



Morgan Hill Transportation Master Plan

Stakeholders Committee Meeting #3

March 27th, 2024



HEXAGON
TRANSPORTATION CONSULTANTS, INC.



KIER+WRIGHT



AGENDA

- 1. Welcome, Review of Agenda, and Introductions**
- 2. Overview of Draft TMP Goals**
- 3. Multimodal Analysis**
 - Bicycle/Pedestrian Network (Existing/Gaps)
 - Bicycle/Pedestrian Safety Analysis (Hot Spots)
- 4. Traffic Operations Analysis**
 - Transportation Demand Model
 - VTA Model & Structure
 - City-Specific Land Use Data
 - Traffic Operations
 - Intersection Peak-Hour Operations
 - Roadway segment Capacity Analysis
- 5. Workshop/Group Exercise**
 - Street typologies definitions and Introduction
 - Allocation of roadway space exercise
- 6. Next Meeting Dates - 6:00 p.m. to 8:00 p.m.**
 - Wednesday, April 17th
 - Wednesday, July 31st
- 7. Next Steps, Action Items and Adjourn**



Role of Stakeholders Committee

- Provide a collaborative forum for discussion and input into the Transportation Master Plan.
- Inform other stakeholders and community members about the additional opportunities for input.
- The Committee is advisory to the city's staff and does not make decisions for the project.
- The Committee will run by consensus with the assistance of a facilitator.
- Committee members shall not speak on behalf of the Committee or the City
- The City Council is the ultimate policy maker relating to any policies or prioritization of the projects for the City.



Overview of Draft TMP Goals

- **Safety** - Eliminate traffic fatalities and reduce the number of non-fatal collisions for all modes within the City.
- **Increased Transportation Options** – Provide a range of high-quality and comfortable bikeways, trails, pedestrian facilities, and local transit options to create a safe, connected, balanced, and convenient transportation system for all ages, abilities, and socioeconomic groups.
- **Access to Regional Transit Services and Local Destinations** – Enhance access to regional transit services and local destinations like Downtown, schools, parks, and services through improved multimodal connections and local transit options that enable more trips to take place without relying on a private vehicle.
- **Congestion Management** - Improve operations on city arterials to increase efficiency, reduce emissions, and minimize the extent of regional cut-through traffic on local streets.



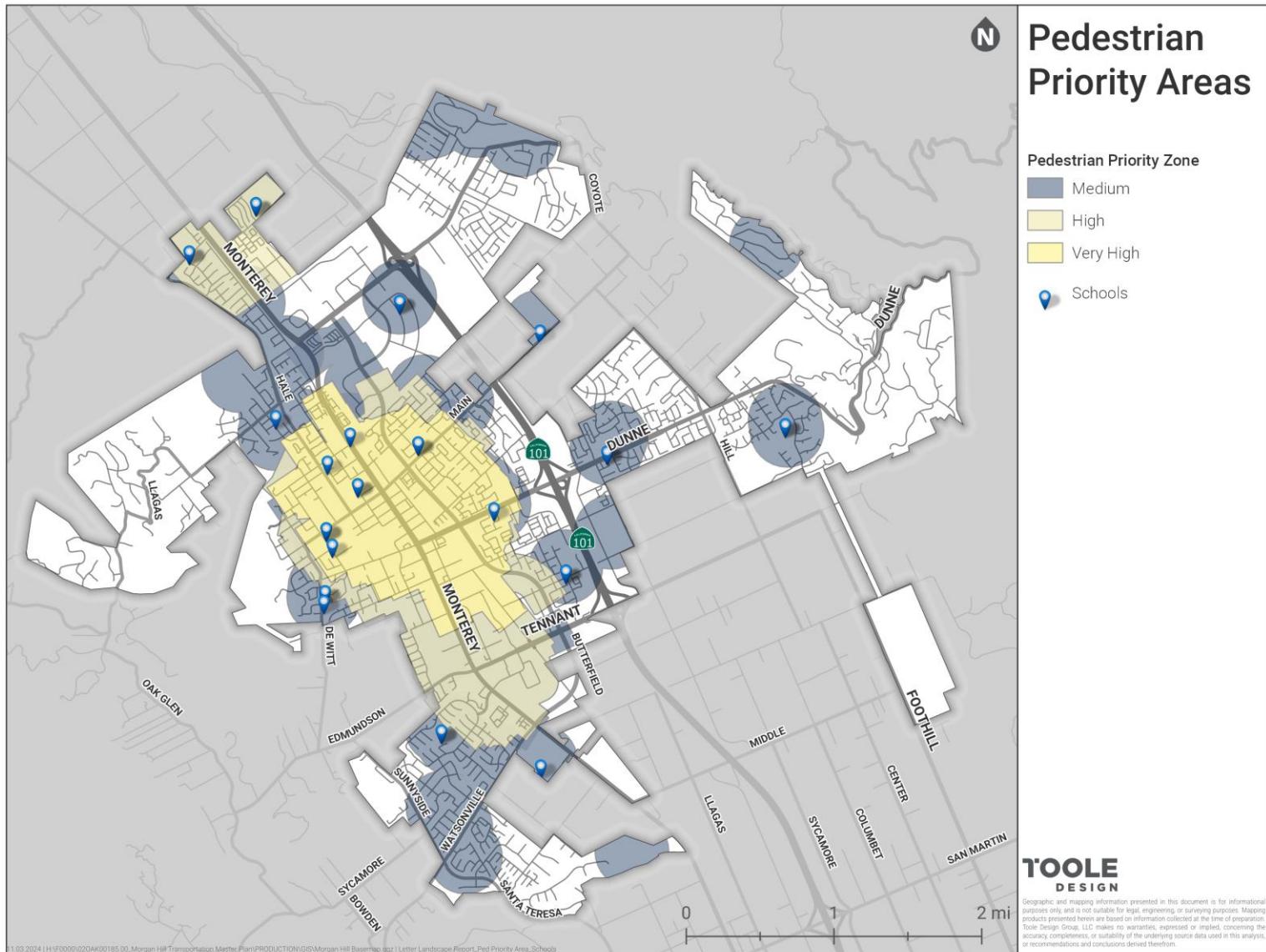
Pedestrian Priority Zones

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Pedestrian Priority Zones (Schools)

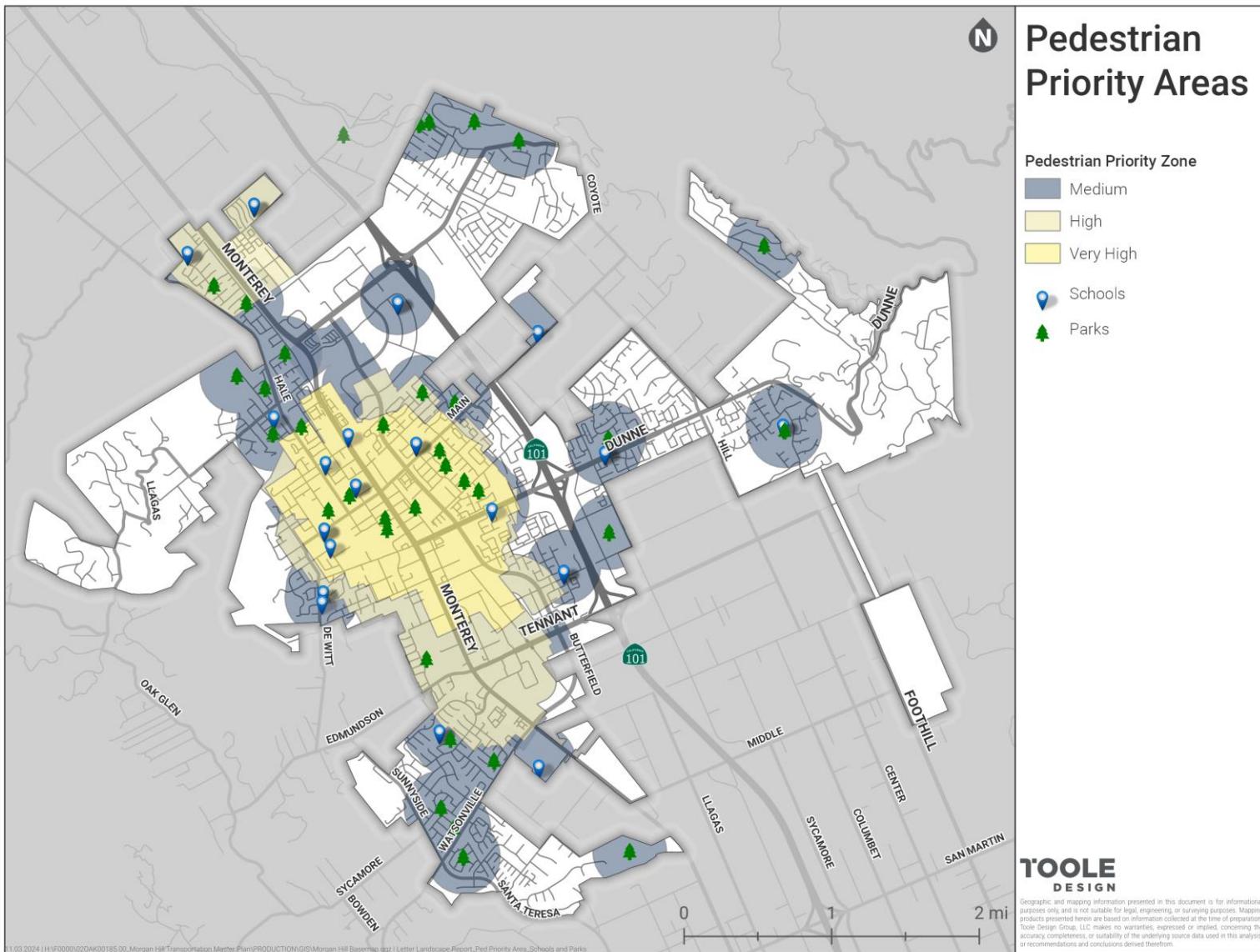


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Pedestrian Priority Zones (Schools and Parks)



