

Cottonwood Heights Transportation Master Plan

CITY COUNCIL – NOVEMBER 1, 2022

Transportation Master Plan Purpose

- Transportation Master Plan serves as a unifying document, consolidating previous transportation policy documents
 - 1st TMP for Cottonwood Heights
 - Updates the 2019 Transportation Capital Facilities Plan
 - Includes latest Active Transportation Master Plan: Mid-Valley Active Transportation Plan
 - Incorporates City Master Plan Documents into the Transportation Model
- Develops a transportation model to anticipate level of service up to 2050
 - Uses WFRC 2019 – 2050 Traffic Analysis Zones (TAZ) – Anticipated Population
 - Added Wasatch Blvd Gravel Pit Master Plan Buildout to Model
 - TAZ Numbers include both residential population and daytime employment population
- Develop typical roadway cross-sections for updated road classifications

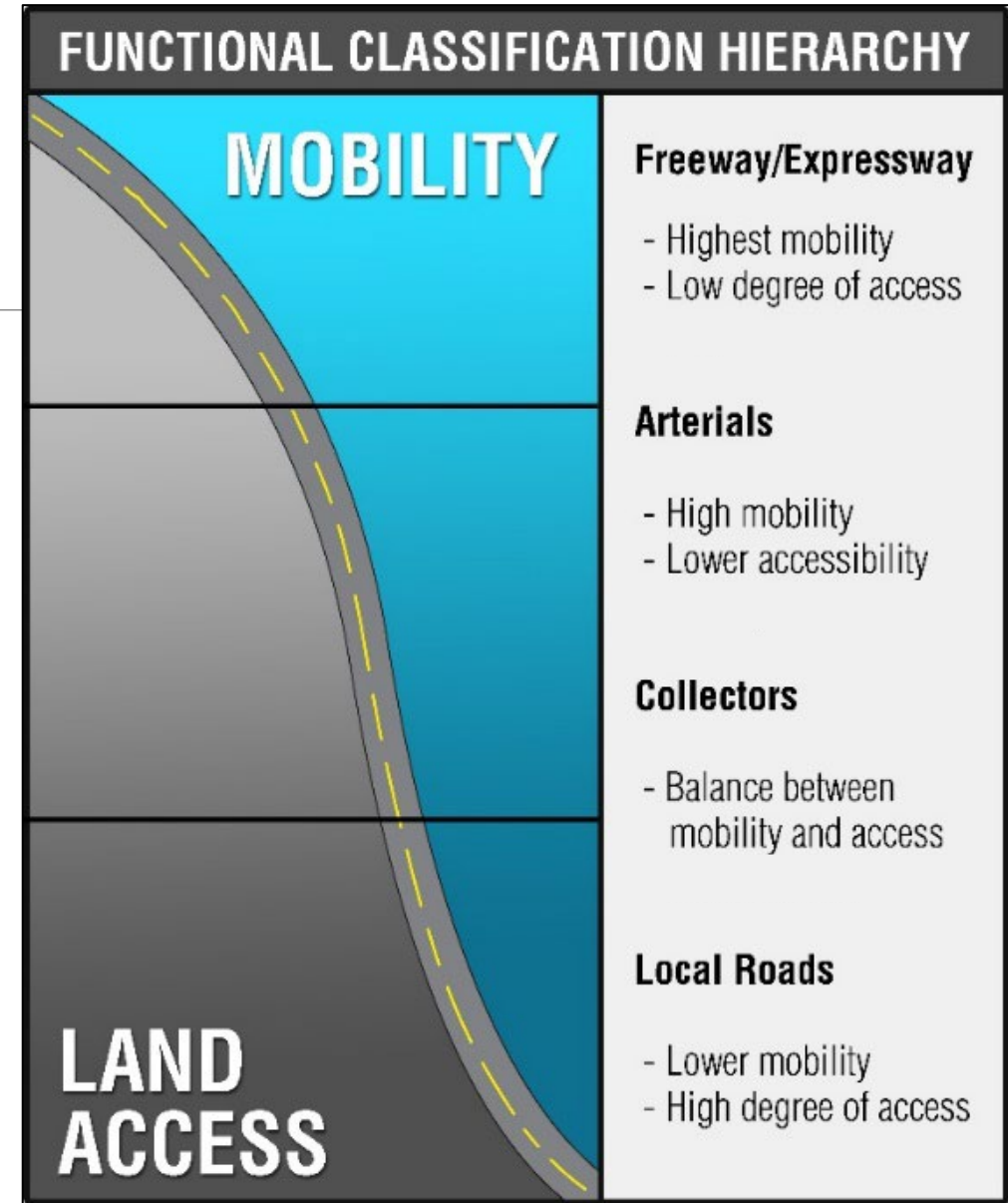
Transportation Master Plan Purpose

Goals & Objectives

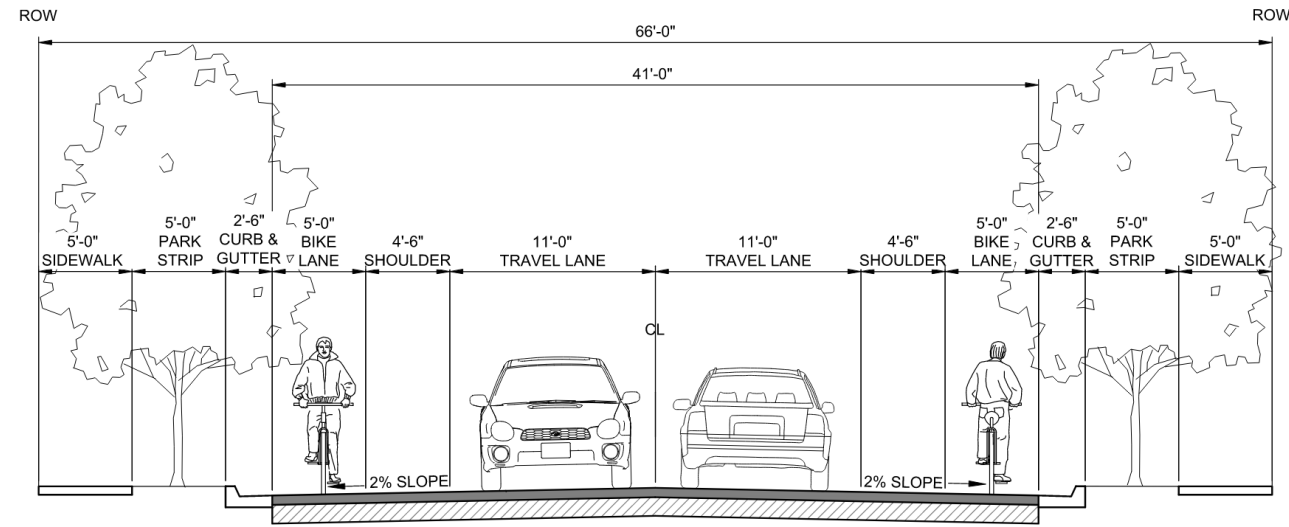
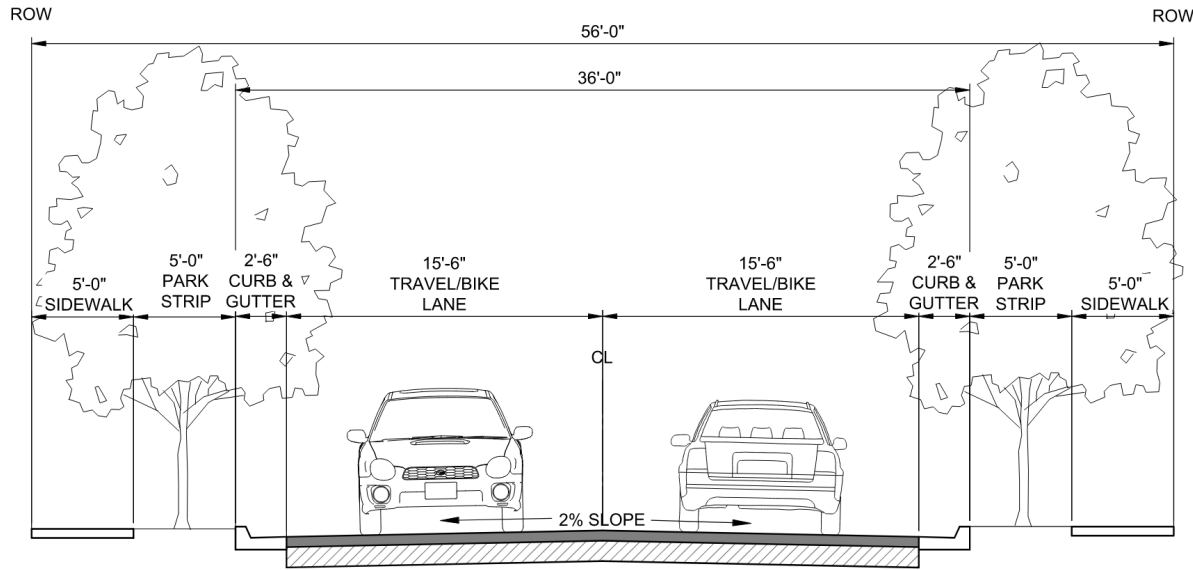
- To develop an efficient and comprehensive multi-modal transportation network for residents and integrates with the updated WFRC regional transportation plan.
- Provide safe and efficient traffic movement in Cottonwood Height.
- Promote active transportation on all Cottonwood Heights Roads.
- Identify locations for future neighborhood connectivity projects.

