



# DRAFT REPORT PRESENTATION MPO COMMITTEES

June 11, 2020



# PURPOSE OF THE MEETING

- Provide a Project Overview
- Present DRAFT Report Findings
- Gather Input and Feedback on DRAFT from MPO Committees



# PROJECT TEAM

Kip Harrington

*RCAMPO Project Manager*

Dustin Hamilton, PE

*Consultant (HDR) Project Manager*

- Rapid City MPO Staff
- SDDOT Staff
- FHWA Staff
- Member Agency Staff
- Study Consultant Team



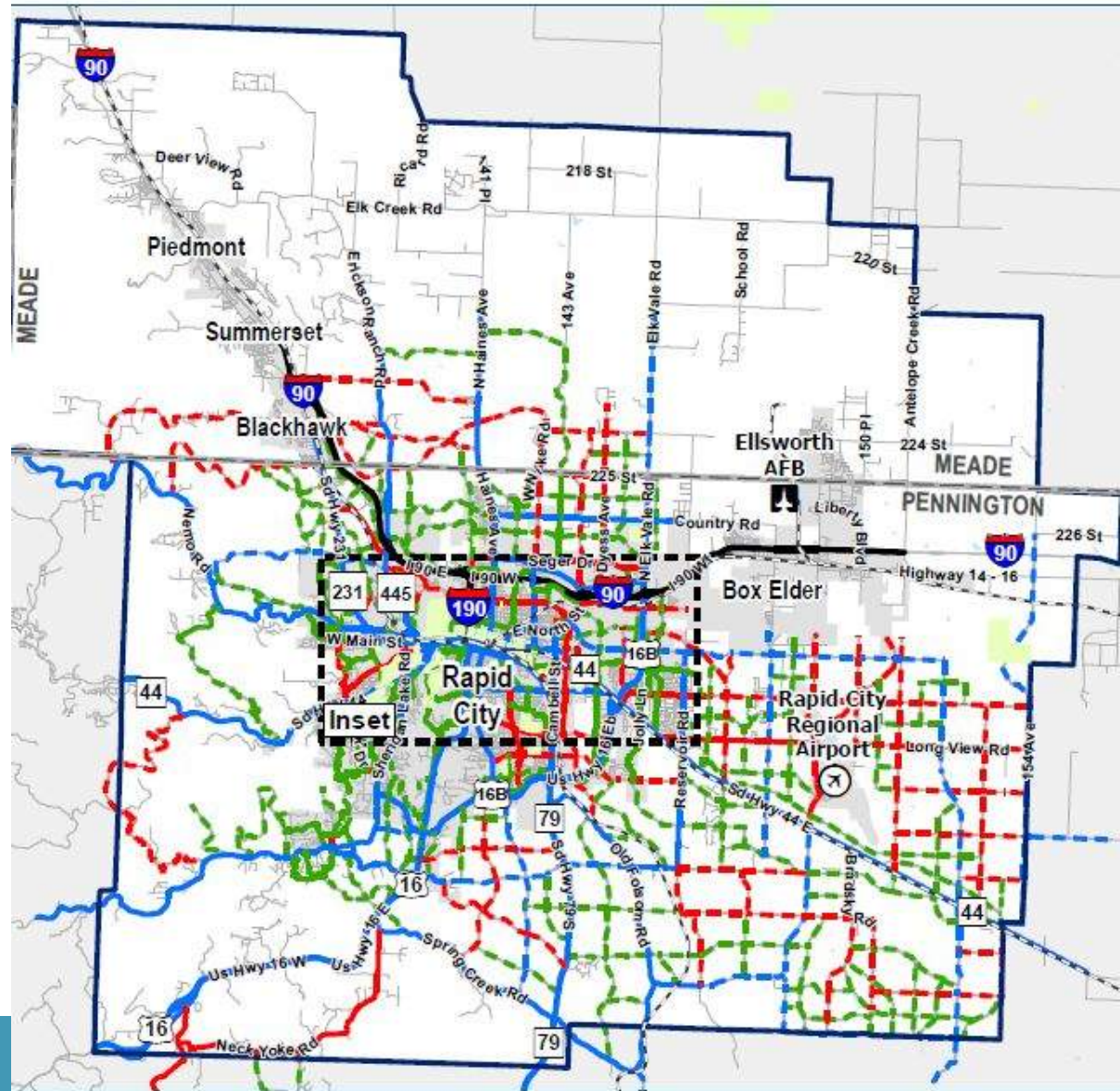
# PROJECT OVERVIEW

- Travel Demand Model Update and Validation
- Existing System Review (Capacity, Safety, multi-modal)
- Year 2045 Transportation Needs Plan and Fiscally Constrained Plan
- Major Street Plan Review and Update
- Bicycle and Pedestrian Plan Update
- Public Input and Involvement

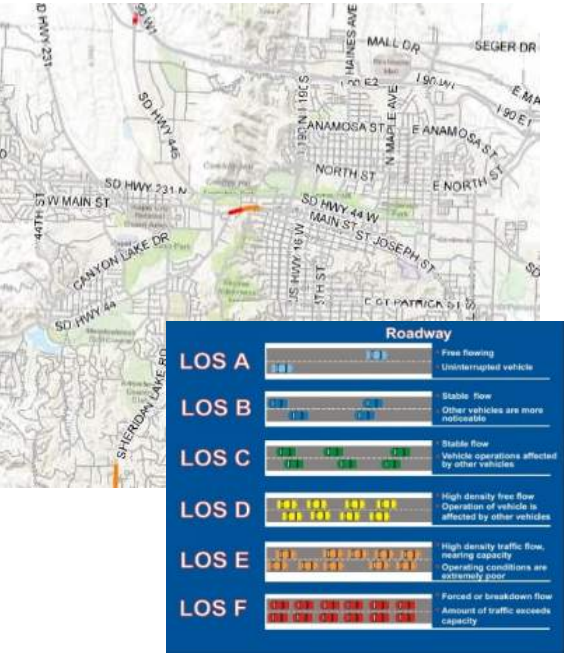


# BACKGROUND INFORMATION

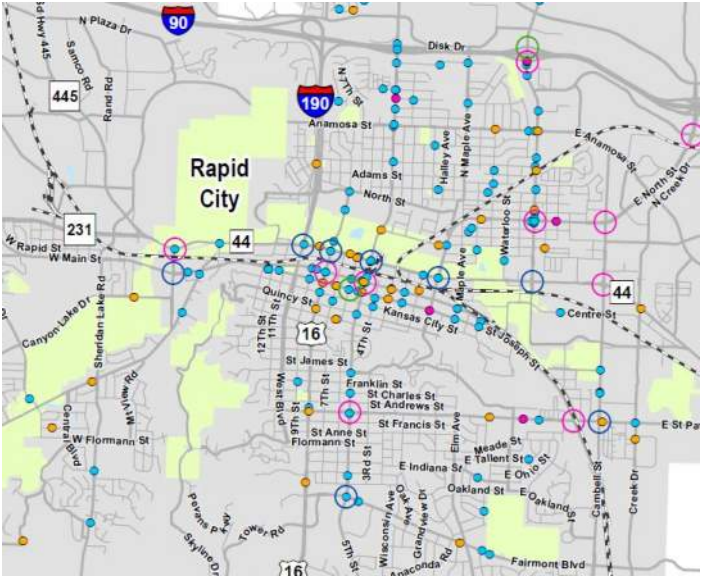
- Metropolitan Transportation Plan (MTP) - Formerly known as Long Range Transportation Plan (update required every five years)
- Includes all modes of travel
  - Highway, Bicycle, Pedestrian, Transit, Freight
- Projects must be in the MTP to be included in Transportation Improvement Program (TIP)
- Promotes regional performance measures and targets
- This MTP targets goals, strategies, etc. for the year 2045 planning horizon