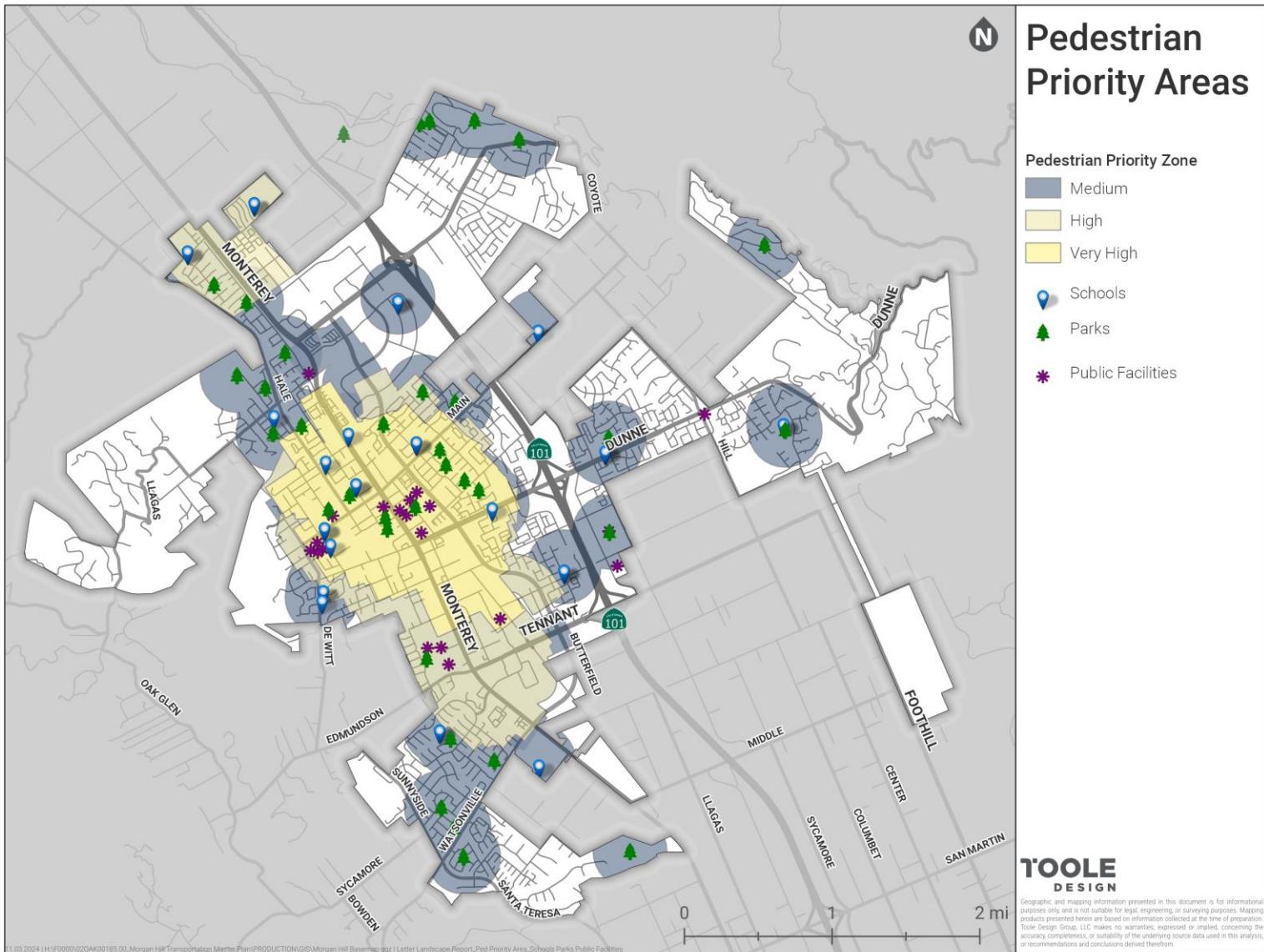
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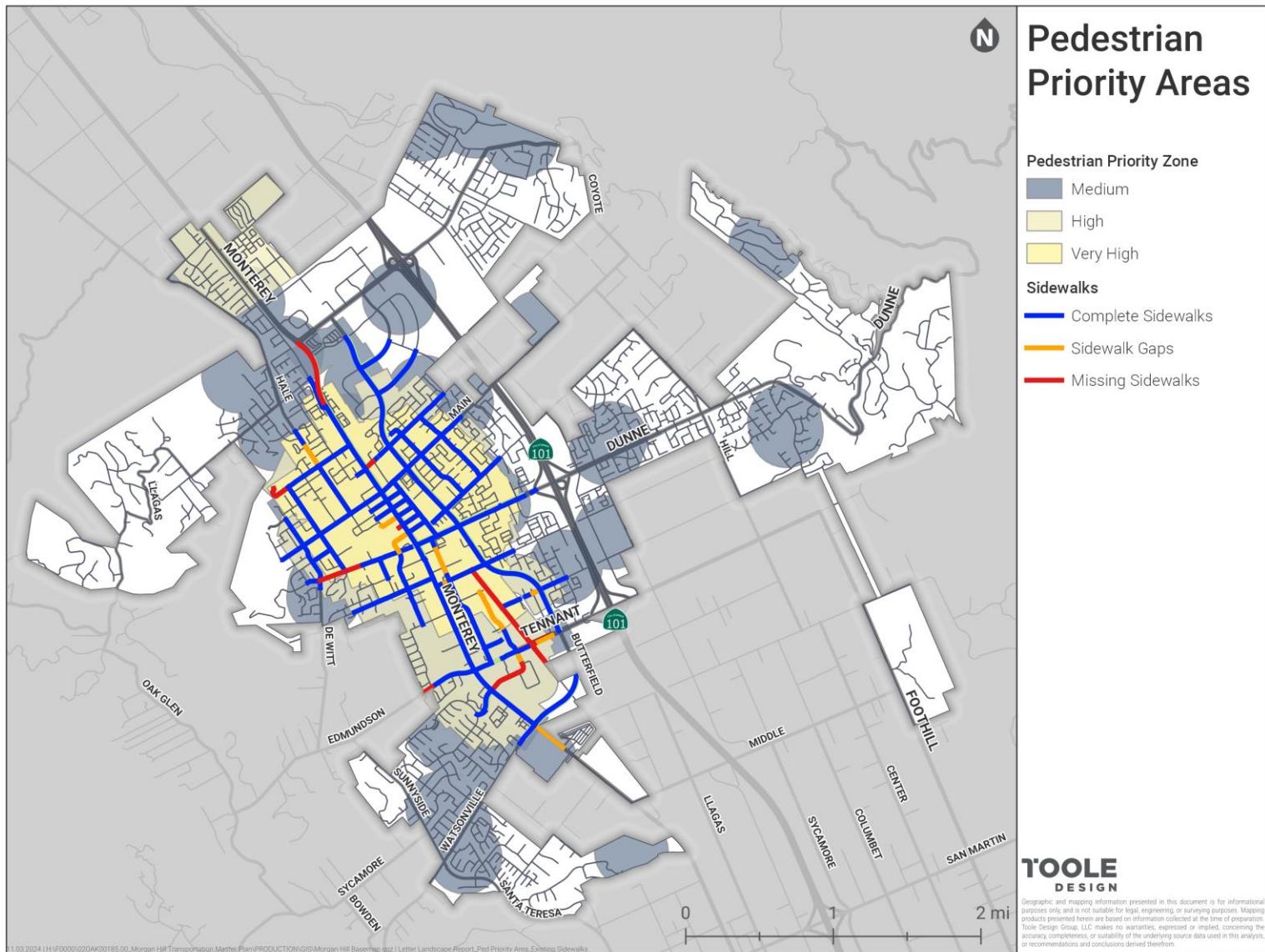
Pedestrian Priority Zones (Schools, Parks, and Public Facilities)





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Pedestrian Priority Zones (Existing Sidewalks)

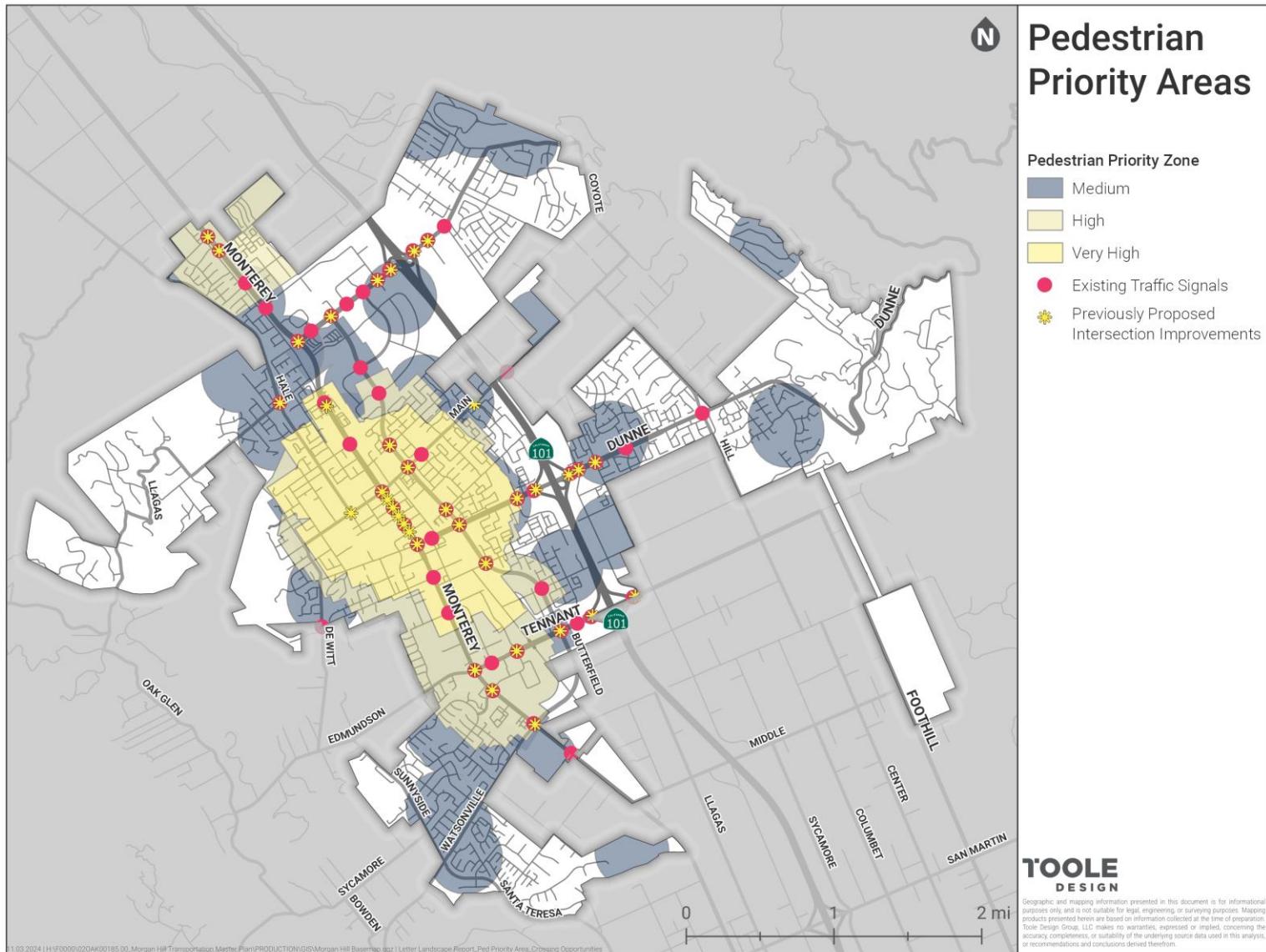


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Pedestrian Priority Zones (Crossing Opportunities)

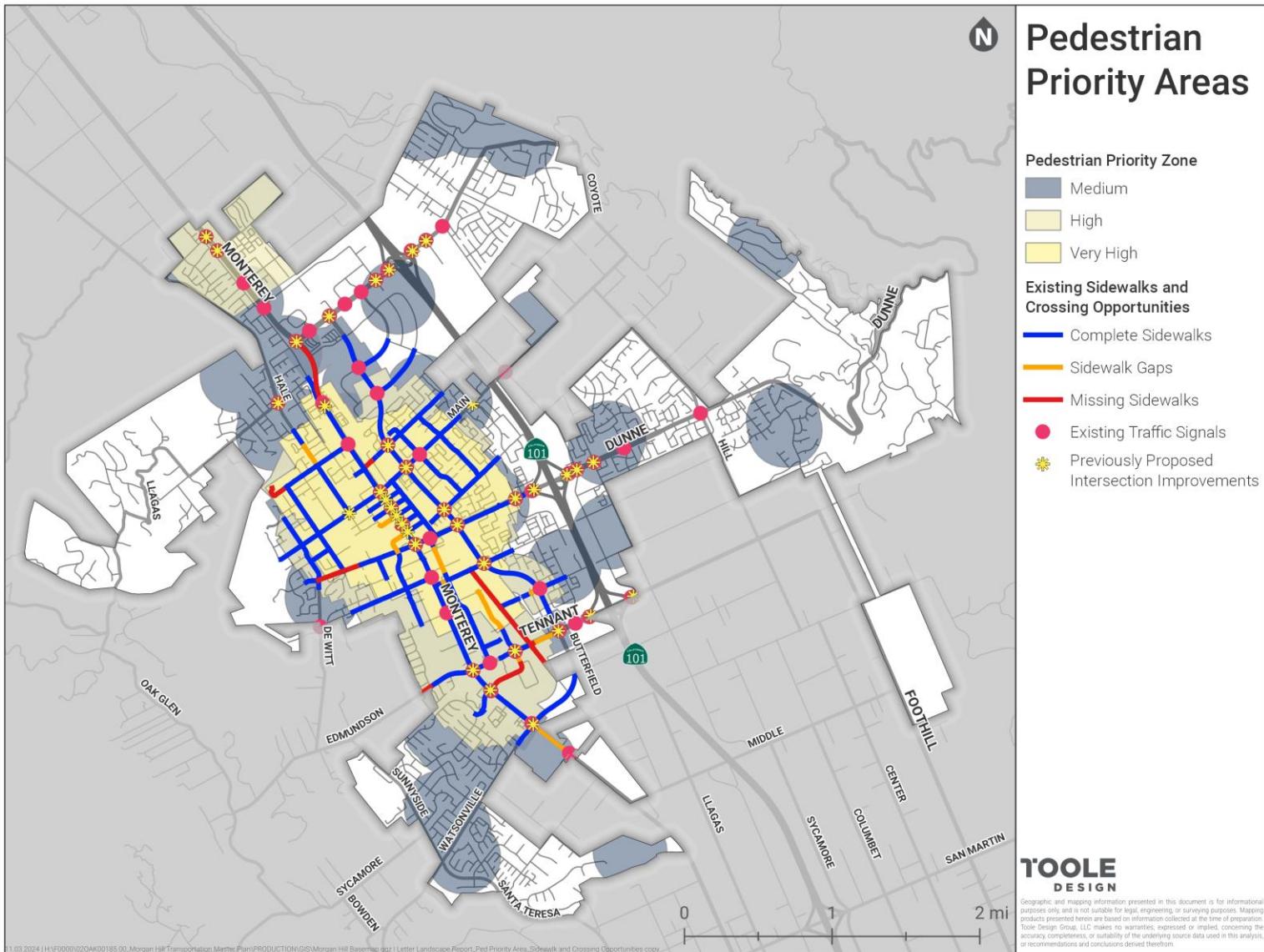


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Pedestrian Priority Zones (Sidewalks and Crossing Opportunities)





How will the pedestrian priority zone information be used?

