get around?


Q3 How many times per week do you take a five (or more) minute WALK along/near the SR 471 Corridor?


## Q4 When you WALK along/near the SR 471 Corridor, primarily where do you go? (Select one)

Answered: 4 Skipped: 1


| ANSWER CHOICES | RESPONSES |  |
| :---: | :---: | :---: |
| Work | 0.00\% | 0 |
| School | 0.00\% | 0 |
| Shops/Restaurants | 25.00\% | 1 |
| Entertainment | 0.00\% | 0 |
| Parks | 0.00\% | 0 |
| General Recreation | 50.00\% | 2 |
| Through trip | 0.00\% | 0 |
| Other (please specify) | 25.00\% | 1 |
| TOTAL |  | 4 |
| \# OTHER (PLEASE SPECIFY) |  | DATE |
| 1 Don't walk |  | 6/9/2021 9:03 PM |

## Q5 How many times per week do you take a five (or more) minute BIKE along/near the SR 471 Corridor?



| ANSWER CHOICES | RESPONSES |  |
| :--- | :--- | :--- |
| Almost Never | $80.00 \%$ | 4 |
| Occasionally | $20.00 \%$ | 1 |
| Weekly | $0.00 \%$ | 0 |
| Several Times Per Week | $0.00 \%$ | 0 |
| TOTAL | 5 |  |

## Q6 When you BIKE along/near the SR 471 Corridor, primarily where do you go? (Select one)

Answered: 4 Skipped: 1


| ANSWER CHOICES | RESPONSES |  |
| :---: | :---: | :---: |
| Work | 0.00\% | 0 |
| School | 0.00\% | 0 |
| Shops/Restaurants | 25.00\% | 1 |
| Entertainment | 0.00\% | 0 |
| Parks | 0.00\% | 0 |
| General Recreation | 25.00\% | 1 |
| Through trip | 25.00\% | 1 |
| Other (please specify) | 25.00\% | 1 |
| TOTAL |  | 4 |
| \# OTHER (PLEASE SPECIFY) |  | DATE |
| 1 None |  | 6/9/2021 9:03 PM |

Q7 Please rank the following infrastructure in order of importance to you (1=LEAST Important, 10=MOST Important; use the "Other" box at the bottom for additional infrastructure):

Answered: 5 Skipped: 0



Appendix E: Online Survey Results Page 8 of 15
On-Street Bicycle Lanes

Appendix E: Online Survey Results Page 9 of 15


Appendix E: Online Survey Results Page 10 of 15


Appendix E: Online Survey Results
Page 11 of 15

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | TOTAL | WEIG AVER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benches | $\begin{array}{r} 50.00 \% \\ 2 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 50.00 \% \\ 2 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 4 |  |
| Bicycle <br> Parking | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 25.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 50.00 \% \\ 2 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $25.00 \%$ $1$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 4 |  |
| Crosswalks | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ <br> 1 | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 3 |  |
| Golf Cart Crossing | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 3 |  |
| Lighting | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 40.00 \% \\ 2 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 5 |  |
| Median Islands | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 50.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $50.00 \%$ $1$ | 2 |  |
| On-Street Bicycle Lanes | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 3 |  |
| Removal of On-Street Parking | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 3 |  |
| Shading/Trees | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | $\begin{array}{r} 33.33 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $33.33 \%$ | 3 |  |
| Traffic Calming | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $20.00 \%$ $1$ | 5 |  |
| Wide Sidewalks | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | 20.00\% $1$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $20.00 \%$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 20.00 \% \\ 1 \end{array}$ | 5 |  |

Q8 What needs/issues do you see along the SR 471 Corridor today? (check all that apply)



# Q9 What would make you more likely to walk or bike along the SR 471 Corridor? 

| Answered: 4 Skipped: 1 |  |  |
| :---: | :---: | :---: |
| \# | RESPONSES | DATE |
| 1 | wide bike/pedestrian paths separate from traffic lanes. | 6/18/2021 9:08 AM |
| 2 | If there was less involvement with the traffic | 6/9/2021 9:06 PM |
| 3 | Less traffic more shopping | 6/9/2021 9:03 PM |
| 4 | Traffic control. Safe to cross the streets. | 6/9/2021 8:55 PM |

# Q10 Do you have any other input for the SR 471 Complete Streets Study? 

Answered: 3 Skipped: 2

| $\#$ | RESPONSES | DATE |
| :--- | :--- | :--- | :--- |
| 1 | Bicycle/pedestrian traffic is not compatible with golf cart traffic. | $6 / 18 / 20219: 08 \mathrm{AM}$ |
| 2 | This would be a great improvement for the city and could potentially attract more residents and <br> tourists | $6 / 9 / 20219: 06$ PM |
| 3 | Same, just a safer environment and have a traffic control system that will make a change. | $6 / 9 / 20218: 55$ PM |

APPENDIX F: ARTPLAN OUTPUTS

## ARTPLAN 2012 Conceptual Planning Analysis

Project Information

| Analyst | KHA | Arterial Name | SR 471 | Study Period | Standard K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Date Prepared | $12 / 17 / 202108: 30: 30$ | From | CR478A | Modal Analysis | Multimodal |
| Agency |  | To | NW 10th Ave | Program | ARTPLAN 2012 |
| Area Type | Rural Developed | Peak Direction | Northbound | Version Date | $12 / 12 / 2012$ |
| Arterial Class |  |  |  |  |  |
| File Name | K:\GVL_TPTO $\backslash 142361010-$ SR 471 Complete Streets $\backslash$ calcs\LOSPLAN_SR471 (NB).xap |  |  |  |  |
| User Notes |  |  |  |  |  |

## Arterial Data

Not Applicable

## Automobile Intersection Data

Not Applicable

## Automobile Segment Data

| Segment \# | Length | AADT | Hourly Vol. | SEG \# Dir.Lanes | Posted Speed | Free Flow Speed | Median Type | On-Street Parking | Parking Activity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | 1300 | 7000 | 333 | 1 | 35 | 40 | None | No | N/A |
| 2 (to Central Avenue) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 3 (to CR 478) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 4 (to NW 10th Ave) | 2600 | 7700 | 366 | 1 | 45 | 50 | None | No | N/A |

## Automobile LOS

Not Applicable

Page 2 of 6

## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is $\mathbf{1 0 0 0}$ veh/h/ln.

