I-70
East Corridor Multimodal TDM Plan

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Prepared for:

COLORADO
Department of Transportation

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Acronyms and Abbreviations

1601	Policy Directive 1601
ABT	Account-Based Ticketing
Ac	Acres
ADT	Average Daily Traffic
ARTA	Aerotropolis Regional Transportation Authority
BID	Business Improvement District
BRT	Bus Rapid Transit
CDOT	Colorado Department of Transportation
CID	Community Improvement District
CMAQ	Congestion Management & Air Quality
DRCOG	Denver Regional Council of Governments
DU	Dwelling Units
EOC	Executive Oversight Committee
ES	Executive Summary
EV	Electric Vehicle
FLM	First and Last Mile
FHU	Felsburg Holt & Ullevig
GES	Globeville Swansea Elyria

GHG	Greenhouse Gases
HOA	Homeowners Association
I-70	Interstate 70
IGA	Intergovernmental Agreement
ITS	Intelligent Transportation Systems
LOS	Level of Service
LRT	Light Rail Transit
MaaS	Mobility as a Service
MPO	Metropolitan Planning Organization
MVRTP	Metro Vision Regional Transportation Plan
NEATS	Northeast Area Transportation Study
NEPA	National Environmental Policy Act
NETC	Northeast Transportation Connections
P3	Public-Private Partnership
PMT	Project Management Team
RTD	Regional Transportation District
SLS	System Level Study
SOV	Single Occupant Vehicle
SPT	Stakeholder Project Team
TMA	Transportation Management Association
TMO	Transportation Management Organization
TDM	Transportation Demand Management
TOD	Transit-oriented Development
TMP	Transportation Master Plan
TNC	Transportation Network Company
VMT	Vehicle Miles of Travel

Executive Summary

Study Context

East of the Denver-Aurora urban area, Interstate 70 (I-70) provides access to the Denver region's eastern edge, an area expected to be an economic hub with technology, industry, and commerce, along with substantial residential development. I-70 East Corridor (between E-470 and the Town of Bennett) development is expected to continue to put pressure on the roadway network with I-70 as the backbone of the system. Improvements on some level are planned on most of the nine existing interchanges in the corridor, and five additional interchanges are being considered for the short- or long-range future.

Colorado Department of Transportation (CDOT) Policy Directive 1601 includes transportation demand management (TDM) requirements to preserve the functioning of the transportation system through efficient travel patterns. The 1601 policy requires applicants to achieve a 3 percent average daily traffic reduction at the interchange ramps through TDM strategies. Specific TDM strategies and calculations will be carried out through individual 1601 applications. The purpose of this corridor-wide planning effort is to identify corridor-wide strategies to mitigate traffic impacts, inform individual 1601 applications within the corridor, and provide background for CDOT's analysis of 1601 applications. This effort was initiated because the 1601 Procedural Directive strongly encourages corridors with multiple planned new or reconfigured interchanges to undertake corridor-wide TDM planning.

Chapter 1 provides an introduction to the plan, including the study context, definition of the study area, and the purpose of the plan. **Chapter 2** presents an overview of previous plans, corridor interchanges, and new and ongoing development.

Chapter 3 presents a toolbox of TDM strategies that are primarily geared toward individual interchange TDM plans. **Chapter 4** discusses TDM strategies that are best viewed in a larger corridor-wide context. **Chapters 3** and **4** help advance the conversations among corridor agencies and other stakeholders about TDM strategies that require coordination and cooperation among multiple local, county, regional, and state agencies. Corridor-wide strategy areas include transit, development patterns, and transportation management organizations (TMOs).

Chapter 5 presents three conceptual scenarios for packaging corridor-wide TDM strategies in the I-70 East Corridor. **Chapter 6** proposes next steps to advance TDM in the study corridor.

Conceptual Corridor TDM Scenarios

Chapter 5 presents three conceptual scenarios for packaging corridor-wide TDM strategies in the I-70 East Corridor. Scenarios 1 and 2 were presented as a starting point for discussion among the local, county, regional, and state agencies participating in the study Stakeholder Project Team (SPT). Following a December 2023 SPT meeting and subsequent input from the SPT, Scenario 3 was developed to combine and refine the most favorable aspects of Scenarios 1 and 2.

Scenario 1: Mixed-Use Development with Transit-Optimized Corridors

Scenario 1 would identify transit optimized corridors that could be more closely integrated with efficient, transit-supportive, mixed-use development and use a non-interstate arterial street corridor that can be constructed with complete street principles and connect to major activity centers. Local transit planning, such as the Aurora Northeast Area Transportation Study (NEATS), could serve as the foundation for determining optimal transit routes. The benefits of locating transit service on a non-interstate street could result in greater transit ridership and multimodal trips. It would preserve interstate capacity for statewide and interstate travel rather than a reliance on I-70 and new interchanges to facilitate transit and vehicular travel within the corridor itself.

Scenario 2: Transit Service on I-70 Corridor

Scenario 2 would create a high-speed transit spine using I-70. It would start at the Peoria Station in the Regional Transportation District (RTD) network, connect with the 40th & Airport-Gateway Park Station, and provide service through the I-70 East Corridor TDM study area with thoughtfully planned stops along the I-70 corridor at major development centers. Jurisdictions and developments around each major stop or station would implement local circulator transit, micromobility, and active transportation networks to connect to the stops. New and reconfigured I-70 interchanges would be designed to conveniently accommodate bus movements on and off I-70 with a passenger drop-off/pick-up area when the transit service is introduced. Stops could start as simple stops at the end of an interchange off-ramp with access to micromobility and active transportation. Future enhancements could include a park-and-ride, a full mobility hub, and circulator bus service.

Scenario 3: Combine Transit Service on I-70 Corridor with Mixed Use / Transit Optimized Corridors

Scenario 3 would create a high-speed transit spine using I-70 similar to that in Scenario 2. The spine would start at the Peoria Station in the RTD network, connect with the 40th & Airport-Gateway Park Station, and provide service through the I-70 East Corridor TDM study area at interchanges to service major developments and activity centers. Again, similar to Scenario 2, new and reconfigured I-70 interchanges would be designed to conveniently accommodate bus movements on and off I-70 with a passenger drop-off/pick-up area when the transit service is introduced. The stop/station operations and multimodal access provided by local jurisdictions and developments would evolve along with evolving transit service and area development.

As the I-70 transit spine, the backbone of the scenario, evolves, Scenario 3 would also include long-term development of the transit optimized corridors and transit-supportive mixed-use development identified in Scenario 1. This transit-oriented arterial and collector street grid would work in concert with the regional I-70 transit spine, providing transit connections between east I-70 corridor communities, between the corridor and the existing RTD system, and to the I-70 transit stations.

Next Steps

Participants in the plan's SPT, including representatives of Arapahoe County, Adams County, City of Aurora, Town of Bennett, Denver Regional Council of Governments (DRCOG), RTD, CDOT, and Northeast Transportation Connections (NETC), have expressed interest in continuing coordination on TDM and related planning for the corridor after this study is completed. If an East I-70 Corridor TDM Committee with representatives from these agencies is formed, the following outlines the focuses of that group:

- **Structure for Interagency Group**. Defining an operating structure for the interagency TDM group, including a leadership structure, roles, responsibilities, and meeting/communications procedures.
- **Individual Interchange 1601 TDM Strategies**. County, local government, or other corridor I-70 interchange sponsors can use the toolbox of potential TDM strategies presented in **Chapter 3** of this plan, along with toolboxes provided by CDOT and DRCOG, to assist in development of interchange TDM plans.
- **Confirm and Refine a Conceptual Corridor TDM Plan**. A committee workshop process can be used to confirm, modify, and further develop the conceptual corridor TDM plan outlined in this report.
- **Governance Structure for Regional Transit Service**. The interagency group will need to develop a governance structure for the I-70 transit spine service. There is a wide range of potential structures, including CDOT directly operating a service similar to Bustang, an existing county or local government as lead agency, a new corridor local/county organization, or a local/county organization in partnership with a regional or state agency.
- **Funding Structure for Regional Transit Service**. An additional but closely related need is to develop a funding plan for capital and operating costs for the I-70 transit spine service.
- **Multimodal Access to I-70 Regional Transit Stations**. Some aspects of the multimodal access for the regional transit stations (e.g., sidewalks, local trail connections) are likely to be the responsibility of local agencies in partnership with local development. Others such as transit circulators or regional trails may be developed through interagency partnerships or new organizations.
- **Long Range Area-Wide Transit District.** Although the larger area-wide transit network is expected to be developed over a longer time period, the TDM working group should begin to formulate a plan for operating the more extensive transit network that is envisioned. Options or elements of the plan could include expansion of the RTD district in more of the corridor, an existing county or local government as lead agency, or a new corridor local/county organization.
- **Transportation Management Organization.** County and local agencies may decide to create an I-70 East Corridor TMO. A TMO could serve in one or more of the governance and funding roles described previously and play an important role in planning, advocacy, and implementation of other TDM strategies presented in the TDM toolbox.

1. Introduction

Study Context

Interstate 70 (I-70) is a crucial transportation facility within the interstate network system. It provides east-west mobility nationally and through the state of Colorado passing through the Denver-Aurora metropolitan area. East of the Denver-Aurora urban area, I-70 provides access to the Denver region's eastern edge, an area expected to be an economic hub with technology, industry, and commerce, along with substantial residential development. I-70 East Corridor development is expected to continue to put pressure on the roadway network with I-70 as the backbone of the system. Improvements on some level are planned on most of the nine existing interchanges in the corridor, which are at Picadilly Road, E-470/Gun Club Road, Airpark Road, Watkins Road, Manila Road, CO 79, Kiowa-Bennett Road, Colfax/CO 36, and Wagner Street in Strasburg. Five additional interchanges are being considered for the short- or long-range future at Harvest Road/Aerotropolis, Quail Run Road, Schumaker Road, Harback Road, and Yulle Road.

The Colorado Department of Transportation (CDOT) initiated a System Level Study for the corridor in 2018 to evaluate future interchange roadway access and functionality supporting development along the corridor. The System Level Study was discontinued in 2020 and then reestablished in late 2022 as the current I-70 East Corridor Multimodal Transportation Demand Management (TDM) Plan, with a focus on creating a multimodal framework to meet the TDM requirements that have recently been included in CDOT Policy Directive 1601 for new or reconfigured interchanges on the interstate system (https://www.codot.gov/programs/planning/data-studies/data-studies). CDOT has also issued Procedural Directive 1601.1 outlining procedures for meeting Policy Directive 1601 requirements. The Policy Directive 1601 and Procedural Directive 1601.1 are referred to together in this report as the 1601 Interchange Approval Process.

The I-70 East Corridor Multimodal TDM Plan provides an opportunity to take a corridor-wide approach to advance critical state and regional goals, such as to minimize greenhouse gas (GHG) emissions, provide mobility options for the traveling public, and limit the need for expensive roadway capacity improvements whenever these are not needed.

Policy Directive 1601

To preserve the overall functionality and operability of the state of Colorado's highway system, new interchanges and major improvements to interchanges must follow Policy Directive 1601, a policy requiring interchange sponsors to implement traffic reduction or TDM strategies to preserve the long-term functionality of the constructed interchange improvement.

Transportation Demand Management

Transportation Demand Management (TDM) is a set of strategies and policies aimed at improving mobility options for everyone, reducing traffic congestion, and promoting sustainable transportation modes such as public transit, biking, walking, and carpooling. Over time, TDM has expanded to apply more broadly to policies and programs designed to support and incentivize healthier, more environmentally sustainable transportation behaviors. Overall, a range of organizations and individuals can undertake TDM strategies and policies, including local, regional, state, and federal policies and programs to Transportation Management Associations (TMAs), special districts,

employers, or individuals, with specific targeted programs and incentives. The I-70 East Corridor Multimodal TDM Plan intends to create a comprehensive plan that includes all current and future I-70 interchanges between E-470 and Strasburg and provides a framework to assist individual interchange sponsors in meeting 1601 Interchange Approval Process TDM policy requirements.

Study Area

Study Boundaries

East-west extents of the study area were established as the roughly 21-mile I-70 corridor from E-470 to Strasburg. North-south extents were determined to be roughly 2 miles from I-70 with adjustments for developments that extend beyond this buffer. **Figure 1** shows the extent of the TDM Plan project boundary, existing interchanges, and local jurisdictions.

The previous System Level Study Existing Conditions Report showed a study corridor extending roughly 1 mile north and south of I-70. However, after discussions with local jurisdictions and stakeholders, a 2-mile boundary was selected to include nearby developments that have access to the interchanges. Port Colorado, Prosper, and the Aerotropolis development area are three examples of developments where the full extent of those developments extends beyond the 2-mile buffer and the project boundaries have been adjusted to include the full developments.

Jurisdictions and Districts

The project area falls into several jurisdictions, with I-70 owned and managed by CDOT, while land in proximity to the highway is in Adams County to the north and Arapahoe County to the south. As shown on **Figure 1,** the City of Aurora and the Town of Bennett have incorporated a significant portion of the western and eastern parts of the corridor, respectively.

Figure 2 shows that most existing interchanges (all but Kiowa-Bennett Road and Wagner Street in Strasburg) fall within the Denver Regional Council of Governments (DRCOG) metropolitan planning organization (MPO) area, which determines that the interchanges are categorized as urban type interchanges under the 1601 Interchange Approval Process. Other regional districts include the Regional Transportation District (RTD), a transit service provider with a service boundary that extends into portions of the study area, generally in parts of incorporated Aurora that have joined the district. However, RTD currently does not provide service within the study area. Northeast Transportation Connections (NETC) is a transportation management association (TMA) that recently expanded its coverage east of E-470.

NETC TMA

Northeast Transportation Connections (NETC) is a transportation management association (TMA) serving the northeast Denver region. In 2017, NETC entered into a contract with CDOT to provide TDM solutions to communities affected by the Central 70 project—a refurbishment and expansion of Interstate 70, west of the current project study area. One of the first such partnerships between a TMA and a DOT in the nation's history, this outreach effort provided an opportunity to study the viability and efficacy of TDM programs aimed at communities of diversity affected by a major construction project.

Other local authorities include homeowners associations, business improvement districts, and metro districts that are more specific to the developments in the area and are not depicted on the map.

