Transportation Master Plan

Hooper City

March 2025

Prepared by:

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Salt Lake City, UT 84107

Project No. 55-21-003

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1 INTRODUCTION

1.1 BACKGROUND

The Hooper City Transportation Master Plan (TMP) contains the goals, objectives and policy guidance as well as an overview of the strategies that the City intends to employ by the year 2050. The TMP is the City's long-range blueprint for travel and mobility. The TMP recognizes the need to address existing and future growth in a manner that maintains convenient mobility and access for residents while preserving the rural lifestyle that is important to the well-being of the community, both culturally and socially.

The City has seen continued population growth. Per US Census data, the population has increased from 7,218 residents in the 2010 Census to 9,087 residents in the 2020 Census. The City is expected to continue to grow because of the excellent quality of life that Hooper City offers.

1.2 PURPOSE OF THE TRANSPORTATION MASTER PLAN

The Hooper City TMP serves a variety of purposes and presents a vision that defines the City's long-term transportation system needs into the future. The TMP also provides policy direction on decisions regarding the implementation of the transportation system projects. It serves as a comprehensive reference guide for major transportation system issues in Hooper City. Finally, the TMP prioritizes projects for implementation to address short-term deficiencies and safety for motorized and non-motorized travel while working towards meeting the ultimate transportation system needs of the City by the year 2050.

As a result of the City's continued growth, there has been a steady increase in traffic across the existing transportation network. The City remains committed to providing a balanced transportation system that provides citizens with new active transportation options and improved roadway connectivity to maintain its high quality of life. This TMP provides the goals, principles and policies that will be used to improve the transportation system today and shape it for the future. These guidelines and policies will aid City staff and officials in making informed decisions regarding transportation policies. The Capital Improvements Plan (CIP) identifies near-term projects to improve deficiencies in the existing transportation system. Additionally, the CIP looks forward to the year 2050 to create a comprehensive list of projects that require significant advance planning and funding resources to implement but are needed to accommodate future transportation demands.

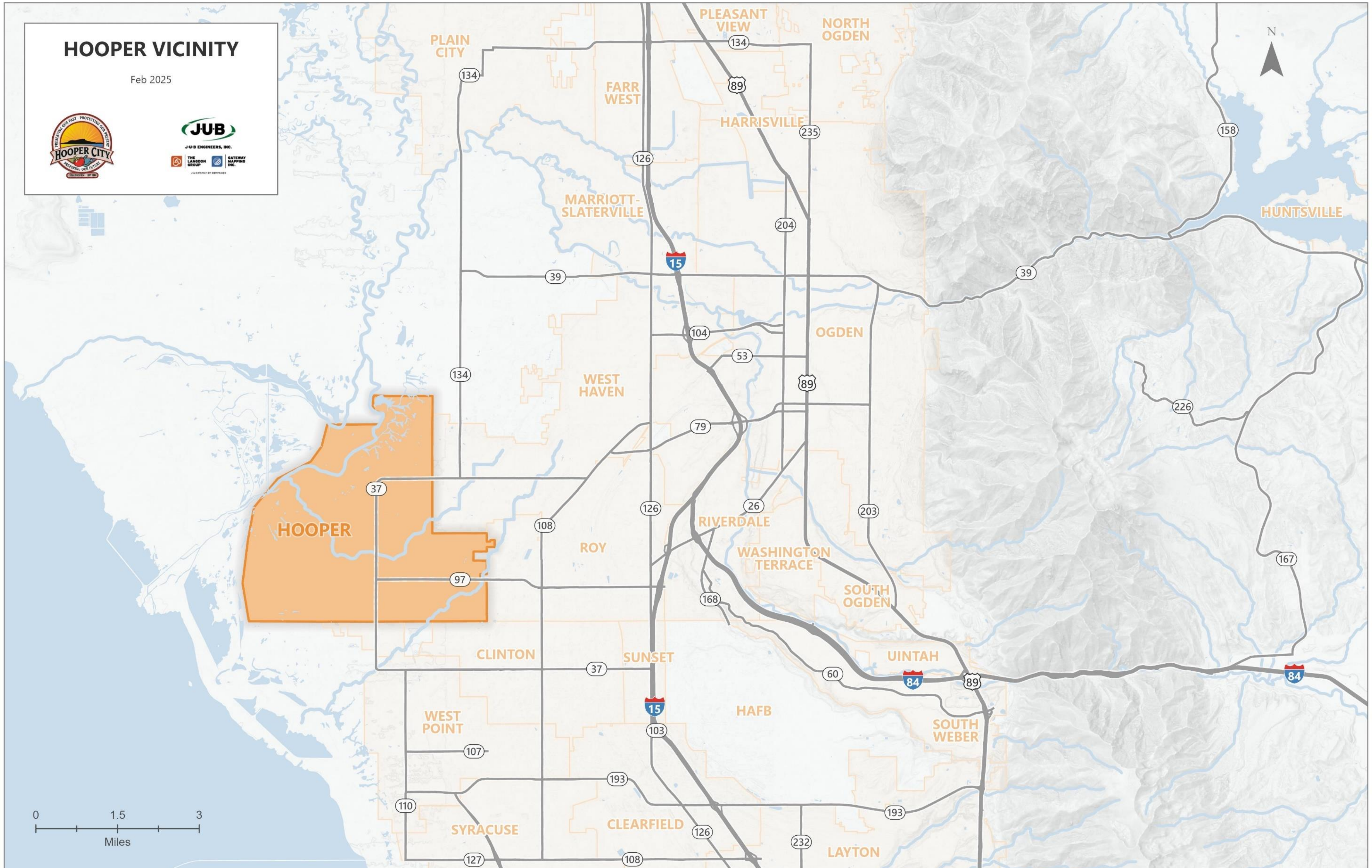
1.3 PLAN DEVELOPMENT PROCESS

This TMP update was administered and financed by Hooper City as part of the General Plan Update. It was completed in collaboration with and under the guidance of City staff. As a result, this TMP provides information and data that reflect existing (2021) conditions.

1.4 STUDY AREA

The study area includes Hooper City as well as collector and arterial roadways a half mile outside the city limits. The study area is shown in **Figure 1.**

Figure 1: Hooper Vicinity Map



2 EXISTING CONDITIONS

Developing an accurate assessment of the existing conditions in the City is an important first step in developing a TMP. As a part of this process, an inventory of the existing network and an evaluation of existing conditions within the study area was completed to identify existing transportation issues and to establish a framework for the analysis of future conditions. The existing street network and traffic patterns will serve as the basis for the future network and for identifying future transportation conditions and needs.

2.1 LAND USE

In 2010, the US Census Bureau estimated the population of Hooper City at 7,218 residents[1]. By 2019 the City had an estimated population of nearly 9,152. This growth represents approximately a 27% increase in population between 2010 and 2019.

Hooper City has the potential for significantly more growth in the future. The existing land use is typical of a small community. A commercial core is located along Main Street and the city center is surrounded by a residential grid. The city is predominantly rural and agricultural. Part of the city (mainly east of SR-37) have begun to develop into suburban neighborhoods.

As existing agricultural land is developed with residential and commercial uses, traffic volumes in Hooper will increase.

[1] U.S. Census Bureau, Population Estimates Program (PEP)

2.2 EXISTING ROADWAY FUNCTIONAL CLASSIFICATION

The existing roadways are classified by function according to guidelines prepared by the Federal Highway Administration (FHWA). Federal funding programs specifically apply to roadways with functional classifications of collector and above. Roadways are classified based on their function, with respect to both mobility and access. For example, an interstate freeway occupies one end of a continuum between mobility and access, providing traffic with greater mobility and little access to adjacent lands. A cul-de-sac, at the opposite end of this continuum, provides access to land, but offers minimal movement of traffic.

To enable streets and highways to accomplish their intended function, the planning and design of the facilities should consider those elements that support the intended functions. Descriptions of the various roadway functional types and related planning and design considerations are provided in **Table 1**. Federal funding programs only apply to roadways with functional classifications of collector and above.

Table 1: Roadway Functional Classifications

Roadway Classification	Description	Example
Interstate	Interstates promote movement of traffic with limited access, high speeds, separated directional lanes, adequate geometries, and grade-separated intersections. The interstate freeway is essentially a specialized Major Arterial.	I-15 I-80 I-84
Major Arterial	Principal Arterials are generally the high traffic volume roads within a study area. These roadways contain the greatest proportion of through or long-distance travel. Roadway access should be limited to promote efficient traffic movement. Speeds are generally in the 35 to 45 mph range in urban situations, and parking is usually prohibited. Arterials are typically about a mile apart but may be spaced with a half-mile separation. Many of the intersections will be signalized, and signal placement and coordination are critical to the operation of the arterial.	SR-108, SR-126
Minor Arterial	Roadways that connect principal arterials and collectors are classified as minor arterials. Minor arterials usually have capacity sufficient to carry 3 or 4 lanes of traffic and have curb, gutter, and sidewalk along both sides. The predominant function of a minor arterial is to promote movement of through traffic, but these facilities also provide considerable access for local traffic that originate or is destined to points along the roadway. Often minor arterials become boundaries to neighborhoods and serve less concentrated developments such as neighborhood shopping centers or schools. Urban speeds are generally in the 35 to 40 mph range. Access may be restricted, and parking is often prohibited in an urban situation.	SR-37 (4000 South) SR-97 (5500 South)

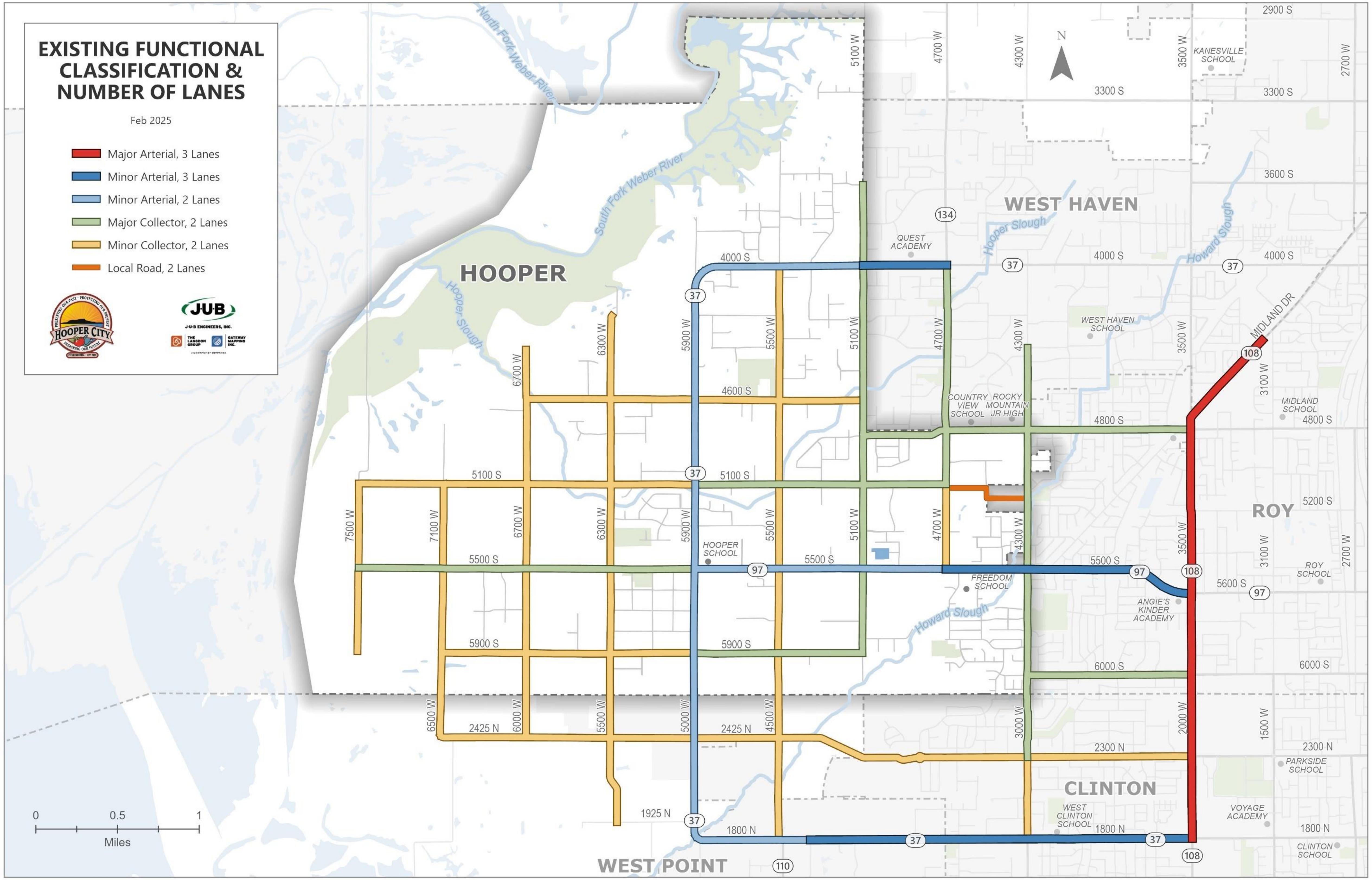
Roadway Classification	Description	Example
Collector	A collector is intended to assemble and concentrate residential and rural traffic and direct it to the arterial system. Collectors usually are designed with 2 or 3 lanes of traffic, and have curb, gutter, and sidewalk along both sides. Direct access to adjoining property is common and often essential. Operating speeds are generally in the 25 to 35 mph range. Parking is acceptable but may be limited. Collectors are sometimes sub-categorized into major and minor collectors. Major collectors tend to connect important regional facilities directly to the arterials, while minor collectors usually connect to the local roads.	5500 West, 5100 South
Local Streets	Local streets typically consist of two lanes with shoulders, with curb, gutter and sidewalks present in some locations. Local roads are the capillaries of a transportation network, providing direct access to public facilities, businesses, and private property. The typical speed limit on local streets is 20 to 25 mph and parking is usually permitted.	Local streets constitute all the City-owned roads that are not classified under the preceding categories. Some local roads may also be private streets.

Figure 2 shows the existing functional classification for Hooper City. Historically Hooper City has not required construction of curb and gutter or sidewalks for all developments. As a result, many roadway segments do not meet the adopted standards and have insufficient pavement width and may be missing curb and gutter or sidewalks. All future developments and roadway projects must now install curb and gutter and sidewalks to meet city standards.

2.3 INTERSECTION CONTROL

Traffic control devices are an essential element at each intersection because they regulate traffic flow and can improve safety. Intersection control devices include roundabouts, stop signs (2-way and 4-way), traffic signals, and yield signs. Within Hooper, there are no existing traffic signals or roundabouts. As traffic congestion increases, the need to modify major intersections with traffic signals and roundabouts can be expected.

Figure 2: Existing Functional Classification & Number of Lanes



2.4 TRAFFIC COUNTS

PM peak hour traffic counts were collected by J-U-B staff at a total of five locations throughout Hooper. The count locations were identified by the City. These counts were conducted in March 2021 for the following locations and dates:

- 5500 South (SR-97) / 5900 West (SR-37) (March 9, 2021)
- 5900 South / 5900 West (SR-37) (March 10, 2021)
- 5900 South / 5500 West (March 10, 2021)
- 5100 South / 5500 West (March 11, 2021)
- 4000 South (SR-37) / 5500 West (March 17, 2021)

The average daily traffic volumes are summarized in and traffic count data is provided in **Appendix A: Traffic Counts and Analysis.**

2.5 LEVEL OF SERVICE

Level of Service (LOS) is a qualitative description of the level of congestion ranging from LOS A to LOS F. LOS A through D represents free-flowing traffic and LOS E & F represents gridlock. LOS D is considered the minimum acceptable Level of Service.