## Not Applicable

## Multimodal Segment Data

| Segment \# | Outside Lane Width | Pave Cond | Pave Shldr /Bike Lane | Side Path | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{gathered} \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{gathered}$ | Amenities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 3 (to CR 478) | Typical | Typical | No | No | N/A | Yes | Typical | No | 0 | 0.2 | Poor | None |
| 4 (to NW 10th Ave) | Typical | Typical | No | No | N/A | Yes | Typical | No | 0 | 0.2 | Poor | None |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 38 | 62 |  | No | Yes |  | N/A | Wide |  | No | No |  |
| 2 (to Central Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 3 (to CR 478) | 85 | 15 |  | Yes | Yes |  | Typical | Adjacent |  | No | No |  |
| 4 (to NW 10th Ave) | 25 | 75 |  | Yes | No |  | Typical | N/A |  | No | No |  |

## Multimodal LOS

|  | Bicycle Street |  | Bicycle Sidepath |  | Pedestrian |  |  |  |  |  |  | Bus |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Link \# | Score | Los | Score | LOS | 1 | 2 | 3 |  | Score |  | Los | Adj. Bu | ses | LOS |
| 1 (to SE 3rd Avenue) | 33.36 | F | N/A | N/A |  |  |  |  |  | . 50 | D |  | 0.00 | F |
| 2 (to Central Avenue) | 31.28 | F | N/A | N/A |  |  |  |  |  | . 48 | B |  | 0.00 | F |
| 3 (to CR 478) | 31.28 | F | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |  |  |  |  |  | . 50 | B |  | 0.00 | F |
| 4 (to NW 10th Ave) | 37.62 | F | N/A | N/A |  |  |  |  |  | .47 | E |  | 0.00 | F |
|  | Bicycle LOS | 34.47 | F |  |  | $\begin{aligned} & \text { Ped } \\ & \text { LOS } \end{aligned}$ |  |  | 3.71 | D |  | $\begin{aligned} & \text { Bus } \\ & \text { LOS } \end{aligned}$ | 0.00 | F |

[^17]
## ARTPLAN 2012 Conceptual Planning Analysis

Project Information


Arterial Data
Not Applicable

## Automobile Intersection Data

Not Applicable

## Automobile Segment Data

| Segment \# | Length | AADT | Hourly Vol. | SEG \# Dir.Lanes | Posted Speed |  | Median Type | On-Street Parking | Parking Activity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | 1300 | 7000 | 346 | 1 | 35 | 40 | None | No | N/A |
| 2 (to Central Avenue) | 1300 | 8800 | 435 | 1 | 35 | 40 | None | No | N/A |
| 3 (to CR 478) | 1300 | 8800 | 435 | 1 | 35 | 40 | None | Yes | Low |
| 4 (to NW 10th Ave) | 2600 | 7700 | 380 | 1 | 45 | 50 | None | No | N/A |

Automobile LOS

Not Applicable

Page 2 of 6
$\square$

## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS $E$ in Florida for this facility type and area type is $\mathbf{1 0 0 0}$ veh/h/ln.

Not Applicable

## Multimodal Segment Data

| Segment \# | Outside Lane Width | Pave Cond | Pave Shldr /Bike Lane | Side Path | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{array}{\|c\|} \hline \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{array}$ | Amenities | Bus Stop Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | Typical | Typical | Yes | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 3 (to CR 478) | Typical | Typical | No | No | N/A | Yes | Typical | No | 0 | 0.2 | Poor | None |
| 4 (to NW 10th Ave) | Typical | Typical | No | No | N/A | Yes | Typical | No | 0 | 0.2 | Poor | None |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 2 (to Central Avenue) | 30 | 45 | 25 | Yes | Yes | Yes, | Typical | Wide | Typical | N, | NO | No |
| 3 (to CR 478) | 85 | 15 |  | Yes | Yes |  | Typical | Adjacent |  | No | No |  |
| 4 (to NW 10th Ave) | 25 | 75 |  | Yes | No |  | Typical | N/A |  | No | No |  |

## Multimodal LOS



[^18]
## ARTPLAN 2012 Conceptual Planning Analysis

Project Information

| Analyst | KHA | Arterial Name | SR 471 | Study Period | Standard K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Date Prepared | $12 / 17 / 202108: 30: 30$ | From | CR478A | Modal Analysis | Multimodal |
| Agency |  | To | NW 10th Ave | Program | ARTPLAN 2012 |
| Area Type | Rural Developed | Peak Direction | Northbound | Version Date | $12 / 12 / 2012$ |
| Arterial Class |  |  |  |  |  |
| File Name | K:\GVL_TPTO $142361010-$ SR 471 Complete Streets\calcs\LOSPLAN_SR471 (NB)_Option 1.xap |  |  |  |  |
| User Notes |  |  |  |  |  |

## Arterial Data

Not Applicable

## Automobile Intersection Data

Not Applicable

Automobile Segment Data

| Segment \# | Length | AADT | Hourly Vol. |  | Posted Speed | Free Flow Speed | Median Type | On-Street Parking | Parking Activity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | 1300 | 7000 | 333 | 1 | 35 | 40 | None | No | N/A |
| 2 (to Central Avenue) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 3 (to CR 478) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 4 (to NW 6th Ave) | 1300 | 7700 | 366 | 1 | 45 | 50 | None | Yes | Low |
| $\mathbf{5} \text { (to NW 10th }$ Ave) | 1300 | 7700 | 366 | 1 | 45 | 50 | None | No | N/A |

Not Applicable

Page 2 of 6


## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS $E$ in Florida for this facility type and area type is 1000 veh/h/ln.