- Prioritize general areas for improvements
- Identify specific improvement opportunities
 - New crossing needed
 - Enhancements to existing crossings
 - Address sidewalk gaps

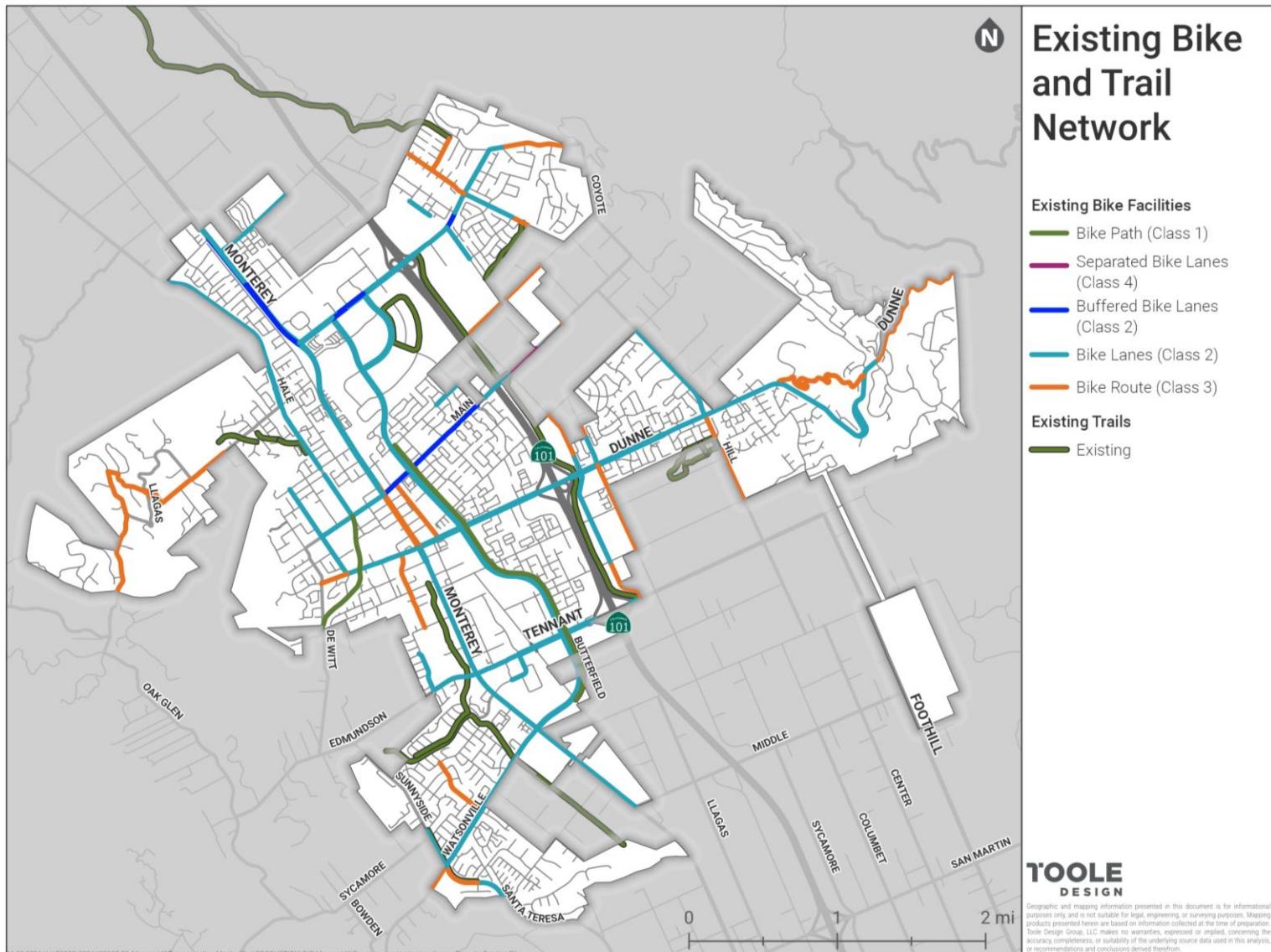


Bikeways and Trails Network



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Existing Bike and Trail network



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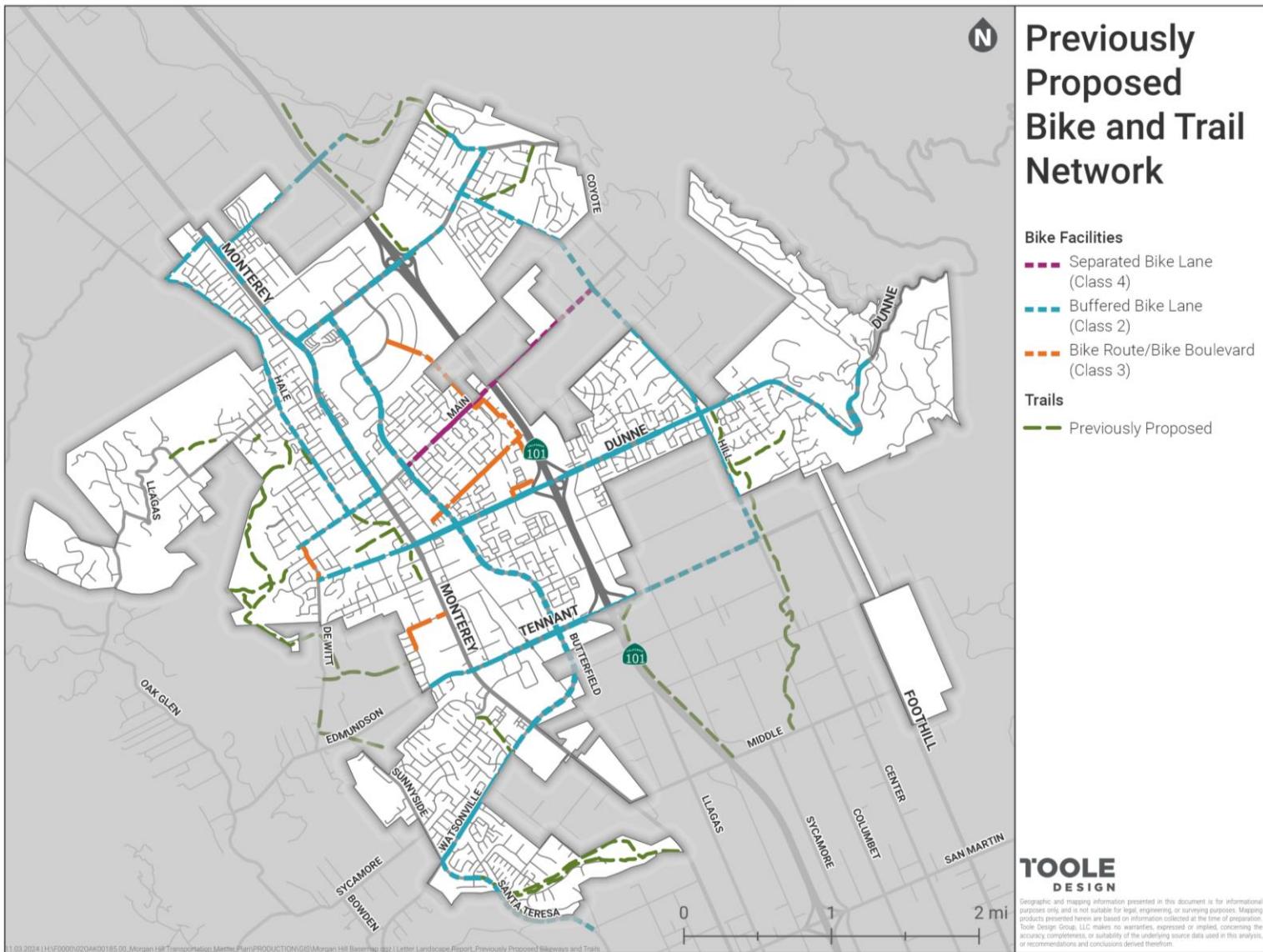
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Previously Proposed Bikeways and Trails



Previously Proposed Bike and Trail Network

Bike Facilities

- Separated Bike Lane (Class 4)
- Buffered Bike Lane (Class 2)
- Bike Route/Bike Boulevard (Class 3)