2.6 EXISTING CONDITIONS TRAFFIC ANALYSIS

The five intersections listed in section **2.4 Traffic Counts** were analyzed during the PM peak hour using the Synchro software platform. The existing conditions scenario reflects the existing lane configuration and the traffic volume for the day the traffic count data were collected. All intersection approaches performed at LOS C or better. Unsignalized intersections report approach LOS only and not overall intersection LOS. For a summary of LOS results, see **Appendix A**.

2.7 ALTERNATIVE TRAVEL MODES

Bicycling and walking are often the only modes available to the young and elderly. Robust pedestrian and bicycle networks allow shorter distance trips to be moved from the street to bicycle or pedestrian specific facilities. In addition to providing modal options for shorter distance trips, bicycle and pedestrian facilities offer a wide range of recreational opportunities that often enhance quality of life for residents.

Since Hooper has not required construction of sidewalks for all developments in the past, many areas within the city lack these types of facilities. The City now requires new developments to include sidewalks. **Figure 3** presents the current and proposed trails map within Hooper City from the Wasatch Front Regional Council (WFRC) General Plan.

Currently, there are no transit options in Hooper City. The nearest transit routes are located along SR-108 and 5600 South in Roy.

2.8 TRUCK ROUTES

The purpose of truck routes is to concentrate heavy truck traffic on specified roadways to minimize congestion, delay, pavement deterioration, and improve safety. Roadways designated as truck routes can be designed and constructed to handle the heavy vehicle weight loads, which will prolong the life of other roadways throughout City. Designated truck routes also provide opportunities for freight to move efficiently and safely. Hooper City Municipal Code has not designated any roadways as truck routes within the City.

3 FUTURE CONDITONS

The Transportation Master Plan reflects current and future transportation needs within the City. Future travel demand projection serves an essential part of transportation planning by helping identify transportation needs that may not be apparent with existing demand. For this update, future traffic volumes were estimated using the WFRC travel demand model. WFRC maintains a Cube model for the urbanized area within Weber County and the travel demand model was chosen as the primary tool to determine the future traffic demand within the City.

This section summarizes the population, employment, and land use assumptions. This information was utilized in the travel demand modeling process to generate traffic forecasts volumes for functionally classified roadways within the City. These traffic forecasts were used to identify future deficiencies in the transportation system.

3.1 FUTURE LAND USE

Historically, Hooper City has been a bedroom community predominantly composed of single-family residential or agricultural land uses that reflect varied lot sizes and values. The future land use plan as shown in **Figure 3** is expected to continue the recent residential development trends with a focus conventional single family housing with the majority of lots being approximately one-half acre in size. Although the City is planning for significant residential development, the general plan focuses on revitalizing the town center area and developing a strong commercial city core. These areas provide local services, shopping opportunities, and job opportunities for residents.

The relationship between land uses is an important component in developing traffic forecasts. Identifying land use helps determine the number, purpose, route, mode, and diurnal distribution of trips. For example, since the majority of land use in the city is residential, it is expected that a large percentage of work and work related trips are made to employment areas outside of the City.

Table 2 summarizes the model socio-economic inputs that were used for the plan update. By the year 2050 the population within the City's boundaries is expected to increase by approximately 113% to 19,472 residents. Model socio-economics at the traffic analysis zone (TAZ) level are provided in **Appendix B: Traffic Analysis Zone Inputs.**

Table 2: Model Socio-economic Inputs

Population		Households		Employment	
2019	2050	2019	2050	2019	2050
9406	19472	2907	7072	383	561

Figure 3: Existing & Future Trails

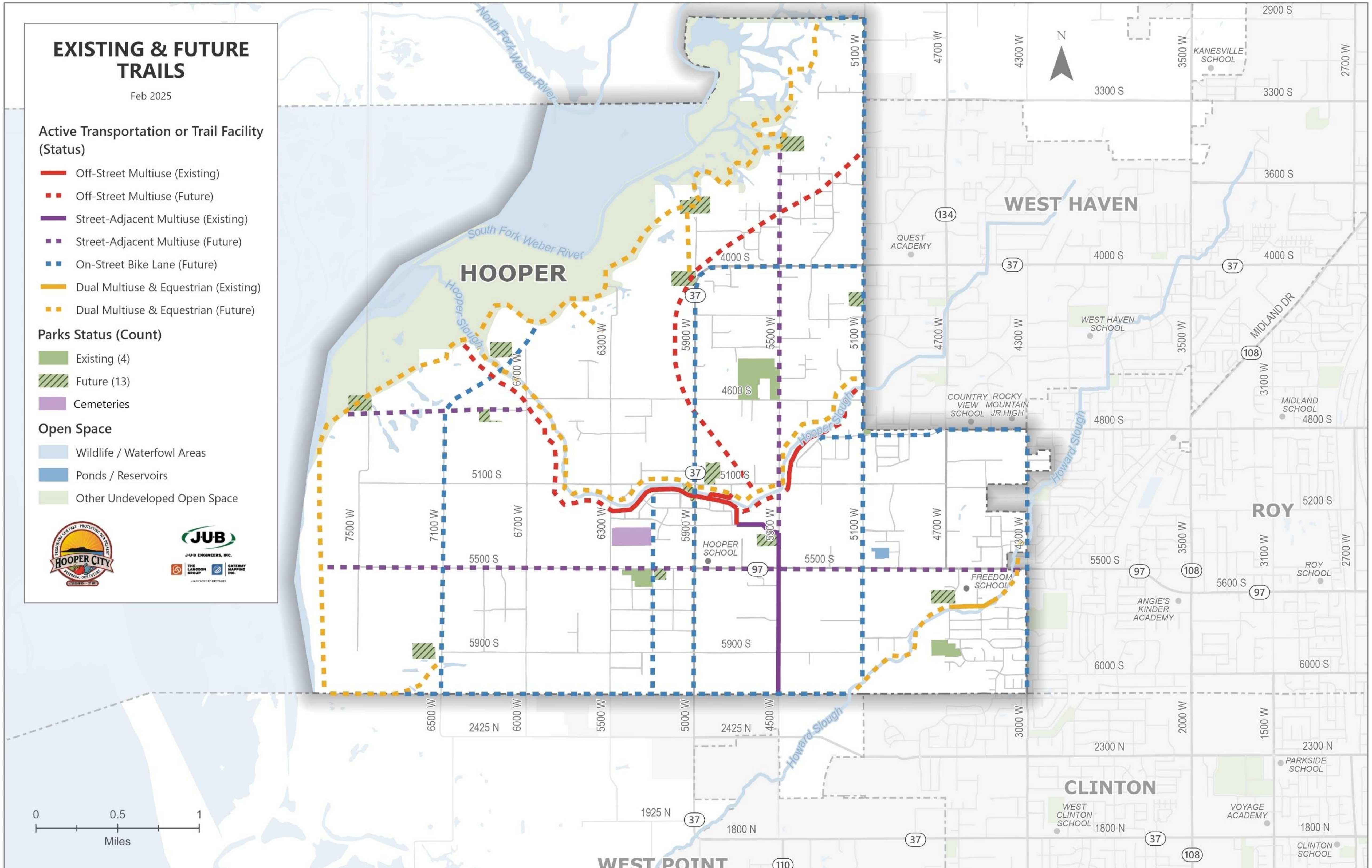
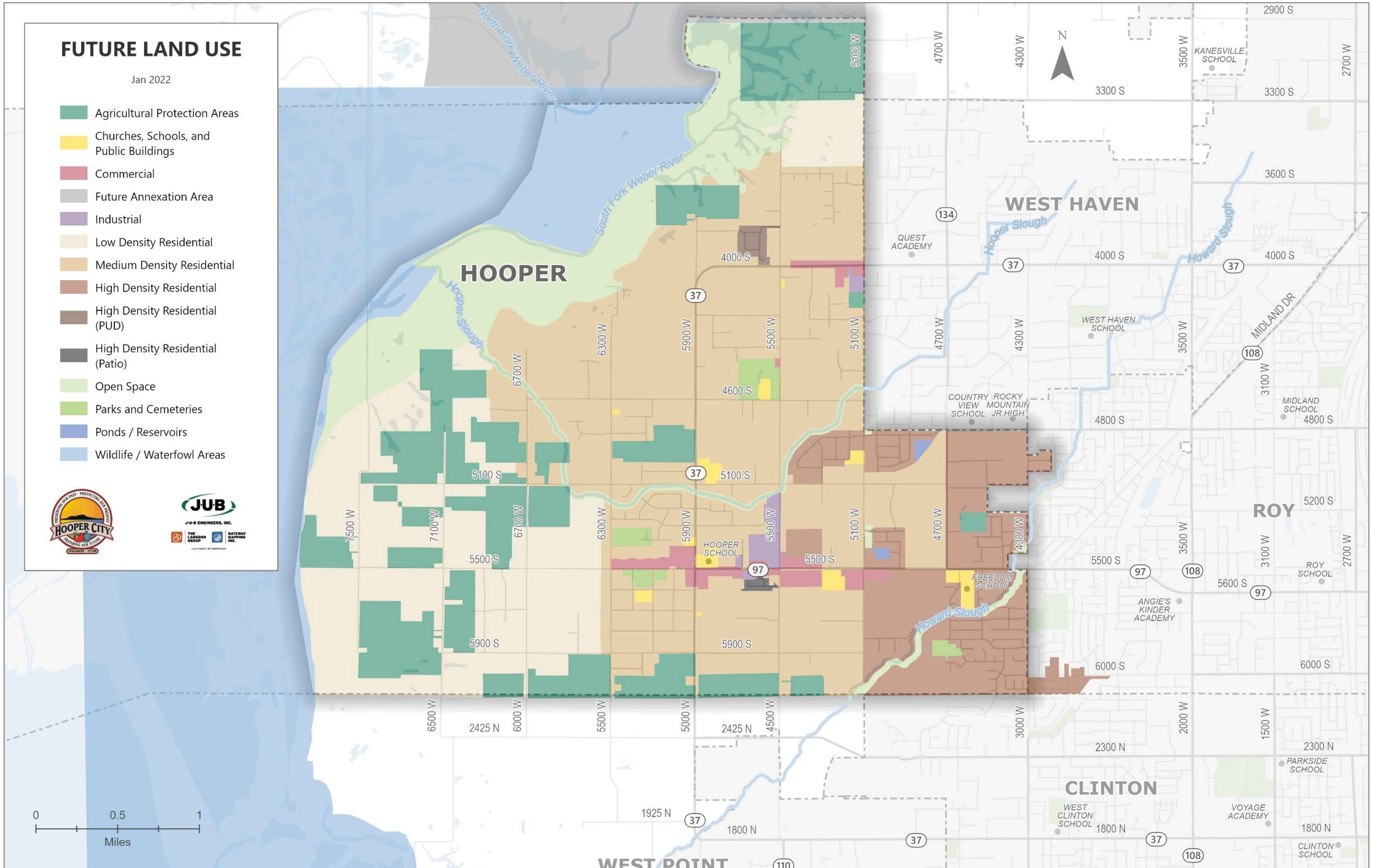


Figure 4: Future Land Use



3.2 TRAFFIC FORECASTS

Future travel demand forecasting is an essential part of transportation planning. Travel forecasts are used to identify transportation needs that may not be apparent with existing demand. For this TMP update, future traffic conditions are based upon modeling completed with the WFRC travel demand model version 8.3.1 (January 2021) for a base year 2019 and future year 2050. The year 2050 model includes the land use assumptions summarized in **Section 3.1** as well as the recommended local network as presented in **Figure 5**.

For roadways, level of service (LOS) is typically evaluated for segments of roadway without intersecting crossroads or major driveways. Segment LOS reflects the combination of travel time delay due to the signal control and the speed traveled below the free-flow speed on each roadway segment. For ease of this analysis, daily service volumes were developed for each roadway functional classification. These service volumes are used for conceptual planning and preliminary engineering purposes and are consistent with HCM methodologies. **Table 3** summarizes the daily service volumes used to evaluate the planned roadway network, as well as the assumptions used in developing these volumes. **Figure 5** summarizes the No-Build forecast daily traffic volumes and LOS for each planned functionally classified road within the City. **Figure 6** presents the 2050 No-Build functional classification and number of lanes.

Table 3: Daily Service Volumes and Assumptions

Functional Class	Area Type	Posted Speed	Travel Lanes	Median	Left-turn Lane	Right-turn Lane	Daily Service Volume	
							LOS C	LOS D
Principal Arterial - UDOT 6 Lane	Transitioning	40 mph or higher	6	Divided	Yes	Yes	41,200	54,300
Principal Arterial - UDOT	Transitioning	40 mph or higher	4	Divided	Yes	Yes	25,935	34,390
Minor Arterial - UDOT	Transitioning	35 mph or lower	2	Divided	Yes	Yes	8,700	17,800
Minor Arterial	Transitioning	35 mph or lower	2	Divided	Yes	Yes	6,700	13,500
Major Collector	Transitioning	35 mph or lower	2	Divided	Yes	No	6331	12,757
Minor Collector	Transitioning	35 mph or lower	2	Undivided	Yes	No	5,728	11,542
Minor Collector - City	Transitioning	35 mph or lower	2	Undivided	No	No	4,824	9,720