Not Applicable

## Multimodal Segment Data

| Segment \# | Outside Lane Width | Pave Cond | Pave <br> Shldr <br> /Bike <br> Lane | $\left\lvert\, \begin{aligned} & \text { Side } \\ & \text { Path } \end{aligned}\right.$ | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{array}{\|c} \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{array}$ | Amenities | Bus Stop <br> Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 3 (to CR 478) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 4 (to NW 6th Ave) | Typical | Typical | No | No | N/A | Yes | Typical | No | 0 | 0.2 | Poor | None |
| 5 (to NW 10th Ave) | Typical | Typical | No | No | N/A | No | N/A | No | 0 | 0.2 | Poor | Typical |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 38 | 62 |  | No | Yes |  | N/A | Wide |  | No | No |  |
| 2 (to Central Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 3 (to CR 478) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 4 (to NW 6th Ave) | 60 | 40 |  | Yes | No |  | Typical | N/A |  | No | No |  |
| 5 (to NW 10th Ave) | 100 |  |  | No. |  |  | N/A |  |  | No. |  |  |

## Multimodal LOS


$\square$

[^19]
## ARTPLAN 2012 Conceptual Planning Analysis

Project Information

| Analyst | KHA | Arterial Name | SR 471 | Study Period | Standard K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Date Prepared | $12 / 17 / 202108: 30: 30$ | From | CR478A | Modal Analysis | Multimodal |
| Agency |  | To | NW 10th Ave | Program | ARTPLAN 2012 |
| Area Type | Rural Developed | Peak Direction | Southbound | Version Date | $12 / 12 / 2012$ |
| Arterial Class |  |  |  |  |  |
| File Name | K:\GVL_TPTO $142361010-$ SR 471 Complete Streets\calcs\LOSPLAN_SR471_Option 1.xap |  |  |  |  |
| User Notes |  |  |  |  |  |

## Arterial Data

Not Applicable

## Automobile Intersection Data

| Cross Street | Cycle Length | Thru g/C | Arr. <br> Type | INT <br> \# <br> Dir.Lanes | $\begin{gathered} \hline \% \\ \text { Left } \\ \text { Turns } \end{gathered}$ | \% <br> Right <br> Turns | Left Turn Lanes | Left <br> Turn <br> Phasing | $\begin{aligned} & \hline \text { \# Left } \\ & \text { Turn } \\ & \text { Lanes } \end{aligned}$ | LT <br> Storage <br> Length | Left <br> g/C | Right Turn Lanes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SE 3rd Avenue | 90 | 0.42 | 3 | 1 | 12 | 12 | Yes | Protected | 1 | 235 | 0.15 | No |
| Central Avenue | 90 | 0.42 | 3 | 1 | 12 | 12 | Yes | Protected | 1 | 235 | 0.15 | No |
| CR 478 | 90 | 0.42 | 3 | 1 | 12 | 12 | Yes | Protected | 1 | 235 | 0.15 | No |
| NW 6th Ave | 90 | 0.42 | 3 | 1 | 12 | 12 | Yes | Protected | 1 | 235 | 0.15 | No |
| NW 10th Ave | 90 | 0.42 | 3 | 1 | 12 | 12 | Yes | Protected | 1 | 235 | 0.15 | No |

## Automobile Segment Data

Not Applicable

## Automobile LOS

Not Applicable

Page 2 of 6

## Not Applicable

## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS $E$ in Florida for this facility type and area type is $\mathbf{1 0 0 0}$ veh/h/ln.

## Not Applicable

## Multimodal Segment Data

| Segment \# | Outside Lane Width | Pave Cond | Pave Shldr /Bike Lane | Side Path | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{array}{\|c} \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{array}$ | Amenities | Bus Stop Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|l} \hline \mathbf{1} \text { (to SE } \\ 3 \text { rd } \\ \text { Avenue) } \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 20.00 | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Desirable | No | Yes | 12.00 | Yes | Wide | No | 0 | 0.2 | Poor | None |
| $\begin{array}{\|l} \hline 3 \text { (to CR } \\ 478) \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 5.00 | Yes | Typical | No | 0 | 0.2 | Poor | None |
| 4 (to NW 6th Ave) | Typical | Desirable | No | Yes | 8.00 | Yes | Typical | No | 0 | 0.2 | Poor | None |
| $\begin{array}{\|l} \mathbf{5} \text { (to NW } \\ 10 \text { th Ave) } \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 8.00 | Yes | Typical | No | 0 | 0.2 | Poor | Typical |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | N, |  |  |
| 2 (to Central Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 3 (to CR 478) | 85 | 15 |  | Yes | Yes |  | Typical | Adjacent |  | No | No |  |
| 4 (to NW 6th Ave) | 100 |  |  | Yes |  |  | Typical |  |  | No |  |  |
| 5 (to NW 10th Ave) | 100 |  |  | Yes |  |  | Typical |  |  | No |  |  |

## Multimodal LOS



Not Applicable

Not Applicable

* Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
\# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
\#\# Facility weighted $\mathrm{g} / \mathrm{C}$ exceeds normally acceptable upper range ( 0.5 ); verify that $\mathrm{g} / \mathrm{C}$ inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.