# EXISTING CONDITIONS ANALYSIS



Traffic Operations



Safety

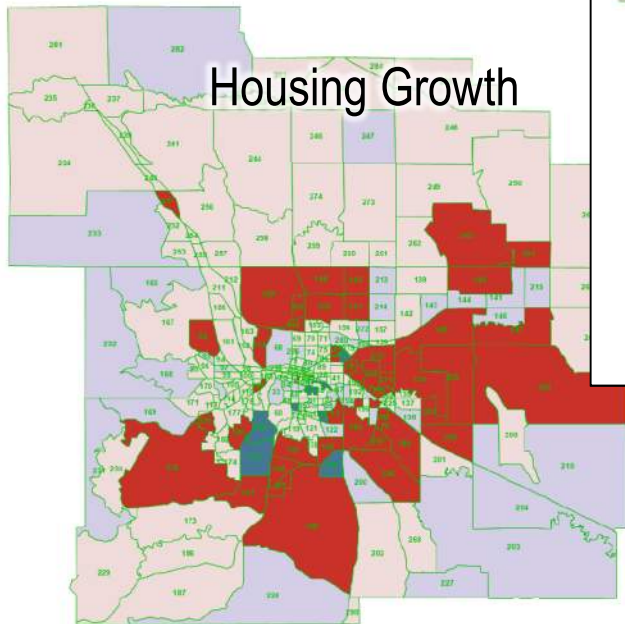


Transit

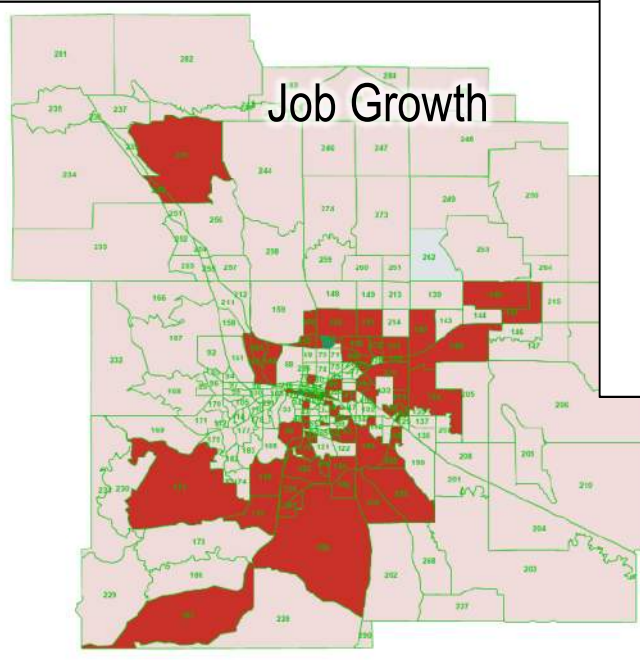
# MTP – MODEL UPDATE/RESULTS

- How the Travel Demand Model (TDM) Works

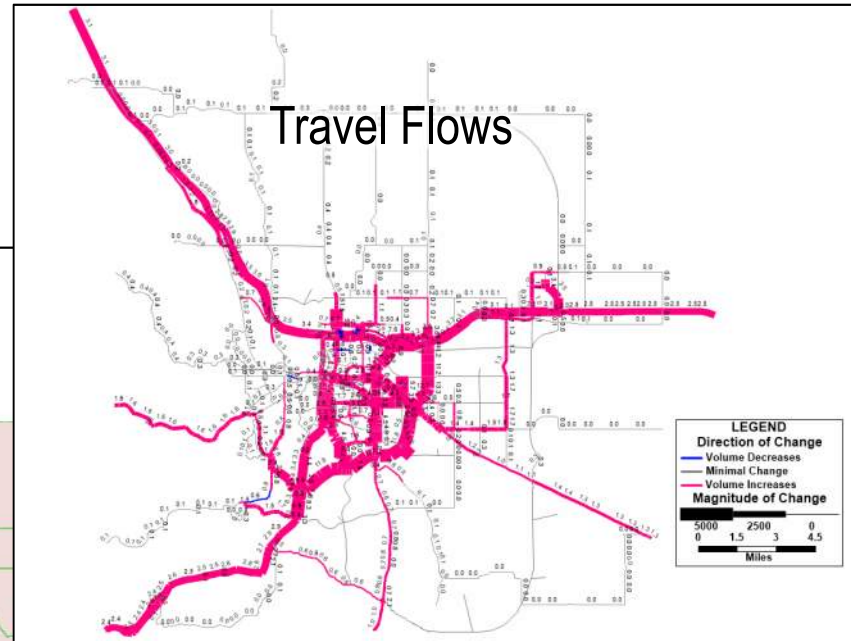
Housing Growth



Job Growth

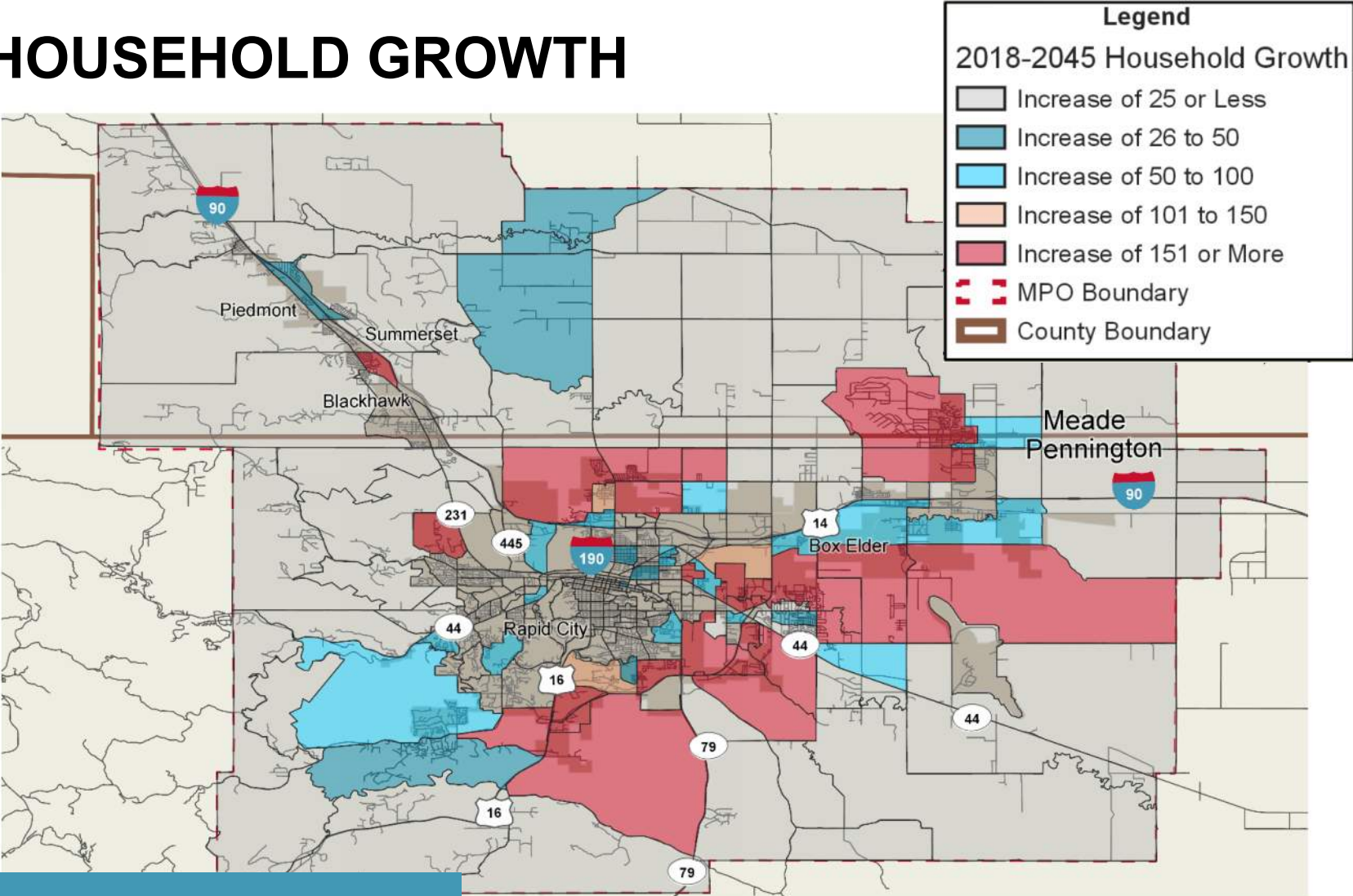


Travel Flows

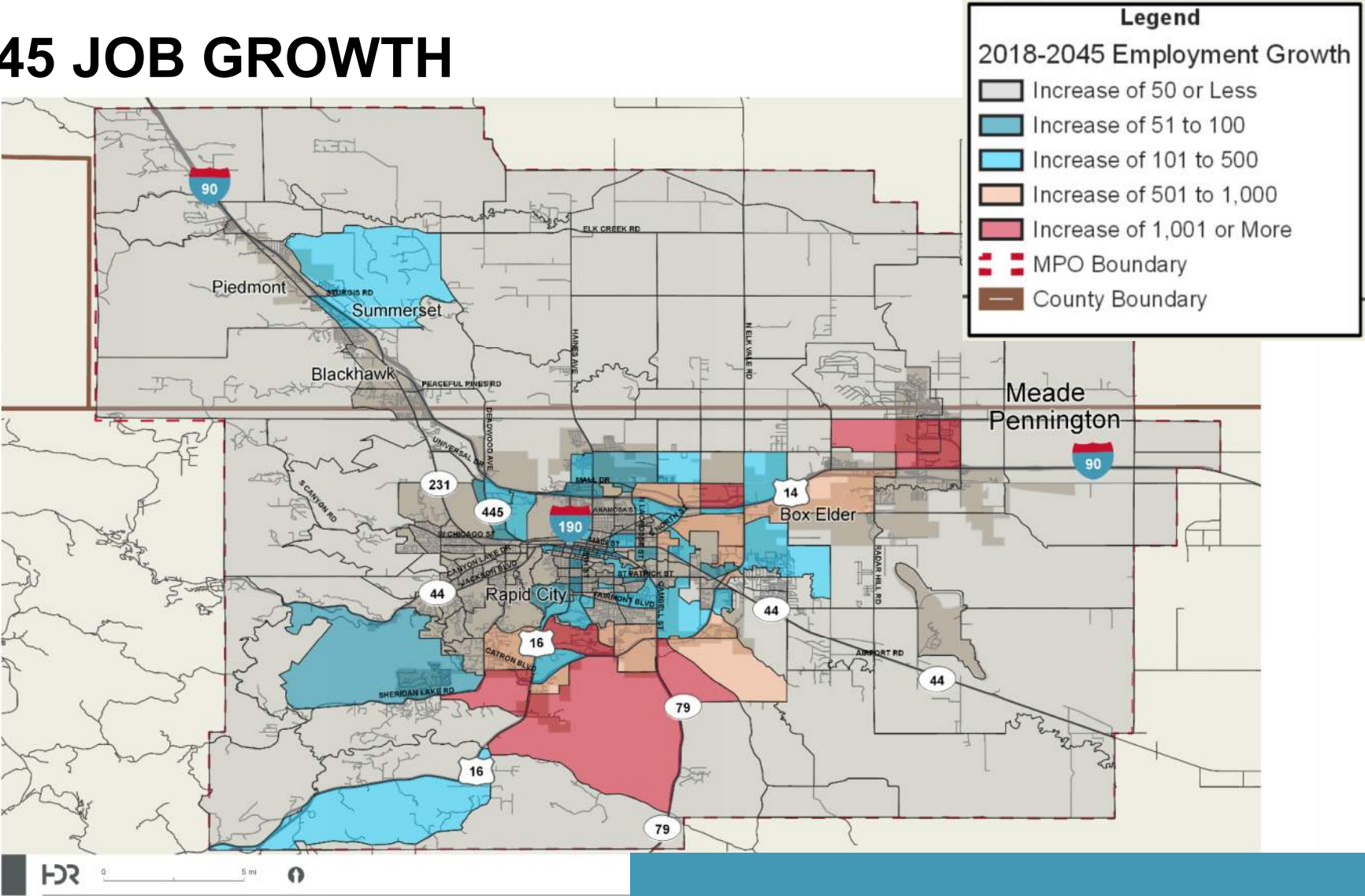


	2018	2045	Change
Households	49,008	59,456	+21%
Employment	67,337	97,713	+45%

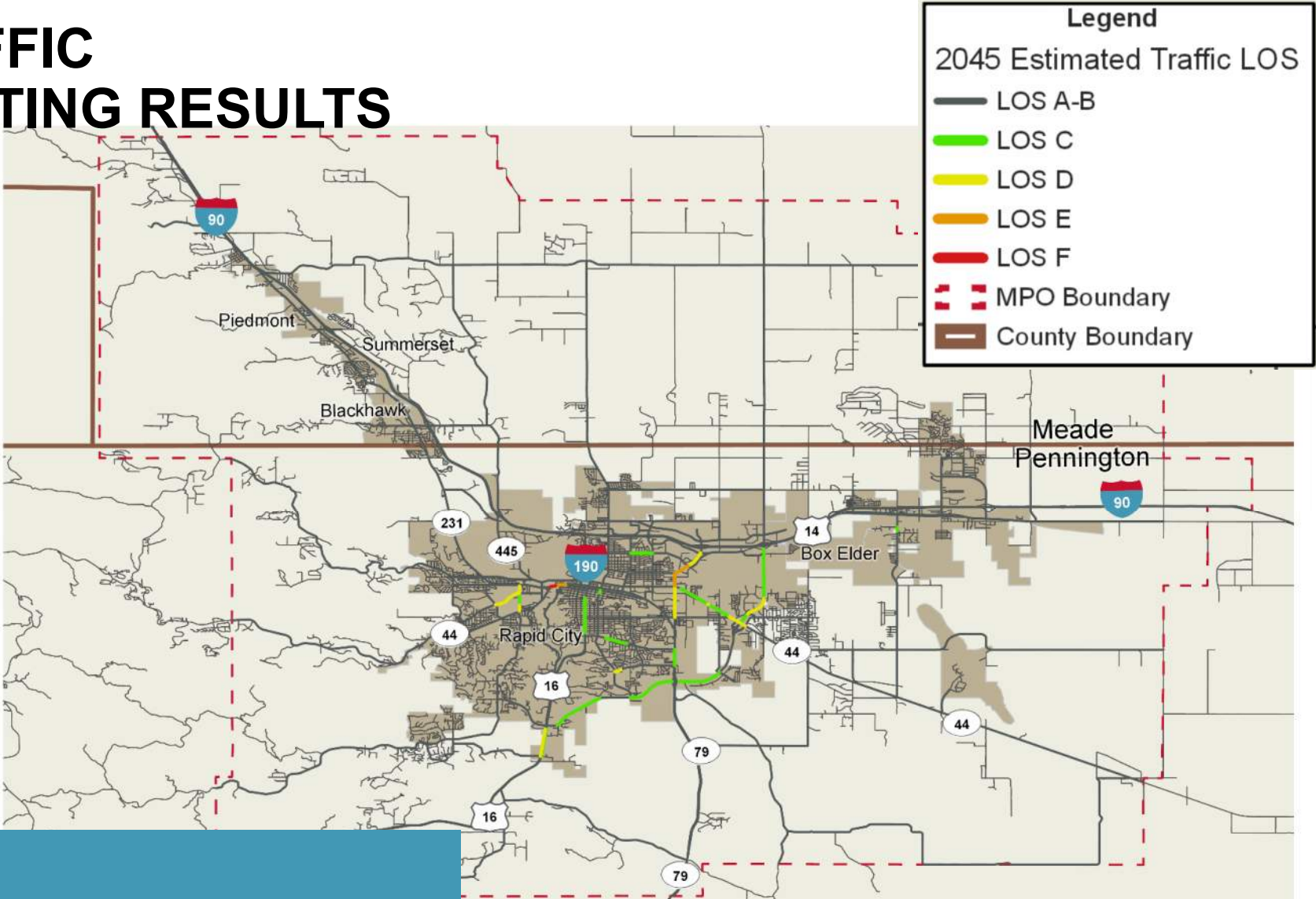
# 2018-2045 HOUSEHOLD GROWTH



# 2018-2045 JOB GROWTH



# 2045 TRAFFIC FORECASTING RESULTS



# MTP ANALYSIS THEMES / NEEDS



Limited Congestion  
Levels through 2045



Opportunities for New  
Corridors in Growth  
Areas



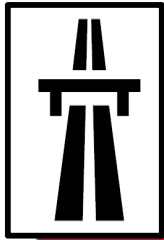
Complete Bike and  
Pedestrian  
Connections



Current Safety  
Improvement  
Opportunities



# MTP GOALS



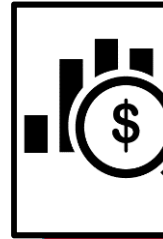