Figure 5: Year 2050 No-Build Daily Traffic Volumes and Level of Service

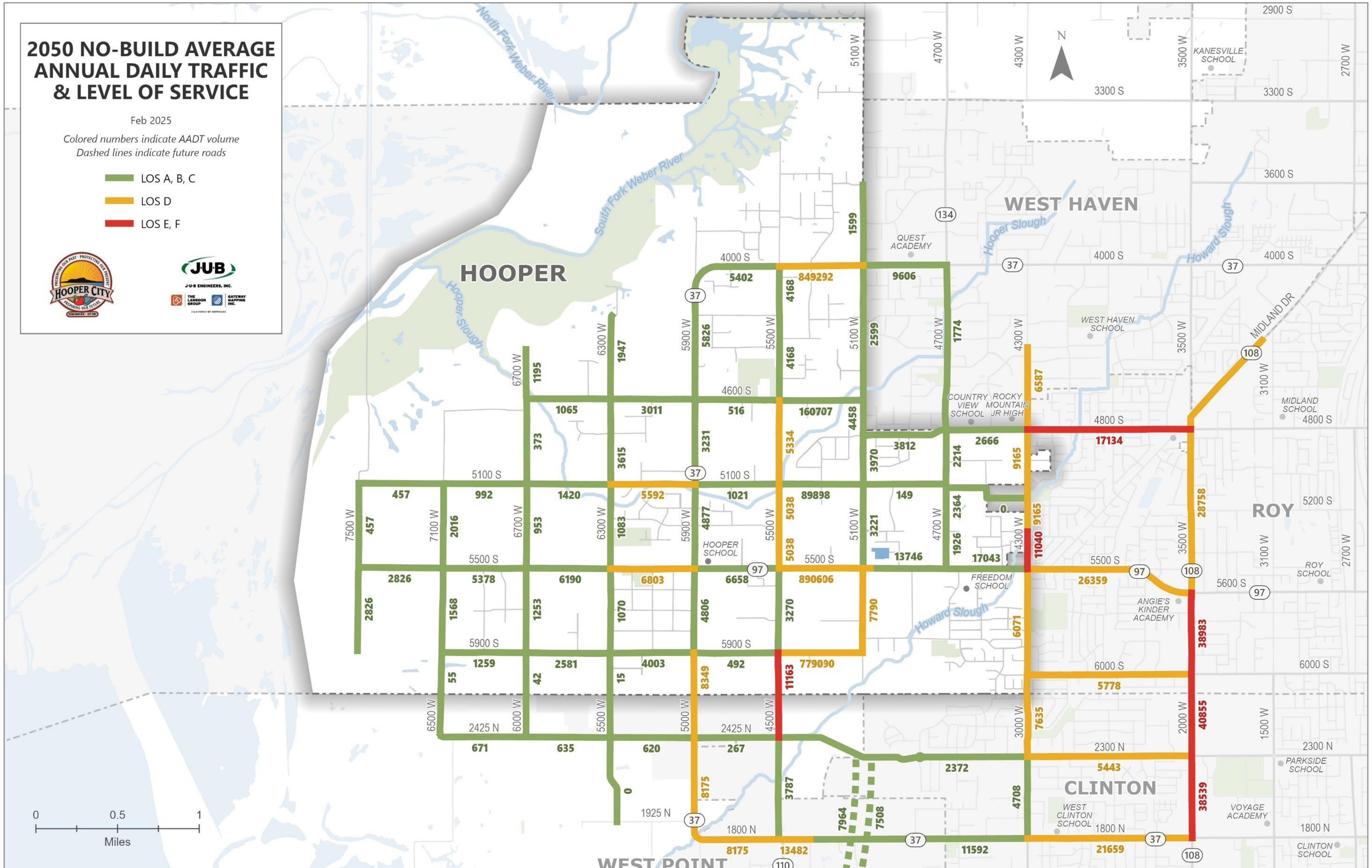
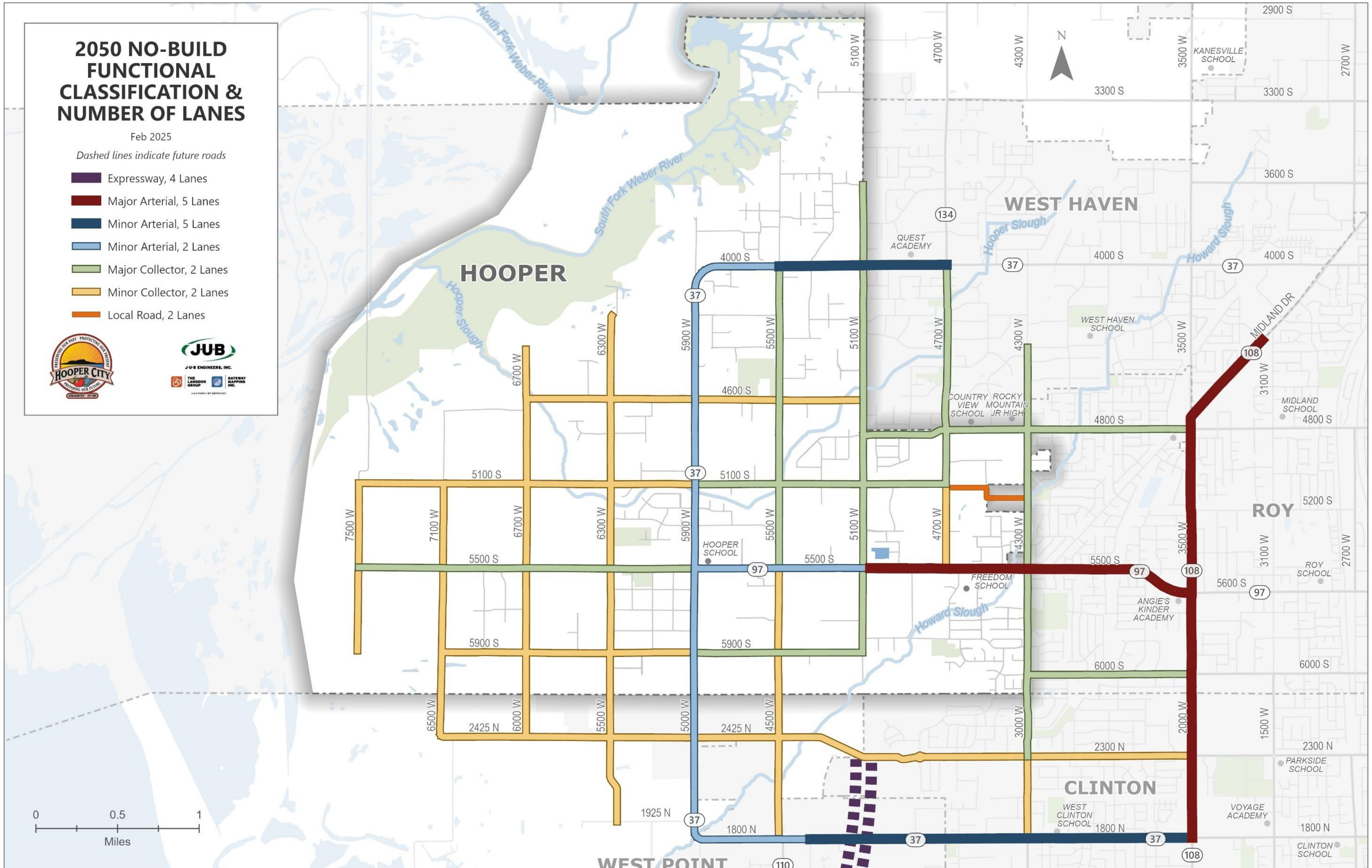


Figure 6: Year 2050 No-Build Functional Classification and Number of Lanes



3.3 AREAS OF CONCERN

To better address traffic issues in Hooper, the analysis of within the city was separated into three recognizable areas with common concerns. These areas are as follows: West of SR-37 (5900 West); East of SR-37 (5900 West) and North of SR-97 (5500 South); and East of SR-37 (5900 West) and South of SR-97 (5500 South).

3.3.1 WEST OF SR-37 (5900 WEST)

All roadway segments west of SR-37 (5900 West) are expected to perform adequately through at least 2050. The city would like to extend 5900 South to 7500 West and connect 6300 West to SR-37 (5900 West) in the vicinity of 4200 South to reduce the number of dead-end minor collectors and expand the grid network within the city. The city intends to improve all existing collectors in this area to at least have curb and gutter. Local roads should be constructed to increase connectivity to the collector roadways and provide multiple accesses to neighborhoods.

3.3.2 EAST OF SR-37 (5900 WEST) / NORTH OF SR-97 (5500 SOUTH)

Most roadway segments in this area are expected to perform adequately through at least 2050. 4300 West will need to be improved to handle the expected demand. The classification of 5500 West should be upgraded from a minor collector to a major collector by 2050. The city would like to install a perimeter roadway at the north end of the city between 5500 West and 5100 West. SR-37 (4000 South) will be expanded to a five-lane cross section east of 5500 West by 2050. SR-97 (5500 South) will also be expanded to a five-lane cross section east of 5100 West by 2050.

3.3.3 EAST OF SR-37 (5900 WEST) / SOUTH OF SR-97 (5500 SOUTH)

Most roadway segments in this area are expected to perform adequately through at least 2050. However, 5500 West and 4500 West between 5900 South and 2425 North will need to be improved to handle the increased demand by 2050. 5500 West and 4500 West should be improved from minor collectors to major collectors by 2050 in partnership with Clinton City. The city would like to connect 5100 West south of 5900 South to 2425 North/2300 North.

3.3.4 WEST WEBER CORRIDOR

Weber County is planning on building the West Weber Corridor by 2050. In Hooper, West Weber Corridor will replace 5100 West. West Weber Corridor will be a divided highway with two lanes in each direction with signalized intersections at 2300 North, 5500 South and 4000 South. The city is proposing a two-way frontage road on the west side of the West Weber Corridor to allow continued access to properties with existing access to 5100 West.

3.3.5 SR-37/5900 WEST INTERSECTION CURVE REALIGNMENT

The intersection of 5900 West and SR-37 (where SR-37 transitions from 5900 West to 4000 South) has a skew angle that makes it difficult for southbound drivers to see oncoming traffic in the curve. It is recommended that 5900 West be realigned so that it connects to the curve as close to perpendicular as possible. This will allow drivers on 5900 South to more easily see oncoming traffic on SR-37. Right of Way will be impacted on the northeast corner of this intersection if 5900 South is realigned.

3.4 2050 TRAFFIC ANALYSIS

The traffic volume used in the existing conditions analysis was projected to the year 2050 using growth trends identified in the WFRC travel demand models. Two 2050 models were created, 2050 No-Build and 2050 Build. The 2050 No-Build scenario utilizes the forecast 2050 volume, but retains the existing conditions roadway network, this scenario is used to identify future capacity deficiencies. The 2050 Build scenario in turn uses the 2050 forecast data, but the roadway network includes upgrades to address the deficiencies identified in the 2050 No-Build scenario.

3.4.1 2050 NO-BUILD

In the 2050 No-Build scenario, the 5500 South (SR-97) / 5900 West (SR-37) intersection northbound and southbound approaches are expected to function at LOS E. The 4000 South (SR-37) / 5500 West intersection southbound approach is expected to function at LOS F. All other approaches on the analyzed intersections identified in Section 2.4 function at LOS C or better. **Appendix A** presents the 2050 No-Build analysis details.

3.4.2 2050 BUILD

The 2050 Build scenario looked to correct the deficiencies identified in the 2050 No-Build scenario at the 5500 South (SR-97) / 5900 West (SR-37) and 4000 South (SR-37) / 5500 West intersections.

At the 5500 South (SR-97) / 5900 West (SR-37) intersection, left turn lanes were added on all approaches and a traffic signal was added. These upgrades allow the intersection to function at an expected overall LOS A with all approaches functioning at LOS A or B.

At the 4000 South (SR-37) / 5500 West intersection, left and right turn lanes were added to each approach and a traffic signal was added. These upgrades allow the intersection to function at an expected overall LOS A with all approaches functioning at LOS A or B.

Appendix A presents the 2050 Build analysis details.

4 RECOMMENDATIONS

Transportation network upgrades were determined by evaluating the proposed 2050 functionally classified road network and reviewing existing and planned intersection traffic control devices. These improvements are based on the traffic volume forecasts from the 2050 travel demand modeling.

4.1 ROADWAY AND INTERSECTION CONTROL

Figure 7 & Figure 8 show the recommended functional classification system, number of lanes, Annual Average Daily Traffic (AADT), and LOS respectively for Hooper City without the construction of West Weber Corridor. **Figure 9 & Figure 10** show the recommended functional classification system, number of lanes, AADT, and LOS respectively for Hooper City with the addition of West Weber Corridor. These changes were identified based upon input from City staff, UDOT and WFRC to better respond to future access requirements and anticipated traffic conditions within the city.

In further preparation for the projected increases in traffic volumes, several intersections have been designated as likely candidates for the installation of either a traffic signal or roundabout. These intersections are as follows:

- SR-37 (5900 West) / SR-97 (5500 South) (Traffic Signal)
- 5500 West / SR-97 (5500 South) (Traffic Signal or Roundabout)
- 5500 West / SR-37 (4000 South) (Traffic Signal)

Improvements to the intersection traffic control will reduce congestion, increase safety, and improve mobility throughout the transportation network. The type of traffic control device considered for implementation at each intersection in the future, whether it be a traffic signal; roundabout; or other device, should be determined by a traffic study before implementation.

4.2 STREET STANDARDS

Street standards reflect the goals of the City and the typical roadway cross sections. **Table 4** and **Figure 11** summarizes the street standards for Hooper City. Typical sections for regional corridor are in **Appendix C: Arterial Typical Sections** and Minor Collector – City are in **Appendix D: Collector and Local Typical Sections**.

Table 4: Summary of Typical Roadway Cross Sections

Function Class	ROW	Pavement	Park Strip	Sidewalks
Minor Arterial	84'	60'	4.5’	4'
Major/Minor Collector	66'	42'	4.5’	4'
Local	60'	36'	4.5'	4'

All streets shall be required to meet the Hooper City standard cross sections as identified in the Plan.

Modification of these standards may be recommended on a case-by-case review by the City Engineer based on the existing and proposed roadway function, proximity to intersections and access points, crash history, transition to existing roadways, and related technical criteria as deemed applicable by the City Engineer. The City may require higher standards, based on best engineering judgment related to the safe operation and progression of traffic flow.

Intersections of collector streets and higher road classification shall be reviewed for the need for turn lanes and other geometric improvements. The City Engineer may recommend alternative standards when those standards can be demonstrated to provide better traffic flow and safer operation. The City Engineer provides technical review for the City, as final decisions and appeals rest with the Hooper City Council.

*Figure 7: 2050 Functional Classification and Intersection Control (**WITHOUT** West Weber Corridor)*