## ARTPLAN 2012 Conceptual Planning Analysis

Project Information

| Analyst | KHA | Arterial Name | SR 471 | Study Period | Standard K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Date Prepared | $12 / 17 / 202108: 30: 30$ | From | CR478A | Modal Analysis | Multimodal |
| Agency |  | To | NW 10th Ave | Program | ARTPLAN 2012 |
| Area Type | Rural Developed | Peak Direction | Northbound | Version Date | $12 / 12 / 2012$ |
| Arterial Class |  |  |  |  |  |
| File Name | K:\GVL_TPTO 142361010 - SR 471 Complete Streets\calcs\LOSPLAN_SR471 (NB)_Option 2.xap |  |  |  |  |
| User Notes |  |  |  |  |  |

## Arterial Data

## Not Applicable

## Automobile Intersection Data

Not Applicable

Automobile Segment Data

| Segment \# | Length | AADT | Hourly Vol. | SEG <br> \# <br> Dir.Lanes | Posted Speed | Free Flow Speed | Median Type | On-Street Parking | Parking Activity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|l\|l\|} \hline 1 \text { (to SE 3rd } \\ \text { Avenue) } \end{array}$ | 1300 | 7000 | 333 | 1 | 35 | 40 | None | No | N/A |
| 2 (to Central Avenue) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 3 (to CR 478) | 1300 | 8800 | 419 | 1 | 35 | 40 | None | Yes | Low |
| 4 (to NW 6th Ave) | 1300 | 7700 | 366 | 1 | 45 | 50 | None | Yes | Low |
| $\begin{array}{\|l} \hline \boldsymbol{5} \text { (to NW 10th } \\ \text { Ave) } \end{array}$ | 1300 | 7700 | 366 | 1 | 45 | 50 | None | No | N/A |

Automobile LOS

Not Applicable

Page 2 of 6

## Not Applicable

## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area tyneis 1000 veh/h/ln.

## Not Applicable

## Multimodal Segment Data

| Segment \# | $\begin{array}{\|c\|} \hline \text { Outside } \\ \text { Lane } \\ \text { Width } \\ \hline \end{array}$ | Pave Cond | Pave <br> Shldr <br> /Bike <br> Lane | $\left\lvert\, \begin{aligned} & \text { Side } \\ & \text { Path } \end{aligned}\right.$ | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{array}{\|c} \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{array}$ | Amenities | Bus Stop <br> Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 (to SE 3rd Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 3 (to CR 478) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 4 (to NW 6th Ave) | Typical | Typical | No | No | N/A | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 5 (to NW 10th Ave) | Typical | Typical | No | No | N/A | No | N/A | No | 0 | 0.2 | Poor | Typical |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 38 | 62 |  | No | Yes |  | N/A | Wide |  | No | No |  |
| 2 (to Central Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 3 (to CR 478) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 4 (to NW 6th Ave) | 60 | 40 |  | Yes | No |  | Wide | N/A |  | No | No |  |
| 5 (to NW 10th Ave) | 100 |  |  | No. |  |  | N/A |  |  | N, |  |  |

## Multimodal LOS

|  | Bicycle Street |  | Bicycle Sidepath |  | Pedestrian |  |  |  |  |  | Bus |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Link \# | Score | Los | Score | LOS | 1 | 2 | 3 | Scor |  | Los | Adj. Buses | LOS |
| 1 (to SE 3rd Avenue) | 33.36 | F | N/A | N/A |  |  |  |  | . 50 | D | 0.00 | F |
| 2 (to Central Avenue) | 31.28 | F | N/A | N/A |  |  |  |  | . 48 | B | 0.00 | F |
| 3 (to CR 478) | 31.28 | F | N/A | N/A |  |  |  |  | . 48 | B | 0.00 | F |
| 4 (to NW 6th Ave) | 34.84 | F | N/A | N/A |  |  |  |  | . 07 | c | 0.00 | F |
| 5 (to NW 10th Ave) | 36.93 | F | N/A | N/A |  |  |  |  | . 68 | E | 0.00 | F |
|  | Bicycle LOS | 33.68 | F |  |  | $\begin{aligned} & \text { Pede } \\ & \text { LOS } \end{aligned}$ |  | 3.45 | C |  | Bus LOS $\mathbf{0 . 0 0}$ | F |

## Not Applicable

[^20]
## ARTPLAN 2012 Conceptual Planning Analysis

Project Information

| Analyst | KHA | Arterial Name | SR 471 | Study Period | Standard K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Date Prepared | $12 / 17 / 202108: 30: 30$ | From | CR478A | Modal Analysis | Multimodal |
| Agency |  | To | NW 10th Ave | Program | ARTPLAN 2012 |
| Area Type | Rural Developed | Peak Direction | Southbound | Version Date | 12/12/2012 |
| Arterial Class |  |  |  |  |  |
| File Name | K:\GVL_TPTO 142361010 - SR 471 Complete Streets\calcs\LOSPLAN_SR471_Option 2.xap |  |  |  |  |
| User Notes |  |  |  |  |  |