**System Preservation**



**Safety**



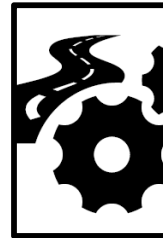
**Multi-Modal Mobility  
and Accessibility**



**Economic Prosperity**



**Environmental  
Sustainability and  
Resiliency**



**System Efficiency and  
Reliability**



# PRIORITIZATION APPROACH – SYSTEM IMPROVEMENT PROJECTS

## Safety

- The project improves safety at a high-crash or high-crash rate intersection
- The project provides a safer treatment for non-motorized users

## Multi-Modal Mobility and Accessibility

- The project completes a planned bicycle or pedestrian facility that connects to regional bicycle and pedestrian system
- The project improves traffic mobility or provides a new bicycle, pedestrian, or transit connection to designated growth areas in the region

## System Efficiency and Reliability

- The project improves traffic operations for a location operating at LOS D or worse in 2045
- The project improves reliability for a corridor identified as having reliability issues
- The project improves reliability in a designated freight corridor

## Economic Prosperity

- The project benefits access to a tourism location

## Environmental Sustainability and Resiliency

- The project limits impacts on the natural environment
- The project limits impacts to the built environment and surrounding neighborhoods
- Project limits impacts on Environmental Justice populations

# PRIORITIZATION APPROACH – SYSTEM ADDITION PROJECTS

## Place Corridor Additions Near Anticipated Growth Areas

- Project's level of 2045 Average Daily Traffic (ADT) predicted to occur in the corridor
- Project location is within a designated high-growth corridor

## Prioritize Corridor Additions for Infill and Contiguous Development Areas

- Project is located in designated infill area defined by the Tier 1 utility service area