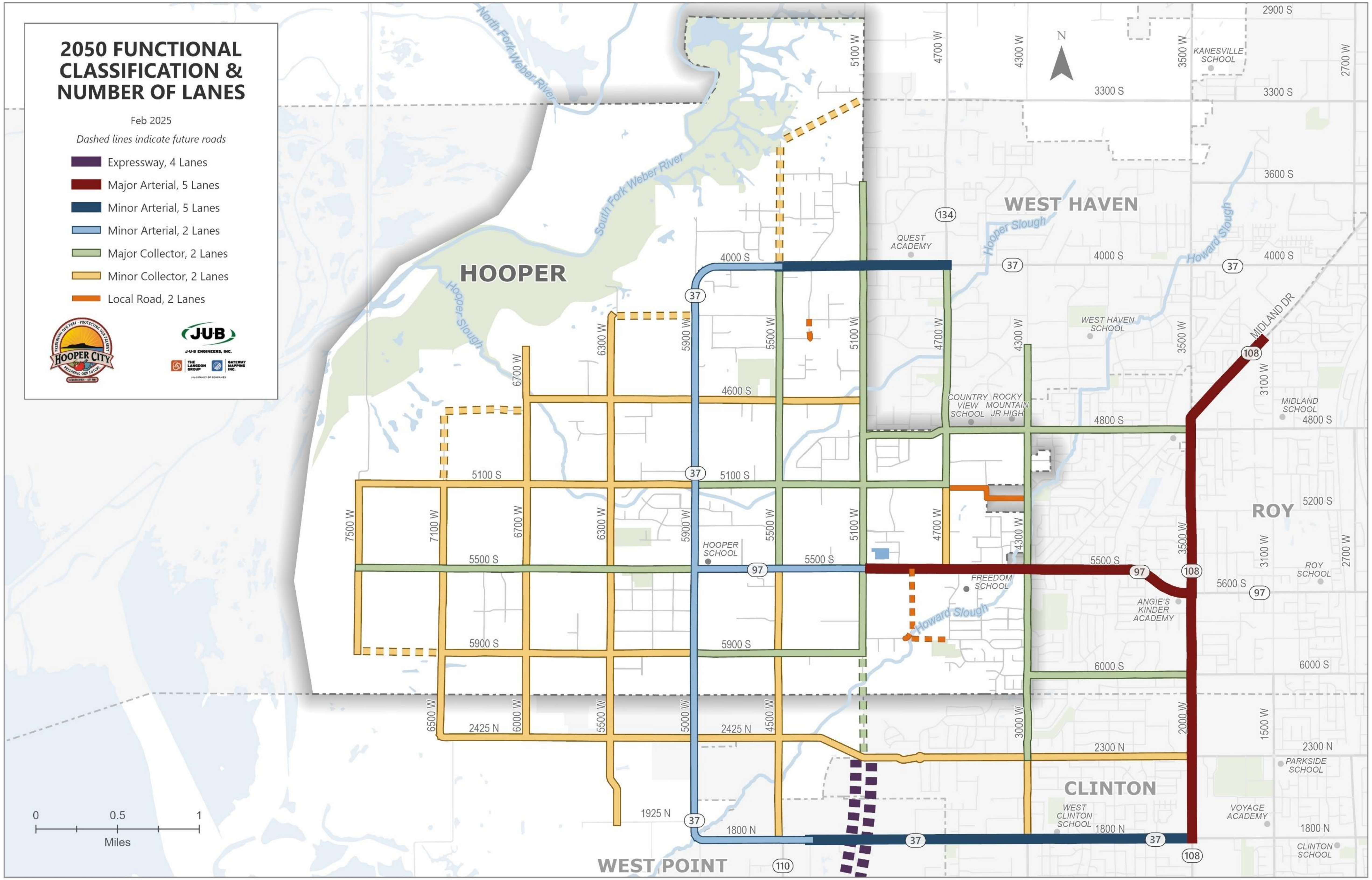


*Figure 8: 2050 AADT/LOS (**WITHOUT** West Weber Corridor)*

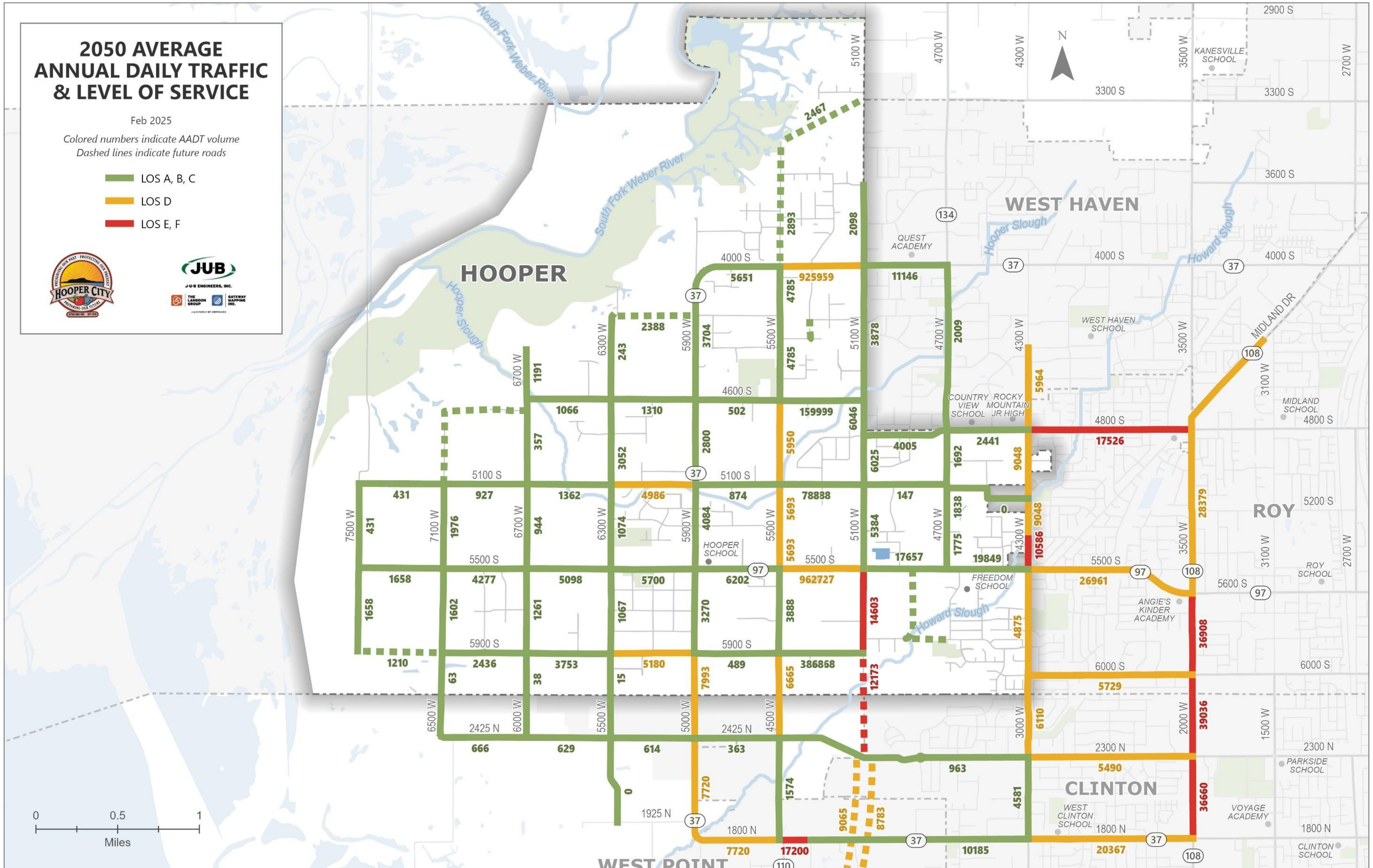


*Figure 9: 2050 Functional Classification and Intersection Control (**WITH** West Weber Corridor)*

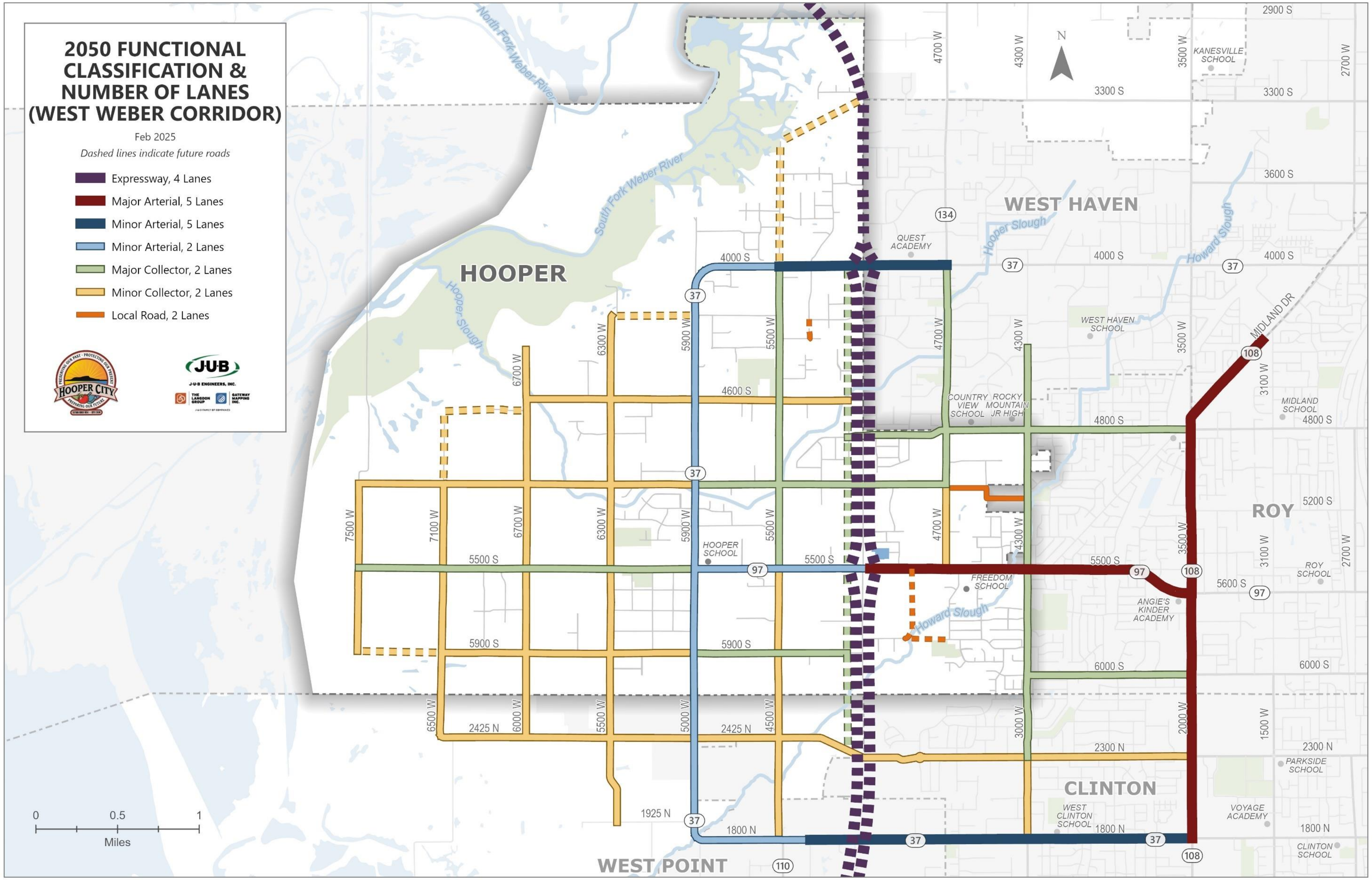


*Figure 10: 2050 AADT/LOS (**WITH** West Weber Corridor)*

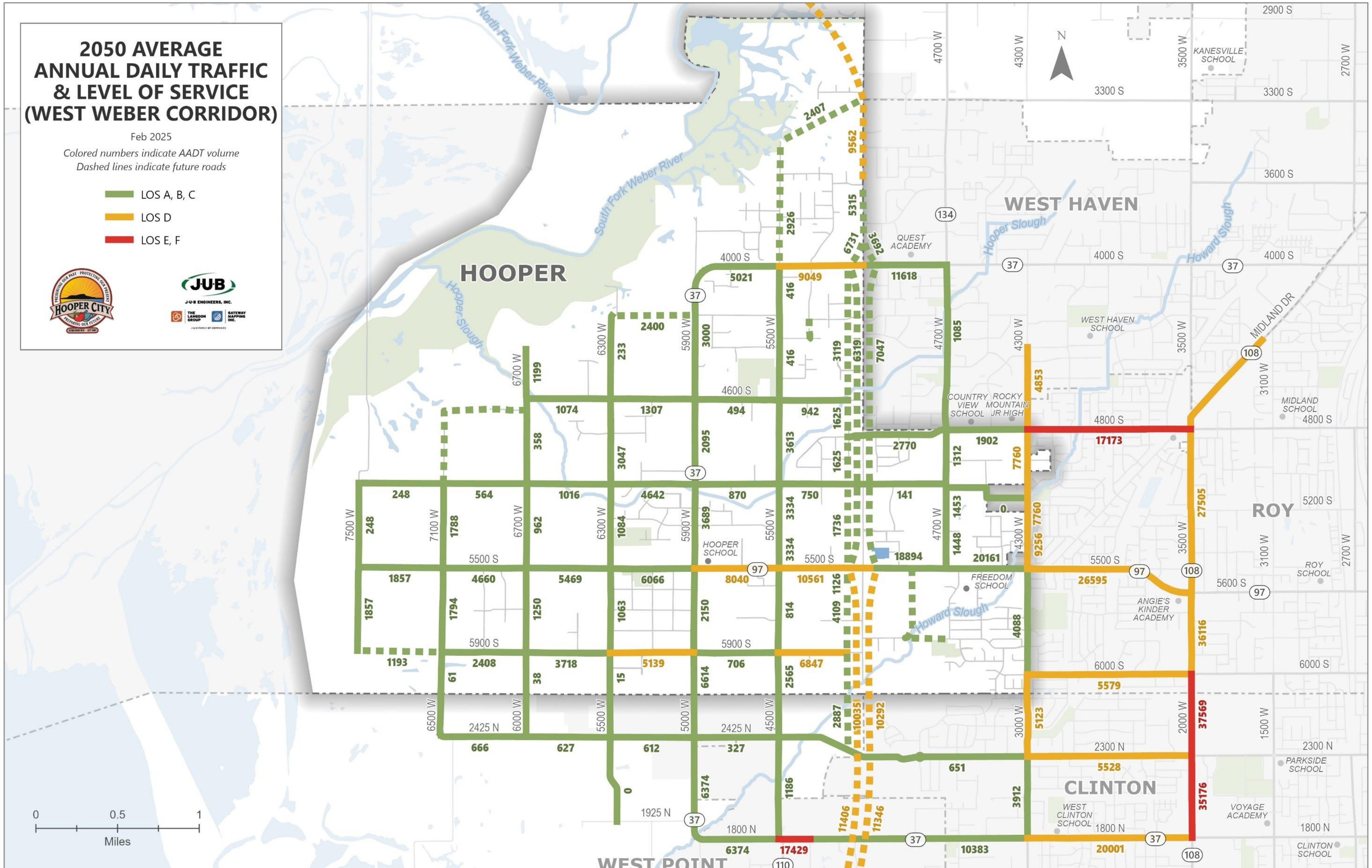
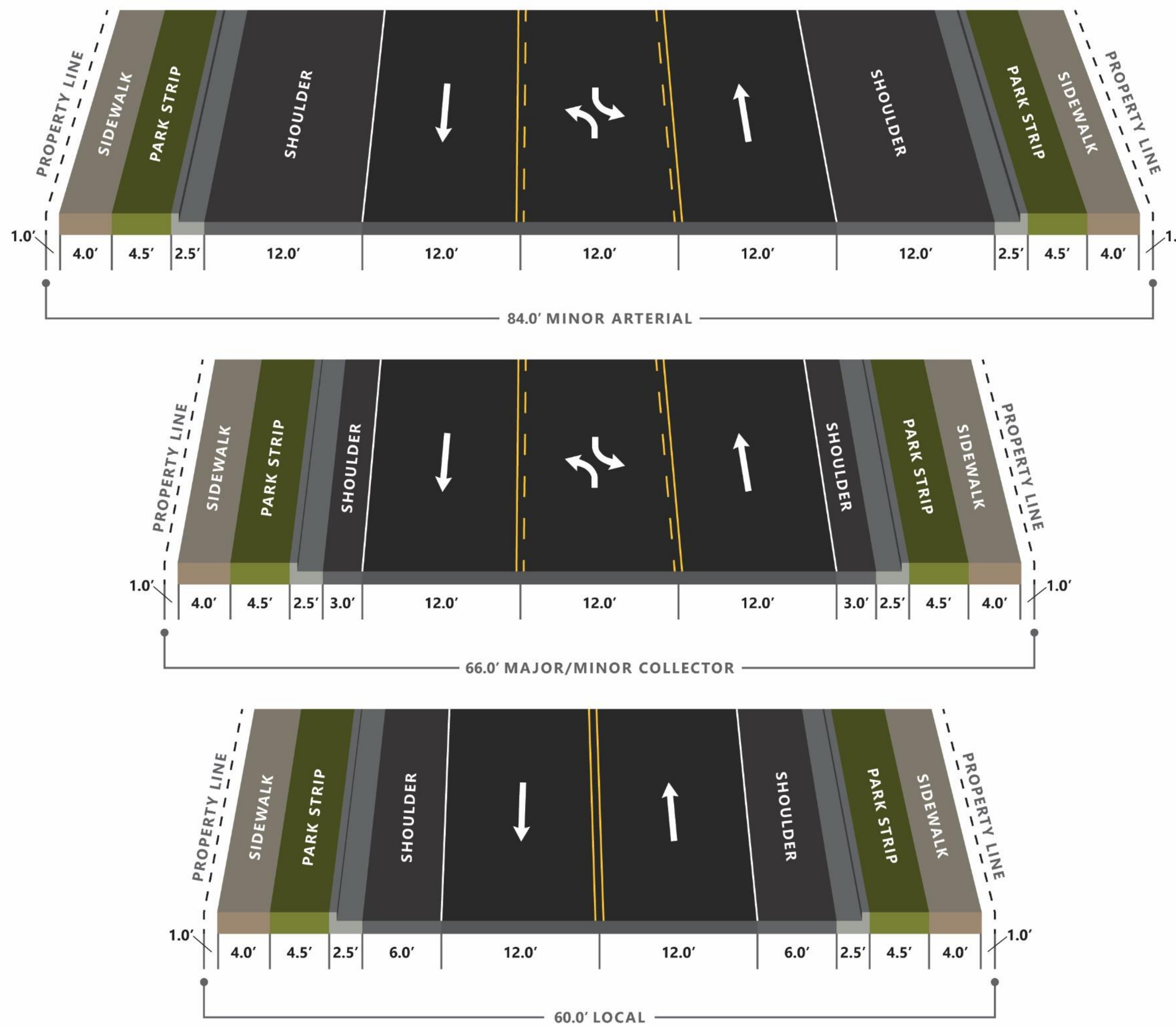