Figure 1. Study Area

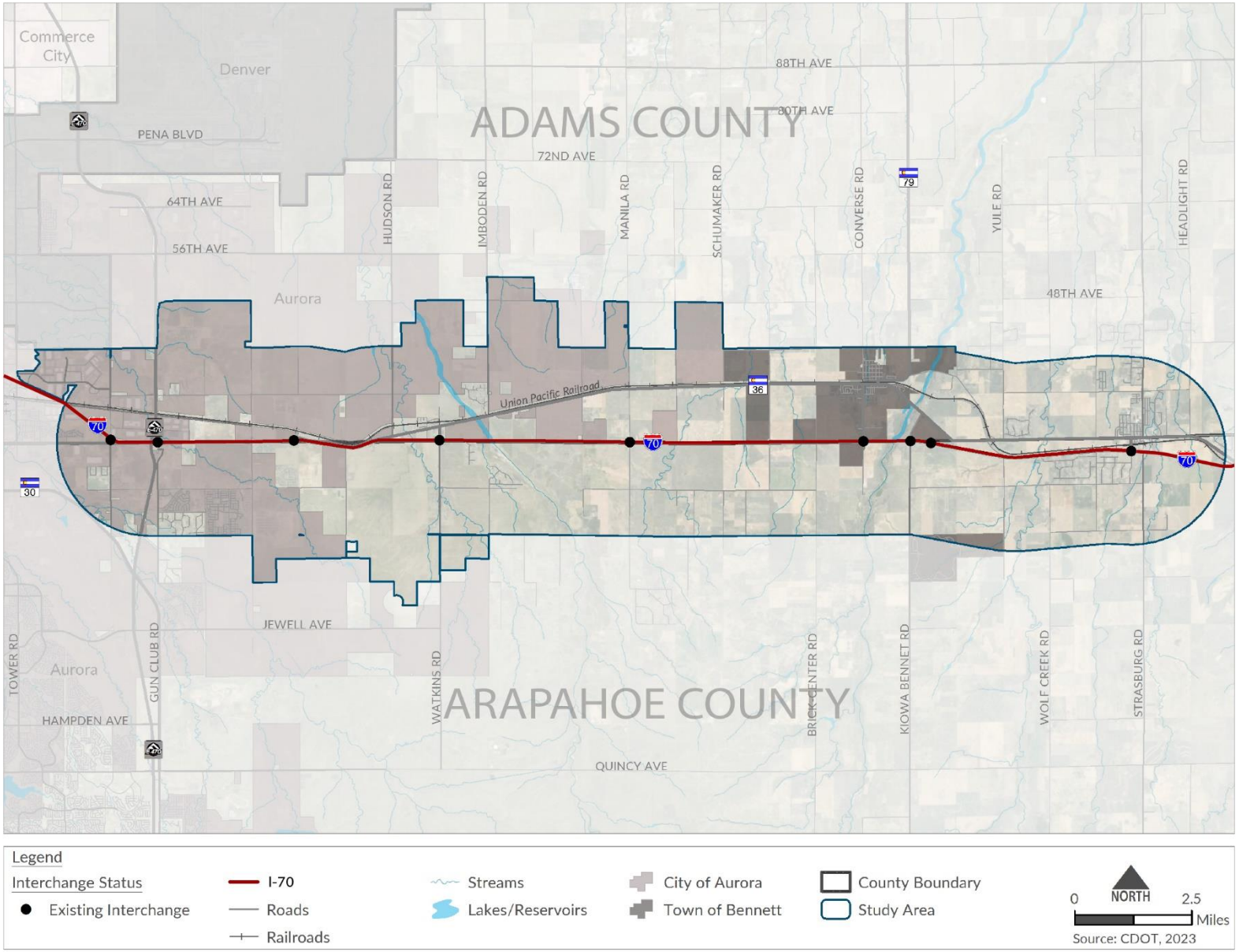
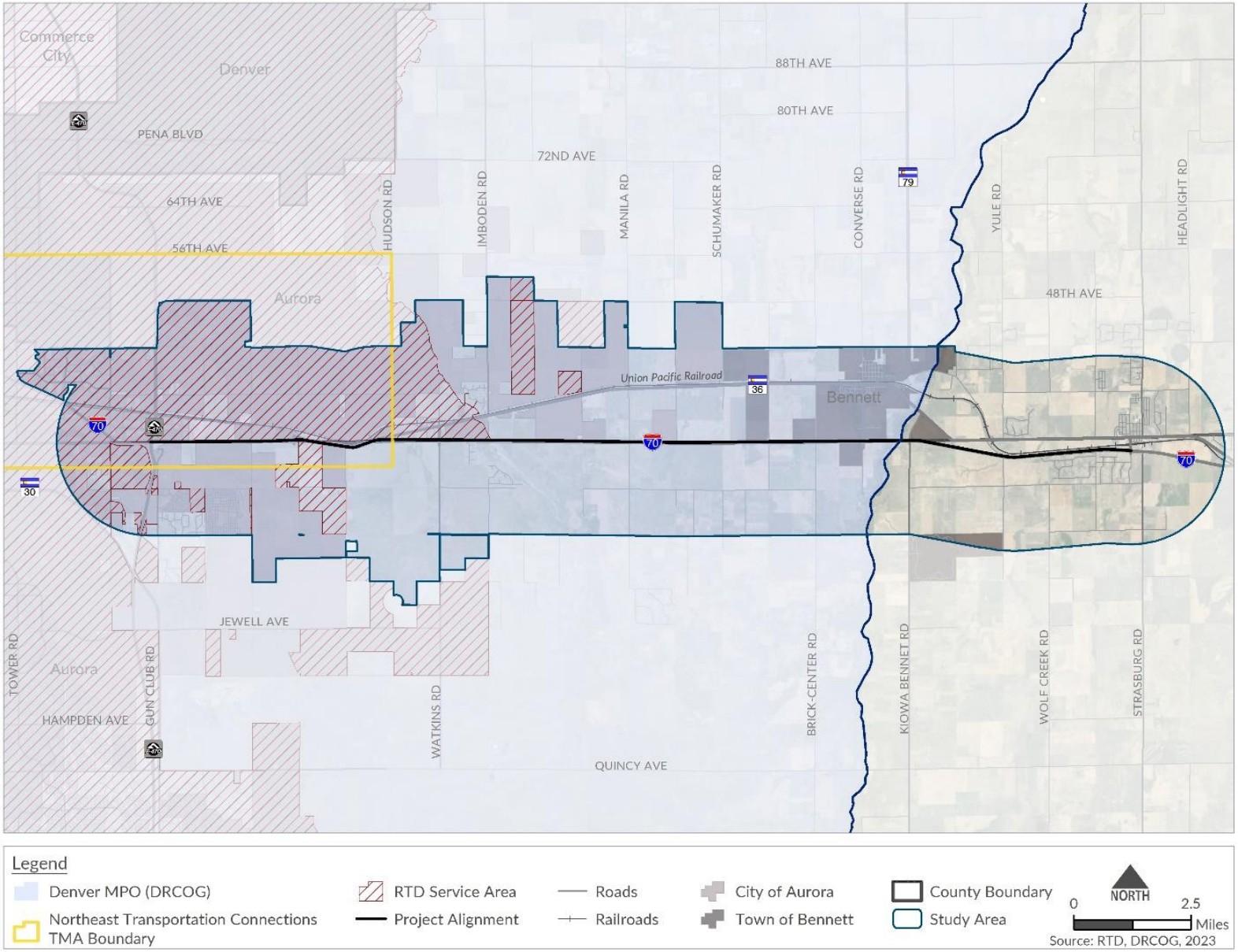


Figure 2. Jurisdictions and Districts



Purpose of Plan

CDOT's Policy Directive 1601 includes TDM requirements to preserve the functioning of the transportation system through efficient travel patterns. The 1601 policy requires applicants to achieve a 3 percent Average Daily Traffic (ADT) reduction at the interchange ramps through TDM strategies. This standard is generally achievable with a mix of moderate to highly impactful TDM strategies. Specific TDM strategies and calculations will be carried out through individual 1601 applications. The purpose of this corridor-wide planning effort is to identify corridor-wide strategies to mitigate traffic impacts, inform individual 1601 applications within the corridor, and provide background for CDOT's analysis of 1601 applications. It was initiated because the 1601 Procedural Directive strongly encourages corridors with multiple planned new or reconfigured interchanges to undertake corridor-wide TDM planning.

The I-70 East Corridor has a high rate of residential and employment growth that will impact the functioning of I-70 and other transportation facilities. Most of the eight existing interchanges in the corridor are planned for significant improvements and applicants are planning for five additional interchanges to serve this growth. The I-70 East Corridor has opportunities to develop impactful corridor-wide TDM strategies through the resources of entities within the corridor, the economies of scale provided by large new development opportunities, and the potential for connections to regional transit networks in the Denver metro area.

Organization of the Plan

Three groups have directed the study:

- **Project Management Team (PMT).** The PMT has met approximately monthly throughout the project and consists of CDOT Region 1 and Headquarters staff, along with the Felsburg Holt & Ullevig (FHU) consultant team.
- **Stakeholder Project Team (SPT).** The SPT consists of representatives from Arapahoe County, Adams County, City of Aurora, Town of Bennett, RTD, DRCOG, and NETC, along with CDOT and FHU. This group has met roughly quarterly.
- **Executive Oversight Committee.** A CDOT executive management group has provided oversight for the study.

The PMT and SPT established two tracks for development and evaluation of TDM strategies for the corridor:

- **TDM Toolbox.** The first track consists of the development of a TDM toolbox of various TDM strategies that can be applied at individual interchanges. **Chapter 3** of the plan presents a set of fact sheets for the approximately 20 TDM strategies identified as strong candidates for inclusion in individual interchange TDM plans. The fact sheets include general descriptions of each TDM strategy, discussion of potential applicability to the I-70 East Corridor, examples in the metro area, and summary information about implementation, funding sources, and measurement of benefits.
- **Corridor-Wide TDM Goals, Strategies and Scenarios. T**he second track focuses on TDM strategies that are more corridor-wide in nature in three general areas: Transit, Development Patterns, and Transportation Management Organizations. **Chapter 4** of the plan discusses these corridor-wide TDM strategies, and **Chapter 5** presents conceptual corridor TDM scenarios.

2. Baseline Analysis

Review of Previous Plans

Chapter 2 provides summaries of previous plans that are most relevant to the I-70 East Corridor Multimodal TDM Plan. **Table 1** briefly summarizes each plan and its relevance to the East I-70 TDM Plan. Plan summaries are grouped in three categories:

- **City, Town, and County Transportation Plans**, including plans prepared by Arapahoe County, Adams County, Aurora, and Bennett
- **Regional Transportation Plans**, including plans and studies prepared by RTD, DRCOG, and CDOT
- **TDM-Specific Plans**, including plans and guidance material prepared by CDOT and interchange-focused plans prepared by interchange project sponsors.

In addition to the brief summaries provided in **Table 1**, more detailed summaries of two of the plans with particular relevance to this project are provided in **Appendix A**:

- **Aurora Northeast Area Transportation Study (NEATS**) due to the large amount of focused and relevant information
- **CDOT Policy Directive 1601.1** due to the centrality of this directive to the corridor TDM study.

Appendix C provides links to the latest CDOT 1601 process guidance material.

Table 1. Summary of Relevant Previous Plans

City, Town, and County Transportation Plans

Lead Agency	Name	Year/ Status	Description	Relevance to East I-70 TDM Plan
Arapahoe County	2040 Transportation Master Plan	2021	Multimodal transportation plan addressing the unincorporated and incorporated parts of the county	• Recommends a study with other local and regional agencies on extending transit service east along I-70 via options that include expanding RTD or Bustang/Outrider service • Emerging Technologies and Future Trends chapter and other sections include several TDM strategies
Adams County	Advancing Adams: Planning for a Shared Future	2022	Multimodal transportation plan focusing primarily on the unincorporated county	• Recommends a fixed route shuttle service along I-70 to connect with RTD, along with first and last mile services north of I-70 • Innovation and New Technology chapter and other sections include several TDM strategies
Aurora	Aurora Places	2018	Citywide comprehensive plan	• Shows land near I-70 west of Manila Road as potential annexation areas • Shows emerging residential areas east of E-470 both north and south of I-70; commercial hubs and urban districts adjacent to and south of I-70; and industrial hubs north of I-70
Aurora	Northeast Area Transportation Study (NEATS)	2018	Multimodal transportation plan for the quadrant of Aurora generally north of Jewell Avenue and east of Picadilly Road	• Due to large amount of focused and relevant information, this study is detailed in Appendix A
Bennett	Town of Bennett Transportation Master Plan	2023	Multimodal transportation plan for the Town of Bennett	• Emphasizes continued coordination with DRCOG, CDOT, RTD, and the counties for development of infrastructure and multimodal services, including potential transit connection to the RTD rail network

Regional Transportation Plans

Lead Agency	Name	Year/ Status	Description	Relevance to East I-70 TDM Plan
RTD	Reimagine RTD, System Optimization Plan	2022	Charts a path forward for RTD in response to changing conditions, needs, and transit innovations	• Includes a high-level financial review of potential RTD expansion east in and around the I-70 corridor
CDOT	Statewide Transportation Plan	2020	2045 multimodal transportation plan encompassing all of the state's metropolitan and rural planning regions	• No specific project recommendations on the I-70 East study corridor
CDOT	Bustang Service Expansion Study	2022	A 3-year expansion plan for CDOT Bustang, Outrider, Snowstang, and Pegasus routes on I-70 (west from Denver) and I-25	• Service on the I-70 East Corridor is not currently part of this 3-year expansion plan
DRCOG	Regional TDM Strategic Plan	December 2023	DRCOG prepared a TDM Strategic Plan and TDM Toolkit	• TDM Toolkit describes various TDM strategies for a variety of land use contexts
CDOT	Statewide TDM Plan	2019	A statewide look at and creation of an inventory of TDM programs across the state	• Provides a reference for TDM programs throughout Colorado
DRCOG	Regional Multimodal Freight Plan	2020	Provides regional strategies for greater regional coordination and collaboration on freight issues	• Includes references and strategies related to Denver International Airport and Colorado Air and Space Port areas

TDM Interchange-Specific Plans

Lead Agency	Name	Year/ Status	Description	Relevance to East I-70 TDM Plan
CDOT	Policy Directive 1601.1 on Interchange Approval	2022 Update	Latest update of CDOT's policy for new interchanges and major improvements to existing interchanges, including the introduction of the TDM requirement	• Due to the centrality of this directive, this study is detailed in Appendix A
Various	TDM plans for individual interchanges throughout Colorado		At the time of report preparation, no individual interchange TDM plans have been finalized and accepted	

Corridor Interchanges

The study corridor currently includes nine I-70 interchanges, including the current Colfax Avenue and future Picadilly Road interchange west of the E-470 study corridor. (This is included because it is directly tied to planned improvements at the E-470/Gun Club Road interchange.) In addition, five locations have some level of planning for a future new I-70 interchange. **Figure 3** shows all 14 existing and potential interchanges, and **Table 2** describes each, along with the cross-street, I-70 milepost, and existing interchange for each location. **Table 2** also summarizes plans for improvements to existing interchanges or construction of new interchanges, along with the agency or agencies leading the planning or implementation of improvements, the status of the CDOT 1601 approval process, the status of any TDM plan required as part of the 1601 process, and whether the project is included in DRCOG's 2050 Metro Vision Regional Transportation Plan (MVRTP).

Figure 3. Interchanges

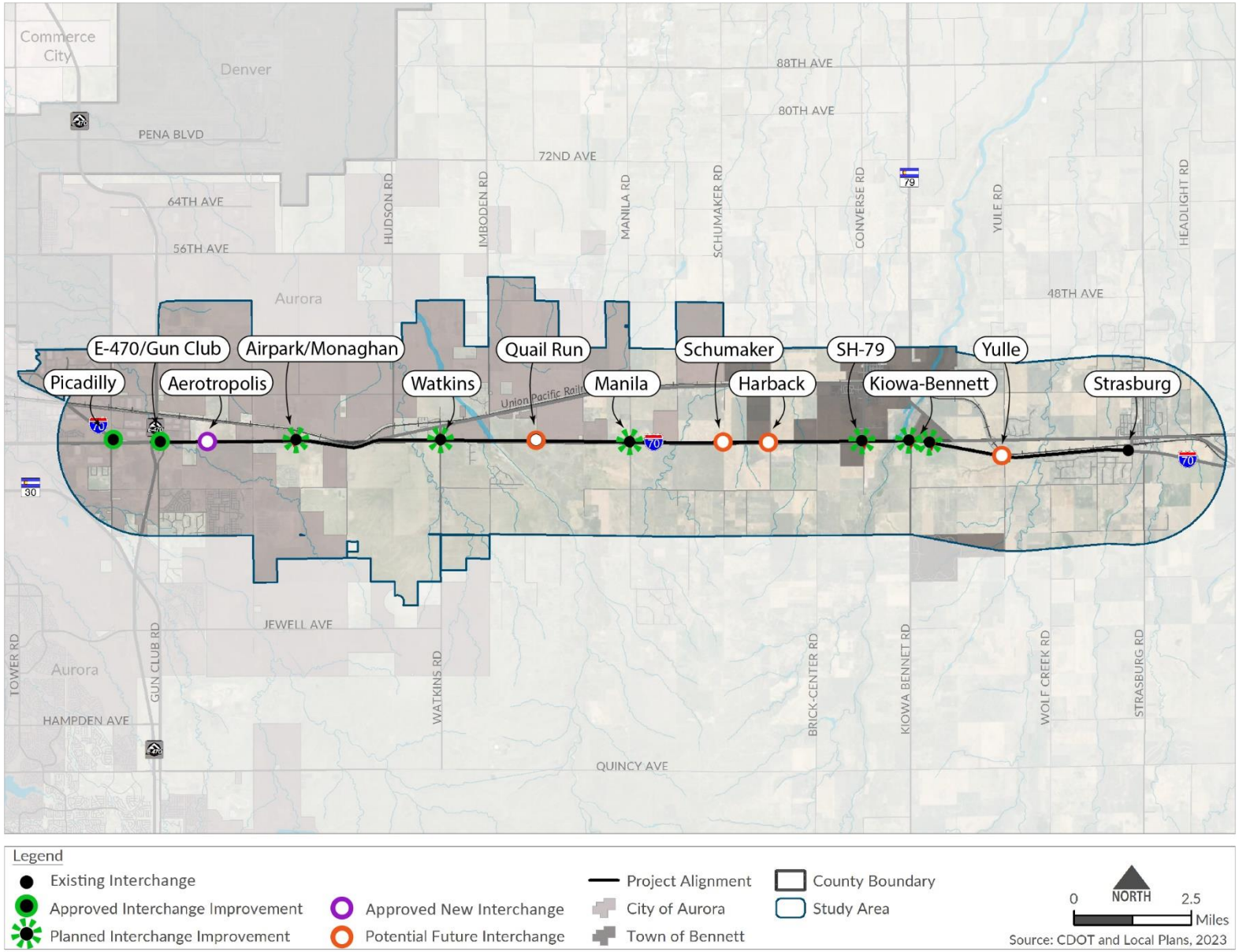


Table 2. I-70 East Interchange Summary

Location	Existing Interchange	Planned Improvement	Lead Agency(s) for Improvement	1601 Status	TDM Plan Status	Project in 2050 MVRTP?
Picadilly Road	Partial movement interchange at Colfax Avenue	Replace partial Colfax interchange with full movement diverging diamond interchange at Picadilly Design-build project in progress	Aurora	Approved in 2020	No TDM plan	Yes (2020-2029 Staging)
E-470 / Gun Club Road	I-70 access to E-470 and Gun Club Rd via a Gun Club diamond interchange and a northbound to eastbound flyover ramp	Replace Gun Club interchange with fully directional E-470 interchange Replacement is contingent upon a full movement interchange at Picadilly Rd and a new Harvest Rd/Aerotropolis interchange	Aurora & E-470 Authority	Approved in 2006 Requires new 1601 & NEPA approvals	No TDM plan	Yes (2020-2029 Staging)
Aerotropolis / Harvest Road	None	Diamond interchange with roundabout ramp terminals	Aerotropolis Regional Transportation Authority (ARTA)	Approved in 2020	Pre-TDM requirement but the System Level Study (SLS) contains TDM plan (Appendix H)	Yes (2020-2029 Staging)
Airpark Road/ Monaghan Road	Rural diamond interchange at Airpark Road	Replace Airpark interchange with a diamond interchange at Monaghan Road (600 feet east of Airpark) Phase 1 to include a full movement interchange Later phases to include full width and a Monaghan Road extension to the north over the UP Railroad	Arapahoe County	Arapahoe County initiated the 1601, NEPA, and preliminary design of Phase 1 in 2023	To be included in the 1601 project	Airpark/Monaghan Interchange is on MVRTP network Interchange reconstruction is in Unfunded Vision Plan
Watkins Road	Rural diamond interchange	Initial phase to reconstruct as improved diamond interchange Ultimate improvement to partial cloverleaf	Arapahoe County	Not initiated or programmed at this time	Not initiated	Interchange is on MVRTP network Improvement project not in MVRTP