## Develop New Corridors that Relieve Existing Congestion

- Project diverts traffic from a congested corridor

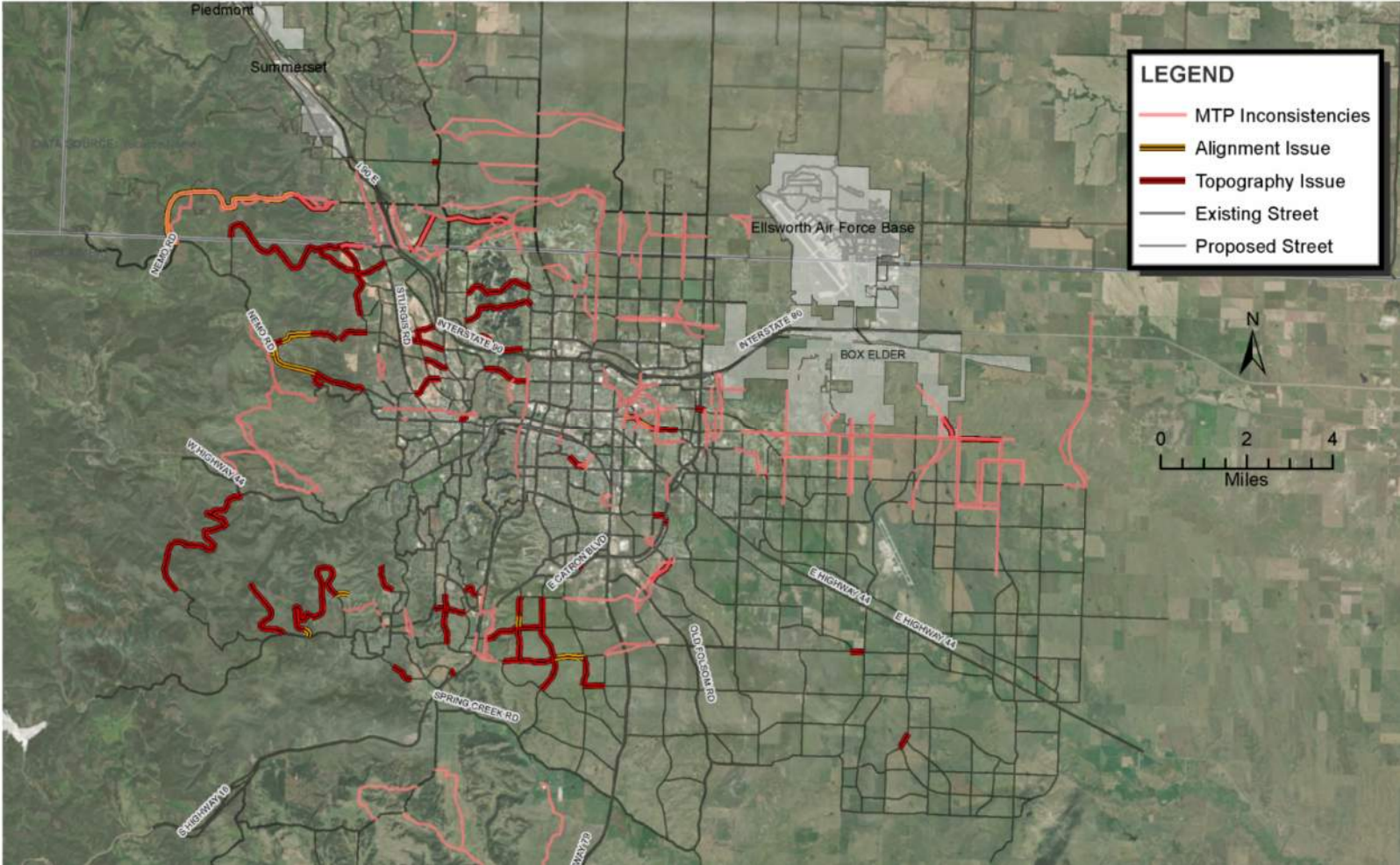
## Preserve Open Space

- Transportation impacts on open space and agricultural land are limited

## Limit Impacts to Natural Resources

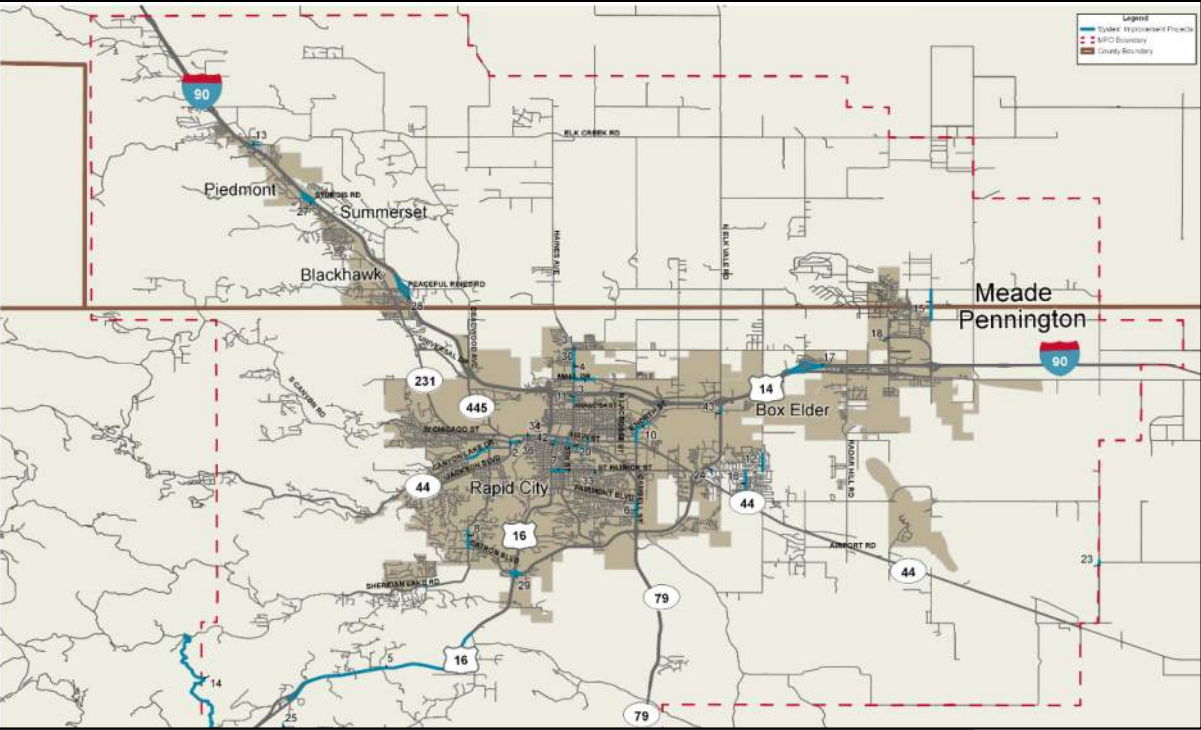
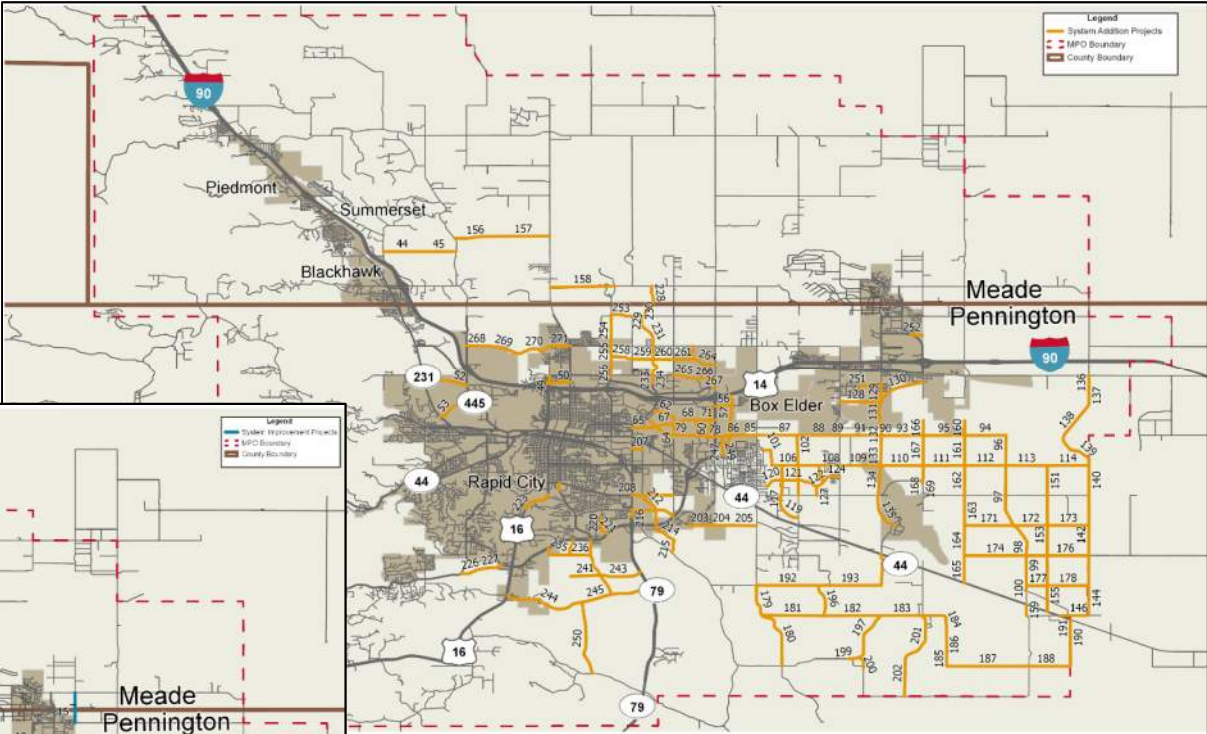
- Transportation impacts on environmental resources