Functional Classification

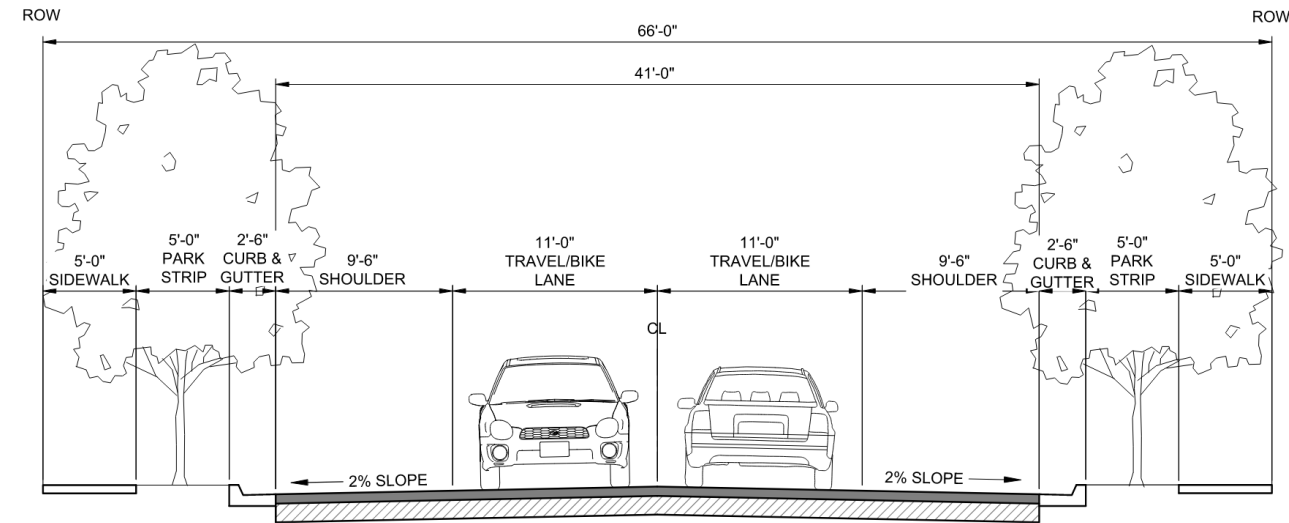
- Inverse Relationship
 - Mobility Increases while Access Decreases
- City Divided into the following Classifications
 - Urban Core Arterial (3-7 Lanes)
 - Urban Arterial (3-5 Lanes)
 - Urban Collector (2-3 Lanes)
 - Local Roads
- Typically spaced to provide optimal traffic flow throughout the city