Figure 11: Roadway Cross Sections



4.3 ACCESS MANAGEMENT

Access management is an important tool in transportation planning. Access management is the planning, design and implementation of land use and transportation strategies to maintain a safe flow of traffic on roadways while accommodating the access needs of adjacent developments. The concept involves maximizing the efficiency of arterial and collector corridors by limiting or consolidating driveways or access points. By requiring adjacent land to be accessed from facilities with lower functional classifications, traffic conflicts caused by turn movements onto and off of key roadways are consolidated and reduced

The benefits of access management include increased capacity, maintenance of traffic flow and speed, improved safety, and preservation of infrastructure investment. By employing access management techniques, roadways can better fulfill their intended function for a longer period of time, maximizing capacity and reducing the need for expensive infrastructure investments in the future through the addition of travel lanes.

Where practical, the future collectors and arterials identified in the Transportation Master Plan should be managed with coordinated access control as follows:

- Maintain 35 mph speed limits or higher to promote mobility.
- Signals spaced at 2,640 feet.
- Local street intersections spaced at 660 feet.
- Accesses spaced at 330 feet.
- Street parking limited or none.
- Separated pathways or sidewalks.
- Separate bike paths adjacent to the travel lanes.

Table 5 summarizes additional access management considerations for regional corridors, based on spacing guidance from the Access Management Manual, second edition; Access Management Application Guidelines; and UDOT Administrative Rule R930-6.

Table 5: Additional Access Management Criteria for Regional Corridors

Functional Classification	Access Management
Minor Arterial	Arterials have limited access. Side street access and 330' min. spacing for driveways. No new individual residential access.
Major Collector (Residential)	Street access only preferred, with 200' average driveway spacing with min. 150' spacing.
Major Collector (Commercial/Industrial)	300' min. spacing (shared accesses).
Minor Collector (Residential)	No parking instead of limiting access points. Street access preferred.
Minor Collector (Commercial/Industrial)	Shared access. No parking. 200' min. spacing.

4.4 INTER-BLOCK CONNECTIVITY

For convenient access, circulation, safety, emergency response, utility routing and traffic, within each block (areas between collectors and or arterials), all development, including construction of new local streets, shall connect or accommodate the connection of local streets between collectors and arterials (through streets or stub streets) at a minimum of two locations (later defined) on each side of a typical "block" forming a general grid-type pattern in both north/ south and east/ west directions. These connections shall be made as close as possible to the one-third point (900 feet) of the block interval, but at a minimum within the "mid-block connection range" (600 feet to 1200 feet) from the collector or arterial intersection.

Development with collector or arterial roadway frontage within the mid-block connection range shall be required to incorporate the street connection into the development's roadway design. Developments shall provide local street stubs into the interior portion of the block within the mid-block connection range. Developments located on the Interior of a block may be required to provide off-site connections if required for ingress and egress or for compliance with governing codes, but shall at a minimum provide stub streets in the mid-block connectivity range within their development to abutting properties. Interior developments may be required to provide one or multiple connections or stub streets in each direction as required depending on the size of the development and proximity to the mid-block connectivity range.

During the conceptual or preliminary stage of development, the developer and/or the developer's engineer is encouraged to communicate with the City and surrounding property owners to coordinate the most efficient location for roadway connection points to accomplish the purposes of the required inter-block connectivity. During the review and approval process, at the City's discretion, consideration will be given to existing conditions, including but not limited to, existing houses or structures, no-build zones, water bodies, sloughs, wetlands, city boundaries, zoning, utilities, etc., which may substantiate the adjustment or elimination of one or more connection point or stub street. In the event that the City elects to waive a connection point or stub street requirement when evaluating inter-block connectivity, this action shall not be construed to change or eliminate the requirements for ingress and egress, nor does it eliminate any other requirement of this chapter for any development.

When evaluating inter-block connectivity, the City may consider agreements or arrangements made between property owners in plan or agreement form.

Developments shall connect to, or make further progress towards connection to, existing stub streets. This includes previously planned and approved streets that have not been constructed.

All planned or proposed connections and stub streets shall be designed as fully developed city standard street sections, and must comply with AASHTO design standards for public streets. Streets shall also include all utilities that continue to the project boundary or property line.

4.5 ROADWAY LIGHTING

According to AASHTO's Geometric Design of Highways and Streets, Good visibility under both day and night conditions is fundamental to enabling motorists, pedestrians, and bicyclists to travel on roadways in a safe and coordinated manner. Properly designed and maintained street lighting should provide comfortable and accurate night visibility, which should facilitate vehicular, bicycle and pedestrian traffic. Decisions concerning appropriate street lighting should be coordinated with safety management, crime prevention, and other community concerns. The AASHTO publication An Informational Guide for Roadway Lighting provides discussion on street and roadway lighting.

Properly designed lighting can provide improved safety. Additionally, lighting improvements enhance and improve roadway Level of Service by conditions as vehicles can flow more freely when proper lighting conditions are provided. Street lighting should be included on all streets classified as collectors or arterials. These elements are recommended to be implemented with all roadways being improved and for roadways that currently do not have lighting facilities. Lighting can also provide attractive gateway features or entrances to specific areas or demarcating the City boundary. Lighting should also be considered on state highways within the City for consistency and continuity with city lighting standards.

4.6 BICYCLE AND PEDESTRIAN FACILITIES

A fully developed Transportation Master Plan involves all modes of transportation. Cities that provide well-designed bikeways and pedestrian network facilities encourage greater use and commonly experience higher utilization of active modes of transportation. Many factors can influence how and when these alternative modes of transportation are used. One of the largest barriers for use is missing or incomplete pedestrian and bicycle networks.

Often these modes of transportation are not supported or implemented as new development occurs. As new developments are proposed within Hooper City sidewalk, trails, and bike lanes shall be constructed in accordance with the applicable standards and plans. The existing streets that are missing bicycle and pedestrian facilities should be retrofitted to include sidewalks, bike lanes and trails redevelopment occurs. This Transportation Master Plan includes sidewalk facilities in the recommended roadway cross section shown in **Section 4.2 Street Standards**. **Figure 3** presents both the existing and future trail network in Hooper.

4.7 TRANSIT

Transit systems are one of the most widely used methods for reducing vehicular demand. Transit use can reduce the problems associated with traffic congestion and improve the livability of the area. When the transit options are convenient and reliable, residents may use transit for some or all of their daily trips.

Much like other communities in the region, Hooper has experienced continued population growth. This growth has transformed parts of the community from a rural to a more suburban environment. The addition of transit facilities and integration into the existing transportation system are challenges that the community will face as it continues to transform. A proactive approach and advanced planning for future transit improvements can result in significant cost savings. Traditionally, public transit has followed development, resulting in higher right-of-way costs for transit enhancements. Advanced planning and corridor preservation will help ensure a more cost-effective phasing of public transit projects. Ideally, the transit network will also balance local and regional mobility needs with community character.

5 CAPITAL IMPROVEMENT PLAN

5.1 CAPITAL IMPROVEMENT PLAN

The proposed roadway and pedestrian improvements vary from small improvements to complete sidewalks on existing roadways to larger projects such as new roadways and roadway widening.

Based upon input from City staff, improvements have been grouped into projects to be completed within the next five years (2021-2026) and greater than 5 years. Projects are listed in general terms and are not ranked in any priority. Improvements are shown in **Table 6** and **Table** 7.

Project priorities will change as the local area develops. Additionally, the planning horizon is 23 years. Many issues that are not anticipated today will affect project prioritization in the future. These major projects have been identified and cost estimates developed as a means of planning for the future and ensuring that local development plans are coordinated within the overall regional transportation plan. Each project will require further study and need to be programmed into long-range budgets. These projects should be individually evaluated in more detail and constructed as required to support continued development of the City.

Table 6: Transportation Improvement Projects 0-5 Years

0-5 Year Projects					
Street	From	To	Functional Class	Project	Construction Cost (2024$s)
5500 West	Southern City Limit	5500 South	Minor Collector	Widen / Curbs	$ 5,841,900
5500 West	5500 South	4200 South	Minor Collector	Widen / Curbs	$ 17,349,500
Total Cost					$ 23,191,400

Table 7: Transportation Improvement Projects 5+ Years

Street	From	To	Function Class	Project	Construction Cost (2024$s)
4600 South	5900 West	5500 West	Minor Collector	Widen / Curbs	$ 5,563,400
5100 West	5500 South	4000 South	Minor Collector	Widen / Curbs	$18,826,100
4200 South	6300 West	5900 West	Minor Collector	New Construction	$ 5,191,700
4600 South	6700 West	6300 West	Minor Collector	Widen / Curbs	$ 5,820,500

Street	From	To	Function Class	Project	Construction Cost (2024$s)
4600 South	6300 West	5900 West	Minor Collector	Widen / Curbs	$ 5,841,300
4600 South	5500 West	5100 West	Minor Collector	Widen / Curbs	$ 5,533,000
4800 South	4700 West	4300 West	Major Collector	Widen / Curbs	$ 2,764,500
5100 South	7500 West	6300 West	Minor Collector	Widen / Curbs	$ 17,329,800
5100 South	6300 West	5900 West	Minor Collector	Widen / Curbs	$ 5,598,100
5100 South	5900 West	5500 West	Major Collector	Widen / Curbs	$ 6,120,100
5100 South	5500 West	5100 West	Minor Collector	Widen / Curbs	$ 4,815,800
5100 South	5100 West	4700 West	Minor Collector	Widen / Curbs	$ 5,573,100
5500 South	7500 West	6700 West	Major Collector	Widen / Curbs	$ 13,037,900
5500 South	6700 West	6300 West	Major Collector	Widen / Curbs	$ 6,636,200
5500 South	6300 West	5900 West	Major Collector	Widen / Curbs	$ 6,106,800
5900 South	7500 West	7100 West	Minor Collector	Widen / Curbs	$ 5,617,300
5900 South	7100 West	6300 West	Minor Collector	Widen / Curbs	$ 11,062,200
5900 South	6300 West	5100 West	Minor Collector	Widen / Curbs	$ 16,301,200
7500 West	5900 South	5100 South	Minor Collector	Widen / Curbs	$ 11,444,800
7100 West	Southern City Limit	5100 South	Minor Collector	Widen / Curbs	$ 14,339,300
6700 West	Southern City Limit	5500 South	Minor Collector	Widen / Curbs	$ 8,570,800
6300 West	Southern City Limit	5500 South	Minor Collector	Widen / Curbs	$ 8,545,400
6300 West	5500 South	5100 South	Minor Collector	Widen / Curbs	$ 5,440,700
6300 West	5100 South	4200 South	Minor Collector	Widen / Curbs	$ 10,852,600
5100 West	2425 North	6000 South	Minor Collector	New Construction	$ 5,028,400
5100 West	6000 South	5500 South	Minor Collector	Widen / Curbs	$ 7,285,700
5100 West	5500 South	4000 South	Minor Collector	Widen / Curbs	$ 18,826,100
5100 West	4000 South	Norther City Limit	Minor Collector	Widen / Curbs	$ 18,302,700
5100 West Frontage Road	2425 North	4000 South	Minor Collector	New Construction	$ 32,421,900
4300 West	5500 South	4800 South	Minor Collector	Widen / Curbs	$ 4,837,900
5500 South / 5900 West	-	-	Intersection	Install Signal System and Turn lanes	$ 300,000 (Signal) + $ 860,800 (Turn Lanes)
5500 South / 5500 West	-	-	Intersection	Install Signal System or Roundabout	$ 300,000 (Signal)
4000 South / 5500 West	-	-	Intersection	Install Signal System	$ 300,000 (Signal)
Total **WITHOUT** West Weber Corridor					$ 237,049,300
Total **WITH** West Weber Corridor					$ 238,331,000

6 TRAFFIC CALMING

6.1 TRAFFIC CALMING

The Institute of Transportation Engineers (ITE) defines traffic calming as the combination of measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users. Traffic calming consists of physical design and other measure put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists. For example, vertical deflections (speed humps, speed tables and raised intersections), horizontal shifts, and roadway narrowing are intended to reduce speed and enhance the street environment for non-motorists. Traffic calming measures can be implemented at an intersection, street, neighborhood, or at an area-wide level.

6.1.1 INSTALLING TRAFFIC CALMING MEASURES

The decision to install Traffic Calming Measures (TCM) should be based on engineering merits as opposed to public input alone.

One or more TCMs can be implemented on a temporary basis subject to performance evaluation and neighborhood review. Before implementing a TCM on a permanent basis, a comparison of speed and volume should be performed to determine if the TCM meets expectations and produces the intended result.

ITE provides a list (see link below) of traffic calming measures along with descriptions, cost estimate, benefits and potential issues with a given TCM.

https://www.ite.org/technical-resources/traffic-calming/traffic-calming-measures/

7 TRAFFIC IMPACT STUDY GUIDELINES

7.1 TRAFFIC IMPACT STUDIES

Traffic Impact Studies (TIS) are necessary to identify, review and make recommendations for mitigation of the potential impacts a development may have on the roadway system. The Hooper City Engineer will determine the need for a Traffic Impact Study and the appropriate TIS level. When a Traffic Impact Study is required, prepare the study according to the appropriate TIS level as shown in **Appendix E**. The TIS shall, at a minimum, incorporate Hooper City standards as well as any applicable UDOT and federal standards or guidelines not superseded by city standards. Additional requirements may be added at the City Engineer's discretion.