Location	Existing Interchange	Planned Improvement	Lead Agency(s) for Improvement	1601 Status	TDM Plan Status	Project in 2050 MVRTP?
Quail Run Road	None	Diverging diamond interchange	Port Colorado is leading 1601 project Public interchange sponsor not established at this time	1601, NEPA, and preliminary design in progress	TDM plan in process	Interchange is in Unfunded Vision Plan
Manila Road	Rural diamond interchange	Interchange improvements anticipated to be needed to accommodate industrial, aviation and other development; improvements not defined at this time	To be determined	Not initiated or programmed at this time	Not initiated	Interchange is on the MVRTP network No improvement project defined
Schumaker Road	None	Potential future interchange identified in Aurora NEATS and Arapahoe County TMP	To be determined	Not initiated or programmed at this time	Not initiated	Not identified
Harback Road	None	Potential future interchange identified in Bennett Transportation and Capital Asset Inventory Master Plans	To be determined	Not initiated or programmed at this time	Not initiated	Not identified
Bennett – CO 79/1st St	Diamond interchange	Eastbound ramp improvements funded in the DRCOG 2022–2025 Transportation Improvement Plan Additional improvements in Bennett Transportation Master Plan	To be determined	Not initiated or programmed at this time	Not initiated	Not identified

Location	Existing Interchange	Planned Improvement	Lead Agency(s) for Improvement	1601 Status	TDM Plan Status	Project in 2050 MVRTP?
Kiowa-Bennett Road and Colfax Ave/CO 36	Split interchange with west facing on- and off-ramps to Kiowa-Bennett Road and east facing on and off ramps to Colfax Avenue/ CO 36	Bridge replacement and interchange improvements identified in Bennett Transportation and Capital Asset Inventory Master Plans	To be determined	Not initiated or programmed at this time	Not initiated	Not identified
Yulle Road	None	Potential future interchange identified in Bennett Transportation and Capital Asset Inventories Master Plans	To be determined	Not initiated or programmed at this time	Not initiated	Not identified
Wagner Street/Strasburg	Diamond interchange	Currently no improvement plans	N/A	N/A	N/A	None identified

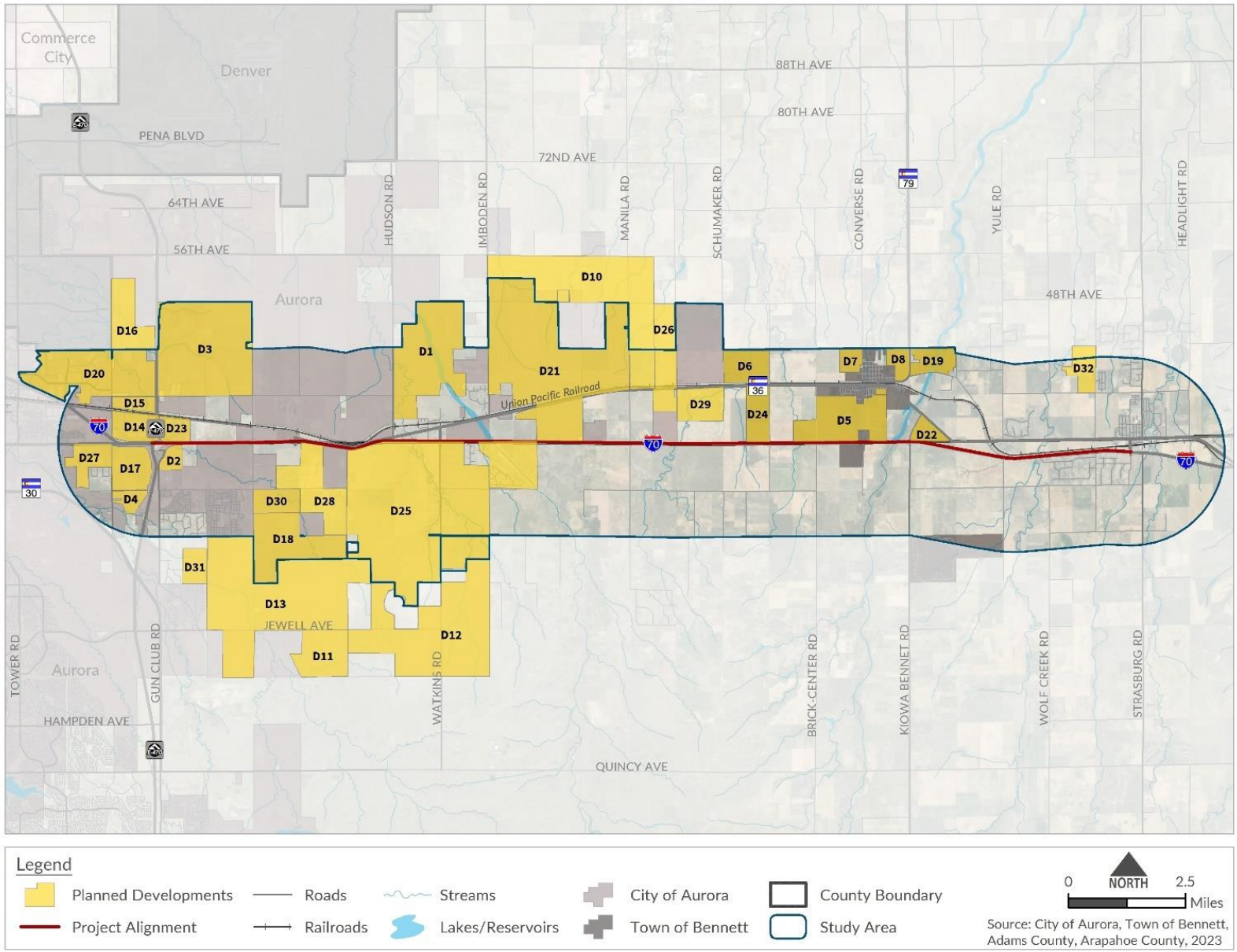
New and Ongoing Developments

The current land use along the corridor is predominantly rural/agricultural, with some areas with industrial uses to the north of I-70 and predominantly commercial and residential to the south of I-70.

To inform development of an effective TDM strategy, the project team developed a comprehensive list of notable developments within two miles of the project corridor. A few additional developments were added to this list despite not being within this radius, as they were large enough in area or would likely include several million square feet of commercial and/or thousands of dwellings units to contribute significantly to vehicular trips if built out to their planned capacities. Key data points were recorded for each development, including its proposed land use, jurisdiction (county, city, or town), site acreage, and number of dwelling (residential / mixed use) and/or square footage (commercial / industrial / mixed use). **Appendix B** presents a description of each development. **Figure 4** shows the location of each development presented in **Appendix B.**

The project team collected data from several sources, including development maps for Adams and Arapahoe counties, the city of Aurora, and the Town of Bennett. The project team also collected information from the websites of private developers overseeing the siting, planning, and construction of these various developments. The information provided in Appendix B represents research conducted in the spring of 2023 and is subject to change.

Figure 4. Planned Developments



3. TDM Strategies

Strategy Overview

Table 3 lists 26 potential TDM strategies based on the review of previous plans and discussions with project stakeholders. Of the full list, 22 were identified as being potentially applicable to TDM efforts for the I-70 East Corridor in the foreseeable future.

Table 3. Potential TDM Strategies for Consideration

General Category	#	Strategy	Description	Corridor-wide or Interchange Specific	Infrastructure, Programmatic, or Policy	Further Consideration in I-70 TDM Plan? (If not, why not)
Land Use	1	Mixed Use Development	Mixed use, transit-oriented development, ped/bike friendly design	Interchange Specific	Policy	Yes
Land Use	2	Reduced Development / Density	Downzoning, agreement to reduce development levels	Interchange Specific	Policy	No (not consistent with 1601 TDM guidance)
Land Use	3	Paid/Unbundled Parking	Paid parking; unbundled parking costs from rent, lease or sale from the primary use	Corridor-wide or Interchange specific	Policy	No (not applicable in I-70 TDM Plan timeframe)
Active Transportation	4	Shared Use Facilities	Trails, shared use sidepaths, overpasses, underpasses for bicycle, pedestrian and other active modes	Interchange Specific	Infrastructure	Yes
Active Transportation	5	On-Street Bike Facilities and Sidewalks	Bike lanes (conventional, buffered, separated), sidewalks, crossing improvements, and curb ramps	Interchange Specific	Infrastructure	Yes
Active Transportation	6	Supporting Infrastructure	Wayfinding, lighting, shade trees, transit stop amenities, bike parking, bike lockers, e-bike charging, bike repair stations, showers, and changing facilities	Interchange Specific	Infrastructure	Yes

General Category	#	Strategy	Description	Corridor-wide or Interchange Specific	Infrastructure, Programmatic, or Policy	Further Consideration in I-70 TDM Plan? (If not, why not)
Active Transportation	7	Shared Micromobility Programs	Shared bikes, e-scooters, and e-bikes through local agency, TMA/O or private partnership, bicycle libraries	Specific Interchange(s)	Programmatic or Policy	Yes
Transit	8	Locally Funded/Managed Transit Service	Local transit connections to regional system, mobility-on-demand/micro transit services	Corridor-wide or Specific Interchange(s)	Programmatic	Yes
Transit	9	Regional Transit Service	CDOT Bustang / Outrider Service or regional agency service	Corridor-wide	Programmatic	Yes
Transit	10	Expansion of RTD Service Area	Development areas joining RTD service area	Corridor -wide	Policy	Yes
Transit	11	Transit Service Upgrades	Bus priority, dedicated lanes, rapid transit, increase frequency, transit stop enhancements	Corridor-wide	Infrastructure	No (not applicable in I-70 TDM Plan timeframe)
Transit	12	Rapid Transit	BRT, Commuter or Light Rail Transit	Corridor-wide	Infrastructure	No (not applicable in I-70 TDM Plan timeframe)
Employer Based	13	Transportation Management Association/Organization	Creation of a TMA/O to plan, fund, and implement TDM strategies	Corridor-wide or Specific Interchange(s)	Policy	Yes
Employer Based	14	Carpool/Vanpool Programs	Rideshare matching program, partnership with private providers, preferential parking	Corridor-wide or Specific Interchange(s)	Programmatic	Yes
Employer Based	15	Modal Subsidies and Vouchers	Eco-passes, vanpool, transportation network company (TNC) partnerships, micromobility subsidies	Corridor-wide or Specific Interchange(s)	Policy	Yes

General Category	#	Strategy	Description	Corridor-wide or Interchange Specific	Infrastructure, Programmatic, or Policy	Further Consideration in I-70 TDM Plan? (If not, why not)
Employer Based	16	Parking Management	Paid parking/parking cash-out, dedicated location parking for carpools/van pools and other sustainable options	Interchange Specific	Policy	Yes
Employer Based	17	Telework/Remote Work Program	Remote work policies	Corridor-wide	Policy	Yes
Community Based	18	Modal Subsidies (Community Based)	Neighborhood EcoPasses, TNC partnerships, micromobility and Car-share subsidies	Corridor-wide or Specific Interchange(s)	Policy	Yes
Community Based	19	Parking Management (Community Based)	Paid parking, dedicated location parking for car-share	Interchange Specific	Policy	Yes
Community Based	20	School-based programs	Safe route to school, school bus, cycle to school	Interchange Specific	Policy	Yes
Personal Vehicle	21	Car-sharing	Car-sharing program through local government, TMA/O, employer/developer, or district	Interchange Specific	Programmatic	Yes
Personal Vehicle	22	Transportation Network Companies (TNC) Partnership	Partnership between TNC and local government, TMA/O, employer/developer, or district	Interchange Specific	Programmatic	Yes
Multimodal Centers	23	Mobility Hubs	Provide multiple transit and micro-mobility services	Interchange Specific	Infrastructure	Yes
Multimodal Centers	24	Park-and-Ride Lots	Carpool lots, park-n-ride lots associated with transit service	Interchange Specific	Infrastructure	Yes
Multimodal Centers	25	Placemaking and wayfinding	Signage, landscaping, amenities, art to support other TDM measures.	Interchange Specific	Infrastructure	Yes
Multimodal Centers	26	Education and Mobility Integration	App websites, information kiosks, trip planning assistance, special events, marketing	Corridor-wide or Specific Interchange(s)	Programmatic	Yes

TDM Toolbox

The following fact sheets describe each of the 22 TDM strategies identified as having potential applicability to the corridor. The fact sheets begin with general descriptions of each strategy. They then provide information focusing more directly on applicability to the I-70 East Corridor and the 1601 TDM plans for corridor interchanges.

Mixed Use Development

Description of Strategy: The overarching goal is to create development that provides and encourages the use of a range of mobility options to reduce reliance on long automobile trips. Specific goals include:

- Allow and support development that contains an integrated mix of uses within walking distance of each other, a range of densities, and design features that complement the corridor transit strategy.
- Provide street design, bicycle facilities, sidewalks, and crosswalks that safely and comfortably provide first- and last-mile connections to transit stations and stops.
- Provide mobility hubs with an appropriate range of micromobility, shared mobility, automobile parking, bicycle parking, and other services at key transit stations.
- Encourage a mix of uses at a corridor level that provides a jobs/housing/services balance reducing the need for long-distance trips for commuting and other travel.

Applicability to I-70 East Corridor: Corridor-wide

Currently in Study Corridor: Several of the major planned developments in the corridor include a mix of residential and commercial/employment uses as described in the Baseline Conditions Report. Examples include Aurora Crossroads, Bennett Crossing, Eastern Hills, Prosper, and Sky Ranch.

Denver Region Example: Transit Oriented Development (TOD) has been an integral part of the planning strategy for DRCOG, RTD, and many of the metro area's cities and counties for many years. TOD planning encourages a mix of uses, moderate to high density, and pedestrian/bicycle supportive infrastructure that are supportive of and by transit ridership. Focus has specifically been given to TODs surrounding major passenger rail or bus rapid transit (BRT) stations, but TOD principles can also be applicable to any transit station.