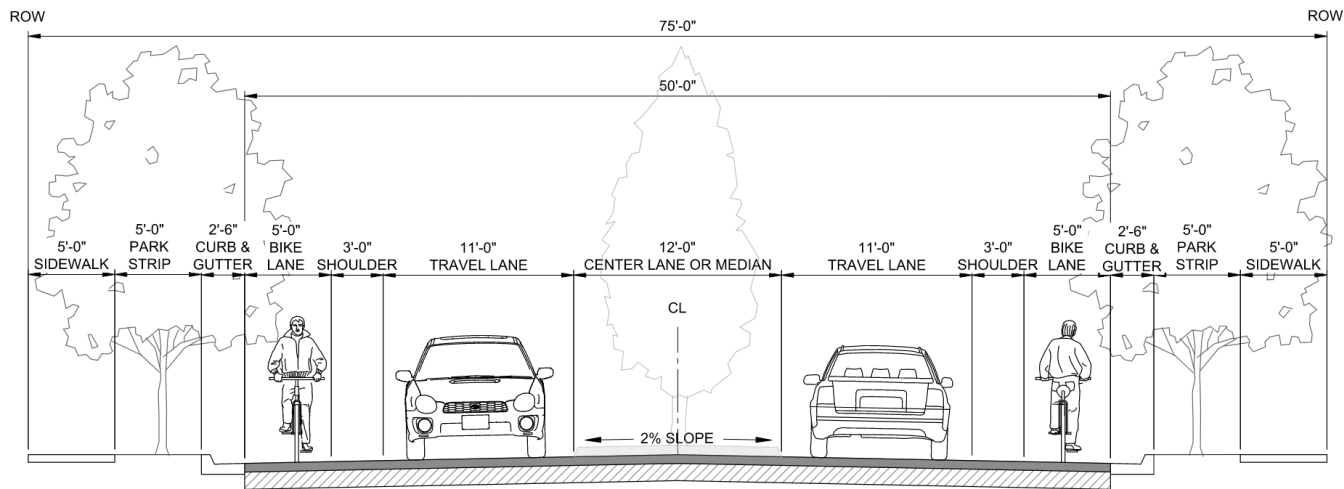
Typical Cross-Sections



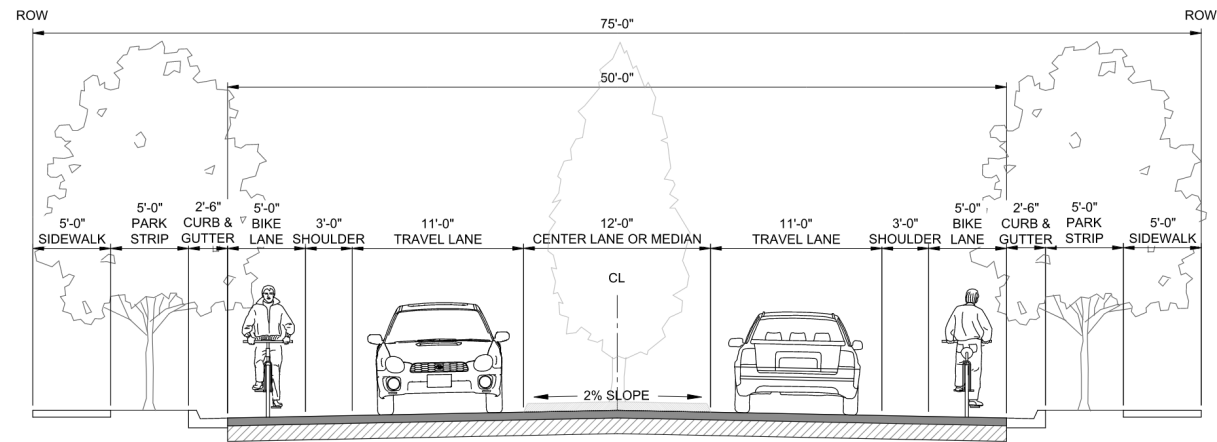
2-LANE URBAN COLLECTOR WITH BIKE LANE & NO PARKING



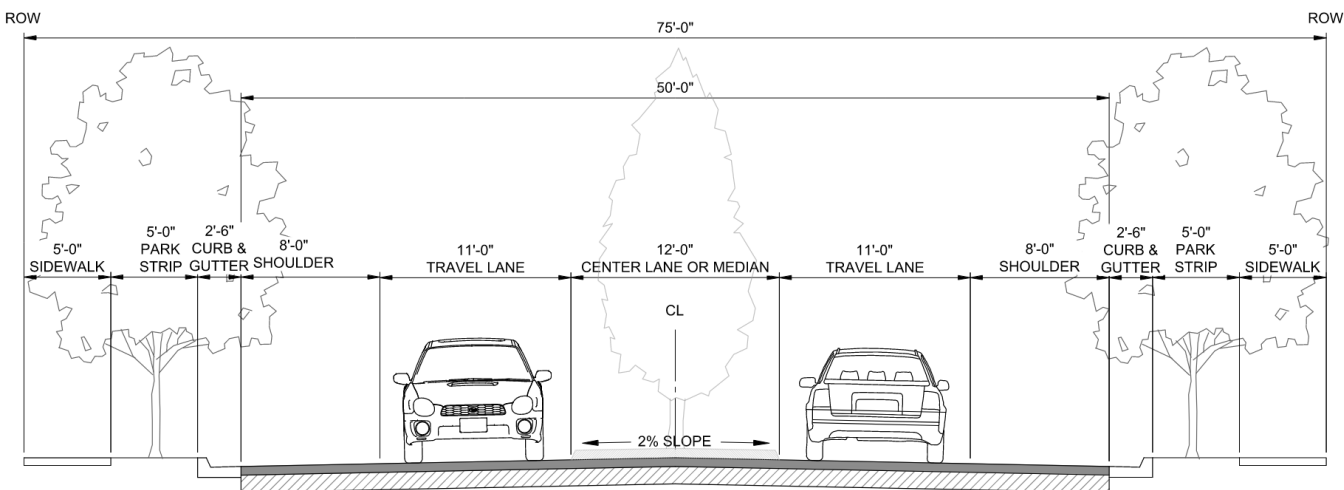
2-LANE URBAN COLLECTOR WITH PARKING



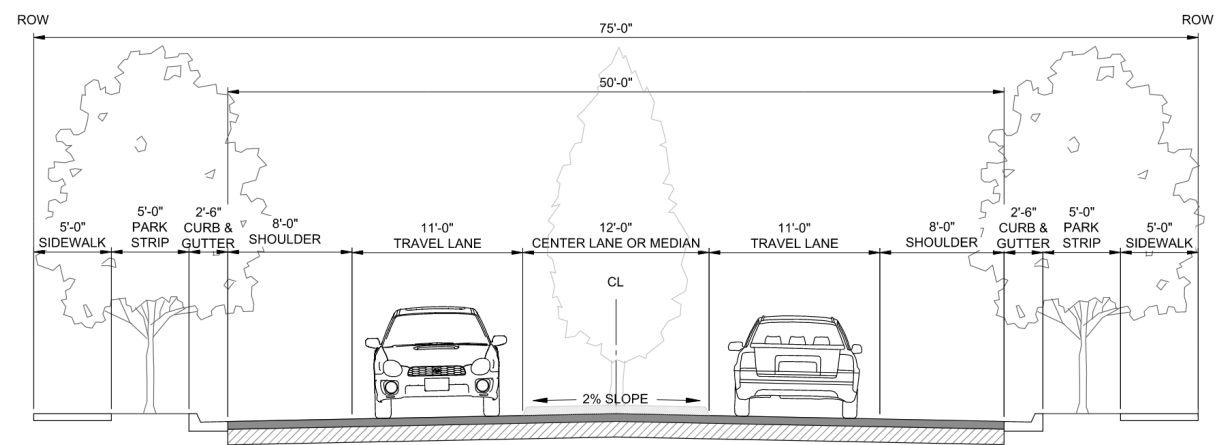
3-LANE URBAN ARTERIAL WITH BIKE LANE & NO PARKING