Arterial Data
Not Applicable

## Automobile Intersection Data

Not Applicable

## Automobile Segment Data

| Segment \# | Length | AADT | Hourly Vol. | SEG <br> \# <br> Dir.Lanes | Posted Speed | Free Flow Speed | Median Type | On-Street Parking | Parking Activity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|l\|l\|} \hline \mathbf{1} \text { (to SE 3rd } \\ \text { Avenue) } \\ \hline \end{array}$ | 1300 | 7000 | 346 | 1 | 35 | 40 | None | No | N/A |
| 2 (to Central Avenue) | 1300 | 8800 | 435 | 1 | 35 | 40 | None | No | N/A |
| 3 (to CR 478) | 1300 | 8800 | 435 | 1 | 35 | 40 | None | No | N/A |
| 4 (to NW 6th Ave) | 1300 | 7700 | 380 | 1 | 45 | 50 | None | N, | N/A |
| $\begin{array}{\|l} \hline \mathbf{5} \text { (to NW 10th } \\ \text { Ave) } \end{array}$ | 1300 | 7700 | 380 | 1 | 45 | 50 | None | No | N/A |

Automobile LOS

Not Applicable

Page 2 of 6

## Not Applicable

## Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS $E$ in Florida for this facility type and area type is 1000 veh/h/ln.

Not Applicable

## Multimodal Segment Data

| Segment \# | Outside Lane Width | Pave Cond | Pave Shldr /Bike Lane | Side Path | Side Path Separation | Side walk | Sidewalk Roadway Separation | Sidewalk Roadway Protective Barrier | Bus Freq | $\begin{array}{\|c} \text { Passenger } \\ \text { Load } \\ \text { Factor } \\ \hline \end{array}$ | Amenities | Bus Stop Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{\|l} \hline \mathbf{1} \text { (to SE } \\ 3 \text { rd } \\ \text { Avenue) } \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 20.00 | Yes | Wide | No | 0 | 0.2 | Poor | None |
| 2 (to Central Avenue) | Typical | Desirable | No | Yes | 12.00 | Yes | Wide | No | 0 | 0.2 | Poor | None |
| $\begin{array}{\|l} \hline 3 \text { (to CR } \\ 478) \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 5.00 | Yes | Typical | No | 0 | 0.2 | Poor | None |
| 4 (to NW 6th Ave) | Typical | Desirable | No | Yes | 8.00 | Yes | Typical | No | 0 | 0.2 | Poor | None |
| $\begin{array}{\|l} \mathbf{5} \text { (to NW } \\ 10 \text { th Ave) } \\ \hline \end{array}$ | Typical | Desirable | No | Yes | 8.00 | Yes | Typical | No | 0 | 0.2 | Poor | Typical |

## Pedestrian SubSegment Data

|  | \% of Segment |  |  | Sidewalk |  |  | Separation |  |  | Barrier |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment \# | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 (to SE 3rd Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | N, |  |  |
| 2 (to Central Avenue) | 100 |  |  | Yes |  |  | Wide |  |  | No |  |  |
| 3 (to CR 478) | 85 | 15 |  | Yes | Yes |  | Typical | Adjacent |  | No | No |  |
| 4 (to NW 6th Ave) | 100 |  |  | Yes |  |  | Typical |  |  | No |  |  |
| 5 (to NW 10th Ave) | 100 |  |  | Yes |  |  | Typical |  |  | No |  |  |

## Multimodal LOS



Not Applicable

[^21]| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 2.9 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | \& |  |  | $\$$ |  | ${ }^{7}$ | $\hat{\beta}$ |  | ${ }^{7}$ | 个 |  |
| Traffic Vol, veh/h | 29 | 1 | 70 | 1 | 0 | 3 | 82 | 390 | 3 | 2 | 212 | 10 |
| Future Vol, veh/h | 29 | 1 | 70 | 1 | 0 | 3 | 82 | 390 | 3 | 2 | 212 | 10 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 2 | 0 | 3 |
| Sign Control Stop | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 170 | - | - | 170 | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, \% | 6 | 6 | 6 | 2 | 2 | 2 | 15 | 15 | 15 | 26 | 26 | 26 |
| Mvmt Flow | 34 | 1 | 81 | 1 | 0 | 3 | 95 | 453 | 3 | 2 | 247 | 12 |



| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.4 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | ¢ |  |  | $\dagger$ |  |  | \& |  |  | $\uparrow$ |  |
| Traffic Vol, veh/h | 9 | 4 | 19 | 5 | 2 | 18 | 15 | 464 | 3 | 8 | 272 | 4 |
| Future Vol, veh/h | 9 | 4 | 19 | 5 | 2 | 18 | 15 | 464 | 3 | 8 | 272 | 4 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 2 | 0 | 4 |
| Sign Control Stop | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| Heavy Vehicles, \% | 6 | 6 | 6 | 13 | 13 | 13 | 15 | 15 | 15 | 21 | 21 | 21 |
| Mvmt Flow | 11 | 5 | 23 | 6 | 2 | 22 | 19 | 573 | 4 | 10 | 336 | 5 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 2.5 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Mr |  | $\boldsymbol{F}$ |  | 4 | 4 |
| Traffic Vol, veh/h | 43 | 47 | 441 | 49 | 30 | 259 |
| Future Vol, veh/h | 43 | 47 | 441 | 49 | 30 | 259 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 165 | - |
| Veh in Median Storage, $\#$ | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 79 | 79 | 79 | 79 | 79 | 79 |
| Heavy Vehicles, $\%$ | 6 | 6 | 14 | 14 | 20 | 20 |
| Mvmt Flow | 54 | 59 | 558 | 62 | 38 | 328 |