TODs in Denver

Included in: Aurora, Arapahoe County, and Adams County include TOD emphases in their comprehensive and transportation plans

Implementation Process

Timeframe*:* Medium term (5-10 years), as development occurs

Implementation Agency: Cities, towns, counties, and private developments

Potential Funding Sources:

Local: Private development, development districts, local government support

Cost Assessment:

Capital = High Operation = Low Maintenance = Low

Implementation Tools/Key Aspects

- Local government planning support, zoning, and coordination with private development
- TOD relies on implementation of effective transit service and stations

Measurement: This strategy may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; **may have impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps. Can be measured with regional travel model or off-model methods.**

Shared Use Paths

Description of Strategy: A trail or separated bicycle and pedestrian (shared use) facility is a physically separated path that accommodates bi-directional travel by bicyclists, micro-mobility, and pedestrians. Notably, these paths are separated from roadways (not on-street). The trail can be located within a publicly owned right-of-way, an exclusive right-of-way, or an easement. These trails typically have improved surfaces and are wide enough to accommodate multiple modes of transportation. Trails and separated facilities can be deployed at the local scale, or at the regional scale providing a continuous route between local communities.

Applicability to I-70 East Corridor: Interchange-specific or corridor-wide.

Currently in Study Corridor? Yes

Denver Region Example: The US 36 bikeway parallels US 36 and provides connections to Denver, Westminster, Superior, Louisville and Boulder. The bikeway connects to RTD transit stops, park n rides and other amenities within the corridor. Other examples of commuting trails include:

- C-470 trail
- Newly planned CO 119 commuter bikeway between Longmont and Boulder

US 36 Bikeway: Separated pedestrian/bike (shared use) facility

Included in: 2019 Statewide TDM Plan, Arapahoe County TMP, Adams County TMP, Town of Bennett TMP and the Emerald Strands, A Cooperative Park, Open Space, and Trail Plan for the Area Surrounding the new Denver International Airport (Adams County et. al. 1990)

Implementation Process

Timeframe: Medium to long term (5-10 years) depending on regional plans/needs

Implementation Agency: CDOT, counties, property owners/developers and districts in coordination with both local entities and larger scale projects with CDOT.

Potential Funding Sources:

Local: Local funding, MPO/DRCOG, partnerships with districts as development grows

State: State funding/grants **Federal**: federal grants

Cost Assessment

Capital = Medium Operation = Low Maintenance = Low

Implementation Tools/Key Aspects

- Create partnerships between local jurisdictions and CDOT
- Secure funding sources and partners
- Understand right-of-way and other environmental constraints

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; **may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with off-model usage estimates.**

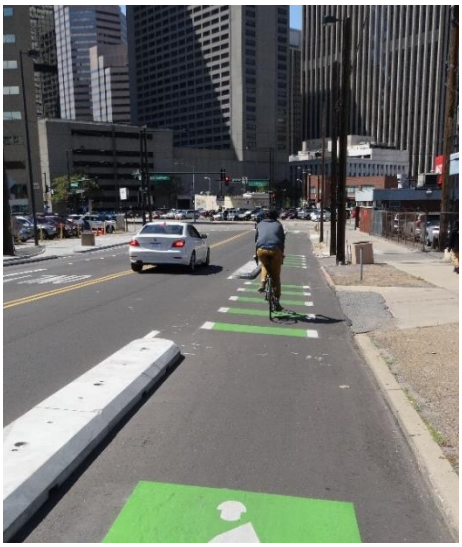
On-Street Bike Facilities and Sidewalks

Description of Strategy: On-street bike lanes are a segment of the roadway that has been designated by pavement markings and signs for bicycles and micromobility such as scooters. Bike lanes are designed specifically for each street depending on traffic volume and speed. Bike lane designs include conventional and buffered bike lanes, where the bike lane is separated by striping only, and protected bike lanes, where the bike lane is separated by striping and some form of vertical element like curb or delineator. Pedestrian facilities include sidewalks and side paths along the street that are either attached to the street with curb and gutter or detached from the street with a sidewalk buffer. Successful on-street bike and pedestrian facilities are safe, comfortable, connected, continuous, and separated from high-speed vehicular traffic, creating a network of facilities for walking and wheeling within the community.

Applicability to I-70 East Corridor: Interchange-specific

Currently in Study Corridor? Yes

Denver Region Example: Many local jurisdictions have on-street bike lanes and pedestrian facilities, as well as programs to navigate connections within the community. The City and County of Denver recently installed bike lanes as a part of the Mayor's goal of 125 miles of new bike lanes by 2023. This program includes all types of bikeways, including neighborhood bikeways, conventional and buffered bike lanes, and protected bike lanes along very busy travel corridors. Denver also has a sidewalk gap program that identifies and constructs missing sidewalk gaps within the existing network of pedestrian facilities.



Protected bike lane in Downtown Denver

Included in: 2019 Statewide TDM Plan, Arapahoe County TMP, Adams County TMP, Town of Bennett TMP, and the Aerotropolis Visioning Study

Implementation Process

Timeframe: Short term (1-5 years), depending on locality and length of facility

Implementation Agency: CDOT, local governments and districts, property owners/developers

Potential Funding Sources*:* Local funding, state and federal grants, partnerships with districts as development grows

Cost Assessment

Capital = Low Operation = Low Maintenance = Low

Implementation Tools/Key Aspects

- Create an identification and implementation plan
- Secure funding sources

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; **may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with off-model usage estimates.**

Supporting Infrastructure

Description of Strategy: Supporting infrastructure refers to facilities that support active transportation. These facilities can include bike parking, storage facilities, street lighting, bike repair stations, e-bike chargers, lockers, showers, changing rooms and any other secondary uses that support the primary active transportation infrastructure (trails, sidewalks, on-street bike lanes).

Applicability to I-70 East Corridor: Interchange-specific

Currently in Study Corridor? No

Denver Region Example: Widespread element of many office buildings, employment centers, universities, multifamily developments, and current active transportation infrastructure.

University of Colorado Denver – Bike Pavilion

Included in: Advancing Adams (Advancing Adams: Parks, Open Space and Trails Plan); Arapahoe County Bicycle and Pedestrian Master Plan; and 1601 TDM Policy Directive

Implementation Process

Timeframe: Medium term (as development and primary infrastructure is constructed)

Implementation Agency: Local governments, TMA, Metro District, HOAs, private developer, organization (employers, educational institutions, housing development, non-profit).

Potential Funding Sources:

Local: developer/employer, district (BID, metro, HOAs), grants

State: CMAQ, state grants

Cost Assessment

Capital = Low Operation = Low Maintenance = Low

Implementation Tools/Key Aspects

- Enhances existing/planned active transportation infrastructure
- Scalable and adaptable to funding and demand

Measurement: This tool may indirectly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, but it does ***not*** have measurable impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps.

Shared Micromobility Programs

Description of Strategy: FHWA defines shared micromobility systems as transportation services deployed in targeted service areas with usage generally intended for short trips, such as first- and last-mile connections to transit. Systems encompass three models: point-to-point (station-based), free-floating (dockless within a defined area), and round-trip (subscription/libraries), and they apply at park-n-rides, high activity areas, stations and/or mobility hubs. Programs connecting to main destinations, corridor transportation services, and mobility hubs can function as wider networks.

Applicability to I-70 East Corridor: Interchange-specific.

Currently in Study Corridor? No

Denver Region Example: Several programs in the Denver area use one of the three models:

- Station-based bike sharing in Boulder (B-Cycle)
- Dockless systems for scooters and e-bikes in Denver, Arvada, Thornton, and Boulder and in Meridian Metro District in Douglas County
- Bicycle libraries in Golden and various Denver neighborhoods through coordination with Northeastern Transportation Connections (NETC) TMA

Spin at Meridian is a micromobility program that serves a specific employment center in the Denver South area, an area with similar potential characteristics as the I-70 East Corridor. As the program sponsor, a Metropolitan District (Meridian) covers most of the costs associated with electric scooters and e-bikes in the area.

Spin at Meridian Metro District (Denver South)

Included in: Arapahoe County 2040 TMP (Technologies and Future Initiatives); Advancing Adams (Chapter 2 Future Mobility Plans); Reimagine RTD Mobility Plan for the Future; and 1601 TDM Policy Directive

Implementation Process

Timeframe: Long-term (as bike facilities, employment development and other connecting transportation services are implemented)

Implementation Agency: County, local government, TMA, metro district, BIDs, large employers, multifamily residential buildings

Potential Funding Sources:

Local: DRCOG (e.g., Multimodal Transportation and Mitigation Options), developer/employer, district (BID, metro, HOAs)

State: CDOT, TDM Innovation grants, CMAQ funds

Cost Assessment

Construction = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Enhances connectivity to mobility hubs and regional transportation nodes
- Scalable and adaptable to funding opportunities

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions; may have an impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps. Can be measured with off-model usage estimates.

Locally Funded/Managed Transit Service

Description of Strategy: Locally funded/managed transit service is a local transit service that provides first and last mile (FLM) or other local connecting services. This type of service often operates in a limited geography or within a defined route or area. Service can be provided through a local TMA or non-profit service provider (such as Via Mobility Services in Boulder). These connectors operate as shuttles, regular buses, or vans/other automobiles depending on anticipated ridership and on available funding. These services may operate on-demand or have a fixed route. Services can also be provided fare free or at equitable rates already established for transit service if integrated into a larger transit operation.

Applicability to I-70 East Corridor: Interchange-specific or corridor-wide. This service is most applicable to connect major developments not in the RTD service area to the RTD system or to provide access to a future regional bus station (such as Bustang).

Currently in Study Corridor? No.

Denver Region Example: The Lone Tree Link is a free shuttle that provides FLM service within the city of Lone Tree. The shuttle formerly served as a connector between Lincoln LRT Station and Sky Ridge Medical Center/Charles Schwab Campus but has since been expanded to serve the entire city. Riders can book rides through the Link on Demand app or over the phone. 75% of annual funding comes from the City of Lone Tree, and the remaining 25% comes from Denver South. Other examples of locally funded/managed transit services include:

- Ride Free Lafayette
- Denver's Connector Microtransit Program; currently implemented in the Montbello, Globeville and Elyria-Swansea neighborhoods

Lone Tree Link

Included in: Advancing Adams (Transit recommendations); Reimagine RTD (Mobility Plan for the Future Recommendations); Town of Bennett TMP; and 2019 Statewide TDM Plan

Implementation Process

Timeframe*:* Short or Medium term (1-10 yrs)

Implementation Agency: Cities, towns, counties, employers, and districts in coordination with private developers, as applicable

Potential Funding Sources

Local: RTD partnership program, cities, counties, towns, DRCOG, metropolitan district funding, Private developers, employer donations (such as Via Mobility's donor program)

Cost Assessment

Construction = Low Operation = High Maintenance = High

Implementation Tools/Key Aspects

- Utilize private/public matching funds (RTD partnership program)
- Create partnerships between employers and multifamily properties
- Connect into existing or planned major transit hubs

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with regional mode choice model or off-model ridership estimates.

Regional Transit Service & Expansion of RTD Service Area

Please see Corridor-Wide TDM Strategy chapters for descriptions and discussions of these corridor-wide transit service strategies

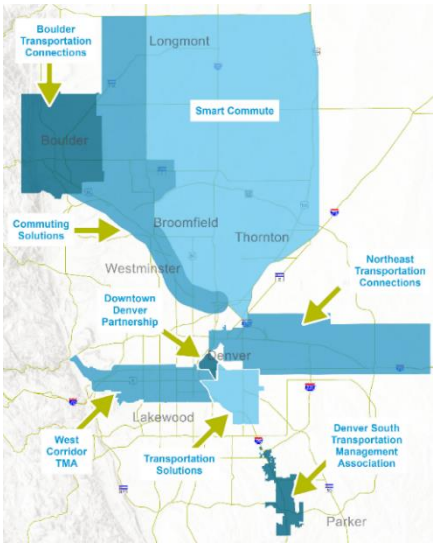
Transportation Management Association/Organization (TMA/O)

Description of Strategy: A Transportation Management Association or Organization (TMA/O) focuses on improving transportation and mobility within a specific area or a region by providing commuting resources and assistance, transportation demand management support, advocacy and planning, education and outreach, and partnerships and collaboration. TMAs typically consist of public and private stakeholders, such as governments, businesses, transit agencies, and community organizations.

Applicability to I-70 East Corridor: Corridor-wide

Currently in Study Corridor? Yes, The Northeast Transportation Connections (NETC) currently serves the northwestern part of the corridor (Aerotropolis).

Denver Region Example: There are currently eight TMAs in the Denver metro area, with NETC serving the northeast Denver region, from Globeville, Elyria, and Swansea to Aerotropolis east of E-470. The TMA works with Denver, RTD, CDOT, DRCOG, local schools, community service organizations, and other entities. Current programs include NETC bike libraries, employee outreach, a tolling equity program, and The Denver Connector (a microtransit commuting service to neighborhood destinations and transit stations).



TMAs in the Denver region (source: DRCOG)

Included in: Aerotropolis Visioning Study

Implementation Process

Timeframe: Medium term (5-10 years), as development occurs

Implementation Agency: Cities, towns, counties, businesses, RTD and community organizations.

Potential Funding Sources:

Local: Contributions from members (cities, towns, counties employers, and other organizations), sponsorships, DRCOG, partnerships with local government/ agencies

State: TMO Seed Funding Grant (CDOT)

Cost Assessment

Capital = Low Operation = High Maintenance = Low

Implementation Tools/Key Aspects

- Encourage collaboration between stakeholders to provide awareness and run programs
- Better management, organization and implementation of TDM strategies

Measurement: This strategy may indirectly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, but it does **not** have measurable impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps.

Carpool/Vanpool Programs

Description of Strategy: Carpool/vanpool programs are transportation initiatives that offer a convenient and cost-effective alternative for commuting to work or other destinations. Participants may pay a fee to a carpool/vanpool organization who in turn will do a routing plan, schedule trips and drive a group of employees/residents to their desired location. Carpools/vanpools typically follow a predetermined route and a set schedule. This shared transportation model helps reduce traffic congestion, can reduce commuting expenses, and can reduce the number of individual vehicles on the road. Vanpool programs often receive support from employers, transportation agencies, or local organizations to encourage their adoption and provide incentives to participants.

Applicability to I-70 East Corridor: corridor-wide

Currently in Study Corridor? Unknown. DRCOG and NETC rideshare programs are available in the corridor.

Denver Region Example: DRCOG's Way to Go program includes a formal partnership with eight transportation management associations in the region. The partnership collaborates on a comprehensive and coordinated effort to address traffic congestion and improve air quality in the region by promoting and implementing a suite of commute choice services, including:

- Vanpool/carpool options, trip planning, and resources, including the Guaranteed Ride Home program
- Facilitating commute options and connections through the MyWayToGo trip-planning platform.

Commuter van from DRCOG's Way to Go fleet

Included in: Arapahoe County TMP, Adams County TMP, and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs), as more development occurs within the corridor

Implementation Agency: DRCOG, Employers, Transportation Management Associations, local transportation agencies.

Potential Funding Sources:

Local: DRCOG, counties and towns, and/or employers.

Cost Assessment

Capital = Medium Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Program can provide equitable access to employees.
- Connect large origin and destination locations.

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with off-model usage estimates.

Modal Subsidies and Vouchers

Description of Strategy: Modal subsidies and vouchers include strategies to increase mobility via transit or micromobility, including distributing transit passes, Transportation Network Companies (TNC) partnerships, vanpool, and micromobility and microtransit subsidies. Distributing transit passes can incentivize residents or employees at the receiving end to use transit to commute rather than personal vehicles. TNCs, which include services like Uber and Lyft, are demand responsive services that connect a user between two points. In addition, vanpools provide the opportunity to travel via a fixed route between locations such as a job and residence. Microtransit services may be demand-responsive as well. Micromobility allows the user to travel freely between two points within a given service area.

Applicability to I-70 East Corridor: Interchange-specific or corridor-wide

Currently in Study Corridor? Yes. Large employers in the area are likely to provide transit and vanpool subsidies.

Denver Region Example: The Town of Nederland, in coordination with Boulder County and RTD, provided EcoPasses to every town resident, an effort funded by a 1.85 property tax mill levy for a period of 10 years. The pass provides unlimited usage of all regular RTD services. Other entities that use EcoPass programs include the Town of Lyons, University of Colorado, and University of Denver.

A regional example is RTD's Zero Fare campaigns to boost ridership.