# MTP – MAJOR STREET PLAN REVIEW



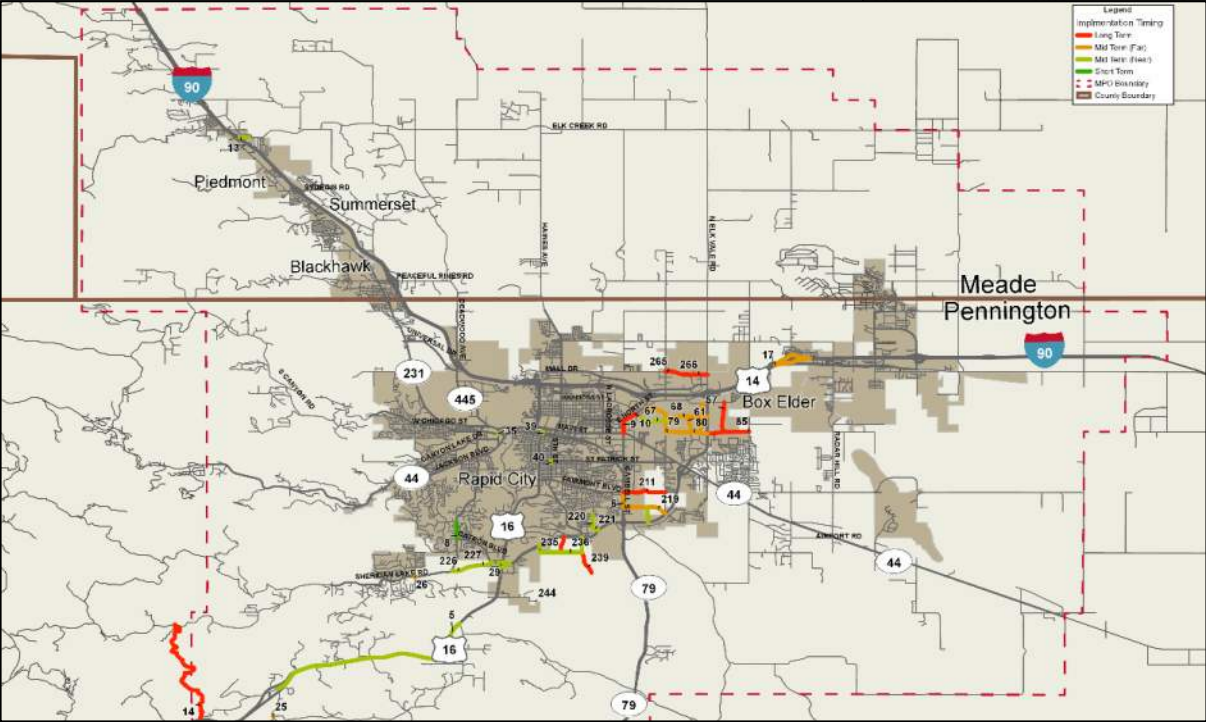
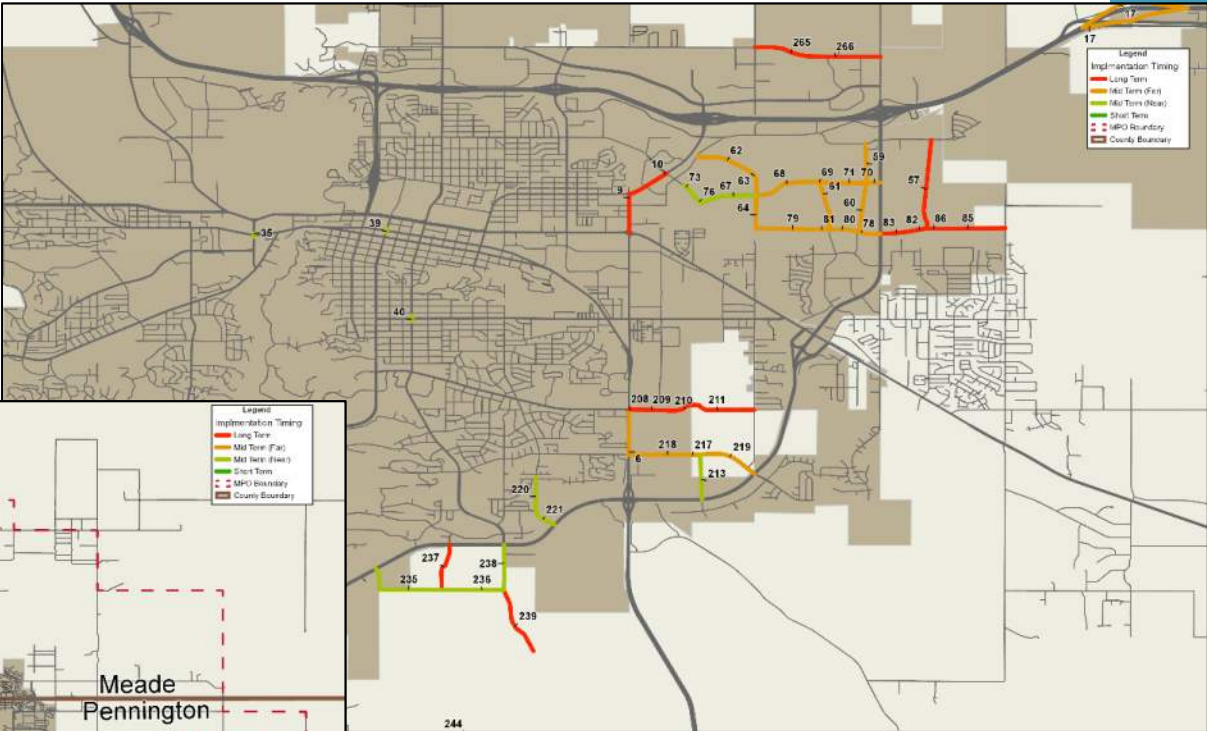
# 2045 NEEDS PLAN