Trails

- Previously Proposed

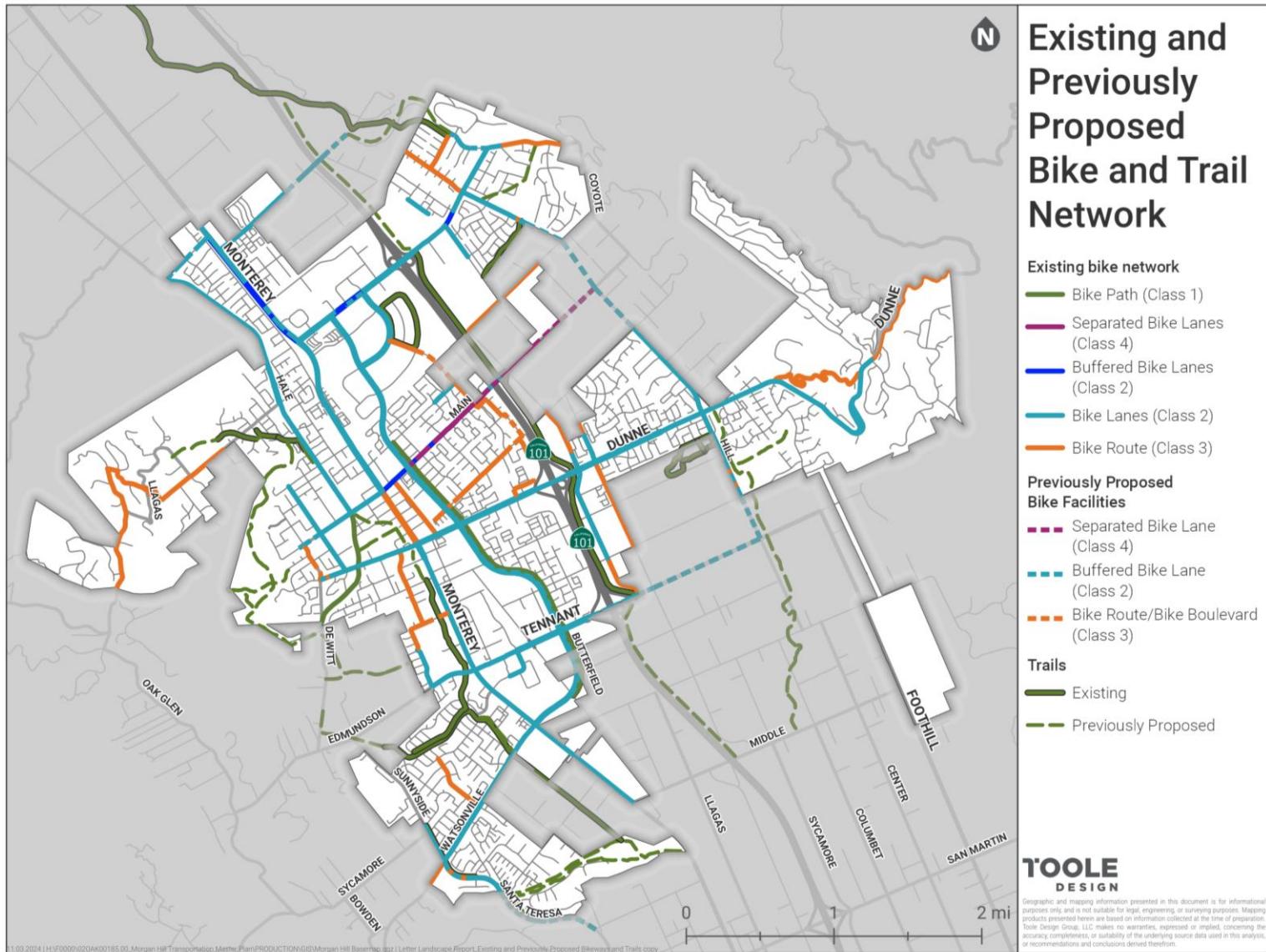
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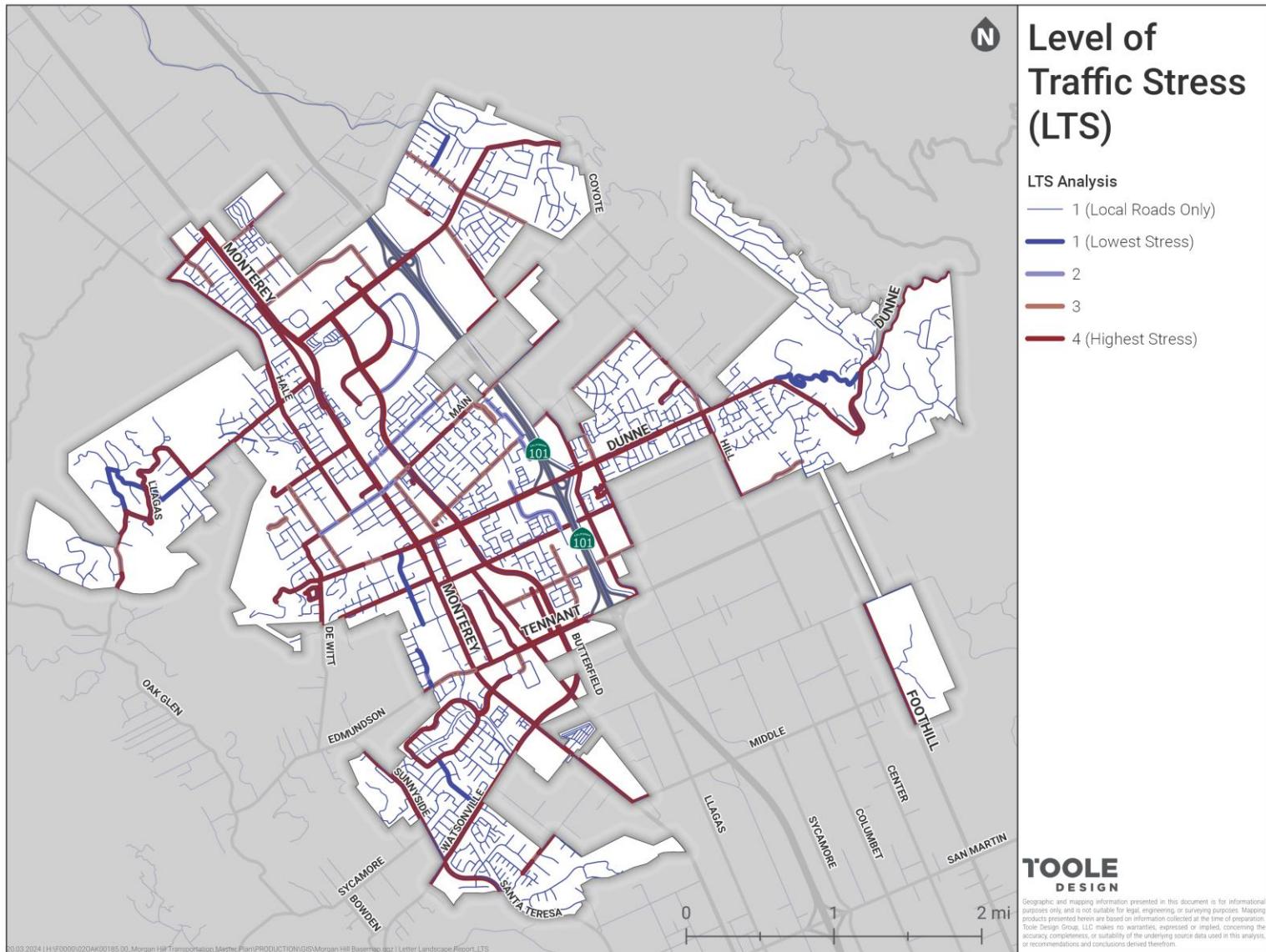
Existing and Previously Proposed Bikeways and Trails





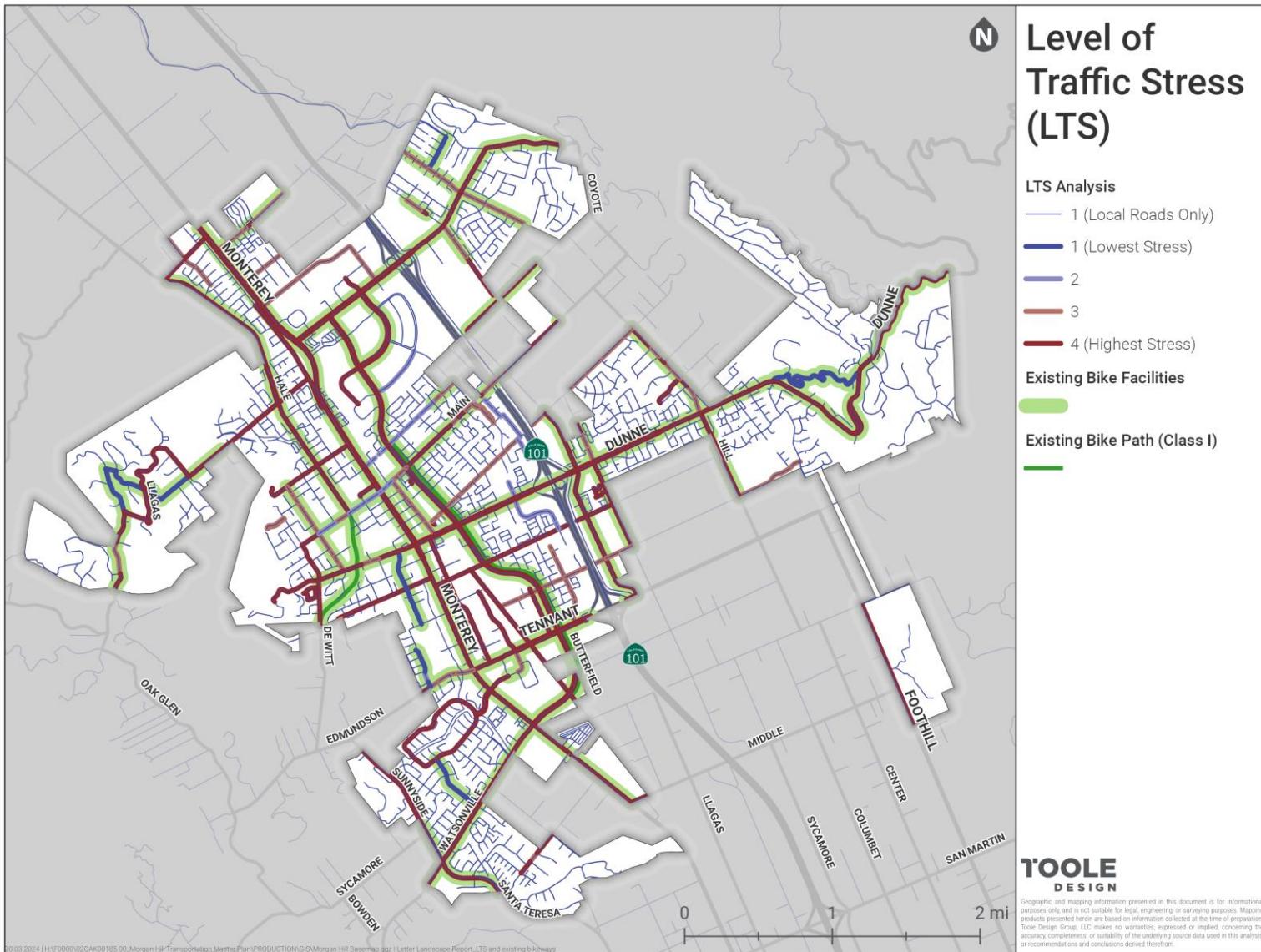
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Level of Traffic Stress





Level of Traffic Stress and Existing Bike Facilities

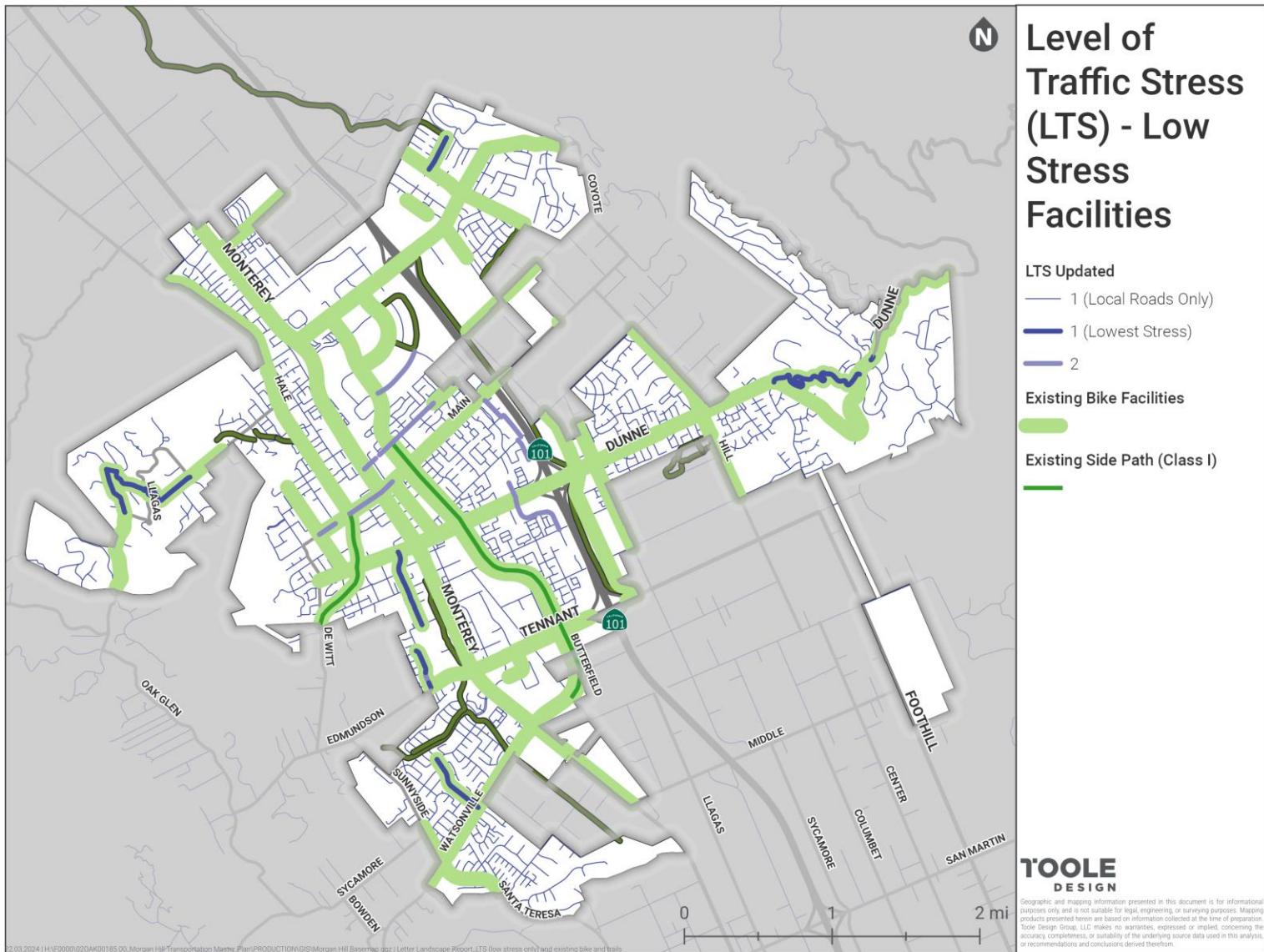


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Low Stress Existing Bike Facilities





How will the bikeway and trail network information be used?