EcoPass Program in Nederland, CO

Included in: Adams County TMP, Arapahoe County TMP, Reimagine RTD and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs)

Implementation Agency: Cities, towns, counties, transit providers, TNCs, micromobility providers, and private developers

Potential Funding Sources

Local: Cities, towns, counties and transit providers: tax mill levies, metropolitan district financing, developers, employers, and TNCs/ micromobility providers

State: CDOT Strategic Transportation TDM Innovation Grants

Federal: CMAQ funding, Advanced Transportation & Congestion Management funding

Cost Assessment

Capital = Low Operation = High Maintenance = Low

Implementation Tools/Key Aspects

- Encourage collaboration between residential, commercial, and employment areas for implementing programs and subsidies Connect large origin and destination locations.
- Study expanding the RTD service boundary into the Corridor area

Measurement: This tool may indirectly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, and have significant impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps, but the reduction depends on external factors such as existing transportation services (transit). Can be measured with model or off-model usage/ridership estimates and user surveys.

Parking Management

Description of Strategy: Parking management refers to the management of a limited resource such as space and ensuring its availability for those who need it. Parking management can include charging fees for parking, time restrictions on parking to control supply and demand, providing incentives such as dedicated parking for carpools or non-vehicular modes, or implementing parking cash-out programs where employees receive cash or other benefits in lieu of parking spaces.

Applicability to I-70 East Corridor: Interchange-specific or corridor-wide.

Currently in Study Corridor? Unknown. These strategies are applicable within the entire I-70 East Corridor.

Denver Region Example: Parking management has become more common in office buildings, employment centers, retail and universities throughout the region. For example, Cherry Creek Mall implemented paid parking within its facilities to better manage demand from users across the neighborhood in 2019.

Cherry Creek Mall implemented paid parking in 2019

Included in: Not applicable.

Implementation Process

Timeframe: Short or Medium term (1-10 yrs). As development occurs.

Implementation Agency: Cities, employers, developers, local transit providers (RTD)

Potential Funding Sources:

Local: Businesses, developers, Business improvement Districts (BIDs), cities, towns and/or counties

Cost Assessment

Capital = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Highly effective transportation demand management (TDM) tool given that every driver needs a place to park.
- Can be integrated with other policies and services and coordinated with public transit.

Measurement: This tool may directly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, it has a significant impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps. Effects are generally measured through off-model estimation.

Telework/Remote Work Program

Description of Strategy: Remote work or telework programs refer to a working arrangement where employees or professionals carry out their job duties from a location outside of a traditional office environment. Instead of commuting to a physical workplace, remote workers utilize technology to perform their tasks remotely. Because workers are not commuting to an office or are reducing the number of commuting trips taken per week, employees are able to reduce their vehicle miles traveled, and thus CO2 emissions as a result of commuting.

Applicability to I-70 East Corridor: Corridor-wide.

Currently in Study Corridor? Likely. Several companies either currently operating or are soon to operate in the corridor may offer remote options. The prevalence of remote work for has increased dramatically as a result of the COVID pandemic. However, the more industrial developments (current and future) within the corridor may not be able to provide these same programs.

Remote worker

Included in: Adams County TMP, Arapahoe County TMP and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs), as more employers operate in the study area

Implementation Agency: Employers, TMA

Potential Funding Sources:

Local: Employers, developers held to emissions reductions

Cost Assessment

Capital = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Encourage employers to offer remote work programs, as applicable
- Create partnerships between employers and developers who are held to emissions reductions

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with regional mode choice model or off-model estimates.

Modal Subsidies (Community Based)

Description of Strategy: Modal subsidies for housing developments include funding strategies to increase mobility via transit, car sharing, or micromobility. These strategies can encourage residents to use alternative modes between their homes and where they need to go. Distributing transit passes, such as RTD's Neighborhood EcoPass program, partnering with TNCs, or using car-sharing/micromobility subsidies all provide alternative options for residential developments.

Applicability to I-70 East Corridor: Interchange specific and corridor-wide

Currently in Study Corridor? Yes. Strategies are applicable within the entire I-70 East Corridor but may prove particularly useful within/near residential developments. Services currently provided include ridehailing (Lyft and Uber) and car-sharing. Scooter share, regional bus (Bustang) and RTD transit are not currently provided.

Denver Region Example: Boulder Junction is transit oriented development in Boulder. The area includes mixed-use and pedestrian-oriented design to create a space where people can work, live, shop and access transit. The project, a collaboration among City of Boulder, private property owners, and RTD, kicked off in 2010. Residents or employees working in Boulder Junction receive an RTD EcoPass, Boulder B-cycle membership (50% reduction), and CarSharing Membership and driving credit.

City of Boulder has found that the automobile trip generation rate for the district is 58 percent, indicating that nearly half of residents or employees are opting for alternative modes. This may result from the transit and multimodal focus and incentivization.

Boulder Junction Plaza and RTD Depot

Included in: Adams County TMP, Arapahoe County TMP, Reimagine RTD, and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs), as residential is developed

Implementation Agency: Employers, TMA

Potential Funding Sources:

Local: Cities, counties and town in collaboration with Transit providers, TNCs, micromobility providers, and residential developers

State: CDOT Strategic TDM Innovation Grants

Federal: CMAQ funding, Advanced Transportation & Congestion Management funding

Cost Assessment

Capital = Low Operation = High Maintenance = Low

Implementation Tools/Key Aspects

- Encourage collaboration between residential, commercial, and employment areas for fixed or demand responsive services
- Study expanding the RTD service boundary into the Corridor area

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with regional mode choice model or off-model estimates.

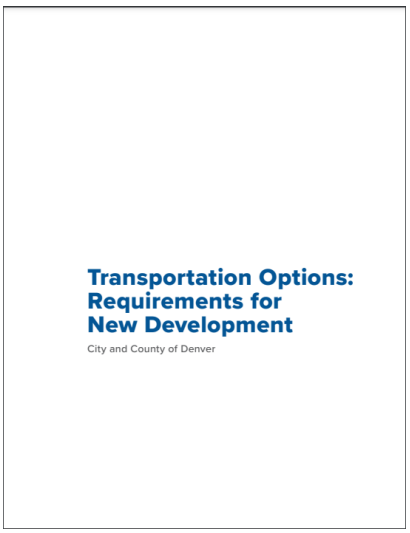
Parking Management (Community Based)

Description of Strategy: Parking management refers to the management of a limited resource such as space availability (parking) and making sure it's available for those who need it. Community based parking management can include charging fees or time restrictions to allocate parking based on supply and demand, providing incentives (dedicated/preferential parking) for carpooling or using alternative transportation, or implementing shared parking with residential communities sharing parking with complementary land uses such as retail, office, or other activity centers.

Applicability to I-70 East Corridor: Interchange-specific or corridor-wide.

Currently in Study Corridor? Unknown. These strategies are applicable within the entire I-70 East Corridor.

Denver Region Example: The city and County of Denver has recently implemented a new TDM ordinance for developers, which includes implementing parking management (parking fees, shared parking, dedicated parking) in a menu of options, to mitigate the traffic impacts of new developments.



Denver's new TDM requirements

Included in: Advancing Adams, Arapahoe County 2040 TMP, 2019 CDOT Statewide TDM Plan

Implementation Process

Timeframe: Medium term (5-10 yrs). As development occurs.

Implementation Agency: Developers, HOAs, cities, towns and/or counties

Potential Funding Sources:

Local: Community Improvement District (CIDs), Developers, cities, towns and/or counties

Cost Assessment

Capital = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Parking management is one of the most effective transportation demand management (TDM) tools due to the fact that every vehicle needs a place for storage.
- It can be integrated with other policies and services, such as dedicated car-share parking, EV parking spaces, as well as coordination with public transit.

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, and it has significant impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps. Effects are generally measured through off-model estimation.

School-Based Programs

Description of Strategy: School-based programs include bus services, bike and pedestrian routes, including the Safe Routes to Schools program and DRCOG's SchoolPool program. Bus service includes drop-off and pickup between schools and a set location. Bike and pedestrian routes to schools include bike and sidewalk facilities that are complete, stress-free, comfortable, and have safe crossings. These factors can increase walking and biking to school. A formalized initiative, Safe Routes to Schools aims to make bike/pedestrian networks safer for students of all grades and abilities. Safe Routes to School strategies can be applied at various scales.

Applicability to I-70 East Corridor: Interchange-specific

Currently in Study Corridor? Yes. This strategy is most applicable between residential areas and nearby schools.

Denver Region Example: Aurora Public Schools have hosted Safe Routes to Schools events, including learning to bike, bike and pedestrian safety, and crossing guard trainings. One such event included a bicycle rodeo at Clyde Miller K-8 to practice bike skills and learn safety tips from Bicycle Colorado. Following the rodeo, fifth- through eighth-grade students enjoyed a neighborhood bike ride. Participants received free bike tune-ups courtesy of Treads Bicycle Outfitters and safety helmets. The rodeo was part of a Safe Routes to School grant through CDOT to teach pedestrian and bicycle safety to Clyde Miller K-8 students and encourage more families to bike and walk to school.

Safe Routes to Schools event (within Study Corridor)

Included in: Adams County TMP, Arapahoe County TMP and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs)

Implementation Agency: DRCOG, cities, towns, counties, and schools/school districts

Potential Funding Sources:

Local: DRCOG, cities, counites and towns in collaboration with schools/school districts

State: CDOT's Safe Routes to Schools grants

Federal: Safe Streets for All (S4A)

Cost Assessment

Capital = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Use CDOT's Safe Routes to Schools grants
- Promote and participate in DRCOG's Schoolpool program
- Create partnerships between schools and high-density residential developments
- Provide routes that connect schools with community centers
- Use Safe Routes to Schools programming from non-profits

Measurement: This tool may indirectly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, but it does not have measurable impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps.

Car-Sharing

Description of Strategy: Car sharing programs offer the flexibility of being able to drive a car without the costs associated with owning one. Car sharing programs can be operated by non-governmental organizations, non-profits, transportation management associations/organizations (TMA/Os), employers, developers, and/or local transit providers. Private companies, such as Zipcar or Getaround, and rental car companies, such as Enterprise, also provide these services. Car sharing services often operate within a defined boundary (free-floating), between specific designated parking locations (point-to-point) or as a round trip model where cars can be used for local or regional travel. A common model is one where an individual pays a set membership to be a part of the car sharing platform and then pays on a per mile/per minute basis when they choose to drive. In this way, a user can control their own transportation costs by determining when they will drive.

Applicability to I-70 East Corridor: Interchange-specific

Currently in Study Corridor? Unknown; car-sharing companies such as Zipcar, Free2move, Turo and Getaround operate out of Denver. While an individual could drive the vehicle into the corridor, it ultimately needs to be returned to the service area or designated parking location outside of the corridor.

Denver Region Example: Colorado CarShare is a non-profit car sharing organization based out of Boulder. The nonprofit operates more than 50 vehicles in the Denver metro area, including several hybrid and electric vehicle options in the Denver region. Colorado CarShare members can pick up and drop off a car 24/7 at many locations in the region. Colorado CarShare also offers partnerships with organizations, developments, colleges and universities, and more. These opportunities could provide specific access to car sharing for individuals who live/work in a given development or attend one of the nearby colleges or universities.

Colorado CarShare vehicle parked in a garage in Boulder, CO

Included in: Adams County TMP, Arapahoe County TMP and 2019 Statewide TDM Plan

Implementation Process

Timeframe: Short or Medium term (1-10 yrs)

Implementation Agency: Local governments, TMA/Os, employers, developers, local transit providers, car sharing organizations and private/rental car companies.

Potential Funding Sources:

Local: Private companies, developments, cities, towns and/or counties

Cost Assessment

Capital = Low Operation = Medium Maintenance = Medium

Implementation Tools/Key Aspects

- Explore collaboration with Colorado CarShare to provide low-cost, flexible, and low-carbon car sharing options
- Promote car-sharing in high job/ population density areas
- Ensure service boundaries covers as many community and activity centers as possible, such as medical, education, and services facilities, shopping, groceries, and more

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements such as the 3% reduction. Can be measured with off-model usage estimates.

Transportation Network Company (TNC) Partnership

Description of Strategy: Transportation Network Companies (such as Uber or Lyft) provide prearranged transportation services for compensation using an online-enabled app or platform to connect drivers using their personal vehicles with passengers. A partnership means improving access to regional hubs, such as RTD stations, Denver International Airport or other employment hubs within a defined geographic area by offering subsidized demand responsive services to or from a location.

Applicability to I-70 East Corridor: Interchange specific.

Currently in Study Corridor? Yes. Lyft and Uber currently provide service within the corridor, but there is no partnership for providing specific services.

Denver Region Example: From August 2016 to February 2017, the City of Centennial operated a pilot program to provide first/last mile connections to transit using an innovative public-private partnership (P3). The GoCentennial pilot was the first pilot project in the country where a government or transit agency fully subsidized first and last-mile rides provided by a transportation network company (in this case Lyft).

Conclusions from this and other similar projects have shown the need to integrate with regional services (transit), the need to prioritize carpooling, and the need of strong marketing.

GoCentennial Service Area

Included in: RTD First and Last Mile Strategic Plan (2019), and Reimagine RTD, Advancing Adams

Implementation Process

Timeframe: Medium term (5-10 yrs), as employment is developed

Implementation Agency: Cities, counties and town in collaboration with Transit providers and TNCs

Potential Funding Sources:

Local: Cities, counties and towns, districts, developers, or employers

Cost Assessment

Capital = Low Operation = High Maintenance = Low

Implementation Tools/Key Aspects

- Encourage collaboration between residential, commercial, and employment areas for demand responsive services
- First and last mile service to regional transit stations

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; it does not have a measurable impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps.

Mobility Hubs

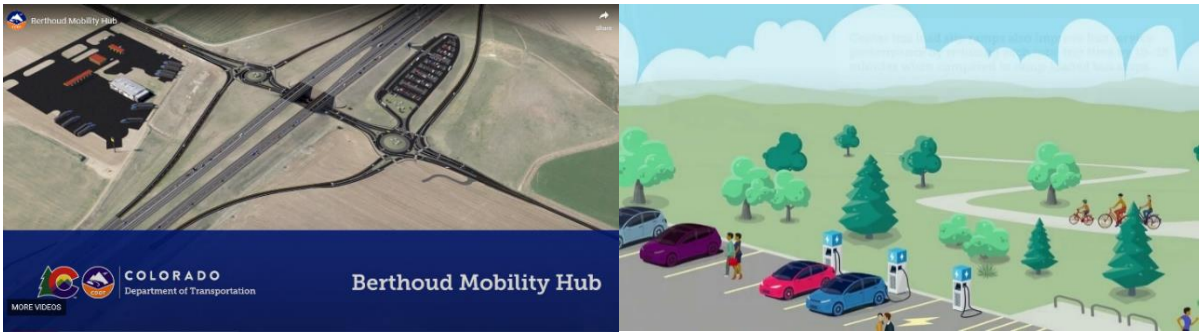
Description of Strategy: Mobility hubs are dedicated locations where a range of transportation modes are co-located in proximity to each other and provide a connection of different transportation services. A mobility hub can be anything from a bus stop and a bike station to a big rail station. It includes placemaking and wayfinding strategies for connecting services.

Applicability to I-70 East Corridor: Interchange-specific.

Currently in Study Corridor? None have been implemented but several future mobility hubs are identified in the Aurora NEATS. This strategy is applicable within the entire I-70 East Corridor.

Denver Region Example: The I-25 North Express Lanes project will build several mobility hubs between Fort Collins and Denver. The Berthoud Mobility Hub, located at Colorado Highway 56 and Kendall Parkway, will include:

- Carpooling and regional bus service (Bustang)
- Sidewalks, a pedestrian underpass and a station with shelters, benches and a covered walkway
- Park-n-ride with 200 spaces (40 for carpooling)
- Electric vehicle charging and bike racks



Berthoud Mobility Hub (CDOT, I-25 North)

Included in: Arapahoe County 2040 TMP; Advancing Adams; Reimagine RTD Mobility Plan for the Future; NEATS; and 1601 TDM Policy Directive

Implementation Process

Timeframe: Medium to long term (5-20 years). As development occurs.
Implementation Agency: Local governments, CDOT, developers, local transit providers (RTD)

Potential Funding Sources:

Local: Developers, cities, towns and/or counties, DRCOG
State: CDOT

Cost Assessment

Capital = High Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Right of way/large space needed for mobility hub.
- Can be integrated with other policies and services.

Measurement: This tool may directly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions. It can have a significant impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps. Measurement varies with different elements and can be measured with off-model usage estimates.

Park-and-Ride Lots

Description of Strategy: Park-and-Ride Lots provide a place for commuters to connect to regional transit and other regional commuting solutions like local shuttles. Users can park their vehicle, bicycle, or micro-mobility vehicle to continue their commute via transit. Park-and-Ride lots also provide a great place to create a mobility hub that connects with buses, trains, regional trails, local bike lanes, carpooling opportunities pedestrian facilities, and other connecting services.