- All Projects Considered for Plan



# 2045 DRAFT FISCALLY-CONSTRAINED PLAN

- Highest-Priority Projects within Anticipated Funding



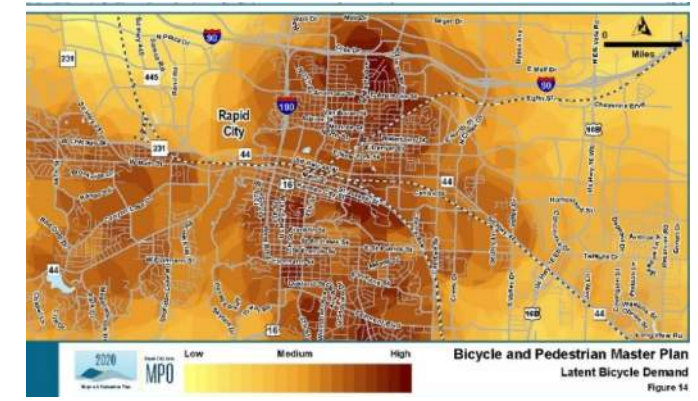
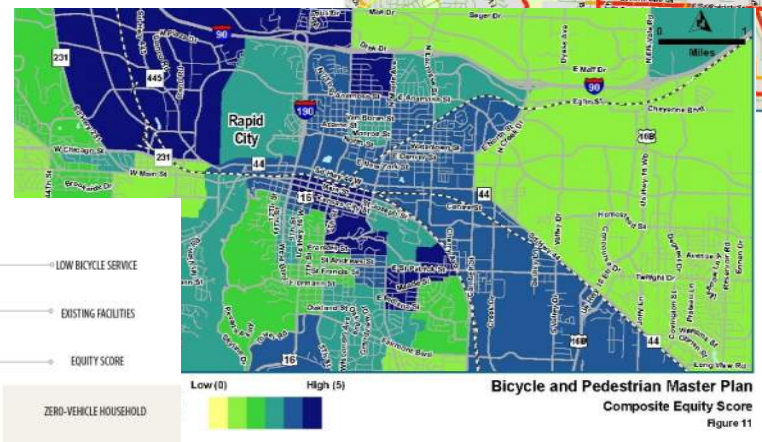
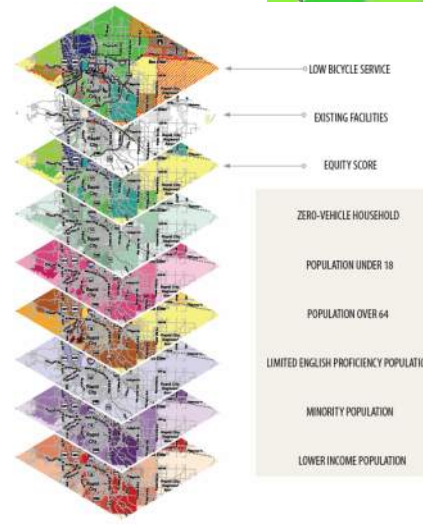
# MTP – MULTI-MODAL

- Planning Level Overview of: transit/bus, air, freight services
- Transit Development Plan – 2020/21
  - Will address detailed recommendations
- Rapid City Regional Airport Master Plan – update in 2020/21
  - Will address detailed recommendations



# BIKE/PEDESTRIAN PLAN UPDATE

- Assessment of 2011 Plan Progress
- New Planning Elements Introduced
  - Level of Traffic Stress (LTS)
  - Equity Analysis
  - Bike/Ped. Demand Analysis
- Network Planning Methods



# BICYCLE PRIORITIZATION APPROACH

## System Safety & Connectivity

- Project completes a **gap** in the existing network & connects two or more existing bike facilities
- Project addresses a **fatal bike crash**
- Project provides a **critical connection** due to limited street connectivity or provides a **crossing of a major barrier**

## Bicycle Accessibility

- Average weighted **demand score** over the project length
- Project is within or provides direct access to an area with high **equity** score, an identified **low bicycle service area**, or both

## Regional Benefit

- Project is along a **transit** corridor
- Project provides **direct access to or an extension of a recreational facility or destination**

## Relative Benefit/Cost

- Ratio of the initial prioritization score per project mile to the project cost per mile

## Project History

- Project identified as a **high priority in RapidTrip 2040**
- Project identified as a **high priority in 2011 Bicycle & Pedestrian Master Plan**

## Project Synergy

- Project **coincides with a priority roadway or sidewalk project**

# PEDESTRIAN PRIORITIZATION APPROACH

## System Safety & Connectivity

- Project completes a **gap** in the existing network & connects two or more existing **pedestrian** facilities
- Project addresses a **fatal pedestrian crash**
- **Distance between signalized crossings**

## Pedestrian Accessibility

- Average weighted **demand score** over the project length
- Project is within or provides direct access to an area with high **equity** score
- **Presence of an existing physical (worn) demand path**

## Regional Benefit

- Project is along a **transit** corridor
- **Functional classification of the adjacent roadway**

## Relative Benefit/Cost

- Ratio of the initial prioritization score per project mile to the project cost per mile