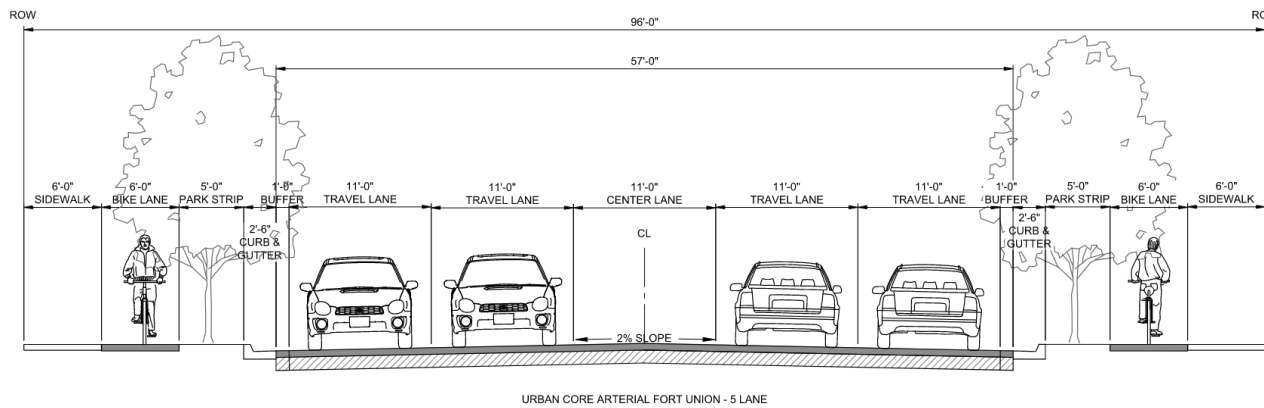
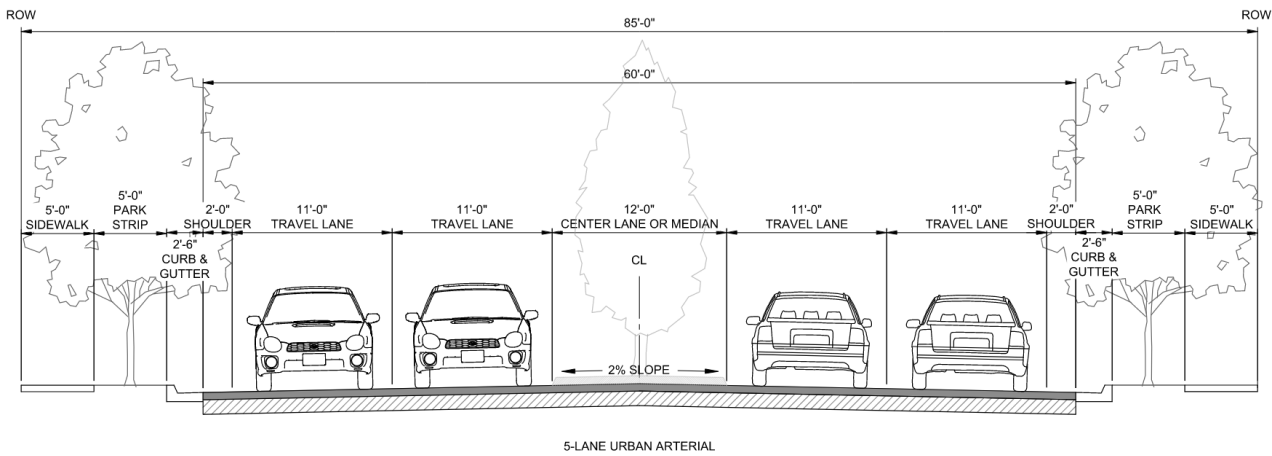
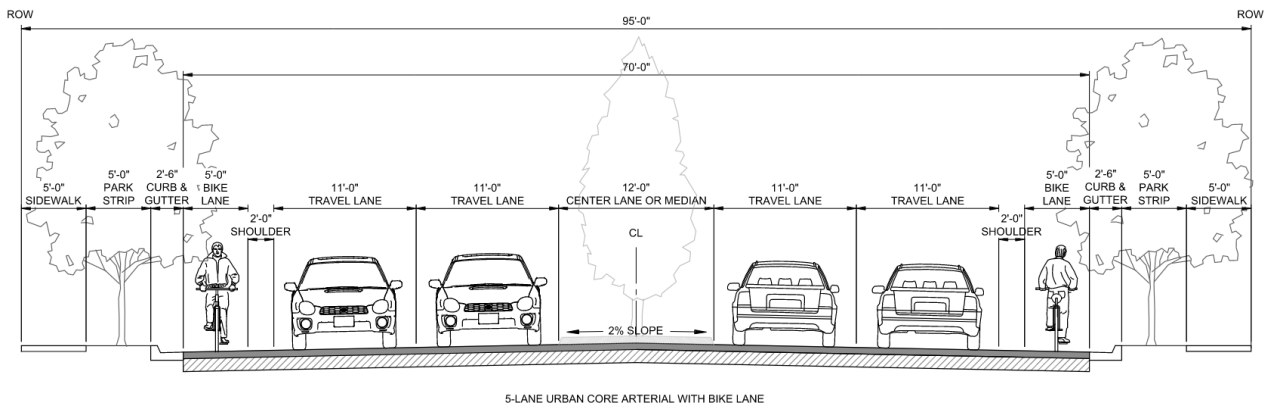
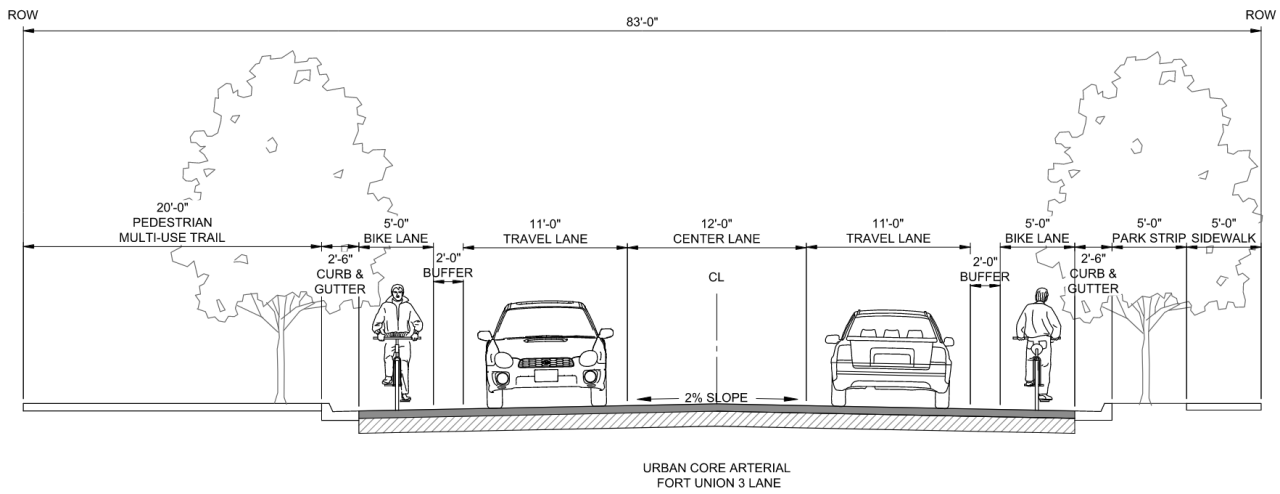
3-LANE URBAN COLLECTOR WITH BIKE LANE & NO PARKING

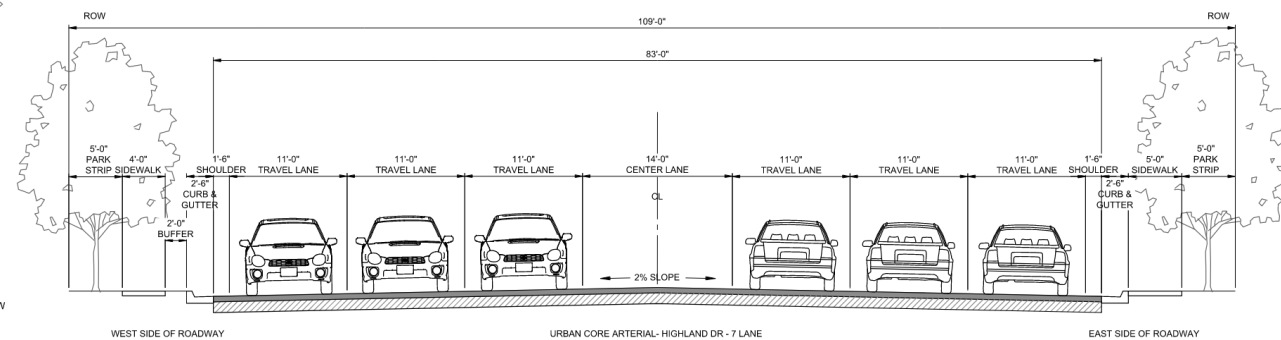
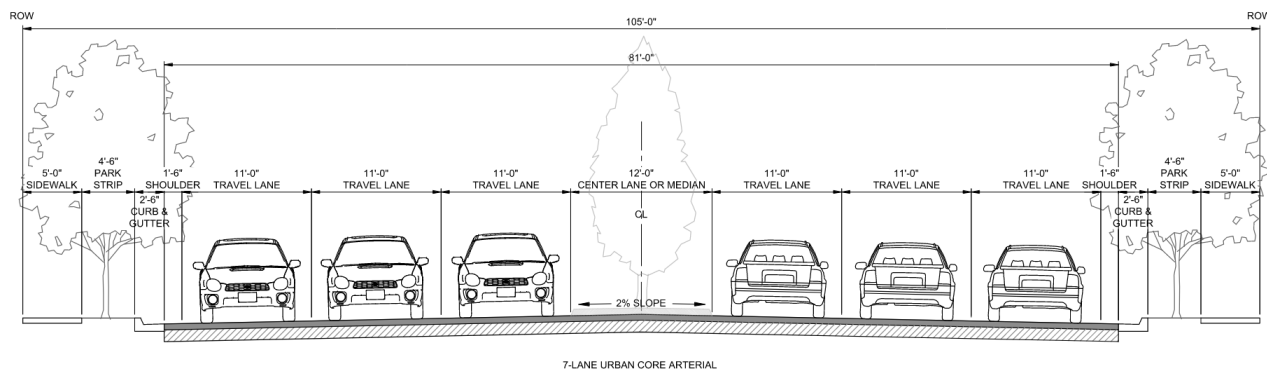
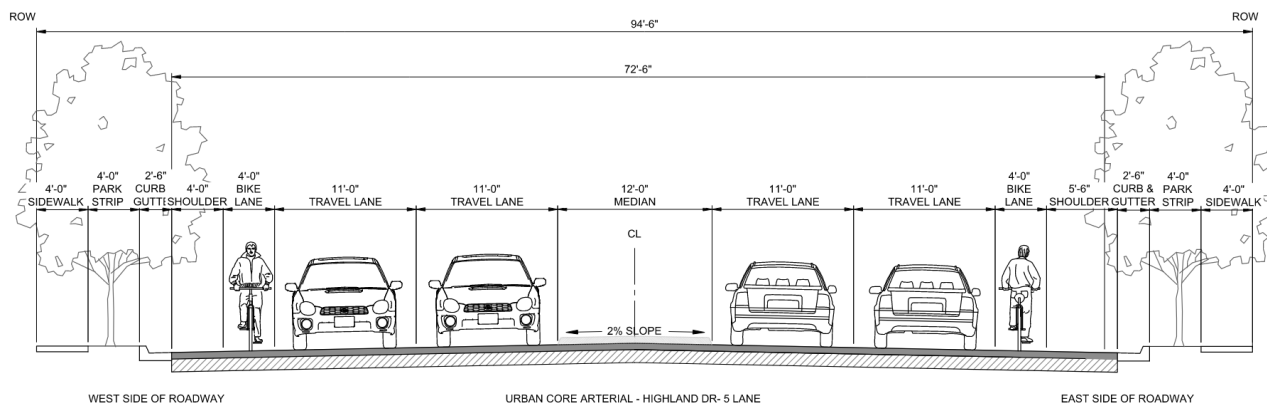