Applicability to I-70 East Corridor: Interchange specific.

Currently in Study Corridor? No

Denver Region Example: RTD has many Park-and-Ride lots throughout the metro area. The US 36 corridor has multiple park-and-ride lots that function as successful hubs for multiple commuting solutions. They provide parking spaces for vehicles as well as a secure location for bike parking. The US 36 bikeway parallels the US 36 corridor and connects through each park-and-ride location. In addition, some of the park-and-ride locations provide a connection to local transit services like the Superior FlexRide.

US 36 McCaslin Station Park-n-Ride

Included in: 2019 Statewide TDM Plan, Arapahoe County TMP, Adams County TMP and the Town of Bennett TMP

Implementation Process

Timeframe: Medium to long term (5-10 years and beyond), depending on regional needs and funding available
Implementation Agency: RTD or CDOT (Bustang) in coordination with Cities and/or Towns

Potential Funding Sources:

Local: Local: RTD funding
State: Partnerships with CDOT and local agency funding
Federal: Federal transit funding

Cost Assessment

Capital = Medium Operation = Low Maintenance = Medium

Implementation Tools/Key Aspects

- Create partnerships between local jurisdictions, RTD and CDOT
- Secure funding sources and partners
- Identify systemwide connectivity needs

Measurement: This tool may reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions; may have impact on average daily traffic (ADT) requirements including the 3% reduction on ramps. Can be measured with off-model usage estimates and/or parking lot utilization surveys.

Placemaking and Wayfinding

Description of Strategy: Placemaking is the re-imagining of streets from a vehicle-only space to a community space by adding features like green space, trees and plants, larger sidewalks, plazas, street furniture, lighting, and community identity features such as art, music and food. Placemaking creates travel space for multiple modes and provides for a wide range of activities along the streetside that foster a connected community. Wayfinding is a system of signs and pavement markings that guide bicyclists and pedestrians to destinations along routes. Wayfinding signs are usually placed at decision points and guide the user along the route.

Applicability to I-70 East Corridor: Interchange specific.

Currently in Study Corridor? Unknown.

Denver Region Example: Originally stemming from COVID-19, the City of Arvada reimagined Olde Town into a pedestrian core, providing community gathering place where restaurants and businesses provide outdoor dining, games, and shopping experiences. In addition, this space provides a gathering place for city events like farmers markets and festivals. In addition, the City of Littleton created a downtown placemaking, signing and wayfinding program. This program reinforces a sense of place and identity for downtown Littleton and has showcased downtown destinations and businesses, which in turn has increased the economic vitality within the downtown core. In addition, the wayfinding signage has helped visitors to easily navigate downtown.

Wayfinding sign in Littleton, CO

Included in: Arapahoe County TMP (in relation to Mobility Hubs) and the Adams County TMP (ES.2 Value lenses)

Implementation Process

Timeframe: Short terms (1-5 years), as development increases

Implementation Agency: Cities, towns and metropolitan districts

Potential Funding Sources:

Local: Local funding, partnerships with districts as development increases

State: State grants

Federal: Federal grants

Cost Assessment

Capital = Medium Operation = Low Maintenance = Low

Implementation Tools/Key Aspects

- Create an identification and implementation plan
- Understand and build community support
- Secure funding sources

Measurement: : This tool is unlikely to reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2 emissions, and will likely not have measurable impact on average daily traffic (ADT) requirements including the 3% reduction on ramps.

Education and Mobility Integration

Description of Strategy: Education and mobility integration includes a wide variety of elements that can take print/physical or digital forms. Social media, ride-hailing apps, websites, and trip planning tools are all digital forms that provide information to multimodal users or potential users. Mobility-as-a-Service (MaaS) and account-based ticketing (ABT) systems are also forms of digital tools that facilitate access and connect mobility services. These media tools can provide education and information on how to use a given mode, where to find that mode, and programs being implemented. Physical forms of education include information kiosks, wayfinding signage, trip planning assistance, special events, translations and marketing. While these physical forms of information sharing may be more limited geographically or in terms of the amount of information they provide, users who do not have access to the internet or a smart phone will benefit from these strategies.

Applicability to I-70 East Corridor: Interchange-specific

Currently in Study Corridor? Unknown

Denver Region Example: In 2017, Northeast Transportation Connections (NETC) entered into a contract with CDOT to provide TDM strategies to communities affected by the improvements to and expansion of I-70. The project impacted the neighborhoods of Globeville, Elyria Swansea, Northeast Park Hill, Stapleton, and Montbello. These neighborhoods include historically underserved populations, including culturally diverse and low-income communities, with pre-existing mobility challenges and aging existing infrastructure. The NETC/CDOT partnership provided outreach to these communities regarding both the I-70 expansion/improvements and TDM strategies that may have been implemented in their communities. NETC/CDOT worked to gain trust in communities by collaborating with organizations already established in the neighborhood, as well as through community ambassadors. Outreach work involved in-person events, translation of materials, interviews, and surveys to determine what strategies would work most effectively.

Rendering of a park over expanded I-70

Included in: Adams County TMP, Arapahoe County TMP, Aerotropolis Visioning Study, 2019 Statewide TDM Plan and Reimagine RTD

Implementation Process

Timeframe: Short term (1-5 yrs), and as multimodal options develop

Implementation Agency: Cities, towns, counties, local transit providers, TMAs , schools, businesses, DRCOG, CDOT

Potential Funding Sources:

Local: DRCOG, CDOT, towns, cities and/or counties in collaboration with multimodal providers

Federal: FHWA grants, including ATTAIN

Cost Assessment

Capital = Low Operation = Medium Maintenance = Low

Implementation Tools/Key Aspects

- Encourage collaboration between towns, cities, counties and transit agencies/providers to provide robust multimodal options and information

Measurement: This tool may indirectly reduce single occupancy vehicle (SOV) travel, vehicle miles traveled (VMT), and some CO2e emissions, but it does not have measurable impact on average daily traffic (ADT) requirements such as the 3% reduction on ramps.

4. Corridor-wide TDM Strategies

Chapter 3 presents a toolbox of TDM strategies primarily geared toward individual interchange TDM plans. **Chapter 4** discusses TDM strategies that are best viewed in a larger corridor-wide context. **Chapter 4**, as well as **Chapter** 3, helps advance the conversations among corridor agencies and other stakeholders about TDM strategies that require coordination and cooperation among multiple local, county, regional, and state agencies. These corridor-wide strategy areas include Transit, Development Patterns, and Transportation Management Organizations (TMOs).

Transportation Management Organizations and Transportation Management Associations are two terms frequently used to describe similar entities. The terms and abbreviations TMO and TMA are both used in this report and can be considered interchangeable.

Transit

The study corridor does not currently have transit service. While transit service is envisioned in Aurora, Arapahoe County, and Adams County long range plans, there are currently no defined plans for funding and implementing transit. However, this part of the region anticipates a high amount of residential and employment growth. Because of the extent and intensity of existing and future development, it is possible that transit can be an effective means of mobility within the area, as well as connect the study corridor to the rest of the region. Following are summaries of two relevant transit studies and a statement on the goals for transit relative to the study corridor.

Reimagine RTD (2022)

Reimagine RTD included a case study of expanding the East Aurora boundary to include City of Aurora areas in Arapahoe County currently not part of the RTD district. The District Boundaries memo concluded that incorporating the rest of Aurora into the District would likely be financially beneficial to RTD, creating more revenue (sales tax and fare collection) than potential costs in terms of service. The study reviewed expanding one fixed-route and adding FlexRide service. This conclusion was based on the anticipated population and employment growth expected in the area by 2045, with the population expected to grow from 14,000 to 62,000 in 2045 and employment from 2,000 to 10,000 in 2045.

I-70 Logistics and Distribution Business Center Employee Public Transportation Survey (2020)

The focus of this study is a survey of 273 employees in the I-70 and E-470 area, which was completed mostly by Amazon employees (65 percent of responses). The survey found that 20 percent of employees already take some form of transit; most live in Aurora along the I-225, Chambers, Buckley, and Tower corridors; and 40 percent are interested in more transit services.

Goals of Transit Service

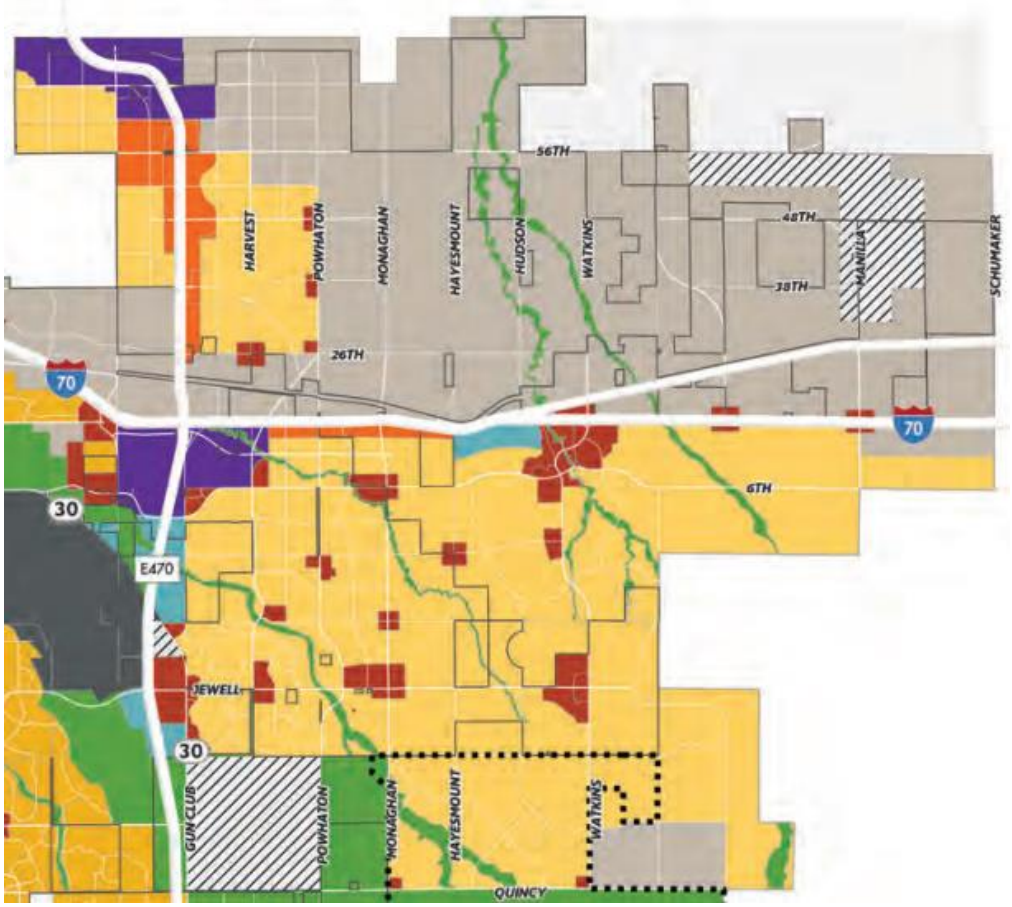
- **Plan for growth.** Provide multimodal accessibility for a rapidly growing corridor and to help avoid sole dependence on I-70 for all mobility.
- **Plan now.** Plan for transit service now so that as the corridor transportation network and development patterns are built out, they are more suitable to transit once sufficient demand is present. This includes streets built for transit vehicles, curbside landscape/streetscape areas sufficiently wide for future transit stops, and associated active transportation connections to stops and stations, and new developments oriented to transit nodes and corridors.
- **Incremental implementation.** Incrementally implement the service instead of retroactively responding to a sudden demand for transit. Create a transit network that can have start-up service that is easily implemented and phased in gradually over time as ridership demand grows.
- **Corridor-wide.** Transit will be most effective and efficient if planned and implemented on a corridor-wide basis rather than by individual interchange sponsors or independent developments. A corridor-wide strategy is key to connect the major employment and residential centers of the corridor. Service should be based on the most popular origin-destination pairs, surveys of existing residents and employees in the area, and serving current and future ridership generation centers and developments.
- **Connect to the regional transit network and between multimodal options.** The corridor transit network should connect to the transit system for the Denver-Aurora metro region. It should also provide mobility hubs with an appropriate range of micromobility, shared mobility, automobile parking, bicycle parking, and other services at key transit stations.
- **Establish effective and reliable operations** (funding, operating entity, etc.). This is critical to success and an important part of the discussion in future phases of this effort.

Development Patterns

TOD and mixed-use development have been integral parts of the planning strategy for DRCOG, RTD, and many of the metro area's cities and counties for many years. Aurora, Arapahoe County, and Adams County each include TOD emphases in their comprehensive and transportation plans and each, sometimes in coordination with other jurisdictions, has implemented TOD initiatives at multiple station areas.

The Aurora Comprehensive Plan encourages mixed-use development with walkable/bikeable neighborhoods in the "emerging neighborhoods" (yellow) that make up a large part of the I-70 East Corridor area, along with "city corridors" (orange), "urban districts" (purple), and "commercial hubs" (red), as shown on **Figure 5**.

Figure 5. Placetype Plan (2018 Aurora Places Comprehensive Plan)



The NEATS also shows the location of bike facilities on major streets and describes the strategy for the area in regard to complete streets:

> (Page ES-7): The current design standards for these roadways, including cross-section elements to serve the motorized, walking and wheeling users is evolving based on current national best practices for complete streets, and the need to support new motorized and non-motorized transportation technologies that are emerging. This evolution may require the flexibility for repurposing travel lanes, creating new ordinances to support non-motorized and small e-motorized users, and launching new safety awareness campaigns….It is envisioned that the recommended bicycle and pedestrian network will be used by people for a host of purposes including commuting, shopping, and recreating. The recommended roadside and off-street facilities will result in a highly connected multimodal complete street (and off street) transportation system within the NEATS Refresh study area.

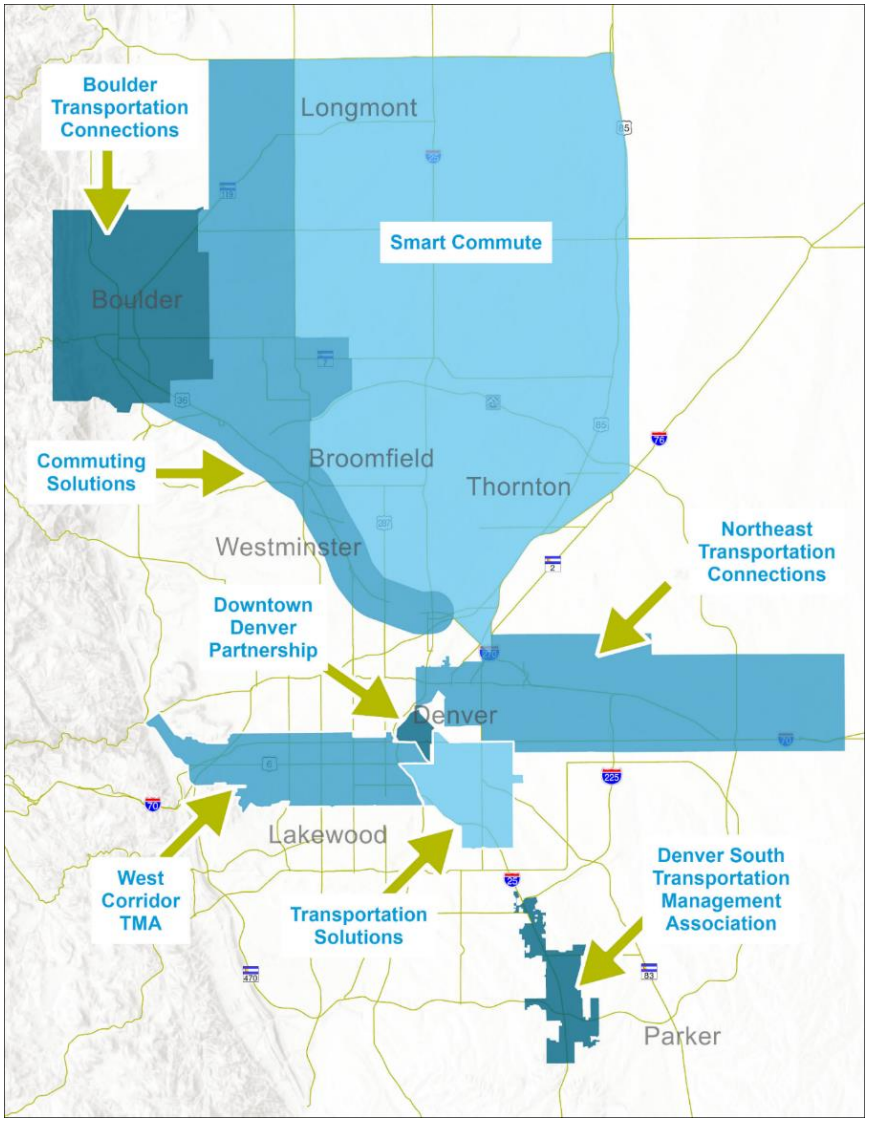
The overarching goal of TOD and mixed-use development is to create synergies between development and TDM strategies so that development provides and encourages a range of mobility options, reducing reliance on long automobile trips. Specific goals include:

- Allow and support development with a mix of uses, density, and design features that complement the corridor transit strategy.
- Provide complete street design that includes bicycle facilities, sidewalks, and crosswalks that safely and comfortably provide first- and last-mile connections to transit stations and stops.
- Encourage a mix of uses at a corridor level that provides a jobs/housing/services balance reducing the need for long-distance trips for commuting and other travel for daily needs.