|  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Intersection |  |  |  |  |  |  |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Mr |  | F |  | F | A |
| Traffic Vol, veh/h | 0 | 0 | 455 | 1 | 7 | 322 |
| Future Vol, veh/h | 0 | 0 | 455 | 1 | 7 | 322 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 150 | - |
| Veh in Median Storage, | 0 | - | 0 | - | - | 0 |
| Grade, $\%$ | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 78 | 78 | 78 | 78 | 78 | 78 |
| Heavy Vehicles, $\%$ | 2 | 2 | 15 | 15 | 18 | 18 |
| Mvmt Flow | 0 | 0 | 583 | 1 | 9 | 413 |





| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.5 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | ¢ |  |  | $\uparrow$ |  |  | \& |  |  | $\uparrow$ |  |
| Traffic Vol, veh/h | 15 | 4 | 20 | 8 | 1 | 21 | 11 | 318 | 3 | 8 | 376 | 18 |
| Future Vol, veh/h | 15 | 4 | 20 | 8 | 1 | 21 | 11 | 318 | 3 | 8 | 376 | 18 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 1 |
| Sign Control Stop | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, \# |  | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, \% | 5 | 5 | 5 | 3 | 3 | 3 | 24 | 24 | 24 | 14 | 14 | 14 |
| Mvmt Flow | 16 | 4 | 22 | 9 | 1 | 23 | 12 | 346 | 3 | 9 | 409 | 20 |



| Intersection |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.3 |  |  |  |  |  |  |
| Movement W | WBL | WBR | NBT | NBR | SBU | SBL | SBT |
| Lane Configurations | * |  | 个 |  |  | \# | 4 |
| Traffic Vol, veh/h | 20 | 60 | 273 | 33 | 1 | 80 | 311 |
| Future Vol, veh/h | 20 | 60 | 273 | 33 | 1 | 80 | 311 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Sign Control S | Stop | Stop | Free | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | 165 | - |
| Veh in Median Storage, \# | \# 0 | - | 0 | - | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | - | 0 |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, \% | 12 | 12 | 24 | 24 | 14 | 14 | 14 |
| Mvmt Flow | 21 | 64 | 290 | 35 | 1 | 85 | 331 |


| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 810 | 309 | 0 | 0 |  | 326 | 0 |  |
| Stage 1 | 309 | - | - | - | - | - | - |  |
| Stage 2 | 501 | - | - | - | - | - | - |  |
| Critical Hdwy | 6.52 | 6.32 | - | - | - | 4.24 | - |  |
| Critical Hdwy Stg 1 | 5.52 | - | - | - | - | - | - |  |
| Critical Hdwy Stg 2 | 5.52 | - | - | - | - | - | - |  |
| Follow-up Hdwy | 3.608 | 3.408 | - | - | - | 2.326 | - |  |
| Pot Cap-1 Maneuver | 336 | 708 | - | - |  | 1169 | - |  |
| Stage 1 | 722 | - | - | - | - | - | - |  |
| Stage 2 | 589 | - | - | - | - | - | - |  |
| Platoon blocked, \% |  |  | - | - |  |  | - |  |
| Mov Cap-1 Maneuver | 336 | 707 | - | - | ~-87 | $\sim-87$ | - |  |
| Mov Cap-2 Maneuver | 336 | - | - | - | - | - | - |  |
| Stage 1 | 721 | - | - | - | - | - | - |  |
| Stage 2 | 589 | - | - | - | - | - | - |  |
|  |  |  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |  |  |
| HCM Control Delay, s | 12.7 |  | 0 |  |  |  |  |  |
| HCM LOS | B |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRW | BLn1 | SBL | SBT |  |  |
| Capacity (veh/h) |  | - | - | 554 | + | - |  |  |
| HCM Lane V/C Ratio |  | - | - | 0.154 | - | - |  |  |
| HCM Control Delay (s) |  | - | - | 12.7 | - | - |  |  |
| HCM Lane LOS |  | - | - | B | - | - |  |  |
| HCM 95th \%tile Q(veh) |  | - | - | 0.5 | - | - |  |  |
| Notes |  |  |  |  |  |  |  |  |
| $\sim$ : Volume exceeds capacity |  | \$: Delay exceeds 300s |  |  |  | +: Computation Not Defined |  | *: All major volume in platoon |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Mr |  | $\uparrow$ |  | i | 4 |
| Traffic Vol, veh/h | 0 | 2 | 306 | 5 | 8 | 334 |
| Future Vol, veh/h | 0 | 2 | 306 | 5 | 8 | 334 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 150 | - |
| Veh in Median Storage, $\#$ | 0 | - | 0 | - | - | 0 |
| Grade, \% | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, $\%$ | 2 | 2 | 22 | 22 | 15 | 15 |
| Mvmt Flow | 0 | 2 | 315 | 5 | 8 | 344 |