- Prioritize areas for improvements
- Identify specific improvement opportunities
 - Enhance existing bikeways with high levels of traffic stress
 - Fill in network gaps
- Review feasibility/opportunities for increasing separation from motor vehicles
- Identify new connections → *updated set of priority bikeway and trail projects*

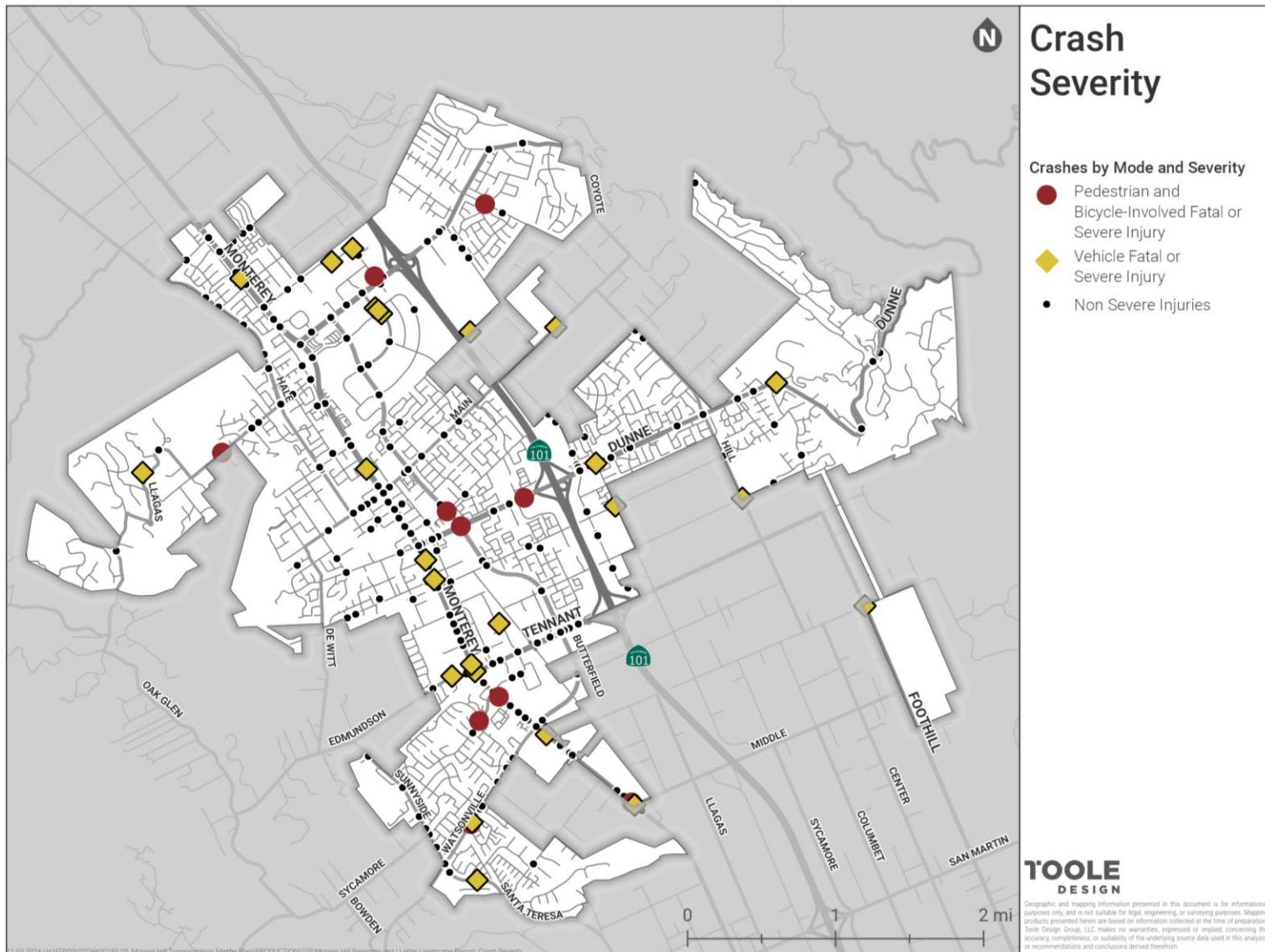


Safety



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Crash Locations and Severity





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High Injury Network – Vehicles





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High Injury Network – Pedestrians





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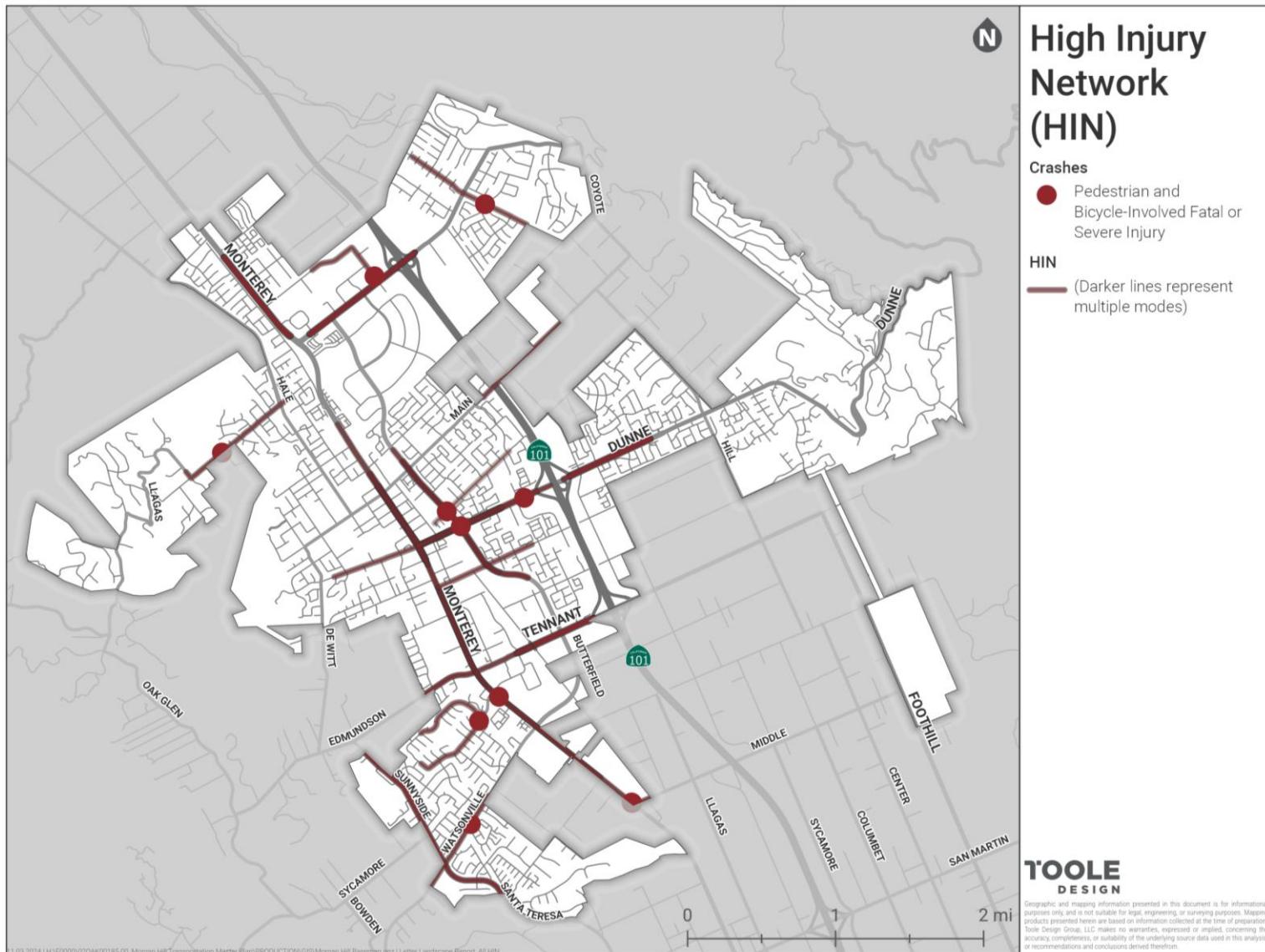
High Injury Network – Bikes





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High Injury Network – All modes





How will the safety information be used?

- Component of general project prioritization
- Identify specific improvement opportunities
- Reference document for future project development
- Inform upcoming Safety Action Plan



Questions



Traffic Operations Analysis

Travel Demand Forecasting Model Update

- Utilizes entirely new Countywide Travel Demand Forecasting (TDF) model
- New traffic projections based upon current traffic conditions & land use data (existing, approved/pipeline development, & Planned General Plan)

Traffic Operations Analysis

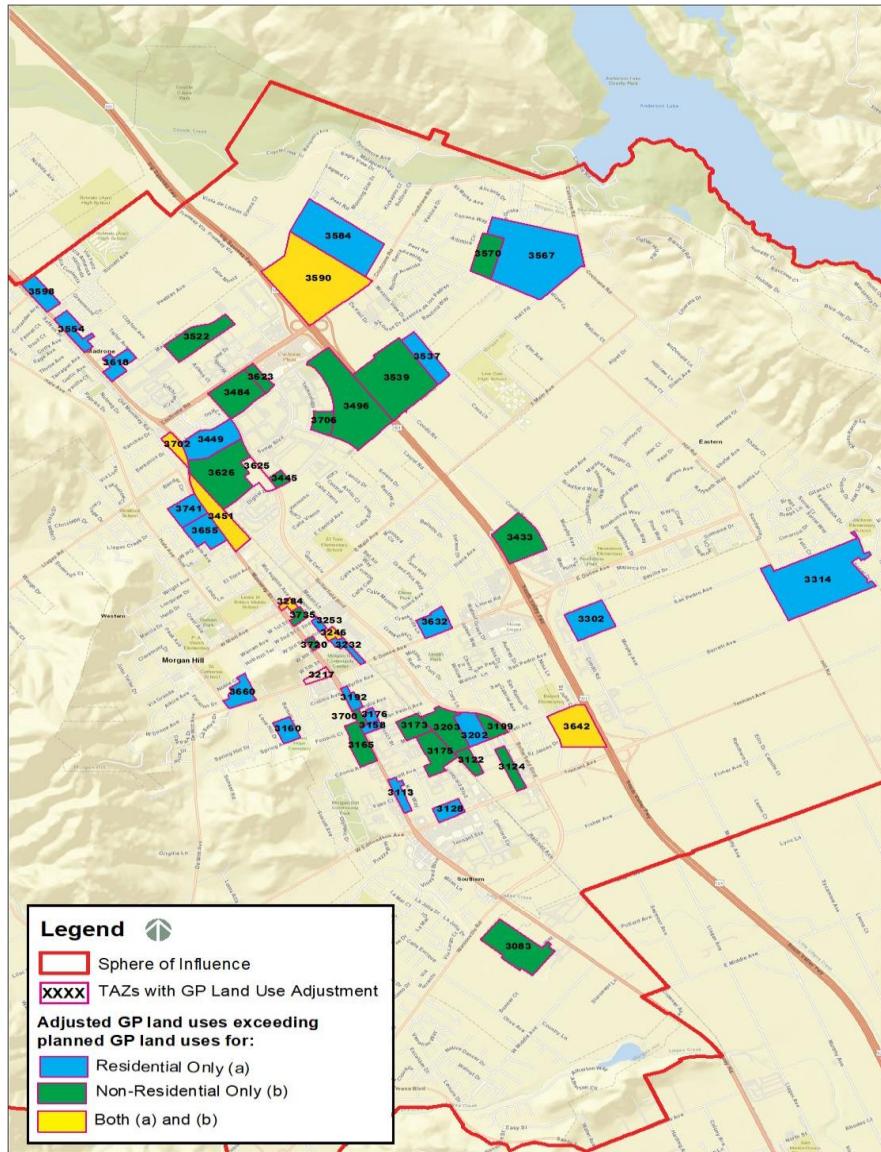
- Intersection Peak Hour and Roadway Segment Capacity Evaluation
- Evaluation of Year 2023 and Future Year 2050 conditions



TDF Model Update

- Developed from VTA's countywide travel demand model
- The Morgan Hill model is a sub-area model of the VTA model
- Includes all cities and counties roughly bounded by southern Monterey County, eastern San Joaquin County, northern Sonoma County, and the Pacific Ocean.
- Reflects Adopted GP 2035 horizon year buildout development levels
 - Approved and Occupied development (post-2019)
 - Approved but unoccupied development
 - Known Pending (Pipeline) development
- Improved citywide travel demand forecasting vs. Old city GP TDF model
 - City GP model was limited to inter-city vehicular traffic forecasting
 - City GP model included minimal land use and network coding outside of City
 - Model update required to complete CEQA-compliant VMT evaluation

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TDF Model Elements

Trip Generation. Trip generation is estimated based on the type and amount of specific land uses within each traffic analysis zone (TAZ).