3-LANE URBAN ARTERIAL WITH PARKING

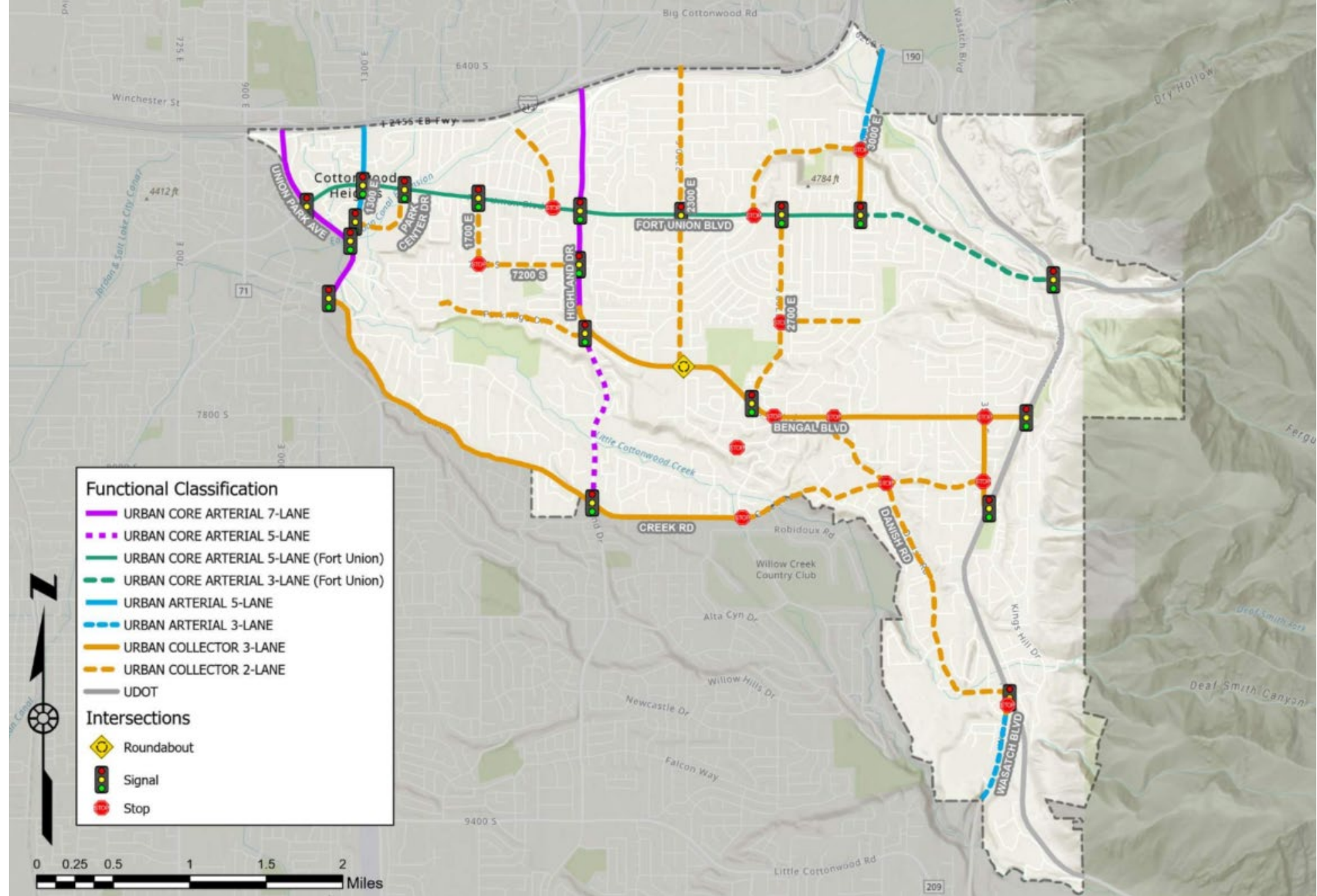


3-LANE URBAN COLLECTOR WITH PARKING

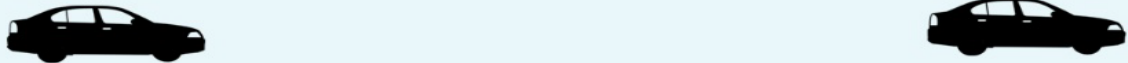
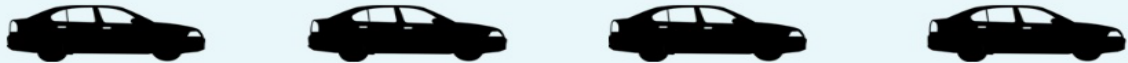




Existing Roadway Network



Level of Service

LEVEL OF SERVICE REPRESENTATION		
A		 Excellent
B		
C		
D		
E		
F		
		Severely Congested

Level of Service

Roadway LOS

Lanes	Arterial	Collector
2	13,400	12,100
3	15,100	13,400
4	31,200	24,200
5	32,800	26,900
6	43,500	NA
7	50,500	NA

Intersection LOS

LOS*	Signalized Intersection Delay (sec/veh)	Stop-Controlled/ Roundabout Delay (sec/veh)
A	≤10	≤10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	≥80	≥50

