2050 Metro Vision Regional Transportation Plan (2050 MVRTP) & Scenario Analysis Introduction

County Transportation Forums
November/December 2019
2050 MVRTP video
DRCOG Planning Framework

DRCOG Metro Vision plan
Shared vision for the future

- 20-year “vision” transportation system
- 20-year affordable transportation system
- Four-year program of funded projects

→ Metro Vision Regional Transportation Plan (MVRTP)
→ Fiscally constrained regional transportation plan
→ Transportation Improvement Program

→ Air quality conformity regulation modeling

Project development
- National Environmental Policy Act (1970) studies

Construct project
MVRTP Overview

- Presents region’s vision for multimodal transportation system
- Helps implement Metro Vision
- Addresses federal requirements – core MPO function
- Determines eligibility for major projects to compete for Transportation Improvement Program funding
- Is updated every four years and amended more frequently
2050 MVRTP major milestones & timeline

- **SUMMER/FALL 2019**: Phase 1: visioning and education
- **WINTER 2019/SPRING 2020**: Phase 2: investment priorities and scenario options
- **FALL/WINTER 2020**: Phase 3: plan development
- **SPRING 2021**: Phase 4: draft plan review
2050 MVRTP Strategic Issues

- How will our region grow & change by 2050?
- How do we make our streets safer for all travelers?
- What role will technology play in travel and mobility?
- How do we respond to the persistent lack of adequate transportation funding?
- What mix of investments in the 2050 MVRTP will best achieve the shared expectations outlined in Metro Vision?
- What choices and tradeoffs is the region willing to make around mobility, travel choices, congestion, and maintenance?
Metro Vision performance measure status

**Ahead of schedule**
- Residents living in locations affordable to the typical household
- Housing near high-frequency or rapid transit
- Employment near high-frequency or rapid transit
- Regional employment
- Urban center housing
- Regional population-weighted density
- Travel time variation (TTV)

**On track**
- Urban center employment
- Non-single-occupant vehicle (SOV) travel
- Vehicle miles traveled (VMT)
- Person delay
- Traffic fatalities
- Surface transportation greenhouse gas (GHG) emissions
- Employment in high-risk hazard areas

**Behind schedule**
- Protected open space
- Housing in high-risk hazard areas

**No determination**
WHAT WE’VE HEARD SO FAR...
Phase one: vision & priorities

- Pop-up events
- Online survey
- Telephone town hall
- County transportation forums
- Youth outreach
- Video development
Pop-up events

- Six events
- Talked to over 500 people

Activity:
- Safety
- Transit
- Sidewalk and bike paths
- Maintenance
- New roads or lanes
Public outreach event results

How would you use money for transportation?

- **615 (26%)** for transit
- **542 (23%)** for sidewalks and bike paths
- **442 (19%)** for safety
- **381 (16%)** for maintenance
- **368 (16%)** for new roads or more lanes
Survey results: high, medium, low, or no funding?

- **3.33** Expand or create new bus routes and rail lines
- **3.27** Add more sidewalks and bicycle paths/lanes
- **3.19** Maintenance of existing roads, highways, and bridges
- **3.19** Increase frequency of existing transit service
- **3.10** Use latest technology to manage existing system
- **2.75** Remove roadway bottlenecks
- **2.30** Add more carpool/HOV lanes
- **2.02** Add more general use lanes (not HOV or toll lanes)
- **1.90** Build new roads

n=589
Survey results: how important should these factors be to policymakers developing transportation policies and plans?

- **Improves safety for all users of the system**: 4.38
- **Provides convenient and useful travel choices besides driving alone**: 4.34
- **Reduces negative impacts on natural or built environment**: 4.02
- **Makes travel times more reliable**: 3.95
- **Reduces traffic congestion**: 3.71
- **Supports economy and freight movement**: 3.43

$n=590$
Urban form guidance from Metro Vision outcomes

“…investment/reinvestment in existing communities…”

“…orderly and compact pattern…”

“Connected urban centers and multimodal corridors…”

“…range of housing options…in or near major employment centers…”

https://metrovision.drcog.org/
2050 MVRTP & scenario planning process framework

Define vision & desired outcomes - Phase I engagement

• What’s important to us about our transportation system?