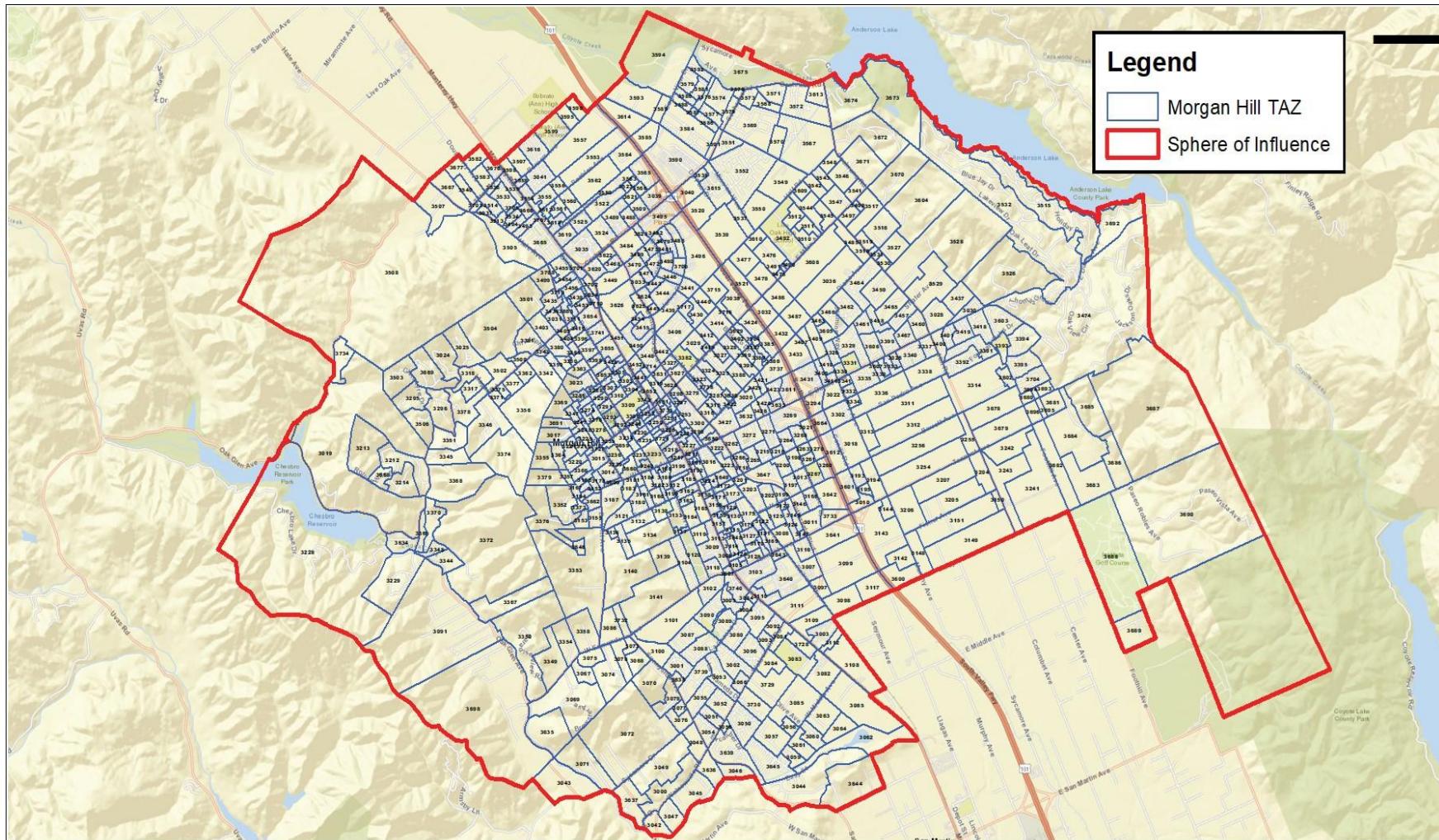
Trip Distribution. The model pairs trip origins and trip destinations (starting and ending points) for each person trip based on the type of trip (e.g., home-to-work, home-to-school, etc.) and the distance a person is willing to travel for that purpose.

Mode Choice. Mode choice, as assigned by the model, determines which mode of transport a person will choose for each trip, based on the availability of a vehicle, the trip distance, and the trip purpose.

Traffic Assignment. Traffic assignment involves determining which route to take to travel between the trip's origin and destination.



Morgan Hill TAZ Map





TDF Model Structure

Roadway System – Defined by links with endpoints (nodes)

- Attributes reflecting length, travel speeds, capacity

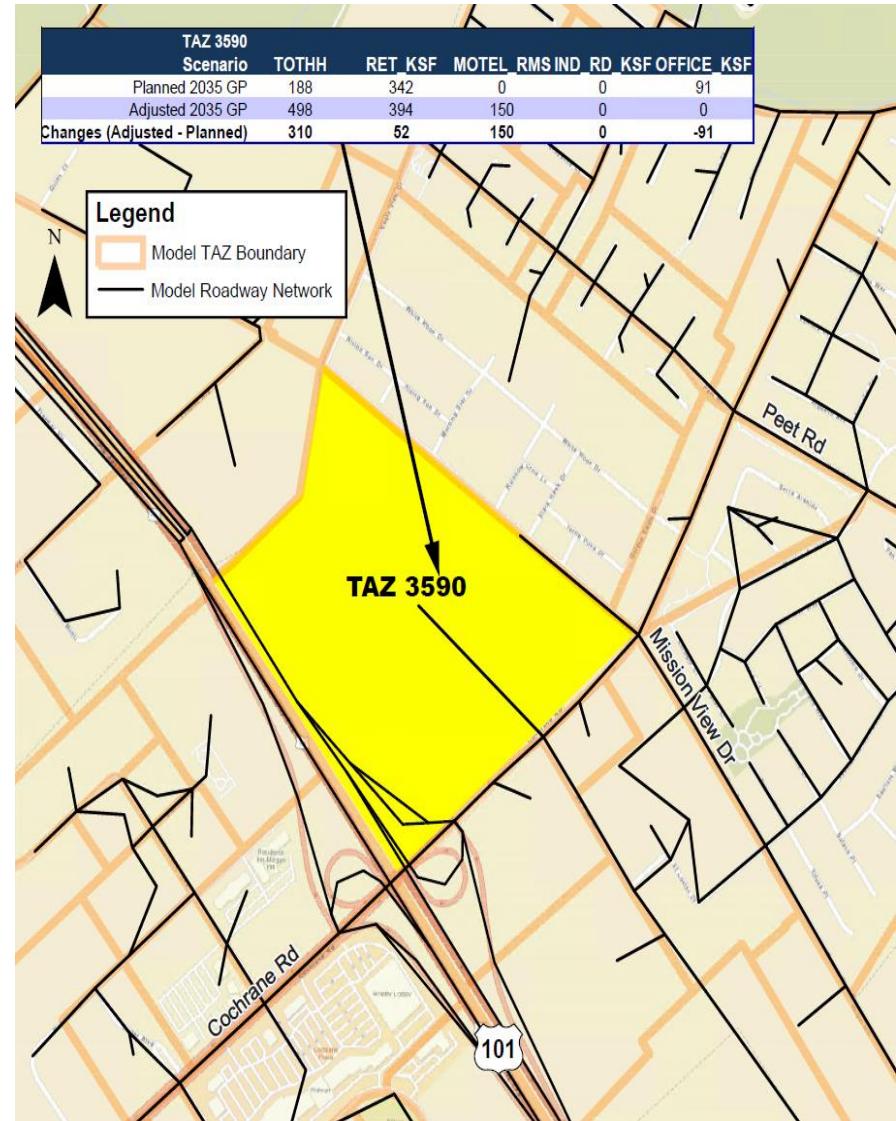
Geographic Area – Defined by Traffic Analysis Zones (TAZs)

- Attributes reflecting land use activity throughout the City
- Boundaries defined by roadway network or other physical barriers

Transit System – Defined by separate transit network (links & nodes)

- Attributes reflecting type of service operating speed, headways, dwelling times
- Accessibility evaluated by the model based on proximity to services

Socio-Economic Data – Information about the number of households (stratified by household income and structure type), population, average income, population age distribution, and employment