APPENDIX H:
PLANNING LEVEL COST INFORMATION

| OPINION OF PROBABLE COST SR 471 Complete Street Study Option 1 Pay Items |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| meM NUMER | DESCRIPION | QTY. | UNTT | UNITPRICE |  | TOTALCOST |
| ROADWAYPAYIIEMS |  |  |  |  |  |  |
| 110-1-1 | CLEARING \& GRUBBING | 2 | AC | 11,000.00 | \$ | 22,000.00 |
| 120-1 | EXCAVATION, REGULAR | 600 | CY | 5.00 | \$ | 3,000.00 |
| 120-6 | EM BANKM ENT, REGULAR | 1,200 | CY | 8.00 | \$ | 9,600.00 |
| 160-4 | TYPE B STABILZATION | 4,000 | SY | 5.00 | \$ | 20,000.00 |
| 285-7-01 | OPTIONALBASE GROUP 01 | 3,000 | SY | 11.00 | \$ | 33,000.00 |
| 327-70-06 | M ILIING EXIST ASPH PAVT, 1.5" AVG DEPTH | 2,000 | SY | 4.00 | \$ | 8,000.00 |
| 334-1-12 | SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC B) | 250 | TN | 200.00 | \$ | 50,000.00 |
| 337-7-83 | ASPHALTIC CONCRETE FRICTION COURSE (TRAFFIC C) (TYPE FC-12.5), (PG 76-22) (1.5") | 200 | TN | 150.00 | \$ | 30,000.00 |
| 425-136-1 | INLETS, CURB TYPE P-6, <10' | 3 | EA | 5,000.00 | \$ | 15,000.00 |
| 425-152-1 | INLETS, DT BOT, TYPEC, <10' | 2 | EA | 3,000.00 | \$ | 6,000.00 |
| 425-2-41 | M ANHOLE, P-7, <10' | 1 | EA | 4,000.00 | \$ | 4,000.00 |
| 430-175-142 | PIPE CULVERT, OPTIONALM ATERIAL (ROUND) (42" STORM /SIDE DRAIN) | 200 | LF | 200.00 | \$ | 40,000.00 |
| 520-1-10 | CONCRETE CURB \& GUTTER, TYPE F | 1,000 | LF | 30.00 | \$ | 30,000.00 |
| 522-2 | CONCRETE SIDEWALK AND DRIVEWAYS, 6 " THICK | 250 | SY | 80.00 | \$ | 20,000.00 |
| 527-2 | DETECTABLE WARNINGS | 100 | SF | 30.00 | \$ | 3,000.00 |
| 570-1-2 | PERFORM ANCE TURF (SOD) | 6,000 | SY | 3.00 | \$ | 18,000.00 |
|  |  | ROADWAYTOTAL |  |  | \$ | 311,600.00 |
|  |  |  |  |  |  |  |
| UGFING PAYMEMS |  |  |  |  |  |  |
| 630-2-11 | CONDUIT, FURNISH \& INSTALL, OPEN TRENCH | 10,000 | LF | 10.00 | \$ | 100,000.00 |
| 630-2-12 | CONDUIT, FURNISH \& INSTALL, DIRECTIONAL BORE | 3,000 | LF | 25.00 | \$ | 75,000.00 |
| 635-2-11 | PULL \& SPLCE BOX, F\&I, 13" $\times 24$ " COVER SIIE | 100 | EA | 1,000.00 | \$ | 100,000.00 |
| 715-516-115 | UGHT POLE COM PLETE-SPECIAL DESIGN, F\&L, POLE TOP M OUNT, ALUM INUM, 15' | 100 | EA | \$ 10,000.00 | \$ | 1,000,000.00 |
|  |  | LGFIINGTOTAL |  |  | \$ | 1,275,000.00 |
|  |  |  |  |  |  |  |
| SGNINGANDPAVEMENTMARKNG PAYIIEMS |  |  |  |  |  |  |
| 654-2-22 | RECTANGULAR RAPID FLASHING BEACON, FURNISH \& INSTALL- SOLAR, COM PLETE SIGN ASSEM BLY | 6 | EA | 8,500.00 | \$ | 51,000.00 |
| 700-1-11 | SINGLE POST SIGN, F\&I (GROUND M OUNT) (<12 SF) | 10 | EA | 400.00 | \$ | 4,000.00 |
| 706-1-3 | RAISED PAVEM ENT M ARKER, TYPE B | 100 | EA | 4.00 | \$ | 400.00 |
| 710-11101 | PAINTED PAVEM ENT M ARKINGS, STANDARD, WHITE, SOLD 6 " | 0.100 | GM | 1,300.00 | \$ | 130.00 |
| 711-11123 | THERM OPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK | 200 | LF | 1.00 | \$ | 200.00 |
| 711-11125 | THERM OPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE CROSSWALK | 200 | LF | 1.00 | \$ | 200.00 |
| 711-11170 | THERM OPLASTIC, STANDARD, WHITE ARROW | 5 | EA | 30.00 | \$ | 150.00 |
| 710-11201 | PAINTED PAVEM ENT M ARKINGS, STANDARD, YELLOW, SOLID 6" | 0.200 | GM | 1,200.00 | \$ | 240.00 |
| 711-11224 | THERM OPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR CHEVRONS | 50 | LF | 1.00 | \$ | 50.00 |
|  |  | S\&PMTOTAL |  |  | \$ | 56,370.00 |
|  |  |  |  |  |  |  |
| 101-1 | M OBILIZATION | 1 | LS | \$ 164,500.00 | \$ | 164,500.00 |
| 102-1 | M AINTENANCE OF TRAFFIC | 1 | LS | \$ 164,500.00 | \$ | 164,500.00 |
| N/A | PROJECT UNKNOWNS | 1 | LS | \$ 164,500.00 | \$ | 164,500.00 |
|  |  |  |  |  |  |  |
|  |  | OPIION 1 TOTALCONSTRUCTIONCOST ${ }^{\text {(1) }}$ |  |  | \$ | 2,136,470.00 |
| OPION1CONIINGENCY (20\%) |  |  |  |  | \$ | 213,600.00 |
|  |  | OPIION1GRANDTOTAL |  |  | \$ | 2,350,000.00 |
|  |  |  |  |  |  |  |
|  |  |  |  | SURVEY | \$ | 50,000.00 |
|  |  |  | OPIION1DESGN ${ }^{(2)}$ |  | \$ | 353,000.00 |
|  |  |  | OPION1泪 ${ }^{(3)}$ |  | \$ | 235,000.00 |
|  |  |  |  |  |  |  |
| (1) Estimated Construction Cost is based on estimated quantities for general design concepts as design plans have not been prepared at this time. <br> (2) Design Cost is based on an estimate of $15 \%$ of construction cost. <br> (3) CEI Cost is based on an estimate of $10 \%$ of construction cost. <br> Kimley-Horn and Associates, Inc. has no control over the cost of labor, materials, equipment, or services furnished by others, or over methods of determining price, or over competitive bidding or market conditions. Any and all professional opinions as to costs reflected herein, including but not limited to professional opinions as to the costs of construction materials, are made on the basis of professional experience and available data. Kimley-Horn and Associates, Inc. cannot and does not guarantee or warrant that proposals, bids, or actual costs will not vary from the professional opinions of costs shown herein. |  |  |  |  |  |  |