Transportation Management Organizations

A TMA or TMO is an organization that focuses on improving transportation and mobility within a specific area or a region by providing commuting resources and assistance, TDM, advocacy and planning, education and outreach, and partnerships and collaboration. TMAs/TMOs typically consist of public and private stakeholders, including local governments, businesses, transit agencies, and community organizations. **Figure 6** shows the eight TMOs currently operating in the metropolitan area.

Figure 6. Existing Metro Area Transportation Management Organizations



Formation of a TMO in the I-70 East Corridor is a promising potential mechanism to plan, coordinate, implement, operate, and fund many of the TDM strategies presented in this plan. A TMO can aid in facilitation of corridor-wide strategies and serve as an umbrella organization to assist in coordination of TDM strategies focused on individual interchange areas and developments within the corridor.

Northeast Transportation Connections

Northeast Transportation Connections (NETC) is a TMA serving northeast Denver and Aurora. Since it is adjacent to and partially in the I-70 East study corridor, a focused description of the NETC TMA is provided here. It began as a collaboration with communities (Globeville, Elyria Swansea, Northeast Park Hill, Stapleton, and Montbello) impacted by the Central 70 project to provide TDM solutions. NETC aims to address mobility challenges in historically underserved neighborhoods. The challenges of implementing TDM in diverse communities include overcoming cultural norms and language barriers, building trust, and working with community leaders.

The NETC underscores the significance of community involvement and tailored strategies in implementing TDM solutions in diverse neighborhoods by providing a community-focused approach. NETC is actively involved in the administration of the following programs:

- **Globeville and Elyria Swansea Tolling Equity Program (GES).** This initiative offers a range of benefits to low-income residents in the community, including free switchable transponders and Express Lanes credit. Additionally, residents in the area receive free RTD transit passes.
- **E-Bike Libraries**. NETC facilitates E-Bike libraries, providing community members with comprehensive support. Libraries encompass information, safety training, and guidance on routes and road rules for using the shared bike system. The objective is to ensure convenient and long-term access to E-Bikes. NETC also informs residents about Denver's E-Bike rebate program.
- **The Denver Connector**. This microtransit initiative offers free ride-sharing services to residents of Montbello, Gateway, Globeville, and Elyria Swansea neighborhoods. It serves as a convenient transportation option for commuting to local neighborhood destinations and transit stations, enhancing connectivity within the community.

NETC's TMA has extended its coverage area eastward beyond E-470 to include parts of the city of Aurora. In collaboration with the city, CDOT, DRCOG, Denver International Airport, E-470, Adams County, Arapahoe County, and Aerotropolis Regional Transportation Authority, NETC will implement TDM strategies in the area. NETC has also worked with Aurora Highlands to include a circulator shuttle and a mobility hub featuring E-bikes, thereby providing residents/employees with enhanced mobility choices.

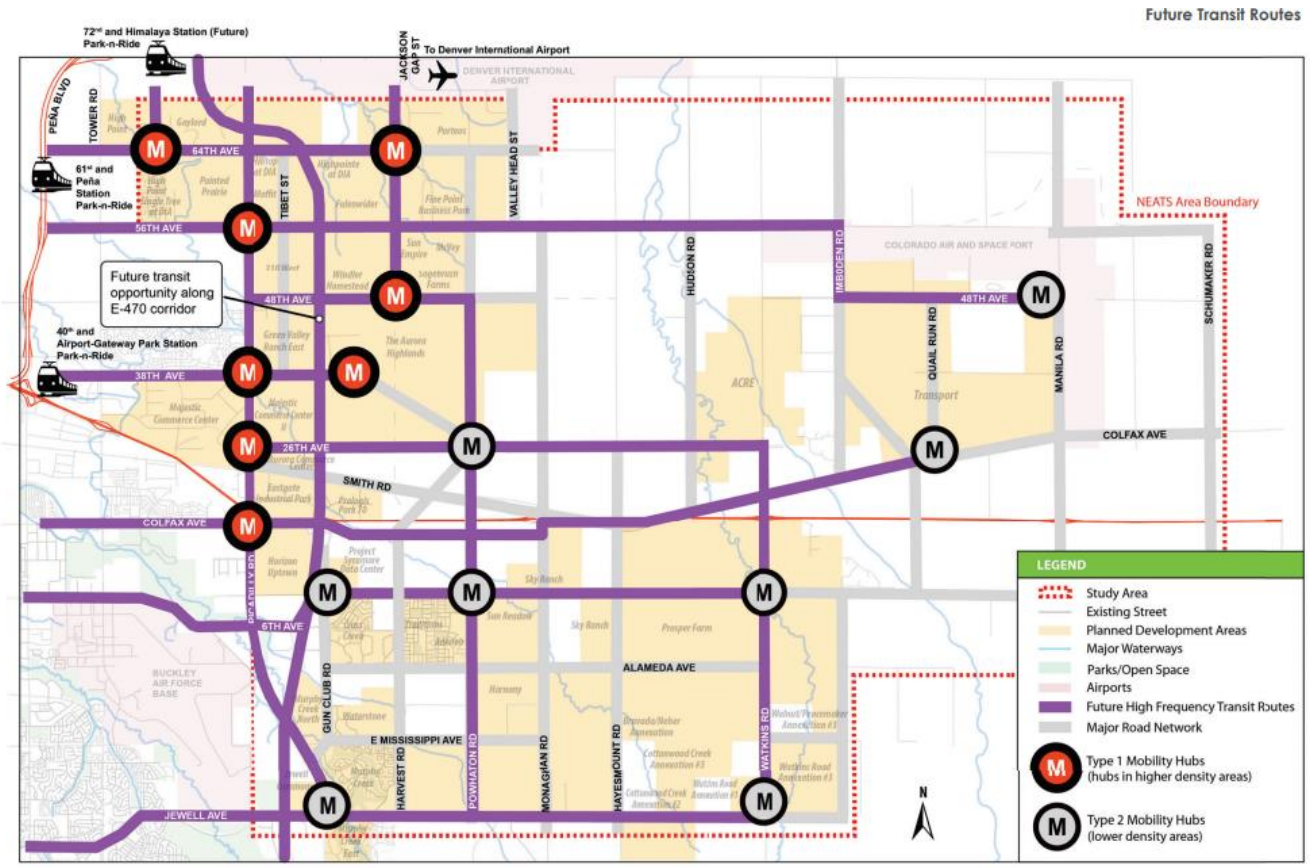
5. Conceptual Corridor TDM Scenarios

Chapter 5 presents three conceptual scenarios for packaging corridor-wide TDM strategies in the I-70 East Corridor. Scenarios 1 and 2 were presented as a starting point for discussion among the local, county, regional, and state agencies participating in the study SPT. Following a December 2023 SPT meeting and subsequent input from the SPT, Scenario 3 was developed to combine and refine the most favorable aspects of Scenarios 1 and 2.

Scenario 1: Mixed-Use Development with Transit-Optimized Corridors

Scenario 1 would identify transit optimized corridors that could be more closely integrated with efficient, transit-supportive, mixed-use development and use a non-interstate arterial street corridor that can be constructed with complete street principles and connect to major activity centers. Local transit planning, such as the Aurora NEATS Study, could serve as the foundation for determining optimal transit routes (see **Figure 7**). Corridor jurisdictions may be able to develop a corridor-wide plan by knitting together existing planning efforts.

Figure 7. Illustrative Scenario 1 Transit Network (NEATS 2018)



The benefits of locating transit service on a non-interstate street could result in greater transit ridership and multimodal trips. It would preserve interstate capacity for statewide and interstate travel rather than a reliance on I-70 and new interchanges to facilitate transit and vehicular travel within the corridor itself. This scenario could result in establishment of transit-oriented communities that fit guidelines set forth in recent land use and affordable housing legislation HB 24-1313.

Benefits

- Has a high potential to reduce long-term impacts on I-70 and on the statewide transportation system.
- Aligns with existing local transit plans (particularly Aurora NEATS).
- Can successfully integrate transit with the existing RTD system.
- Integrates transit-oriented and mixed-use development along a regional corridor through closer integration of transit with the built environment, housing, and development patterns.

Challenges

- Requires increased upfront collaboration among private sector and local, regional, and state agencies.
- Requires upfront infrastructure needs for multimodal transportation.
- Requires extensive capital and operational investments via new funding sources.
- Does not provide high-speed connections to RTD system, particularly for areas in the central and western parts of the corridor.

Scenario 2: Transit Service on I-70 Corridor

Scenario 2 would create a regional bus transit spine using I-70, similar to how Bustang operation on I-25 and west I-70. It would start at the Peoria Station in the RTD network, connect with the 40th & Airport-Gateway Park Station, and provide service through the I-70 East Corridor TDM study area with thoughtfully planned stops along the I-70 corridor at major development centers.

Jurisdictions and developments around each major stop or station would implement local circulator transit, micromobility, and active transportation networks to connect to the stops. New and reconfigured I-70 interchanges would be designed to conveniently accommodate bus movements on and off I-70 with a passenger drop-off/pick-up area when the transit service is introduced. Stops could start as simple stops at the end of an interchange off-ramp and provide access to micromobility and active transportation such as bike lanes/trails and sidewalks. Future enhancements could include a park-and-ride, a full mobility hub, and circulator bus service.

Figure 8. Illustrative Scenario 2 I-70 Transit Spine

Benefits

- Uses existing I-70 infrastructure.
- Creates an initial backbone service and phases stations/stops and local service as development occurs.
- Provides high-speed connections to the regional transit system.
- Spurs TOD around major stops and interchange areas.
- Is consistent with Adams County and Arapahoe County transportation plans.

Challenges

- Reduces the reach of the TOD integration with development patterns by focusing transit on I-70.
- Does not identify I-70 as a transit route in local plans such as the Aurora NEATS Plan.
- Creates the necessity that all interchanges be constructed; in a scenario where all interchanges are not constructed, transit access would be limited for some areas.

Scenario 3: Combine Transit Service on I-70 Corridor with Mixed Use / Transit Optimized Corridors

Scenario 3 would create a high-speed transit spine using I-70 similar to that in Scenario 2. The spine would start at the Peoria Station in the RTD network, connect with the 40th & Airport-Gateway Park Station, and provide service through the I-70 East Corridor TDM study area at interchanges to service major developments and activity centers as illustrated on **Figure 8**.

Again, similar to Scenario 2, new and reconfigured I-70 interchanges would be designed to conveniently accommodate bus movements on and off I-70 with a passenger drop-off/pick-up area when the transit service is introduced. The stop/station operations and multimodal access provided by local jurisdictions and developments would evolve along with evolving transit service and area development. Stops could start as simple stops at the end of an interchange off-ramp and provide access to micromobility and active transportation such as bike lanes/trails and sidewalks. Future enhanced amenities and access could include a park-and-ride, a full mobility hub, and circulator bus service.

As the I-70 transit spine, the backbone of the scenario, evolves, Scenario 3 would also include long-term development of the transit optimized corridors and transit-supportive mixed-use development identified in Scenario 1. This transit-oriented arterial and collector street grid would work in concert with the regional I-70 transit spine, providing transit connections between east I-70 corridor communities, between the corridor and the existing RTD system, and to the I-70 transit stations.

Benefits

- Creates an initial backbone regional service and phases stations/stops, multimodal access to stations/stops, and a transit grid network as development occurs.
- Uses existing I-70 infrastructure.
- Provides high-speed connections to the regional transit system.
- Spurs TOD around major stops and interchange areas.
- Is consistent with local, county, and regional plans.
- Has a high potential to reduce long-term impacts on I-70 and on the statewide transportation system.
- Can successfully integrate transit with the existing RTD system.
- Integrates TOD and mixed-use development along a regional corridor through closer integration of transit with the built environment, housing, and development patterns.

Challenges

- Requires upfront collaboration among local, regional, and state agencies to fund and operate the backbone regional transit service.
- Requires long-term collaboration among local and regional agencies to fund and operate the arterial/collector street transit network and to integrate that network with the RTD system.

6. Next Steps

This plan is intended to provide a framework for continued interagency planning among local government, county, regional and state agencies for corridor-wide TDM planning. The SPT has initially identified Conceptual Corridor TDM Scenario 3, combining the regional transit spine along I-70 with long-range development of a network of mixed-use/transit-oriented corridors, as a long-range corridor TDM vision. This plan is also intended to provide a toolbox of targeted TDM strategies and potential applicability to the corridor to assist individual interchange sponsors in 1601 TDM planning efforts.

Participants in the plan's SPT, including representatives of Arapahoe County, Adams County, Aurora, Bennett, DRCOG, RTD, CDOT, and NETC, have expressed interest in continuing coordination on TDM and related planning for the corridor after this study is completed. If an East I-70 corridor TDM committee with representatives of these agencies is formed, the following outline the initial focuses for that group:

- **Structure for Interagency Group**. Defining an operating structure for the interagency TDM group, including a leadership structure, roles, responsibilities, and meeting/communications procedures.
- **Individual Interchange 1601 TDM Strategies**. County, local government, or other corridor I-70 interchange sponsors can use the toolbox of potential TDM strategies presented in Chapter 3 of this plan, along with toolboxes provided by CDOT and DRCOG, to assist in development of interchange TDM plans.
- **Confirm and Refine a Conceptual Corridor TDM Plan**. A committee workshop process can be used to confirm, modify, and further develop the conceptual corridor TDM plan outlined in this report.
- **Governance Structure for Regional Transit Service**. The interagency group will need to develop a governance structure for the I-70 transit spine service. There is a wide range of potential structures, including CDOT directly operating a service similar to Bustang, an existing county or local government as lead agency, a new corridor local/county organization, or a local/county organization in partnership with a regional or state agency.
- **Funding Structure for Regional Transit Service**. An additional but closely related need is to develop a funding plan for capital and operating costs for the I-70 transit spine service.
- **Multimodal Access to I-70 Regional Transit Stations**. Some aspects of the multimodal access for the regional transit stations (e.g., sidewalks, local trail connections) are likely to be the responsibility of local agencies in partnership with local development. Others such as transit circulators and regional trails may be developed through interagency partnerships or new organizations.
- **Long Range Area-Wide Transit District.** Although the larger area-wide transit network is expected to be developed over a longer time period, the TDM working group should begin to formulate a plan for operating the more extensive transit network that is envisioned. Options or elements of the plan could include expansion of the RTD district in more of the corridor, an existing county or local government as lead agency, or a new corridor local/county organization.
- **Transportation Management Organization.** County and local agencies may decide to create an I-70 East Corridor TMO. A TMO could serve in one or more of the governance and funding

roles described previously and play an important role in planning, advocacy, and implementation of other TDM strategies presented in the TDM toolbox.

Appendix A. Previous Plan Summaries

Aurora Northeast Area Transportation Study

The 2018 Aurora NEATS identified the impacts of growth in the quadrant of Aurora generally north of Jewell Avenue and east of Piccadilly Road, an area that covers a large part of the I-70 East Corridor study area. The NEATS projects nearly 50,000 households and 83,000 jobs in 2040 in the 130 square mile study area. Potential buildout is projected at 87,000 households and 213,000 jobs. I-70 is the major transportation link through the area, connecting it to the Denver metro area.

The 2018 NEATS placed a high priority on connecting future development to I-70. This is evident with all three existing interchanges recommended for improvement and with four new interchanges shown on the NEATS recommended roadway network provided as **Figure A-1**. The roadway network also shows an extensive supporting roadway network that provides additional east-west travel options. The roadway network shown on **Figure A-1** was designed to accommodate anticipated 2040 traffic forecasts.