*LOS F when traffic volumes exceed capacity

Transportation Master Plan Process

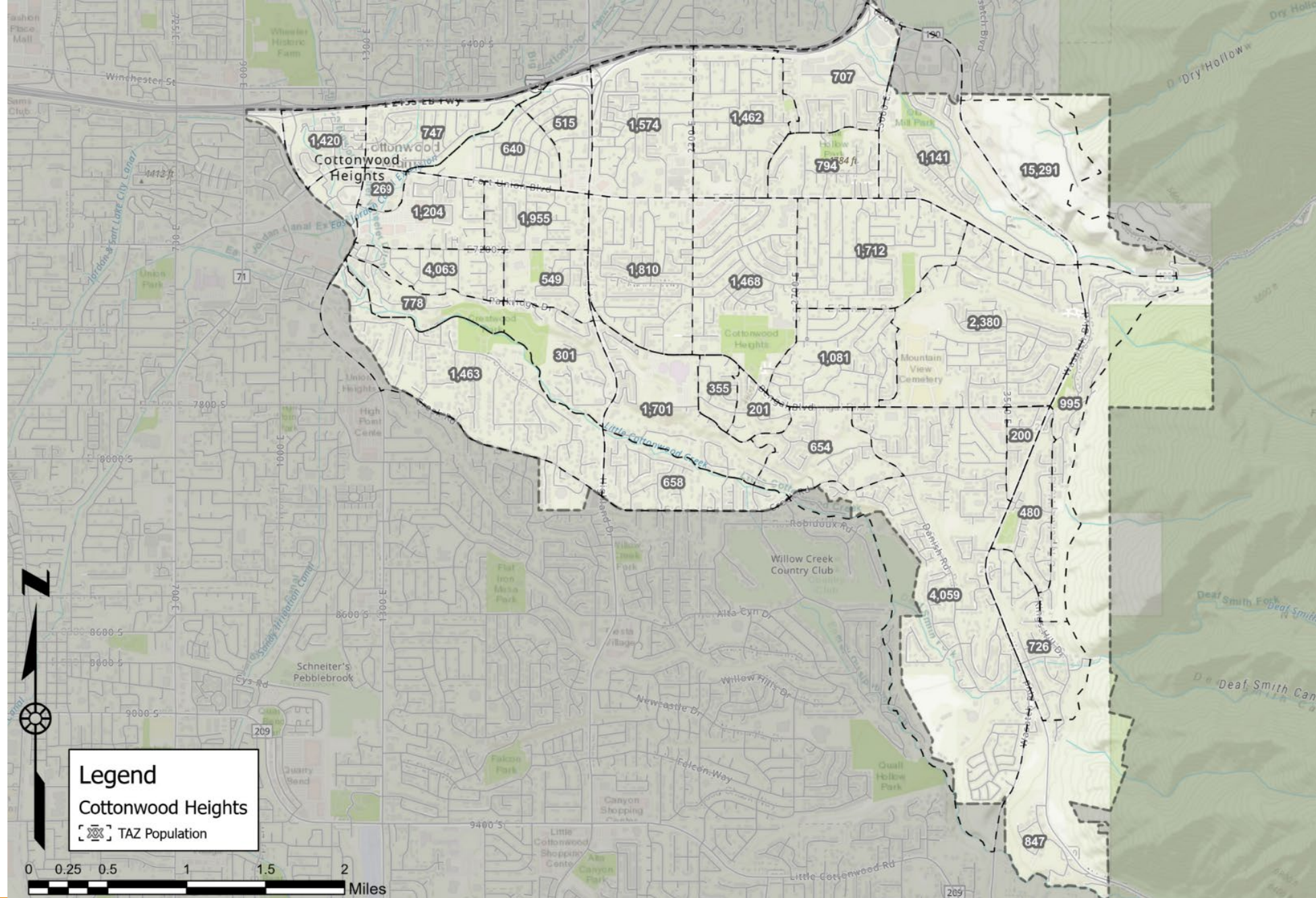
High Level

- WFRM's Travel Demand Model: High Level Regional Analysis
- Roadway and Intersection Level of Service: Based on roadway daily traffic volumes

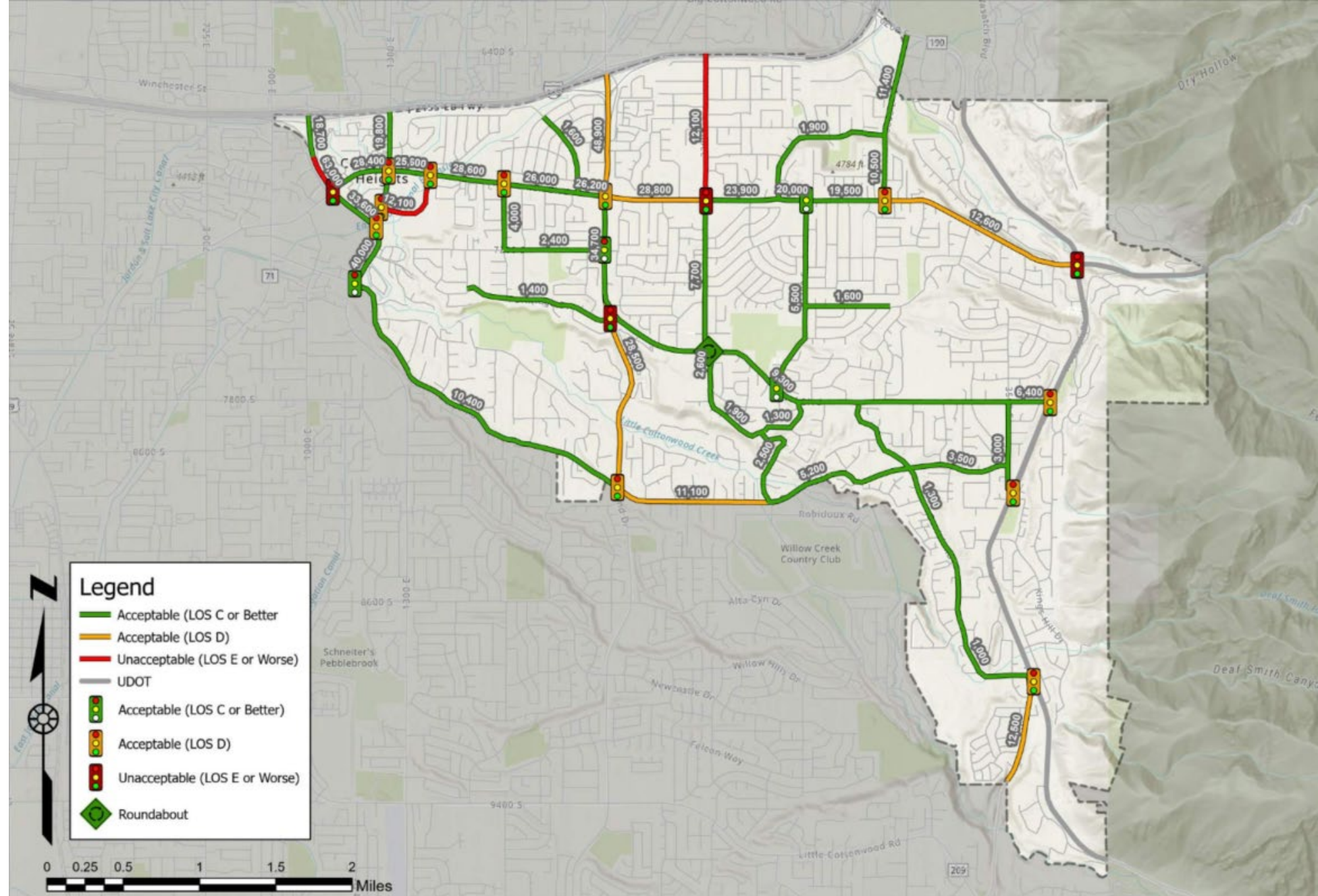
Detailed Level

- Micro-simulation Model (VISSIM/Synchro)
 - Specific Corridors and Intersections