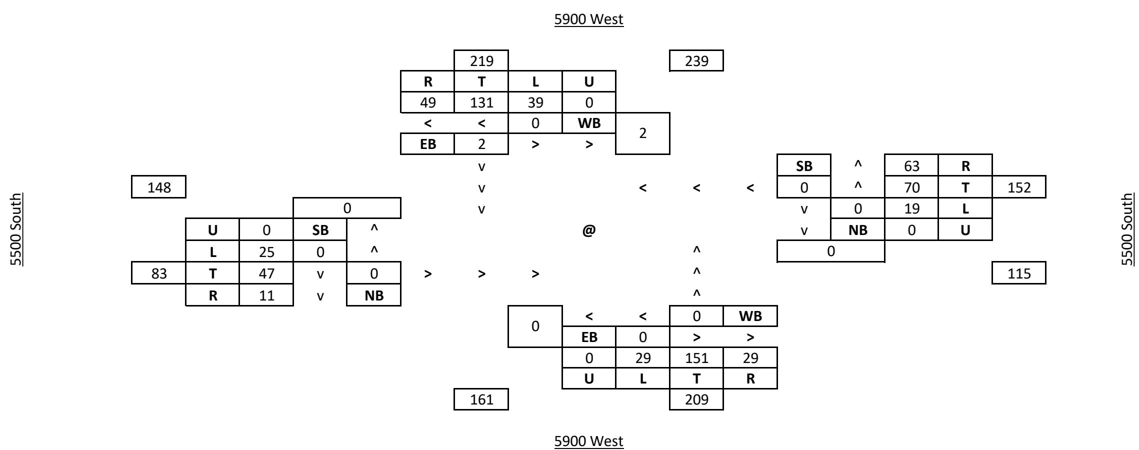
APPENDIX A: TRAFFIC COUNTS AND ANALYSIS

INTERSECTION: 5500 South @ 5900 West
DATE OF TMC: Tuesday, March 9, 2021
TIME: 4:00-6:00 PM
AGENCY: J-U-B ENGINEERS, INC.

PM Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
3:00 PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4:15 PM	0	0	11	35	11	57	0	0	10	24	5	39	0	0	10	21	11	42	0	0	6	11	4	21	159
4:15 PM	4:30 PM	0	0	9	26	8	43	0	0	11	30	1	42	0	0	10	22	17	49	0	0	5	14	3	22	156
4:30 PM	4:45 PM	0	0	12	33	10	55	0	0	6	18	2	26	0	0	5	24	14	43	0	0	4	13	3	20	144
4:45 PM	5:00 PM	0	0	10	33	14	57	0	0	11	43	15	69	0	0	5	13	15	33	0	0	5	14	2	21	180
5:00 PM	5:15 PM	0	0	8	28	14	50	0	0	6	26	7	39	0	0	5	25	8	38	0	0	8	13	4	25	152
5:15 PM	5:30 PM	0	0	12	42	3	57	0	0	6	40	5	51	0	0	6	18	21	45	0	0	6	9	3	18	171
5:30 PM	5:45 PM	2	0	9	28	18	55	0	0	6	42	2	50	0	0	3	14	19	36	0	0	6	11	2	19	160
5:45 PM	6:00 PM	0	0	13	22	11	46	0	0	9	21	8	38	0	0	4	13	16	33	0	0	7	16	2	25	142
	TOTAL	2	0	84	247	89	420	0	0	65	244	45	354	0	0	48	150	121	319	0	0	47	101	23	171	1264

PM Peak Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
4:45 PM	5:00 PM	0	0	10	33	14	57	0	0	11	43	15	69	0	0	5	13	15	33	0	0	5	14	2	21	180
5:00 PM	5:15 PM	0	0	8	28	14	50	0	0	6	26	7	39	0	0	5	25	8	38	0	0	8	13	4	25	152
5:15 PM	5:30 PM	0	0	12	42	3	57	0	0	6	40	5	51	0	0	6	18	21	45	0	0	6	9	3	18	171
5:30 PM	5:45 PM	2	0	9	28	18	55	0	0	6	42	2	50	0	0	3	14	19	36	0	0	6	11	2	19	160
	TOTAL	2	0	39	131	49	219	0	0	29	151	29	209	0	0	19	70	63	152	0	0	25	47	11	83	663
	PHF						0.96						0.76						0.84						0.83	0.92
	%HGV						1.2%						1.1%						0.3%						1.2%	0.9%

5500 South @ 5900 West

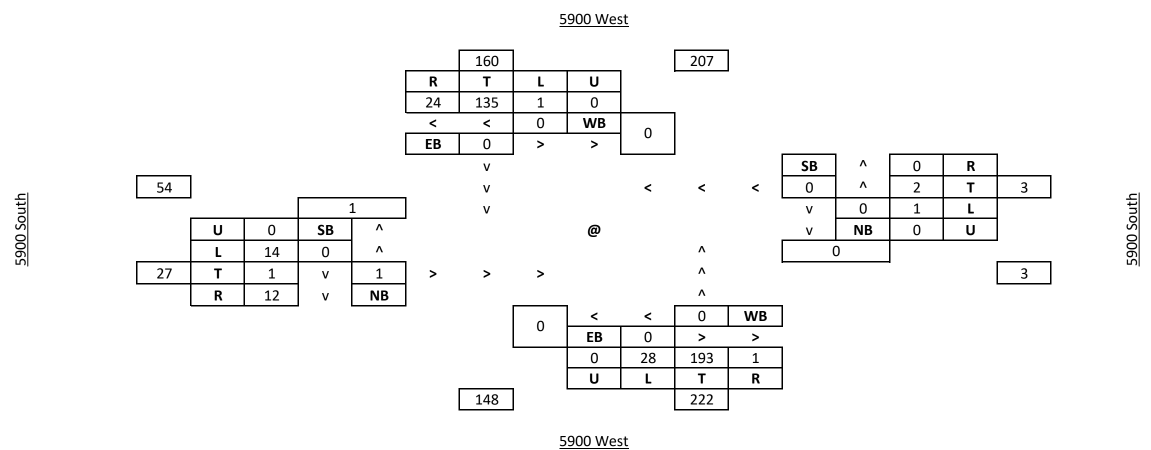


INTERSECTION: 5900 South @ 5900 West
DATE OF TMC: Wednesday, March 10, 2021
TIME: 4:00-6:00 PM
AGENCY: J-U-B ENGINEERS, INC.

PM Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
3:00 PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4:15 PM	0	0	0	27	6	33	0	0	8	41	1	50	0	0	0	1	0	1	0	0	3	1	2	6	90
4:15 PM	4:30 PM	0	0	0	30	5	35	0	0	11	53	0	64	0	0	0	1	1	2	0	0	2	0	5	7	108
4:30 PM	4:45 PM	0	0	1	41	5	47	1	0	3	35	0	38	0	0	0	1	1	2	0	0	2	1	3	6	93
4:45 PM	5:00 PM	0	0	0	20	1	21	0	0	6	54	0	60	0	0	0	1	0	1	0	0	1	0	0	1	83
5:00 PM	5:15 PM	0	0	0	31	10	41	0	0	5	56	0	61	0	0	0	0	0	0	0	1	3	1	2	6	108
5:15 PM	5:30 PM	0	0	1	32	5	38	0	0	8	55	0	63	0	0	0	0	0	0	0	0	5	0	1	6	107
5:30 PM	5:45 PM	0	0	0	33	5	38	0	0	6	38	0	44	0	0	0	1	0	1	0	0	3	0	1	4	87
5:45 PM	6:00 PM	0	0	0	39	4	43	0	0	9	44	1	54	0	0	1	1	0	2	0	0	3	0	8	11	110
	TOTAL	0	0	2	253	41	296	1	0	56	376	2	434	0	0	1	6	2	9	0	1	22	3	22	47	786

PM Peak Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
5:00 PM	5:15 PM	0	0	0	31	10	41	0	0	5	56	0	61	0	0	0	0	0	0	0	1	3	1	2	6	108
5:15 PM	5:30 PM	0	0	1	32	5	38	0	0	8	55	0	63	0	0	0	0	0	0	0	0	5	0	1	6	107
5:30 PM	5:45 PM	0	0	0	33	5	38	0	0	6	38	0	44	0	0	0	1	0	1	0	0	3	0	1	4	87
5:45 PM	6:00 PM	0	0	0	39	4	43	0	0	9	44	1	54	0	0	1	1	0	2	0	0	3	0	8	11	110
	TOTAL	0	0	1	135	24	160	0	0	28	193	1	222	0	0	1	2	0	3	0	1	14	1	12	27	412
	PHF						0.93						0.88						0.38						0.61	0.94
	%HGV						2.4%						3.2%						0.0%						0.0%	2.7%

5900 South @ 5900 West

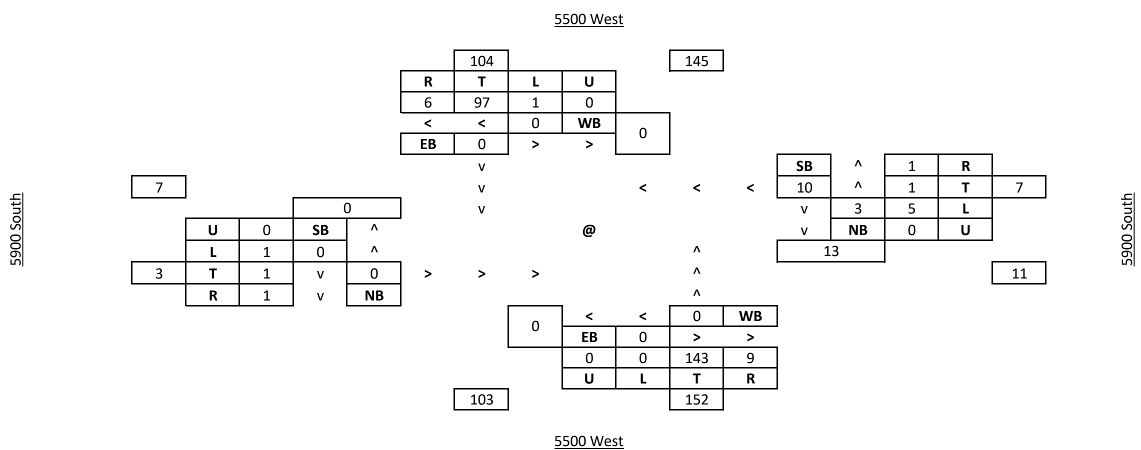


INTERSECTION: 5900 South @ 5500 West
DATE OF TMC: Wednesday, March 10, 2021
TIME: 4:00-6:00 PM
AGENCY: J-U-B ENGINEERS, INC.

PM Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
3:00 PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4:15 PM	0	0	0	13	0	13	0	0	1	20	1	22	0	0	0	0	0	0	0	0	0	0	2	2	37
4:15 PM	4:30 PM	0	0	0	33	2	35	0	0	0	39	2	41	0	0	1	0	0	1	0	0	0	0	0	0	77
4:30 PM	4:45 PM	0	0	1	22	2	25	0	0	0	30	4	34	8	0	3	1	0	4	0	0	1	0	1	2	65
4:45 PM	5:00 PM	0	0	0	17	2	19	0	0	0	40	2	42	1	1	0	0	0	0	0	0	0	0	0	0	61
5:00 PM	5:15 PM	0	0	0	25	0	25	0	0	0	34	1	35	1	2	1	0	1	2	0	0	0	1	0	1	63
5:15 PM	5:30 PM	0	0	0	28	0	28	0	0	0	29	0	29	2	0	2	0	0	2	0	0	0	0	1	1	60
5:30 PM	5:45 PM	0	0	0	23	0	23	0	0	1	29	4	34	0	0	2	1	0	3	0	0	1	0	0	1	61
5:45 PM	6:00 PM	0	0	0	17	0	17	0	0	0	37	2	39	0	0	1	1	0	2	0	0	1	0	0	1	59
	TOTAL	0	0	1	178	6	185	0	0	2	258	16	276	12	3	10	3	1	14	0	0	3	1	4	8	483

PM Peak Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
4:15 PM	4:30 PM	0	0	0	33	2	35	0	0	0	39	2	41	0	0	1	0	0	1	0	0	0	0	0	0	77
4:30 PM	4:45 PM	0	0	1	22	2	25	0	0	0	30	4	34	8	0	3	1	0	4	0	0	1	0	1	2	65
4:45 PM	5:00 PM	0	0	0	17	2	19	0	0	0	40	2	42	1	1	0	0	0	0	0	0	0	0	0	0	61
5:00 PM	5:15 PM	0	0	0	25	0	25	0	0	0	34	1	35	1	2	1	0	1	2	0	0	0	1	0	1	63
	TOTAL	0	0	1	97	6	104	0	0	0	143	9	152	10	3	5	1	1	7	0	0	1	1	1	3	266
	PHF						0.74						0.90						0.44						0.38	0.86
	%HGV						0.0%						0.4%						0.0%						0.0%	0.2%

5900 South @ 5500 West



INTERSECTION: 5100 South @ 5500 West
DATE OF TMC: Thursday, March 11, 2021
TIME: 4:00-6:00 PM
AGENCY: J-U-B ENGINEERS, INC.

PM Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
3:00 PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4:15 PM	0	0	0	15	0	15	0	0	1	35	5	41	0	0	2	4	1	7	0	0	1	6	1	8	71
4:15 PM	4:30 PM	0	0	1	18	1	20	0	0	1	38	5	44	0	0	2	8	0	10	0	0	1	8	3	12	86
4:30 PM	4:45 PM	0	0	0	24	0	24	0	0	2	37	6	45	0	0	4	7	1	12	0	0	0	2	4	6	87
4:45 PM	5:00 PM	0	0	0	23	0	23	0	0	2	38	3	43	0	0	2	2	0	4	0	0	0	3	3	6	76
5:00 PM	5:15 PM	0	0	1	25	2	28	0	0	3	35	6	44	0	0	0	2	1	3	0	0	1	2	3	6	81
5:15 PM	5:30 PM	0	0	1	20	1	22	0	0	2	34	2	38	2	0	2	3	0	5	0	0	0	1	1	2	67
5:30 PM	5:45 PM	0	0	1	24	3	28	0	0	3	29	7	39	0	0	3	5	0	8	0	0	0	5	1	6	81
5:45 PM	6:00 PM	0	0	0	22	0	22	0	0	5	23	6	34	0	0	2	6	0	8	0	0	0	5	2	7	71
	TOTAL	0	0	4	171	7	182	0	0	19	269	40	328	2	0	17	37	3	57	0	0	3	32	18	53	620

PM Peak Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
4:15 PM	4:30 PM	0	0	1	18	1	20	0	0	1	38	5	44	0	0	2	8	0	10	0	0	1	8	3	12	86
4:30 PM	4:45 PM	0	0	0	24	0	24	0	0	2	37	6	45	0	0	4	7	1	12	0	0	0	2	4	6	87
4:45 PM	5:00 PM	0	0	0	23	0	23	0	0	2	38	3	43	0	0	2	2	0	4	0	0	0	3	3	6	76
5:00 PM	5:15 PM	0	0	1	25	2	28	0	0	3	35	6	44	0	0	0	2	1	3	0	0	1	2	3	6	81
	TOTAL	0	0	2	90	3	95	0	0	8	148	20	176	0	0	8	19	2	29	0	0	2	15	13	30	330
	PHF						0.85						0.98						0.60						0.63	0.95
	%HGV						7.7%						5.5%						0.0%						0.0%	5.2%

5100 South @ 5500 West

5500 West

95 152
R T L U
3 90 2 0
< < 0 WB 0
EB 0 > >

v SB ^ 2 R
30 v < < < 0 ^ 19 T 29
0 v v 0 8 L
U 0 SB ^ @ v NB 0 U
L 2 0 ^ ^ 0
30 T 15 v 0 > > > ^ 37
R 13 v NB ^

5100 South 5100 South

0 < < 0 WB
EB 0 > >
0 8 148 20
U L T R
111 176

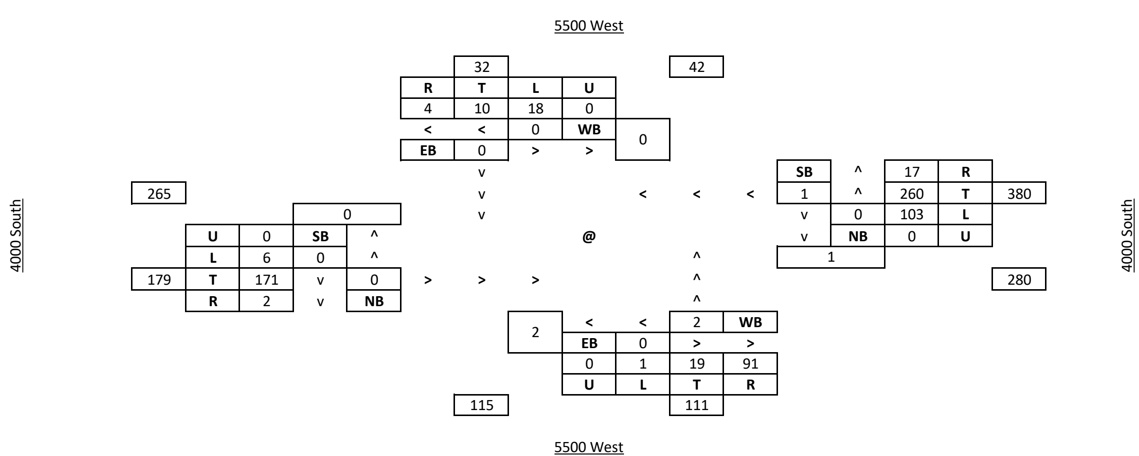
5500 West

INTERSECTION: 4000 South @ 5500 West
DATE OF TMC: Wednesday, March 17, 2021
TIME: 4:00-6:00 PM
AGENCY: J-U-B ENGINEERS, INC.