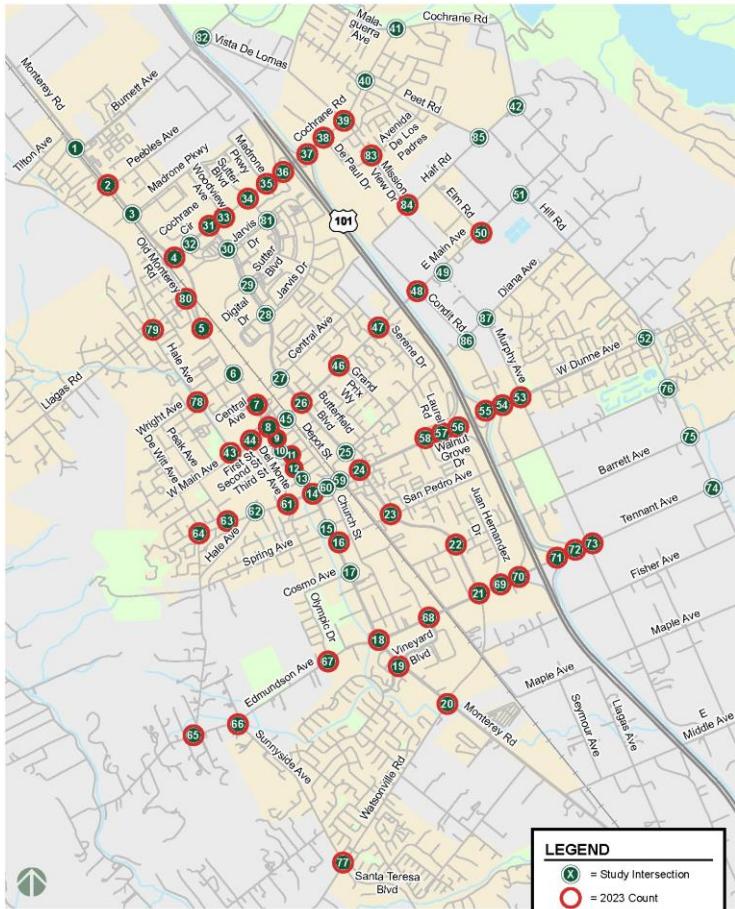


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Traffic Operations Analysis

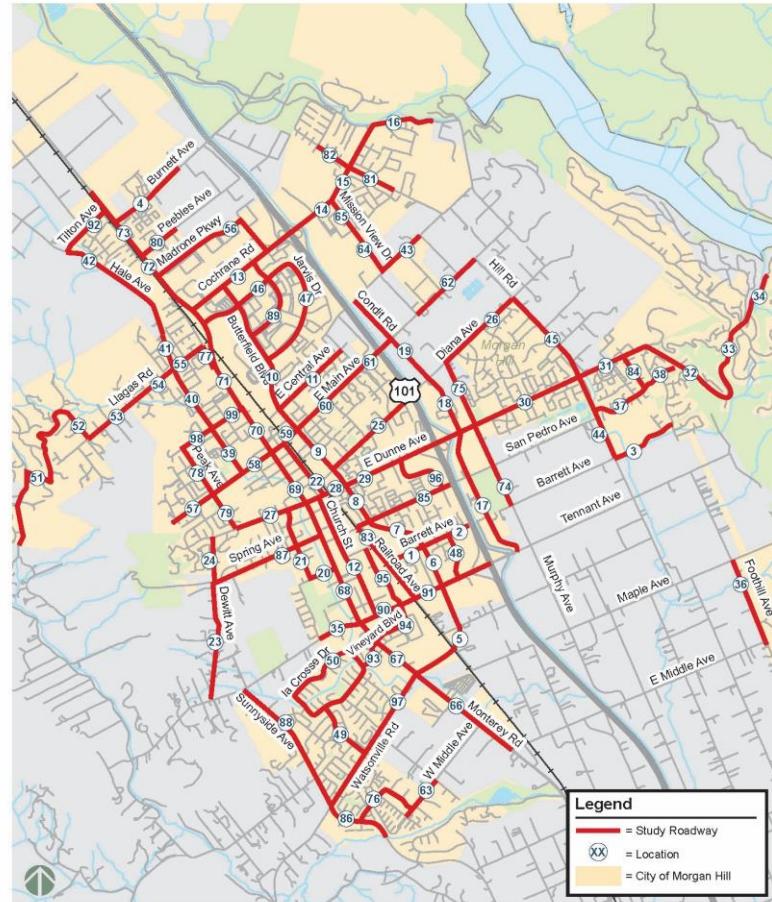
Peak Hour Intersection Operations

87 Intersections



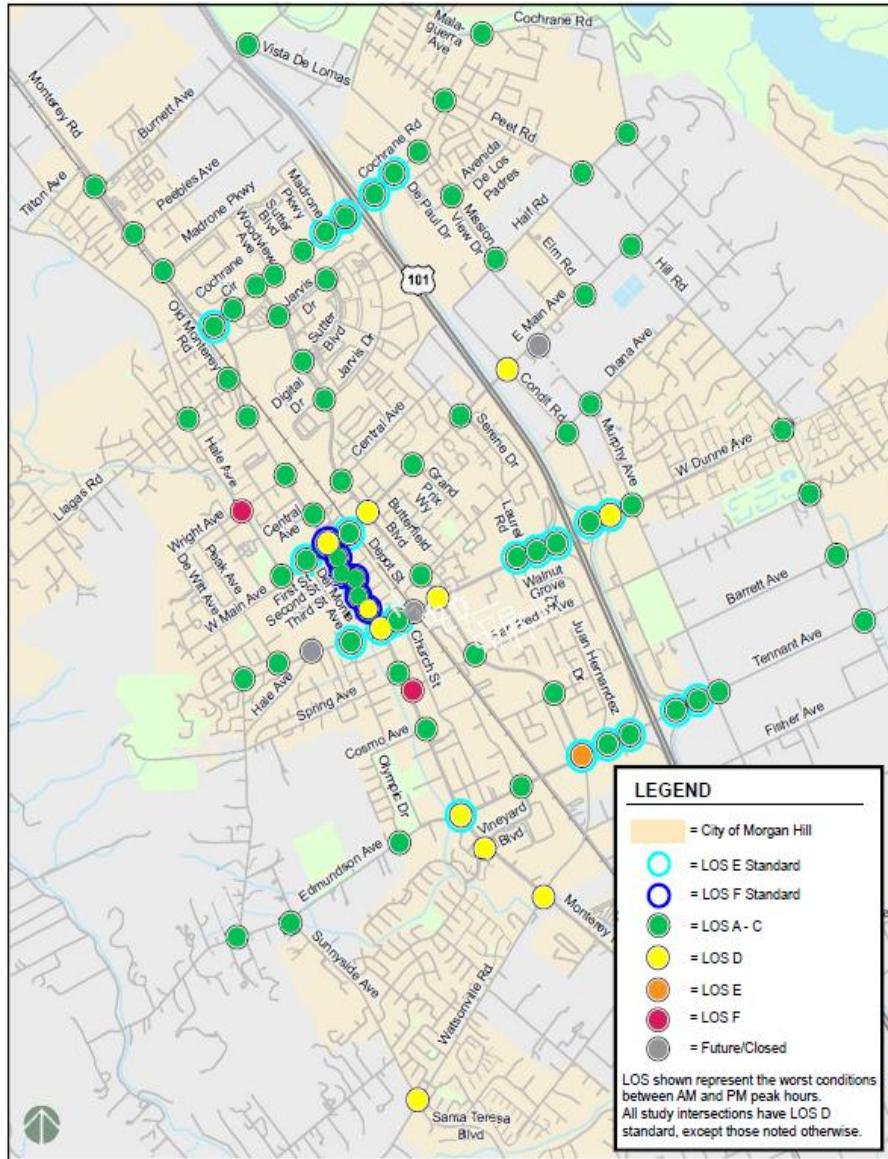
Roadway Segment Capacity

98 Roadway Segments





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Current (Year 2023) Intersection Operations

2 Intersections Operating at LOS F

Hale/Wright

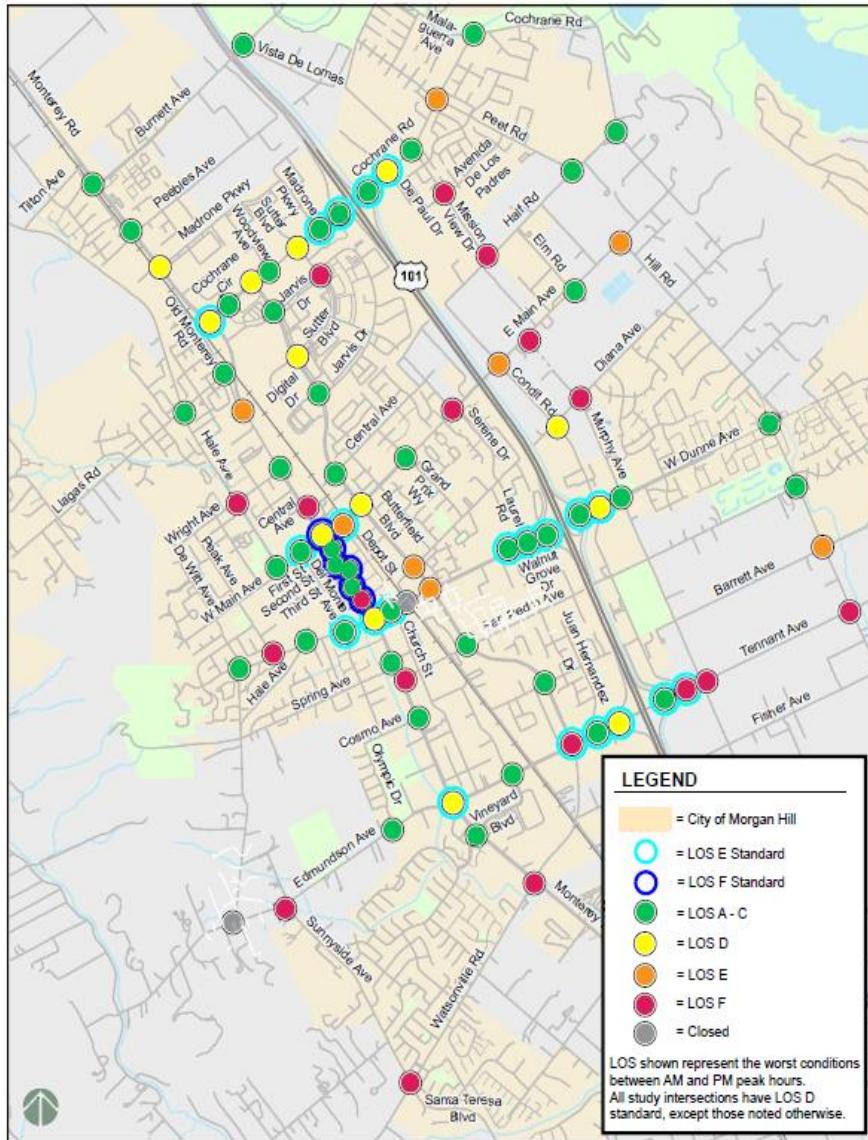
San Pedro/Monterey

1 Intersection Operating at LOS E

Butterfield/Tenant

11 Intersections Operating at LOS D

- Five intersections have LOS E/F standard

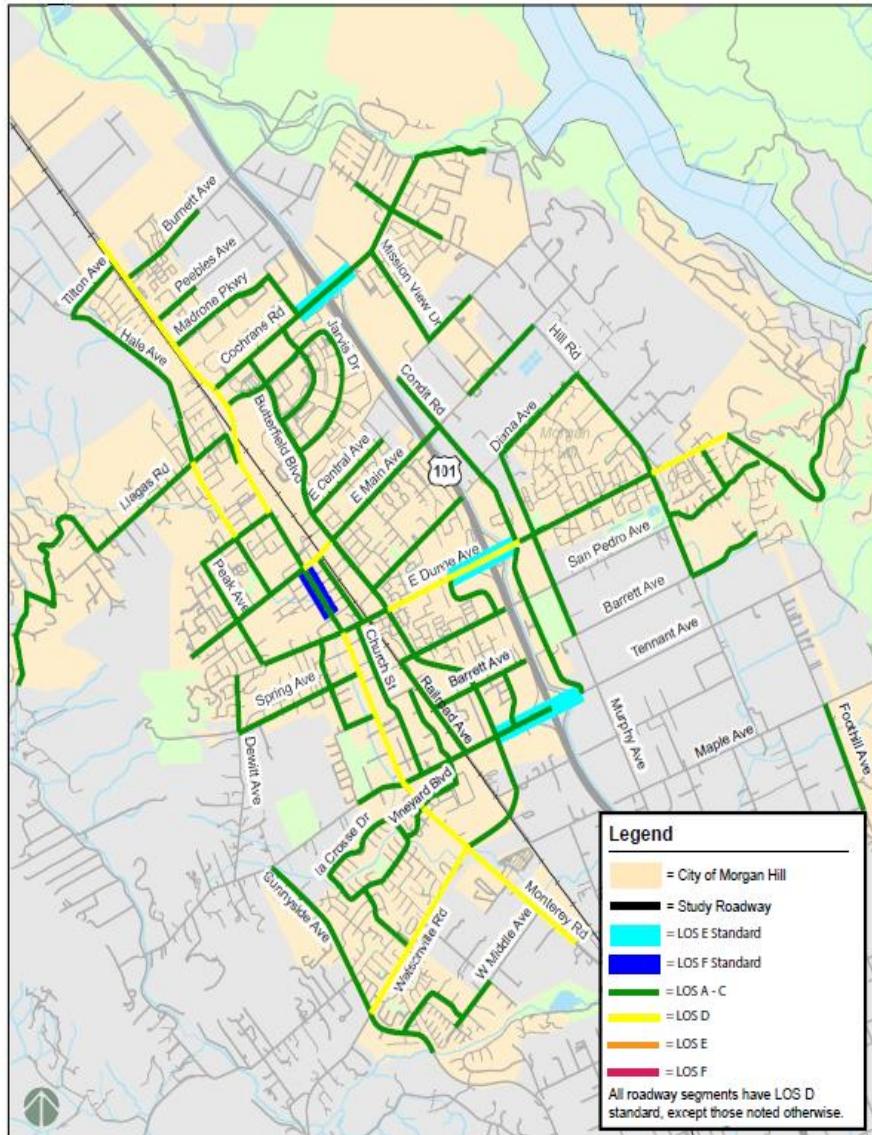


GP Buildout (Year 2050) Intersection Operations

18 Intersections Operating at LOS F
-One intersection within Downtown

8 Intersection Operating at LOS E

13 Intersections Operating at LOS D
- 7 intersections have LOS E/F standard

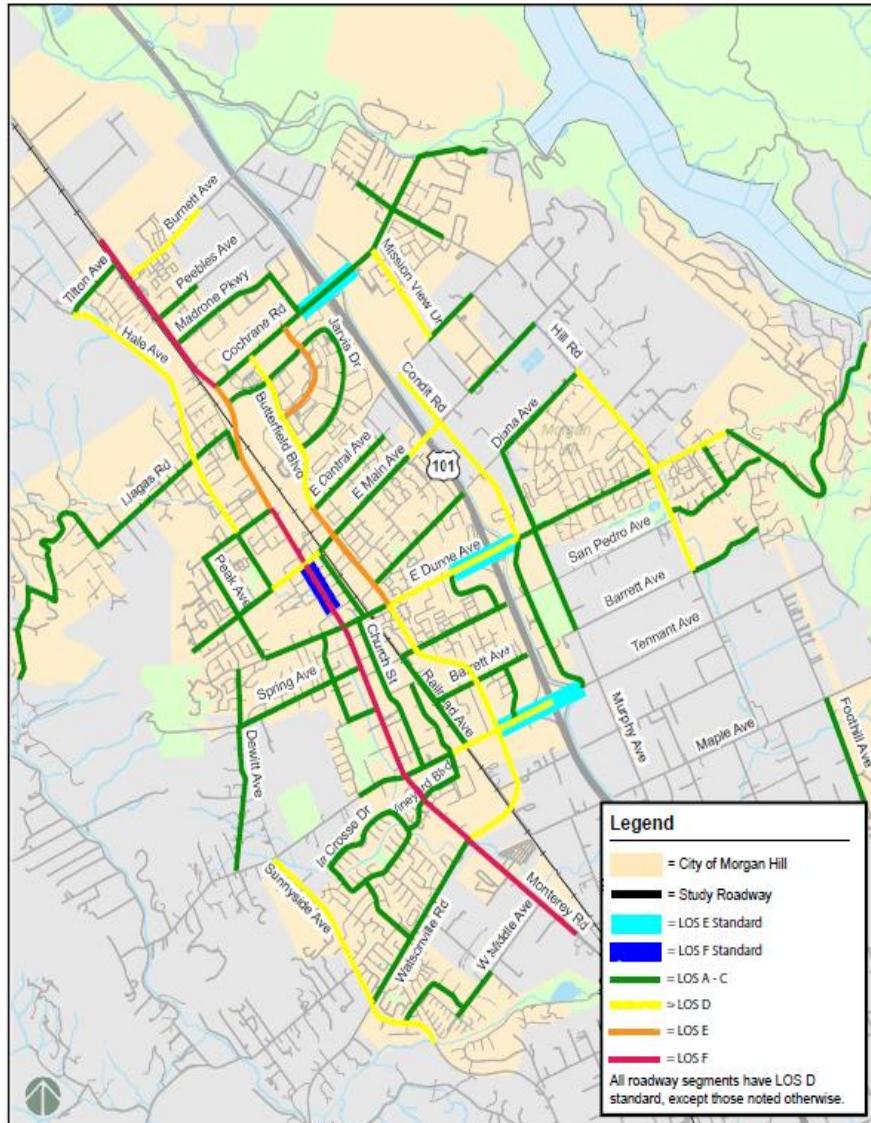


Current (Year 2023) Roadway Capacity

0 Segments at LOS F Capacity Level

0 Segments at LOS E Capacity Level

11 Segments at LOS D Capacity Level



GP Buildout (Year 2050) Roadway Capacity

7 Segments at LOS F Capacity Level

3 Segments at LOS E Capacity Level

22 Segments at LOS D Capacity Level



Traffic Operations Analysis Summary

		2023	2050
Intersection	operating <i>close to</i> substandard level	7 (8%)	8 (9%)
	operating <i>at</i> substandard level	2 (2%)	24 (28%)
Segment	operating <i>close to</i> substandard level	11 (11%)	22 (22%)
	operating <i>at</i> substandard level	0 (0%)	10 (10%)