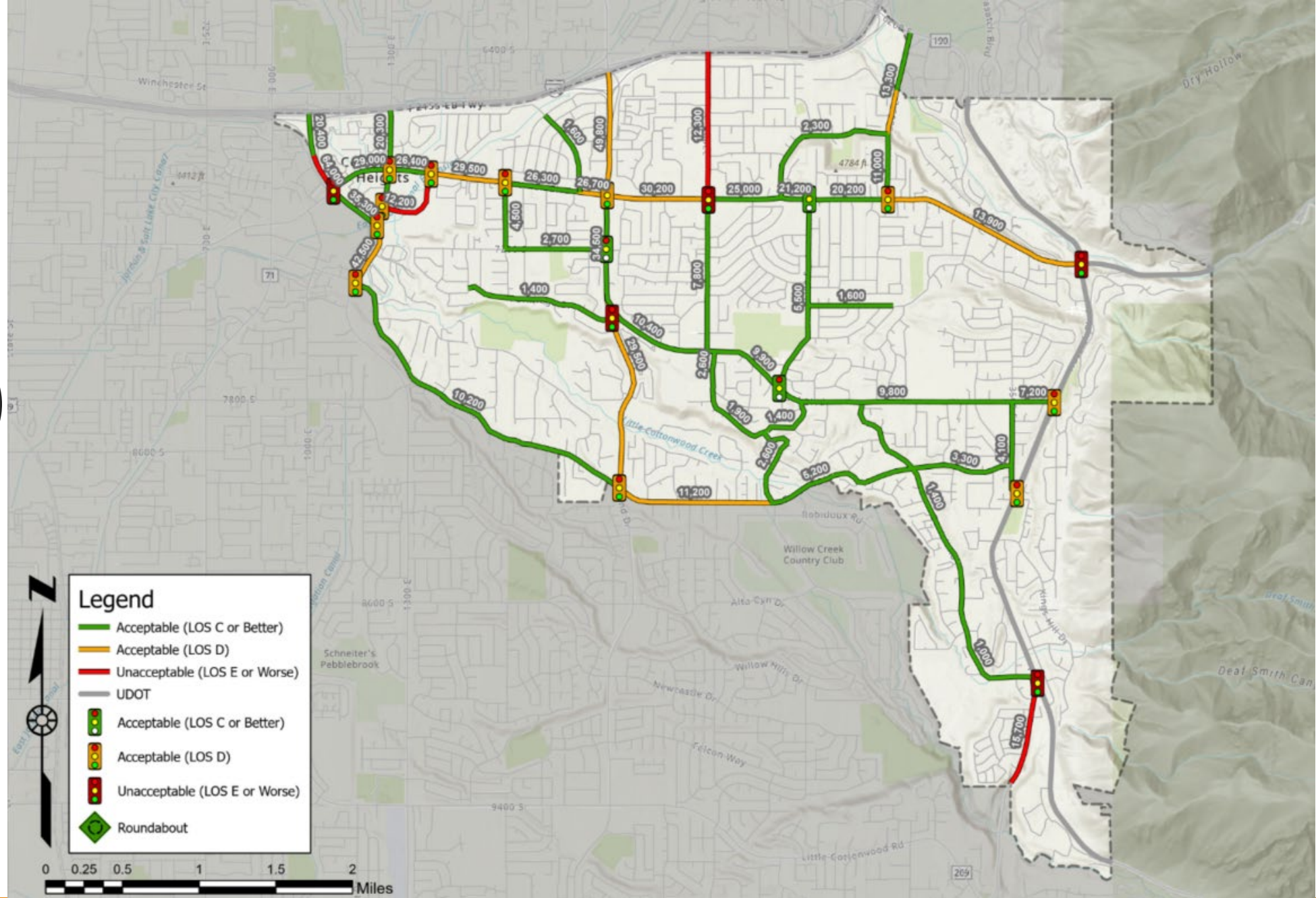
WFRC Travel Demand Model TAZ Map 2050 Population