PM Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
3:00 PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4:15 PM	0	0	5	1	2	8	0	0	0	1	20	21	0	0	25	55	12	92	0	1	2	41	1	44	165
4:15 PM	4:30 PM	0	0	3	2	1	6	0	1	0	4	23	27	0	0	17	53	3	73	0	0	3	31	0	34	140
4:30 PM	4:45 PM	0	0	2	5	1	8	0	0	0	3	36	39	0	0	16	56	5	77	0	0	2	52	1	55	179
4:45 PM	5:00 PM	0	0	8	2	2	12	0	0	1	1	27	29	0	0	28	69	1	98	0	0	1	34	1	36	175
5:00 PM	5:15 PM	0	0	3	2	0	5	0	0	0	4	16	20	0	0	22	56	5	83	0	0	2	43	0	45	153
5:15 PM	5:30 PM	0	0	6	2	0	8	0	0	0	6	26	32	1	0	24	77	5	106	0	0	1	46	1	48	194
5:30 PM	5:45 PM	0	0	1	4	2	7	0	2	0	8	22	30	0	0	29	58	6	93	0	0	2	48	0	50	180
5:45 PM	6:00 PM	0	0	5	2	1	8	0	1	1	4	20	25	0	0	21	56	6	83	0	0	2	35	0	37	153
	TOTAL	0	0	33	20	9	62	0	4	2	31	190	223	1	0	182	480	43	705	0	1	15	330	4	349	1339

PM Peak Hour		SOUTHBOUND						NORTHBOUND						WESTBOUND						EASTBOUND						GRAND
Start	End	EB Ped	WB Ped	Left	Thru	Right	Total	EB Ped	WB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	SB Ped	NB Ped	Left	Thru	Right	Total	TOTAL
4:45 PM	5:00 PM	0	0	8	2	2	12	0	0	1	1	27	29	0	0	28	69	1	98	0	0	1	34	1	36	175
5:00 PM	5:15 PM	0	0	3	2	0	5	0	0	0	4	16	20	0	0	22	56	5	83	0	0	2	43	0	45	153
5:15 PM	5:30 PM	0	0	6	2	0	8	0	0	0	6	26	32	1	0	24	77	5	106	0	0	1	46	1	48	194
5:30 PM	5:45 PM	0	0	1	4	2	7	0	2	0	8	22	30	0	0	29	58	6	93	0	0	2	48	0	50	180
	TOTAL	0	0	18	10	4	32	0	2	1	19	91	111	1	0	103	260	17	380	0	0	6	171	2	179	702
	PHF						0.67						0.87						0.90						0.90	0.90
	%HGV						4.8%						0.4%						1.1%						4.0%	1.9%

4000 South @ 5500 West



Intersection	Movement	2021 Existing Conditions PM Results Volume	Delay (sec)	LOS	95th % Queue
5500 S (SR-97) & 5900 W (SR-37)	EBL	25	10.1	B	13'
	EBT	47			
	EBR	11	8.2	A	3'
	WBL	19	10.1	B	15'
	WBT	70			
	WBR	63	8.6	A	10'
	NBL	29	11.1	B	45'
	NBT	151			
	NBR	29			
	SBL	39	10.4	B	35'
	SBT	131			
	SBR	49			
	Overall				
5900S & 5900 W (SR-37)	EBL	14	11.2	B	5'
	EBT	1			
	EBR	12			
	WBL	1	12.5	B	0'
	WBT	2			
	WBR	0			
	NBL	28	7.6	A	3'
	NBT	193			
	NBR	1			
	SBL	1	7.7	A	0'
	SBT	135			
	SBR	24			
	Overall				
5900 S & 5500 W	EBL	1	10.2	B	0'
	EBT	1			
	EBR	1			
	WBL	5	10.5	B	3'
	WBT	1			
	WBR	1			
	NBL	0	0.0	A	0'
	NBT	143			
	NBR	9			
	SBL	1	7.5	A	0'
	SBT	97			
	SBR	6			
	Overall				
5100 S & 5500 W	EBL	2	10.2	B	3'
	EBT	15			
	EBR	13			
	WBL	8	11.2	B	5'
	WBT	19			
	WBR	2			
	NBL	8	7.5	A	0'
	NBT	148			
	NBR	20			
	SBL	2	7.6	A	0'
	SBT	90			
	SBR	3			
	Overall				
4000 S (SR-37) & 5500 W	EBL	6	7.9	A	0'
	EBT	171			
	EBR	2			
	WBL	103	7.8	A	8'
	WBT	260			
	WBR	17			
	NBL	1	11.9	B	18'
	NBT	19			
	NBR	91			
	SBL	18	20.8	C	15'
	SBT	10			
	SBR	4			
	Overall				

95th percentile volume exceeds capacity, queue may be longer.
m Volume for 95th percentile queue is metered by upstream signal.
~ Approach is above capacity

Intersection	Movement	2050 No-Build PM Results				
		Volume	Delay (sec)	LOS	Q Veh	95th % Queue
5500 S (SR-97) & 5900 W (SR-37)	EBL	38	15.5	C	1.4	35'
	EBT	72				
	EBR	17	10.9	B	0.1	3'
	WBL	31	16.3	C	1.9	48'
	WBT	115				
	WBR	104	12.7	B	1	25'
	NBL	53	48.7	E	11.5	288'
	NBT	276				
	NBR	53				
	SBL	77	35.7	E	8.7	218'
	SBT	258				
	SBR	96				
	Overall					
5900S & 5900 W (SR-37)	EBL	25	16.7	C	0.8	20'
	EBT	2				
	EBR	22				
	WBL	2	18.7	C	0.1	3'
	WBT	3				
	WBR	0				
	NBL	51	8.0	A	0.1	3'
	NBT	352				
	NBR	2				
	SBL	2	8.1	A	0	0'
	SBT	247				
	SBR	44				
	Overall					
5900 S & 5500 W	EBL	2	12.0	B	0.1	3'
	EBT	2				
	EBR	2				
	WBL	8	12.8	B	0.2	5'
	WBT	2				
	WBR	2				
	NBL	0	0.0	A	0	0'
	NBT	235				
	NBR	15				
	SBL	2	7.8	A	0	0'
	SBT	175				
	SBR	11				
	Overall					
5100 S & 5500 W	EBL	3	12.0	B	0.3	8'
	EBT	22				
	EBR	19				
	WBL	9	14.0	B	0.4	10'
	WBT	22				
	WBR	2				
	NBL	15	7.7	A	0	0'
	NBT	277				
	NBR	37				
	SBL	3	8.0	A	0	0'
	SBT	149				
	SBR	5				
	Overall					
4000 S (SR-37) & 5500 W	EBL	10	8.4	A	0	0'
	EBT	291				
	EBR	3				
	WBL	165	8.4	A	0.5	13'
	WBT	416				
	WBR	27				
	NBL	2	22.6	C	2.9	73'
	NBT	32				
	NBR	152				
	SBL	31	134.4	F	4.7	118'
	SBT	17				
	SBR	7				
	Overall					

\# 95th percentile volume exceeds capacity, queue may be longer.
m Volume for 95th percentile queue is metered by upstream signal.
~ Approach is above capacity

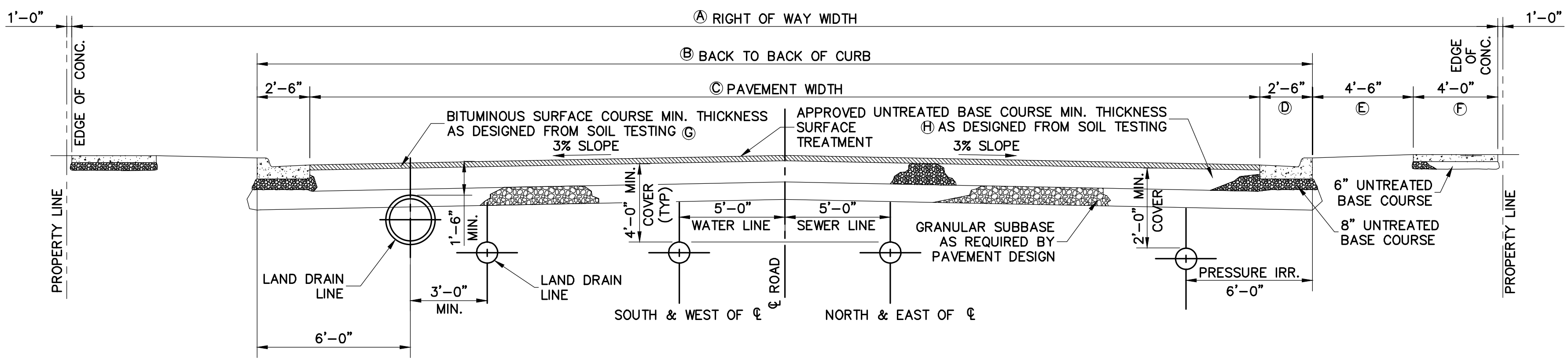
Intersection	Movement	2050 Build PM Results Volume	Delay (sec)	LOS	95th % Queue
5500 S (SR-97) & 5900 W (SR-37)	EBL	38	11.4	B	24'
	EBT	72	9.7	A	38'
	EBR	17			
	WBL	31	10.8	B	20'
	WBT	115	10.7	B	72'
	WBR	104			
	NBL	53	7.9	A	22'
	NBT	276	10.5	B	102'
	NBR	53			
	SBL	77	8.6	A	32'
	SBT	258	9.0	A	106'
	SBR	96			
	Overall		**9.9**	**A**	
5900S & 5900 W (SR-37)	EBL	25	16.7	C	20'
	EBT	2			
	EBR	22			
	WBL	2	18.7	C	3'
	WBT	3			
	WBR	0			
	NBL	51	8.0	A	3'
	NBT	352			
	NBR	2			
	SBL	2	8.1	A	0'
	SBT	247			
	SBR	44			
	Overall				
5900 S & 5500 W	EBL	2	12.0	B	3'
	EBT	2			
	EBR	2			
	WBL	8	12.8	B	5'
	WBT	2			
	WBR	2			
	NBL	0	0.0	A	0'
	NBT	235			
	NBR	15			
	SBL	2	7.8	A	0'
	SBT	175			
	SBR	11			
	Overall				
5100 S & 5500 W	EBL	3	12.0	B	8'
	EBT	22			
	EBR	19			
	WBL	9	14.0	B	10'
	WBT	22			
	WBR	2			
	NBL	15	7.7	A	0'
	NBT	277			
	NBR	37			
	SBL	3	8.0	A	0'
	SBT	149			
	SBR	5			
	Overall				
4000 S (SR-37) & 5500 W	EBL	10	5.4	A	6'
	EBT	291	7.8	A	79'
	EBR	3			
	WBL	165	9.0	A	53'
	WBT	416	10.2	B	127'
	WBR	27			
	NBL	2	6.6	A	42'
	NBT	32			
	NBR	152			
	SBL	31	12.4	B	28'
	SBT	17			
	SBR	7			
	Overall		**9.0**	**A**	

\# 95th percentile volume exceeds capacity, queue may be longer.
m Volume for 95th percentile queue is metered by upstream signal.
~ Approach is above capacity

APPENDIX B: TRAFFIC ANALYSIS ZONE INPUTS

Traffic Analysis Zone Inputs						
TAZ ID Number	2019			2050		
	Population	Households	Employment	Population	Households	Employment
142	96	32	0	515	203	136
265	436	140	0	1662	624	1
266	171	58	1	943	357	2
267	1036	330	2	2099	763	2
268	1589	489	90	2474	890	85
269	188	61	0	1182	437	0
270	361	114	8	1190	432	21
271	1061	351	149	2244	842	160
272	1575	455	26	1571	519	26
274	988	293	9	1458	510	7
275	1360	411	89	1782	632	100
2882	187	60	0	1172	433	0
2883	358	113	8	1180	429	21
Total	9406	2906	382	19471	7071	561

APPENDIX C: ARTERIAL TYPICAL SECTIONS



NOTES:
1. TOP BACK OF CURB ON BOTH SIDES OF ROAD TO BE SAME ELEVATIONS.
2. THE CITY ENGINEER SHALL VERIFY PAVEMENT DESIGN PRESCRIBED BY SOILS REPORT. (SEE SPECIFICATIONS)
3. COMMERCIAL AND INDUSTRIAL STREET SECTIONS ARE DETERMINED BASED ON A TRAFFIC ANALYSIS FOR THE PARTICULAR USE.