Congestion Comparison

- Percent of Intersections operating below threshold for other jurisdictions under General Plan Buildout Conditions

Jurisdiction	% of intersections operating below standard
Morgan Hill (2050)	28%
Gilroy	38%
Los Gatos	0%
Sunnyvale	30%
Mountain View	19%



Questions



Street Typology Workshop

- Group Activity & Participation
- Limited to 30-Minute Exercise
- Identify Group Lead for Report Out



Street Typology Definitions

Purpose

- Define purpose and role of different streets that in Morgan Hill
- Linked to design guidance and improvement types
- Next step (after establishing definitions) → *apply designations to Morgan Hill roads*

Street Types

- Boulevard
- Community Corridor
- Main Street
- Neighborhood Street
- Rural Street



Street Typology Definitions

Boulevard

- **Travel Patterns:** Higher speed and higher volume roadway that connects various parts of a city or region
- **Bikeway and Pedestrian Considerations:** Facilities require greater separation to be comfortable and useful
- **Land Uses:** May include commercial, residential, or recreational amenities along the route



Butterfield Boulevard



Street Typology Definitions

Community Corridor

- **Travel Patterns:** Primarily serves trips within the City of Morgan Hill
- **Bikeway and Pedestrian Considerations:** Accommodates all modes while prioritizing safety, convenience, and comfort of bicyclists and pedestrians
- **Land Uses:** Balances land access and mobility and passes through residential and mixed-use areas





Street Typology Definitions

Main Street

- **Travel Patterns:** Serves local and visiting traffic; Main Street are a place to drive to rather than drive through.
- **Bikeway and Pedestrian Considerations:** Promotes and encourages active transportation and improve overall accessibility and mobility for non-personal motor vehicle users; prioritizes safety, including lower vehicle speeds.
- **Land Uses:** Downtown and walkable areas



3rd Street



Street Typology Definitions

Neighborhood Street

- **Travel Patterns:** Supports short-distance trips and access to residential areas; prioritizes safety, lower vehicle speeds, and traffic volumes
- **Bikeway and Pedestrian Considerations:** Should meet the needs of people walking and biking of all ages and abilities.
- **Land Uses:** Provides local access to neighborhoods and residential areas.



Peet Road



Street Typology Definitions

Rural Street

- **Travel Patterns:** High speed roadways that primarily serve local traffic and trips and connects trips within the City
- **Bikeway and Pedestrian Considerations:** Facilities may require greater separation to be comfortable and useful
- **Land Uses:** May include both residential and rural/agricultural uses along the route



Diana Ave

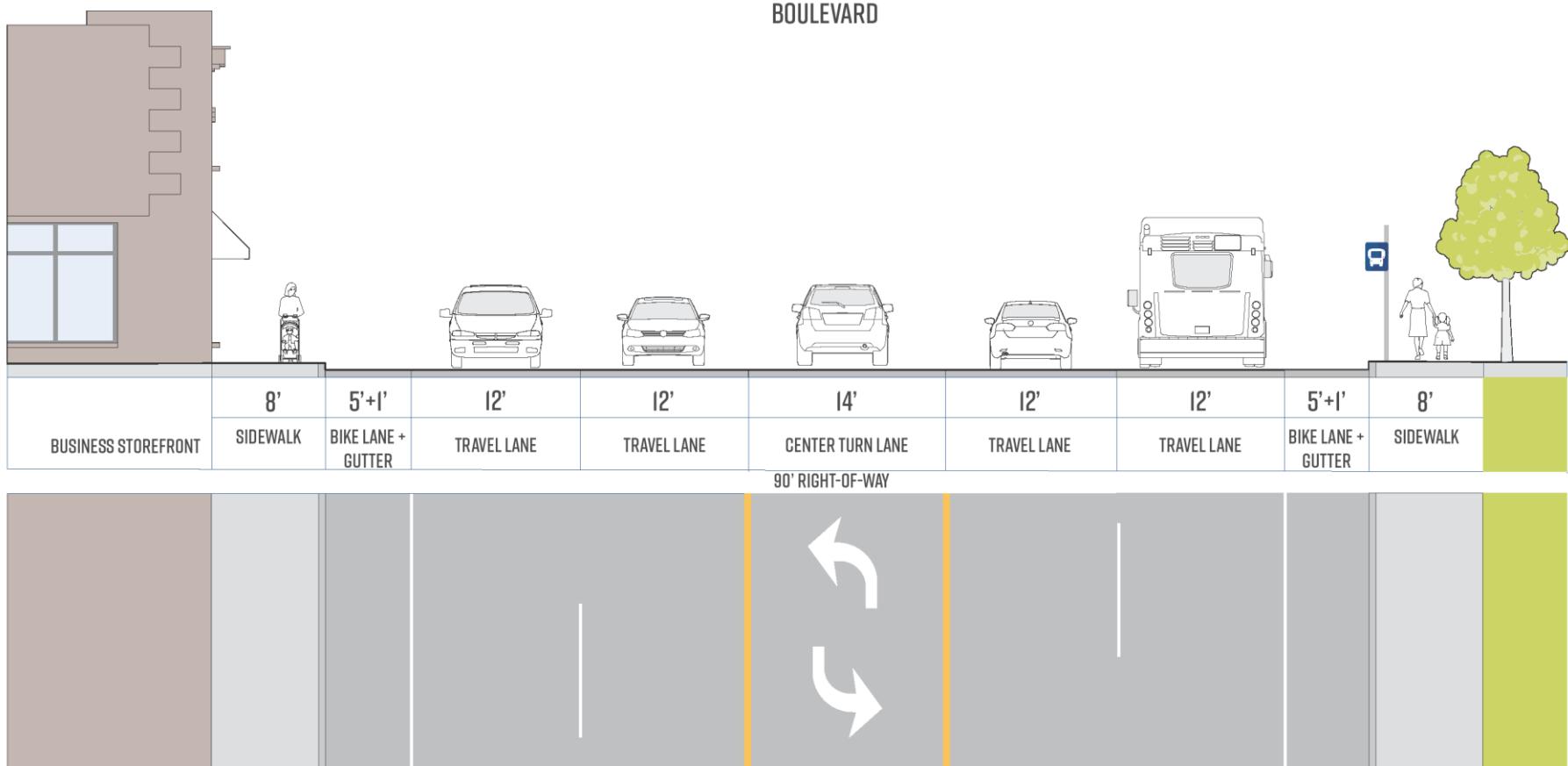


Street Design Activity

- **Task:** Consider street redesign opportunities for two corridors:
 - Boulevard
 - Community Corridor
- **Key question:** How should *available* roadway space be allocated given the competing community priorities?
- Use the cut-out pieces on the table to design your own street
- **Design considerations**
 - Typical **vehicle lane** width is 10-12', with wider lanes on higher speed roadways
 - Minimum **bicycle lane** width is 5', with wider lanes preferred
 - **Safety for all modes** is achieved through street designs that manage speeds and provide high-quality facilities for all users

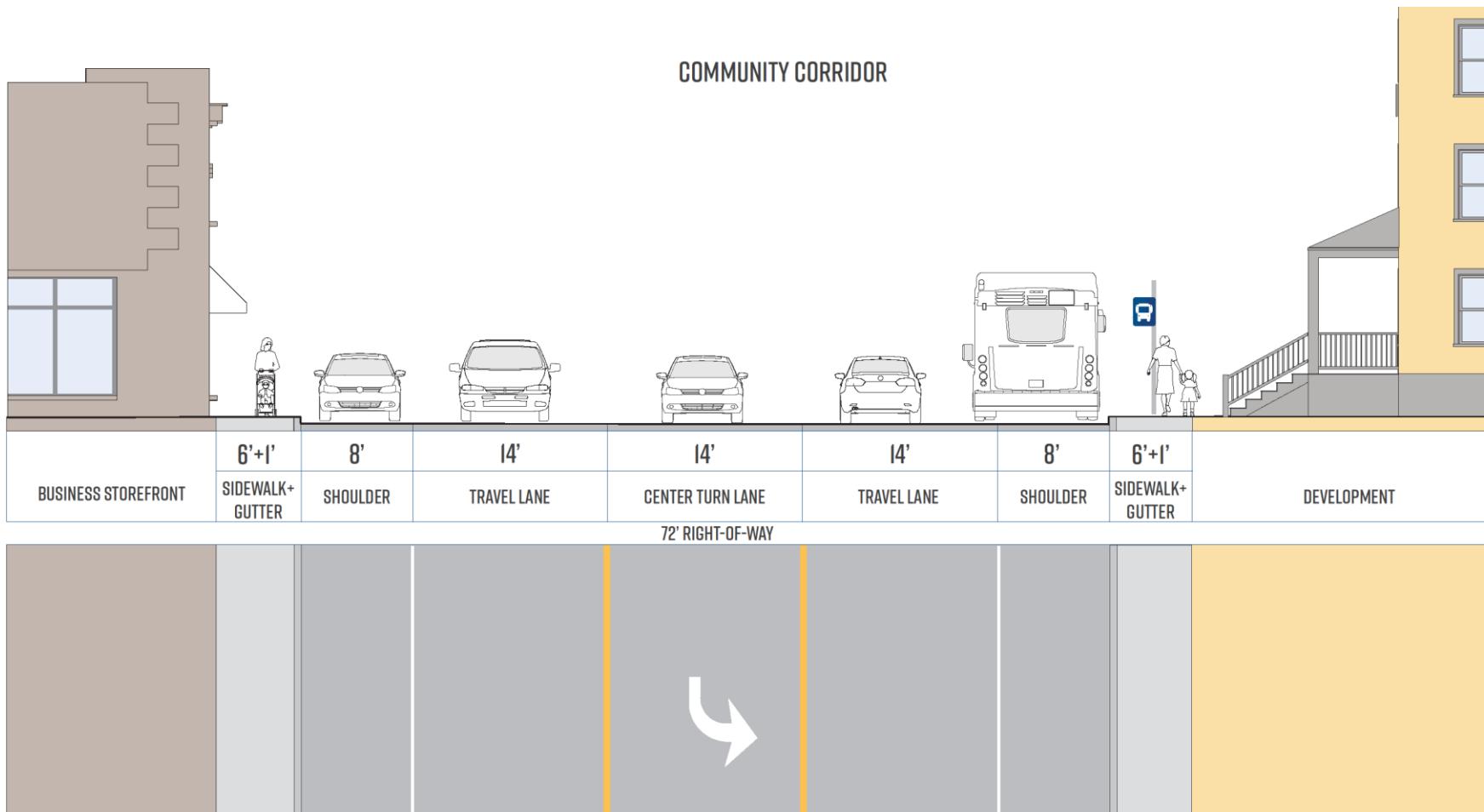


Street Typology Activity





Street Typology Activity





Next Stakeholders Committee Meetings

April 17th 6-8pm

&

July 31st 6-8pm



Preview of Stakeholder Meeting #4

- Discuss Designated Multi-Modal Street Typologies
- TMP Goals and Policies
- TMP Improvement Tool-Box Introduction
- TMP Improvement Prioritization Criteria
- Discussion of Available & Allocated Funding
- Workshop - Improvement Criteria Prioritization