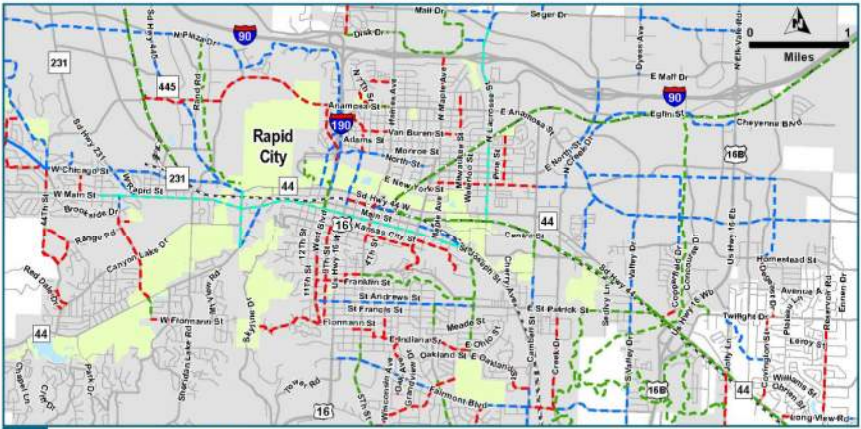
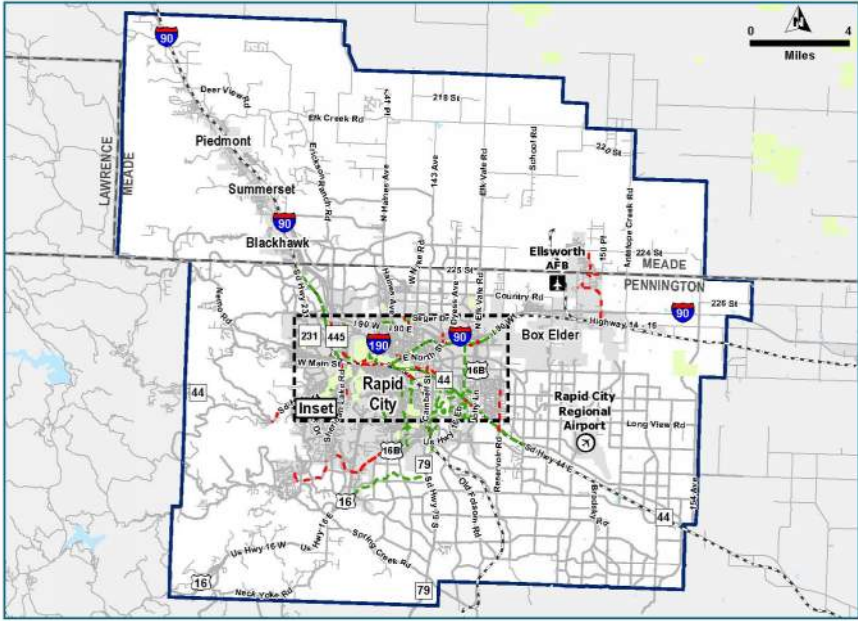
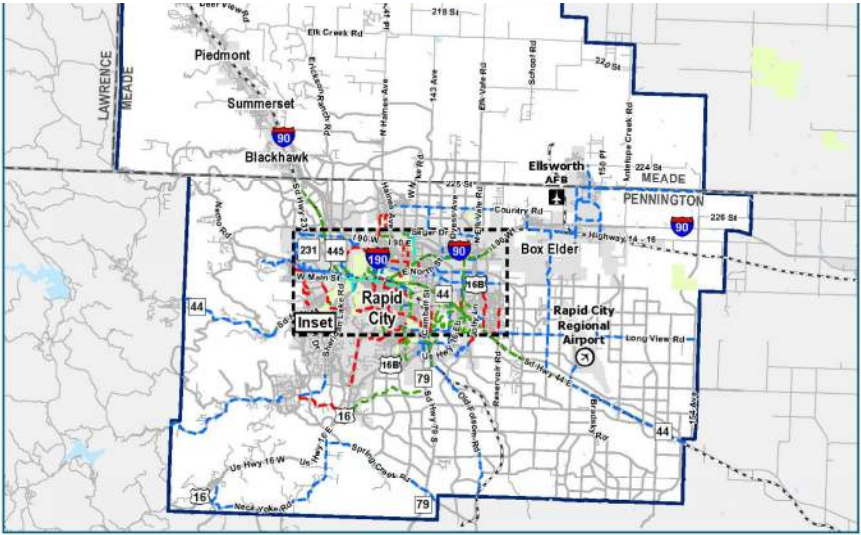
## Project History

- Project identified as a **high priority** in RapidTrip 2040
- Project identified as a **high priority** in 2011 Bicycle & Pedestrian Master Plan

## Project Synergy

- Project coincides with a priority roadway or **bike** project

# BICYCLE & PEDESTRIAN NEEDS



2020 Rapid City Area MPO Bicycle and Pedestrian Master Plan  
 Proposed/Planned Bicycle Facilities

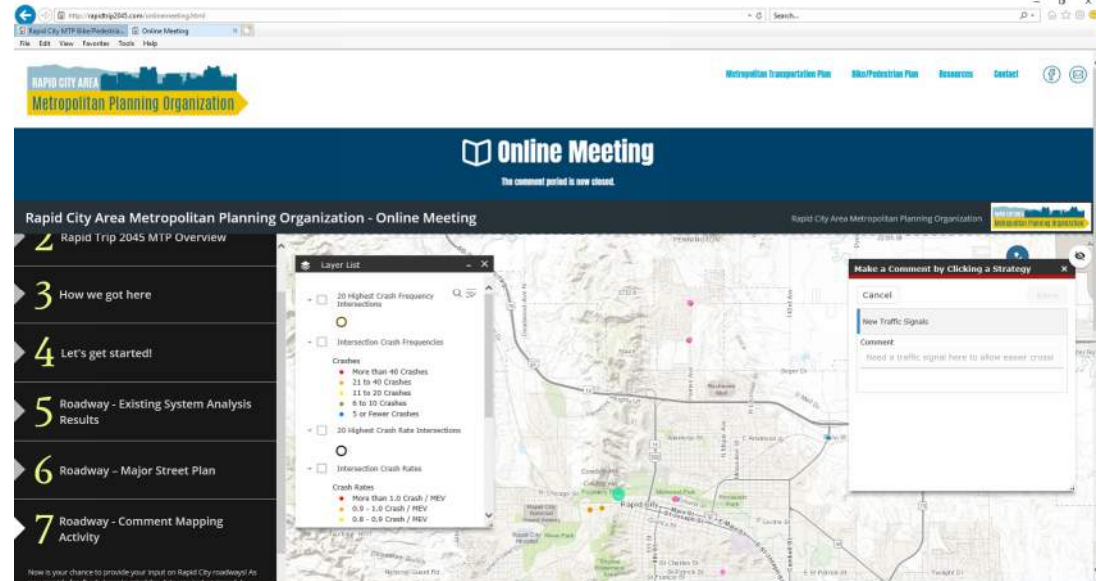
- Bike Lane
- Sharrows/Shared Lane
- Trail
- Separated Bike Lane

2020 Rapid City Area MPO Bicycle and Pedestrian Master Plan  
 Proposed/Planned Pedestrian Facilities

- Sidewalk
- Trail

# PUBLIC INVOLVEMENT

- Project Website – [www.rapidtrip2045.com](http://www.rapidtrip2045.com)
- Public Meeting No. 1 – October 29, 2019
  - Existing Conditions Analysis
- Public Meeting No. 2 – April 20 - May 1, 2020 – On-line Meeting
  - System Improvement Strategies/Needs
- Public Meeting No. 3 – Present Draft Plan Late June/Early July (format likely to be on-line due to restrictions on public gatherings)



# REMAINING STEPS TO PLAN ADOPTION

- MPO Committee Review/Comments on DRAFT (provide comments by July 3<sup>rd</sup>)
- Public Meeting No. 3 – To present DRAFT Report late June/early July
- Finalize Plan and Address Draft Comments in July
- FINAL Document Presentation to MPO Committees and Adoption in August



# THANK YOU!

Questions?



Rapid City Area  
**MPO**

Follow the project at:

- [www.rapidtrip2045.com](http://www.rapidtrip2045.com)