Prepare tools
- 2050 land use forecasts
- land use model
- Updated travel model

• Tools to model and test regional scenarios

Define & test scenarios
- transportation
- urban form

• Explore regional relationships between urban form, transportation investments, and mobility outcomes

Prepare 2050 MVRTP
- Major projects
- Investment strategy

• How do scenario analysis outcomes inform project & investment decisions in the 2050 MVRTP?
Regional scenario planning context

• Explores “what if” alternative futures

• Tests alternative transportation and urban form approaches through the lens of Metro Vision

• Relative comparisons between scenarios and baseline

• Provide guidance and direction for transportation investments in the 2050 MVRTP
Regional scenario planning summary

Achieve
Understand travel behavior and urban form relationships at the regional scale through 2050

Avoid
Dictating or usurping local land use decision-making
Opportunities & limitations

Opportunities
- Robust land use & travel model tools
- Data-rich environment
- Explore & test vision

Limitations
- 2050 MVRTP adoption schedule
- Time & resource allocation
- Not everything can be modeled
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<tr>
<th>Proposed Scenario</th>
<th>Key Scenario Concept</th>
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<th>Transportation Components</th>
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<tbody>
<tr>
<td>Baseline</td>
<td>comparison with scenarios below</td>
<td>base development constraints (regulatory &amp; natural)</td>
<td>2040 Fiscally Constrained RTP</td>
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</table>
| Transit Emphasis                      | transit network & service emphasis                              | upzone housing/jobs at transit stations, urban centers & along frequent-service transit lines | • RTD federal & state $5 BRT corridors  
• finish FasTracks and test extensions  
  • free fares  
• increased transit frequency  
• expand/improve access to transit |
| Regional Highway & Operations Emphasis| improve operations & traffic flow on highways/freeways         | base development constraints (regulatory & natural)                                  | • build out freeway managed lanes system with direct connections (HPTE Express Lanes Master Plan)  
• roadway operations/incident management strategies |
| Freeway/Interstate Congestion Emphasis| build out of freeway/interstate system to address off-peak congestion | base development constraints (regulatory & natural)                                  | • increase operating capacities on highways/freeways  
• decrease operating capacities on highways/freeways |
| Technology/Connected Vehicles Emphasis| version A: autonomous vehicles (AVs) benefit regional mobility  | base development constraints (regulatory & natural)                                  | • Increase walking/bicycling attractiveness (complete streets approach)  
• Telecommuting & other TDM strategies  
• Increase access to base transit network  
• Reduce speeds on major arterials (safety) |
| version B: AVs impact regional mobility|                                                                       | base development constraints (regulatory & natural)                                  |                                                                                           |
| Travel Choices Emphasis               | Increase travel and mobility choices along region’s major arterials | upzone for redevelopment/mixed uses along major arterials & urban centers          |                                                                                           |
| Regional Jobs/Housing Balance Emphasis| Better balance travel patterns at the regional level by locating housing and jobs closer together |                                                                                      | • upzone for housing in/near employment centers  
• upzone housing/jobs along major transportation facilities & urban centers |

Table: Proposed scenarios to test
Transit Emphasis scenario

- **Key concept:** transit network and service emphasis

- **Key land use component:**
  - Upzone housing/jobs at transit stations, urban centers & along frequent transit service lines

- **Key transportation components:**
  - RTD BRT study federal & state funding candidate corridors
  - Finish FasTracks & key extensions
  - Free fares (conceptual)
  - Increased transit frequency
  - Expand/improve transit access
Regional Highway & Operations Emphasis scenario

- **Key concept:** improve operations & traffic flow on region’s highways/freeways

- **Key land use component:**
  - Base development constraints (regulatory & natural)

- **Key transportation components:**
  - Build out freeway managed lanes system with direct connections (HPTE Express Lanes Master Plan)
  - Roadway operations & incident management strategies
Freeway/Interstate Congestion Emphasis scenario

• **Key concept:** build out freeway/interstate system to address off-peak congestion

• Key land use component:
  o Base development constraints (regulatory & natural)

• Key transportation component:
  o Add general purpose lanes to region’s freeways & interstates with severe off-peak congestion
Technology/Connected Vehicles Emphasis scenarios

• **Key concepts:** mobility technology & autonomous vehicles benefit *(version A)* or impact *(version B)* regional mobility

• **Key land use component:**
  - Base development constraints (regulatory & natural)

• **Key transportation components:**
  - Increase or decrease operating capacities on highways/freeways
Travel Choices Emphasis scenario

• **Key concept:** increase travel & mobility choices along region’s major arterials

• Key land use component:
  o Upzone for redevelopment/mixed uses along major arterials & urban centers

• Key transportation components:
  o Increase walking/bicycling attractiveness (complete streets approach)
  o Telecommuting & other TDM strategies
  o Increase access to base transit network
  o Reduce speeds on major arterials (safety emphasis)
Regional Jobs/Housing Balance Emphasis scenario

- **Key concept**: better balance regional travel patterns by locating housing and jobs closer together

- **Key land use/transportation components**:
  - Upzone for housing in/near employment centers
  - Upzone housing/jobs along major transportation facilities & urban centers
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Next steps

- **October-December**: input from: public, county forums, TAC, RTC, Board

- **January-March**: conduct scenario analysis

- **March**: initial scenario results at TAC
THANK YOU!

2050 MVRTP website