[^0]:    

[^1]:    13 >=7-Axle Multi-Trailers $10>=6$-Axle Single Trailers
    $11<=5$-Axle Multi-Trailers
    
    Classification Definitions
    $7>=4$-Axle Single Units
    $8<=4$-Axle Single Trailers $8 \quad<=4$-Axle Single Trailers
    9
    9

[^2]:    
    

    Classification Definitions
    
    
    $\begin{array}{ll}4 & \text { Buses } \\ 5 & 2 \text {-Axle, } 6 \text {-Tire Single Units }\end{array}$

[^3]:    13 >=7-Axle Multi-Trailers 10 >=6-Axle Single Trailers
    11 <=5-Axle Multi-Trailers

    Classification Definitions
    
    

[^4]:    

    - Axle Single Trailers
    

    Classification Definitions
    
    
    
    4 Buses
    5 2-Axle, 6 -Tire Single Units
    $\begin{array}{ll}1 & \text { Passenger Cars } \\ 3 & \text { 2-Axle, 4-Tire Sin }\end{array}$

[^5]:    | Direction | Percentiles |  |  |  |  |
    | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
    |  | $\mathbf{1 5 t h}$ | 50th | Average | 85th | 95th |
    | North Bound | 29 | 33 | 32 | 37 |  |
    | South Bound | 29 | 33 | 33 | 38 |  |

[^6]:    
    

    Classification Definitions
     8 <-4-Axle Single
    9
    9

[^7]:    

[^8]:    

[^9]:     10 >=6-Axle Single Trailers
    11 <=5-Axle Multi-Trailers

    Classification Definitions
    
    

[^10]:    sopkorotow $\tau$
    Classification Definitions
    $7>=4$-Axle Single Unit
    $10>=6-$ Axle Single Trailers
    $11<=5$-Axle Multi-Trailers
    
    13 >-7-Axle Muxilar
    
    

    Buen
    4 Buses
    5 2-Axle, 6-Tire Single Units
    6 3-Axle Single Units

    1 Motorcycles
    2 Passenger Cars
    3 2-Axle, 4-Tire Sin

[^11]:    

[^12]:    

    Classification Definitions
    $10>=6$-Axle Single Trailers

    1 Motorcycles
    $\begin{array}{ll}4 & \text { Buses } \\ 5 & 7>=4 \text {-Axle Single Units } \\ 5 & \text { 2-Axle, } 6 \text {-Tire Single Units }\end{array} \quad 8<=4$-Axle Single Trailers 6 3-Axle Single Units $\quad 9$ 5-Axle Single Trailers

[^13]:    1 Motorcycles
    $\begin{array}{ll}4 & \text { Buses } \\ 5 & \text { 2-Axle, } 6 \text {-Tire Single Units }\end{array}$
    Classification Definitions
    $10>=6$-Axle Single Trailers
    11 < $=5$-Axle Multi-Trailer
    12 -Axle Multi-Trailers $8<=4$-Axle Single Tralle
    9
    9 5-Axle Single Trailers
    
    13
    $\square$ -
    $7>=4$-Axle Single Units
    

[^14]:    | Direction | 50th | Average | 85th | 95th | ADT |
    | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
    |  | 15th | 50th | 40 | 45 | 3331 |
    | South Bound | 27 | 34 | 34 | 40 | 47 |

[^15]:    

    - Axle Single Trailers
    

    Classification Definitions
    
    8 <=4-Axle Sinle Trailers
    9

[^16]:    

    10 >=6-Axle Single Trailers

    Classification Definitions
     1 Motorcycles
    $\begin{array}{ll}4 & \text { Buses } \\ 5 & 2 \text {-Axle, } 6 \text {-Tire Single Units }\end{array}$

    2 Passenger Cars

[^17]:    * Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
    ** Cannot be achieved based on input data provided.
    *** Not applicable for that level of service letter grade. See generalized tables notes for more details. \# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
    \#\# Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

[^18]:    * Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
    ** Cannot be achieved based on input data provided.
    *** Not applicable for that level of service letter grade. See generalized tables notes for more details. \# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
    \#\# Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

[^19]:    * Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
    ** Cannot be achieved based on input data provided.
    *** Not applicable for that level of service letter grade. See generalized tables notes for more details. \# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
    \#\# Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

[^20]:    * Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
    ** Cannot be achieved based on input data provided.
    *** Not applicable for that level of service letter grade. See generalized tables notes for more details. \# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
    \#\# Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

[^21]:    * Service Volumes for the specific facility being analyzed, based on \# of lanes from the intersection and segment data screens.
    ** Cannot be achieved based on input data provided.
    *** Not applicable for that level of service letter grade. See generalized tables notes for more details. \# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
    \#\# Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct. \#\#\# Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