STREET DESIGNATION	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ
ARTERIAL	UDOT	UDOT	UDOT	UDOT	4.5'	4.0'	NOTE 2	NOTE 2
SECONDARY ARTERIAL	84'	65'	60'	2.5'	4.5'	4.0'	NOTE 2	NOTE 2

STANDARD ARTERIAL STREET SECTION

REVISION

NO.	DESCRIPTION	BY	APR.	DATE
△				
△				
△				

J-U-B Engineers • Surveyors • Planners

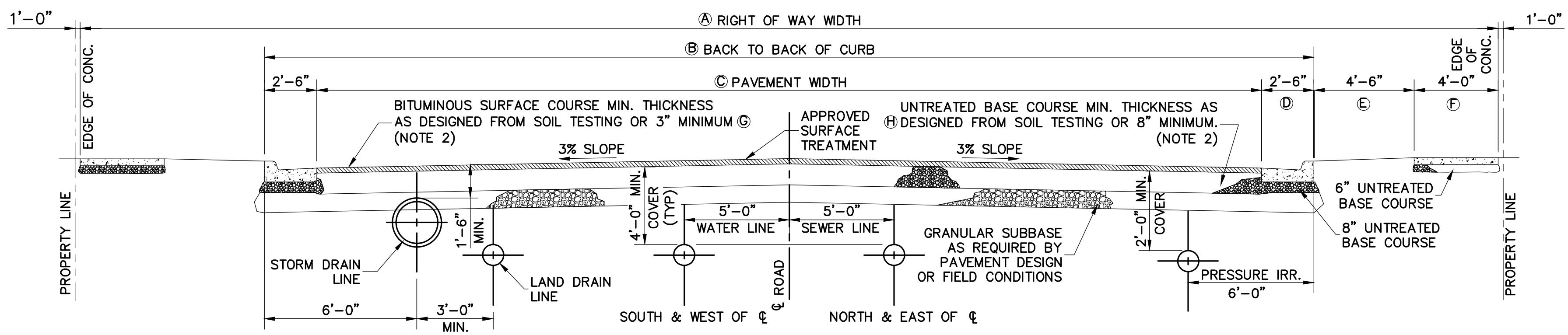
STANDARD ARTERIAL STREET SECTION

HOOPER CITY DEVELOPMENT STANDARDS

STANDARD DRAWING NUMBER: 3

CAD DWG: STREET_SEC_C&C
PLOT SCALE: 1 = 1
DRAWN BY: JDM
DESIGN BY: TLA
CHECKED BY: TLA
ADOPTED DATE: NOV 2003

APPENDIX D: COLLECTOR AND LOCAL TYPICAL SECTIONS



NOTES:
1. TOP BACK OF CURB ON BOTH SIDES OF ROAD TO BE SAME ELEVATIONS.
2. THE CITY ENGINEER SHALL VERIFY PAVEMENT DESIGN PRESCRIBED BY SOILS REPORT. (SEE SPECIFICATIONS)
3. COMMERCIAL AND INDUSTRIAL STREET SECTIONS ARE DETERMINED BASED ON A TRAFFIC ANALYSIS FOR THE PARTICULAR USE.

STREET DESIGNATION	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ
COLLECTOR	66'	47'	42'	2.5	4.5'	4.0'	3" MIN.	8" MIN.
LOCAL	60'	41'	36'	2.5'	4.5'	4.0'	3" MIN.	8" MIN.

STANDARD STREET SECTION WITH CURB & GUTTER

REVISION

NO.	DESCRIPTION	BY	APR.	DATE

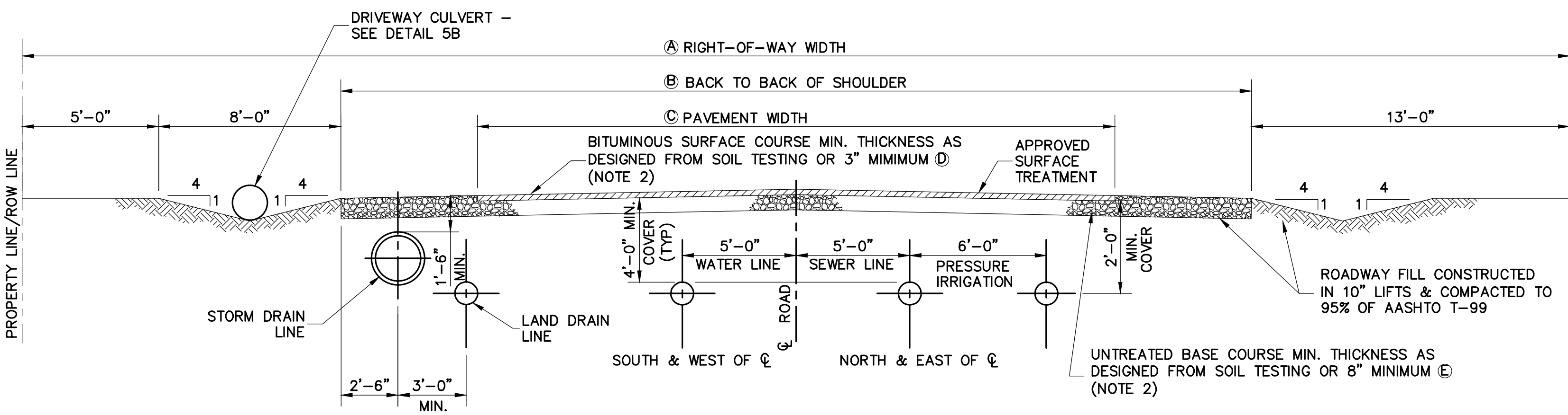
J-U-B Engineers • Surveyors • Planners

STANDARD STREET SECTION WITH CURB & GUTTER

HOOPER CITY DEVELOPMENT STANDARDS

STANDARD DRAWING NUMBER: 4A

CAD DWG STREET_SEC_RURAL_C&G
PLOT SCALE: 1 = 1
DRAWN BY: JDM
DESIGN BY: TLA
CHECKED BY: TLA
ADOPTED DATE: NOV 2003



NOTES:
1. BACK OF SHOULDER ON BOTH SIDES OF ROAD TO BE SAME ELEVATIONS.
2. THE CITY ENGINEER SHALL VERIFY PAVEMENT DESIGN PRESCRIBED BY SOILS REPORT. (SEE SPECIFICATIONS)
3. COMMERCIAL AND INDUSTRIAL STREET SECTIONS ARE DETERMINED BASED ON A TRAFFIC ANALYSIS FOR THE PARTICULAR USE.

STREET DESIGNATION	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
COLLECTOR	66'	40'	28'	3" MIN.	8" MIN.
LOCAL	60'	34'	24'	3" MIN.	8" MIN.

STANDARD RURAL STREET SECTION WITHOUT CURB & GUTTER
(EXISTING STREETS ONLY - NOT FOR NEW DEVELOPMENT)

STATEMENT OF USE

REVISION

NO.	DESCRIPTION	BY	APR.	DATE

Engineers • Surveyors • Planners

STANDARD RURAL STREET SECTION WITHOUT CURB & GUTTER

HOOPER CITY DEVELOPMENT STANDARDS

STANDARD DRAWING NUMBER: 4B

CAD DWG: STREET_SEC_SWALE
PLOT SCALE: 1 = 1
DRAWN BY: JDM
DESIGN BY: TLA
CHECKED BY: TLA
ADOPTED DATE: NOV 2003

APPENDIX E: TRAFFIC IMPACT STUDY GUIDELINES

Permit Level / Traffic Study Level I

Project generates less than 100 daily trips.

No proposed modifications to traffic signals or roadway elements or geometry.

1. Study Area
   a. Defined by City Engineer.
   b. The study area may include property frontage, neighboring and adjacent parcels, and require applicant to identify site access points, and any access points along the roadway within access category distance of property boundaries (Refer to **Section 5.3** and **Table 5**).
2. Horizon year
   a. Opening year of project.
3. Data Collection
   a. AM and PM Peak period turning movement counts of site and study area.
      I. Collect turning movement counts mid week on non-holiday weeks
   b. Identify site and study area roadway and intersection geometries.
   c. Identify study area traffic volume and characteristics.
   d. Identify queue lengths at site and study intersections.
4. Analysis Period
   a. Identify site and study area road traffic for weekday AM and PM peak hours.
5. Right-of-Way Access
   a. Right-of-way and physical conflicts.
   b. Investigate existence of federal or state, no access or limited access control lines.
6. Generate access point capacity analysis as necessary
   a. Analyze the site and study area for the following time periods: weekday AM and PM peak hours including Saturday peak hours.
   b. Identify special event peak hour as necessary (per roadway peak and site peak).
7. Design and Mitigation
   a. Determine and document safe and efficient operational design needs based on site and study area data.
   b. Identify operational concerns and mitigation measures to ensure safe and efficient operation.

Permit Level / Traffic Study Level II

Project generates 100 to 500 daily trips

1. Study Area
   a. Defined by City Engineer.
   b. The study area may include property frontage, neighboring and adjacent parcels, and require applicant to identify site, cross and next adjacent up and down stream access points within access category distance of property boundaries, the intersection of site access drives with state highways and any signalized and un-signalized intersection within access category distance of property line, including any identified queuing (Refer to **Section 5.3** and **Table 5**).

2. Horizon Year
   a. Opening year of project.

3. Data Collection
   a. AM and PM Peak period turning movement counts of site and study area.
      I. Collect turning movement counts mid week on non-holiday weeks
   b. Identify site and study area roadway and intersection geometries.
   c. Identify study area traffic volume and characteristics.
   d. Identify queue lengths at site and study intersections.

4. Analysis Period
   a. Identify site and study area road traffic for weekday AM and PM peak hours.
   b. Identify special event peak hour as necessary (study area roadway peak and site peak).

5. Capacity Analysis
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.

6. Right-of-Way Access
   a. Identify right-of-way and physical conflicts.
   b. Investigate existence of federal or state, no access or limited access control lines.

7. Design and Mitigation
   a. Determine and document safe and efficient operational design needs based on site and study area data.
   b. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Permit Level / Traffic Study Level III

Project Generates 500 to 3,000 daily trips or less than 500 peak hour trips

1. Study Area
   a. Defined by City Engineer.
   b. The study area may include property frontage, neighboring and adjacent parcels, and require applicant to identify site, cross and next adjacent up and down stream access points within access category distance of property boundaries, the intersection of site access drives with state highways and any signalized and un-signalized intersection within access category distance of property line, including any identified queuing (Refer to **Section 5.3** and **Table 5**).

2. Horizon Year
   a. Opening year of project.
   b. Five years after opening.
   c. Document and include all phases of development.

3. Data Collection
   a. AM and PM Peak period turning movement counts of site and study area.
      I. Collect turning movement counts mid week on non-holiday weeks
   b. Identify site and study area roadway and intersection geometries.
   c. Identify queue lengths at site and study intersections.
   d. Traffic control devices including traffic signals and regulatory signs.
   e. Traffic crash data

4. Analysis Period
   a. For each design year analyze site and study area road traffic for weekday A.M. and P.M. peak hours.
   b. Identify special event peak hour as necessary (study area roadway peak and site peak).

5. Trip Generation
   a. Use equations or rates available in latest edition of ITE Trip Generation.
   b. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the City Engineer.

6. Trip Distribution and Assignment
   a. Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding roadway network of study area.

7. Capacity Analysis
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts
   a. Traffic signal warrant study (prepared by developer).
   b. Traffic signal construction drawings if traffic signal is warranted (prepared by developer).
   c. Queuing Analysis

d. Identify traffic signal coordination with existing signals along the corridor.

9. Right-of-Way Access
   a. Identify right-of-way and physical conflicts.
   b. Investigate existence of federal or state, no access or limited access control lines.

10. Design and Mitigation
    c. Determine and document safe and efficient operational design needs based on site and study area data.
    d. Identify operational concerns and mitigation measures to ensure safe and efficient operation.

Permit Level / Traffic Study Level IV

Project generates 3,000 to 10,000 daily trips or 500 to 1,200 peak hour trips.

1. Study Area
   a. Defined by City Engineer.
   b. The study area may include property frontage, neighboring and adjacent parcels, and require applicant to identify site, cross and next adjacent up and down stream access points within access category distance of property boundaries, the intersection of site access drives with state highways and any signalized and un-signalized intersection within ½ mile of the property line on each side of the project (Refer to **Section 5.3** and **Table 5**).

2. Horizon Year
   a. Opening year of project
   b. Five years after opening.
   c. Twenty years after opening.
   d. Document and include all phases of development.

3. Data Collection
   a. AM and PM Peak period turning movement counts of site and study area.
      I. Collect turning movement counts mid week on non-holiday weeks
   b. Identify site and study area roadway and intersection geometries.
   c. Identify queue lengths at site and study intersections.
   d. Traffic control devices including traffic signals and regulatory signs.
   e. Traffic crash data.

4. Analysis period
   a. For each design year analyze site and study area road traffic for weekday A.M. and P.M. peak hours.
   b. Identify special event peak hour as necessary (study area roadway peak and site peak).

5. Trip Generation
   a. Use equations or rates available in latest edition of ITE Trip Generation.
   b. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the City Engineer.

6. Trip Distributions and Assignment
   a. Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding roadway network of study area.

7. Capacity Analysis
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts. For proposed Traffic Signals:

a. Traffic signal warrant study (prepared by developer).
b. Traffic signal construction drawings if traffic signal is warranted (prepared by developer).
c. Queuing analysis.
d. Identify traffic signal coordination with existing signals along the corridor.

9. Right-of-Way Access
   a. Identify right-of-way and physical conflicts.
   b. Investigate existence of federal or state, no access or limited access control lines.

10. Traffic Safety Analysis.
    a. Identify crash trends.
    b. Identify crash mitigation measures.

11. Design and Mitigation
    a. Determine and document safe and efficient operational design needs based on site and study area data.
    b. Identify operational concerns and mitigation measures to ensure safe and efficient operation.

Permit Level / Traffic Study Level IV

Project generates more than 10,000 daily trips or more than 1,200 peak hour

1. Study Area
   a. Defined by City Engineer.
   b. The study area may include property frontage, neighboring and adjacent parcels, and require applicant to identify site, cross and next adjacent up and down stream access points within access category distance of property boundaries, the intersection of site access drives with state highways and any signalized and un-signalized intersection within ½ mile of the property line on each side of the project (Refer to **Section 5.3** and **Table 5**).

2. Horizon Year
   a. Opening year of project.
   b. Five years after opening.
   c. Twenty years after opening.
   d. Document and include all phases of development.

3. Data Collection
   a. AM and PM Peak period turning movement counts of site and study area.
      I. Collect turning movement counts mid week on non-holiday weeks
   b. Identify site and study area roadway and intersection geometries.
   c. Identify queue lengths at site and study intersections.
   d. Traffic control devices including traffic signals and regulatory signs.
   e. Traffic crash data.

4. Analysis period
   a. For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours.
   b. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

5. Trip Generation
   a. Use equations or rates available in latest edition of ITE Trip Generation.
   b. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the City Engineer.

6. Trip Distributions and Assignment
   a. Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

7. Capacity Analysis
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts
   a. Traffic signal warrant study (prepared by developer).
   b. Traffic signal construction drawings if traffic signal is warranted (prepared by developer).

c. Queuing Analysis.
d. Identify traffic signal coordination with existing signals along the corridor.

9. Right-of-Way Access
   a. Identify right-of-way, geometric boundaries and physical conflicts.
   b. Investigate existence of federal or state, no access or limited access control line.

10. Traffic Safety Analysis
    a. Identify crash trends.
    b. Identify crash mitigation measures.

11. Design and Mitigation
    a. Determine and document safe and efficient operational design needs based on site and study area data.
    b. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Application Submittal and TIS Report Format

The applicant must submit one complete application with attachments to the City Engineer. Please include scaled schematic drawings illustrating alignment, number of lanes, lane widths, signing, and pavement markings. If traffic signal modifications are proposed, drawings must show signal phasing, signal head locations and lane markings.

The Traffic Impact Study must follow the recommended format below.

1. Introduction and summary
2. Proposed project description
3. Existing study area conditions
4. Analysis of existing conditions
5. Projected site trips
6. Analysis of projected traffic
7. Conclusions and recommendations