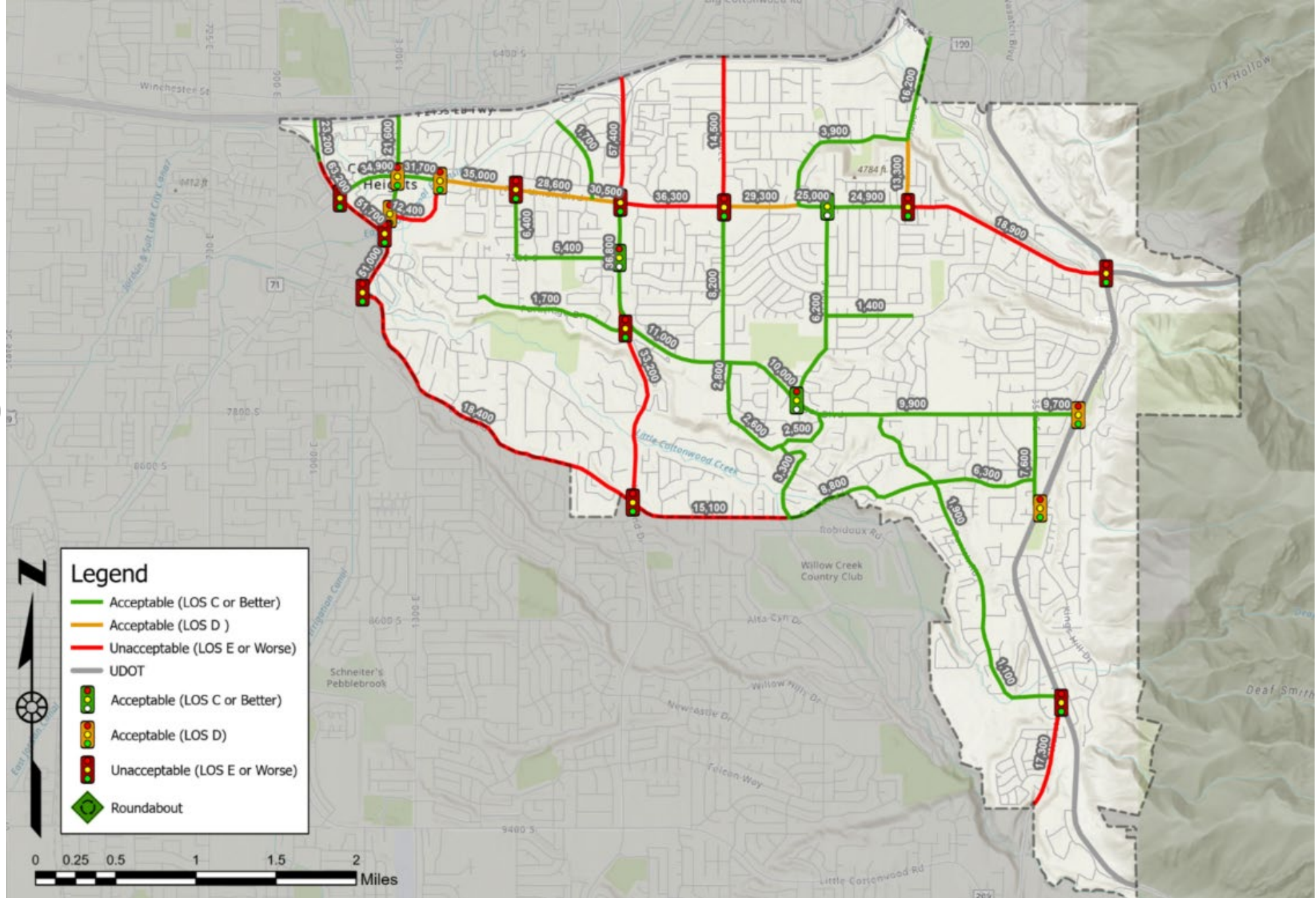
Existing LOS

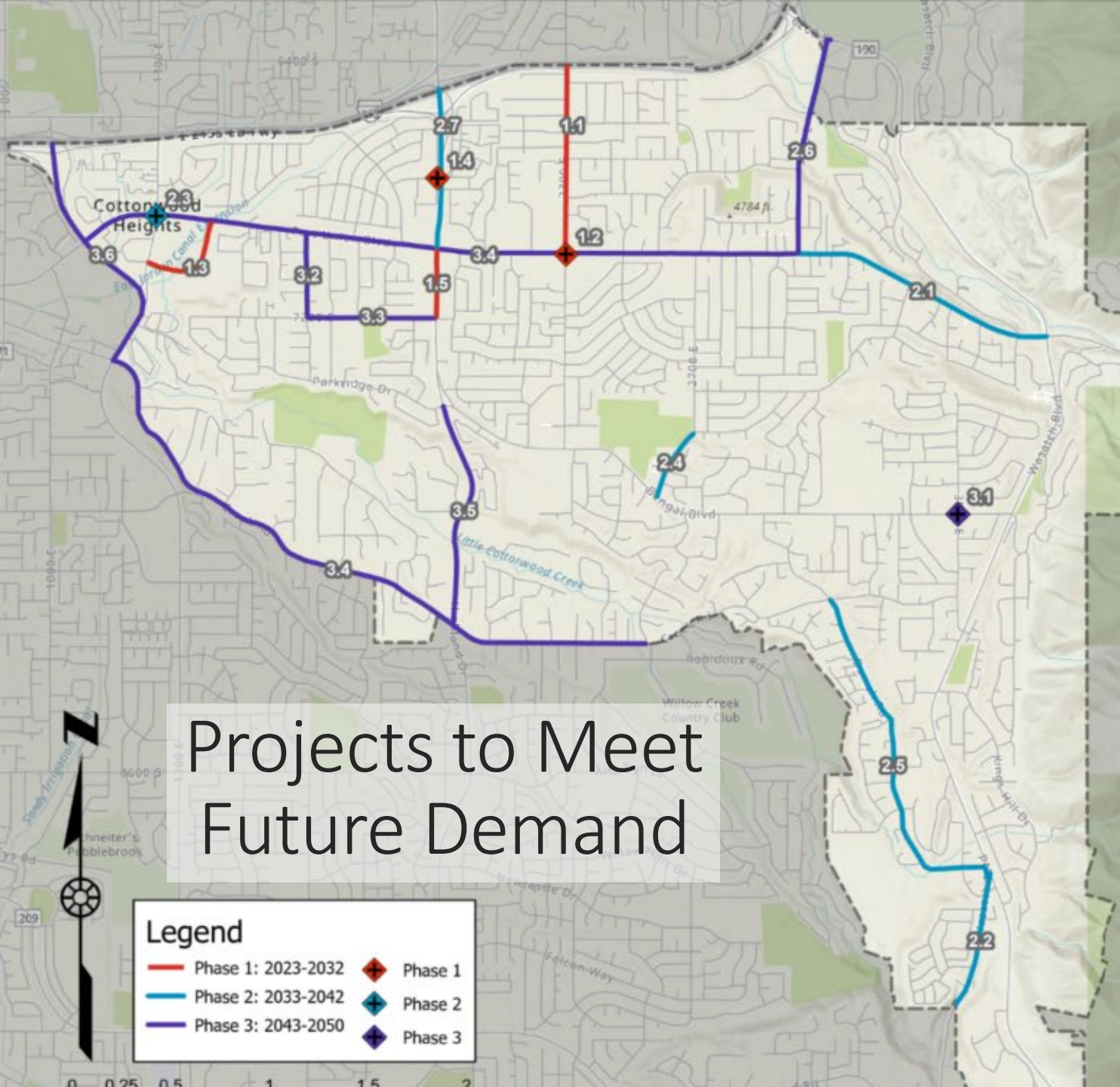


Short Term (2023-2032) No-Build LOS



(2033-2050)





Project Priority	Location	Improvement Type
Phase 1 (2023-2032)		
1.1	2300 East: Fort Union Blvd to north city boundary ²	Reconfigure roadway from 2 to 3 lanes**
1.2	Fort Union Blvd & 2300 East (Intersection)	Auxiliary turn lanes to improve intersection delay
1.3	Park Center Drive: 1300 East to Fort Union Blvd ²	Reconfigure roadway from 2 to 3 lanes**
1.4	Highland Frontage & La Cresta Drive (Intersection)	Realign Intersection & Construct Pedestrian Trail
1.5	Highland Drive (2000 East) & Fort Union (Intersection)	Reconfigure roadway from 6 to 7 lanes from 7200 South to 6900 South
Phase 2 (2033-2042)		
2.1	Fort Union Blvd: 3000 East to Wasatch Blvd ^{1,2}	Rebuild roadway with multi-use trail per approved cross section
2.2	Wasatch Boulevard: SR-210 to south city boundary ²	Reconfigure roadway from 2 to 3 lanes**
2.3	Fort Union Blvd & 1300 East (Intersection)	Intersection Improvement
2.4	2600 East: Bengal Blvd to Bridgewater Drive ²	Reconfigure roadway from 2 to 3 lanes**
2.5	Danish Road: Creek Road to Wasatch Blvd ²	Operational Project to Improve Traffic Flow Without Adding Lane Capacity*
2.6	3000 East: 6200 South to 7000 South ^{1,2}	Operational Project to Improve Traffic Flow Without Adding Lane Capacity*
2.7	Highland Dr (2000): Fort Union Blvd to North City Boundary ¹	Operational Project to Improve Traffic Flow Without Adding Lane Capacity*
Phase 3 (2043-2050)		
3.1	3500 East & Bengal Blvd	Roundabout Intersection
3.2	1700 East: Fort Union Blvd to 7200 South ²	Reconfigure roadway from 2 to 3 lanes**
3.3	7200 South: 1700 East to Highland Drive ²	Reconfigure roadway from 2 to 3 lanes**
3.4	Fort Union Blvd: 1300 East to 3000 East ^{1,2}	Operational Project to Improve Traffic Flow Without Adding Lane Capacity*
3.5	Highland Drive (2000 East): Bengal Blvd to Creek Road ¹	Reconfigure roadway from 4/5 to 7 lanes
3.6	Union Park Blvd: I-215 to Creek Road ¹	Operational Project to Improve Traffic Flow Without Adding Lane Capacity*
3.7	Creek Road: Union Park Blvd to Oak Creek Drive	Operational Project to Improve Traffic Flow Without Adding Lane Capacity

¹Project Identified in the WRC 2023-2050 Regional Transportation Plan

²Project Identified in the 2019 Transportation Capital Facilities Plan

³Anticipated Failure Based on Roadway Segment Volume

*Operational improvements include shoulder widening, intersection improvements, but turnouts, turn pockets or center medians

** Add Center turn lane

Future Roadway Network