Figure A-1. Recommended Roadway Network (NEATS 2018)

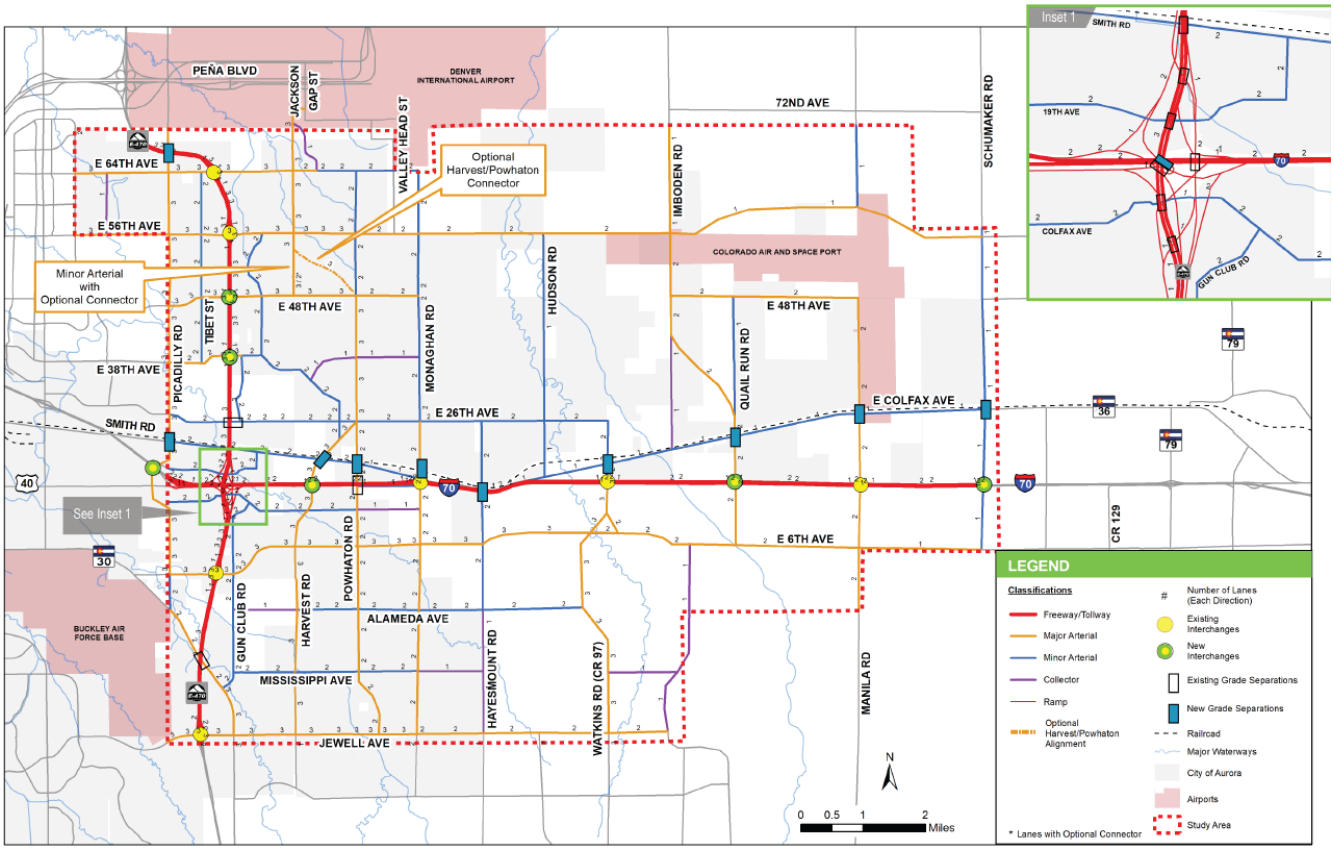
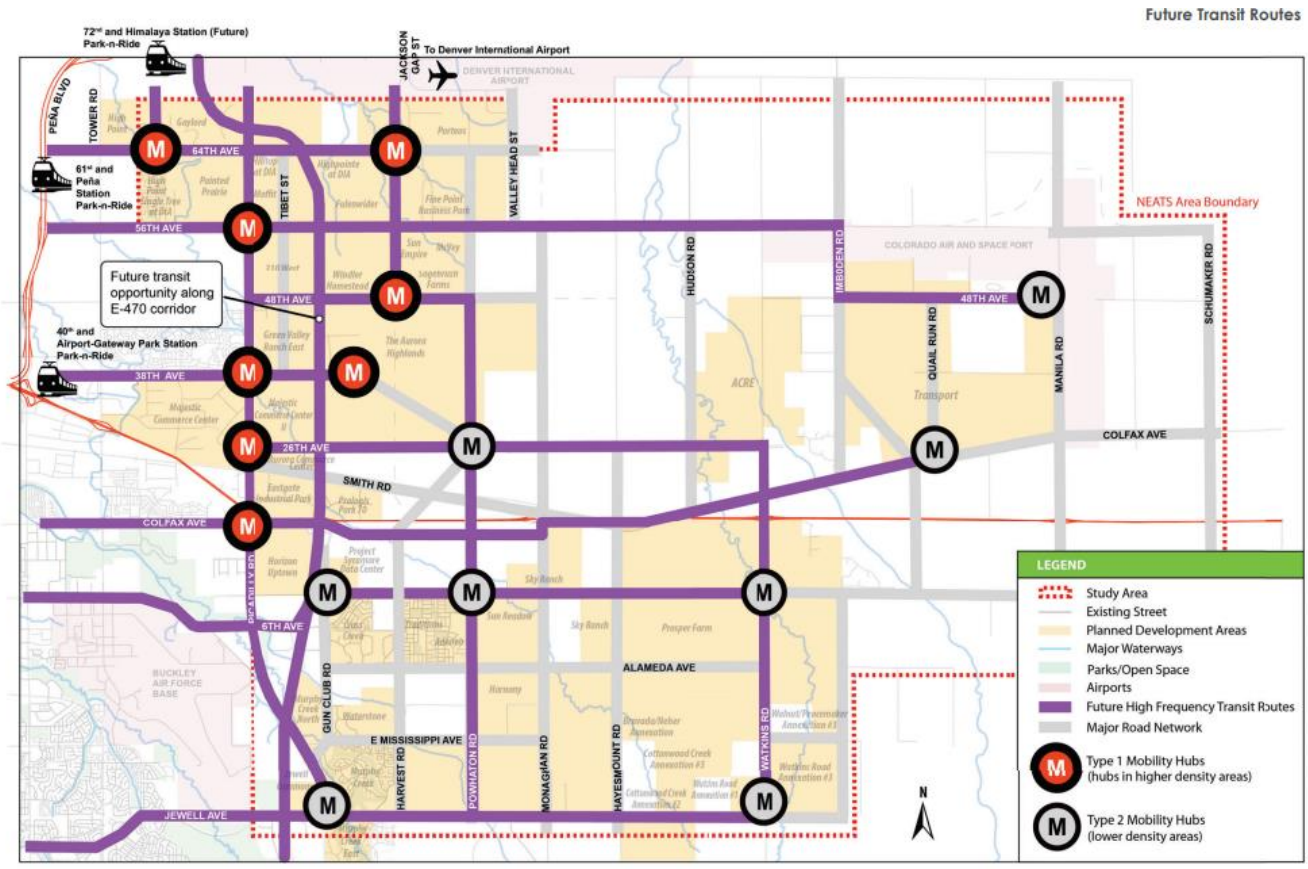


Figure A-2 shows the recommended network of transit routes and mobility hubs for the study area. NEATS also identified "future transportation needs and alternative solutions to address the forecasted travel demand and a multimodal list of projects that adjacent local, regional, and state agencies can support and that achieve a reasonable level of mobility."

Figure A-2. Recommended Transit Network (NEATS 2018)



1601 Interchange Approval Process

CDOT's approval process of new interchanges and major improvements to existing interchanges is referred to as Policy Directive 1601. On April 15, 2021, the Transportation Commission adopted the updated Policy Directive 1601.1, "Interchange Approval Process," which clarified the types of interchange proposals and a set of new TDM requirements for the application process. The policy was updated on June 13, 2022.

Interchange Access Request TDM Requirements

To preserve the overall functionality and operability of the state of Colorado's highway system, an applicant needs to implement traffic reduction or TDM strategies to preserve the long-term functionality of the constructed interchange improvement. The effectiveness of TDM strategies highly depends on the specific location, complementary strategies, nature of the travel segment being targeted, and implementation and promotion. TDM requirements apply to urban and rural Type 1 and Type 2 interchange proposals. The TDM requirement does not apply to Type 2a proposals. The updated Policy Directive also adds the following elements:

- Guidance encouraging an applicant to develop a comprehensive integrated TDM strategy when multiple interchanges are proposed along the same interstate corridor within a condensed distance and timeframe
- Definitions for regionally significant projects
- Consideration of GHG Mitigation Policy Directive 1610.0 and the inclusion of GHG mitigation strategies
- A process to consider allowing applicants to implement alternative TDM strategies to achieve the required ADT reduction

CDOT-Defined Interchange Improvement Types

TDM requirements are defined by interchange type and whether or not the proposed interchange is in an urban (within a MPO Boundary Area) or a rural area.

Type 1 – New Interchanges on the Interstate and Freeway System. Approved by the Transportation Commission.

Type 2 – New Interchanges on the Remaining State Highway System and Modifications to Interchanges. Approved by the Chief Engineer.

Type 2a – Minor Modifications to Interchanges, Which Do Not Require a System Level Analysis. Approved by the Regional Transportation Director.

Type 1 – New Interchanges on the Interstate and Freeway System

- Only governmental or quasi-governmental entities or agencies may be an applicant (districts, local jurisdictions, TMA, etc.)
- Final TDM strategies and associated commitments need to be included in final intergovernmental agreement (IGA)
- Interchange approved by Transportation Commission
- TDM Plan required as a part of 1601 System Level Study
  - Type 1 Urban – New Interchange: TDM score must be at least 100–80 Points
  - Type 1 Rural – New Interchange: TDM score must be at least 80–60 Points
- Trip reduction goals for new Type 1 urban interchanges:
  - Urban – Modeled 3 percent average daily traffic (ADT) trip reduction at interchange ramps on opening day based on ADT and level of service (LOS) in System Level Study–
  - Rural – Modeled 1 percent ADT trip reduction at ramps
  - Option to phase TDM strategies in over time to meet the trip reduction goal of 3 percent (1 percent for rural) within 5 years of opening day

Type 2 – New Interchanges on the Remaining State Highway System and Modifications to Existing Interchanges

- Only governmental or quasi-governmental entities or agencies may be an applicant (districts, local jurisdictions, TMA, etc.)
- Final TDM strategies and associated commitments need to be included in final IGA
- Interchange approved by Chief Engineer
- TDM Plan required as a part of 1601 System Level Study and consistent with Regional Transportation Plan and the Statewide Transportation Plan
  - Type 2 Urban – New Interchange: TDM Score must be at least 80–50 Points
  - Type 2 Rural – New Interchange: TDM Score must be at least 60-40 Points
  - Type 2 Modification: TDM score must be at least 70–50 Points
- Trip reduction goals for new Type 2 urban interchanges:
  - Urban – Modeled 3 percent ADT trip reduction at interchange ramps on opening day based on ADT and LOS in System Level Study
  - Rural – Modeled 1 percent ADT trip reduction at ramps
  - Option to phase TDM strategies in over time to meet trip reduction goal of 3 percent (1 percent for rural) within 5 years of opening day.

Waiver or Reduction of TDM Requirements

The applicant may appeal to the CDOT Chief Engineer for a waiver or reduction of the required TDM strategies. The determination is based on:

- The project interchange is being installed for access to a freight transfer or an intermodal facility and TDM strategies would have minimal effectiveness on ADT at the proposed interchange location.
- The project interchange is being installed in an area that already has functioning TDM strategies, capable of sufficiently reducing future traffic demand at the interchange location.
- The project interchange is being installed in a rural area to improve safety and resiliency of the overall system, and by its rural nature, is not conducive to TDM strategies at the interchange. In such cases, exemptions or corridor-based TDM strategies may be considered as identified in the rural area consideration section.

TDM Plan, Strategies, and CDOT Scorecard

The 1601 Interchange Approval Process indicates that the applicant must develop a project-specific TDM Plan to be included in the Systems Level Study. Prior to the development of the TDM Plan, the applicant must work with CDOT staff to review proposed/appropriate strategies from CDOT's strategy list. The strategies include associated point values to help achieve the modeled ADT reduction goal of 3 percent for urban interchanges and 1 percent for rural interchanges. Points from strategies identified in CDOT's TDM Strategy Scorecard (**Table A-1**) should be added and combined to meet the specific requirements for each type. Additional strategies can be proposed to CDOT and upon approval by CDOT staff they will be assigned point values.

The agreed-upon TDM strategies must be included in the System Level Study for review and approval by CDOT. Upon approval of the System Level Study and the Interchange Access Request, the identified TDM strategies and associated commitments will be included in the final IGA between CDOT and the applicant.

Table A-1. TDM Strategy Scorecard

TDM Strategy	Points	Time Commitment of Strategy
Mobility Hubs – The mobility hub will include two or more transit services/multimodal options available). The applicant will be responsible for the construction of the mobility hub site and funding for two or more multimodal services or multimodal options for 5 years.	80	Maintenance in perpetuity
Shuttles, Feeders, Paratransit – Public or privately operated shuttle service that serves new development at the interchange.	80	5 years
Vanpool – Program that provide service to the development at the interchange	80	5 years
Mixed-Use Development – The new interchange is constructed within a high-quality pedestrian-friendly environment, including a mix of land uses (e.g., residential and commercial), transit-oriented development features and is identified and approved in a local comprehensive plan.	80	Maintenance in perpetuity
Intercity Transit – Transit improvements include a new applicant sponsored service that serves the development at the new interchange. The new transit service could be implemented on adjacent or parallel facilities if that approach is determined appropriate by CDOT staff and the applicant.	80	5 years
Comprehensive ITS Solution – Examples include congestion-reducing adaptive signal optimization, connected vehicles, transit signal priority, count stations, and CCTV cameras to monitor the traffic and safety of all modes.	80	Maintenance in perpetuity
Parking Management - Located at the new interchange at business parks, commercial retail locations, or residential communities; the applicant will consider free parking for vanpools and carpools and paid parking for employees.	60	10 years
Bus Only Lanes, Transit Queue Jumps, Bus Slip Ramps – Facilities can be either on-system or off-system and can be built on adjacent or parallel facilities if CDOT staff and the applicant determine that is the preferred approach for improved connectivity.	60	Maintenance in perpetuity
Local Transit – The expansion of local transit must serve any new development that will be located at the new interchange location.	60	5 years
Park-n-Ride Lots – Applicant would include a park-and-ride as a part of the interchange proposal.	50	Maintenance in perpetuity
Creation of a Transportation Management Organizations/Association (TMO/A) – or financial participation in an existing TMO or TMA that would implement the TDM strategies.	50	3-5 years
Event Related TDM Program – Examples include Winter or Summer Bike to Work Day, Alternative Mode Challenge Programs and Incentives, and include three or more events held per year.	50	5 years
School Pool Program – The applicant can implement this program for either K-12 or Higher Education locations or both.	50	3 years

TDM Strategy	Points	Time Commitment of Strategy
CV & AV (Connected Vehicle and Autonomous Vehicle) Readiness Projects – Examples include implementing a fiber network, real-time driver information, etc.	50	Maintenance in perpetuity
Telecommuting (Remote Work) Program – A telecommuting program offered to employees located at the businesses at the new interchange location. A TMO/TMA or Metropolitan Planning Organization could manage the telecommuting program.	40	5 years
Bicycle and Pedestrian Facilities – The interchange proposal would include infrastructure such as bike lanes, bike trails, multi-use trails, sidewalks, or a pedestrian overpass. Bike and pedestrian improvements can be built, at the new interchange location or on adjacent or parallel facilities, if CDOT staff and the applicant determine that is the preferred approach for connectivity or safety reasons.	40	Maintenance in perpetuity
Regional Ridesharing Programs - Including carpool matching and vanpool programs that could be provided by a Metropolitan Planning Organization or TMA/TMO.	50	5 years
Car-Sharing – A partnership with a carsharing service provider that would serve the development at the new interchange and include designated car-share parking spaces.	40	5 years
Micro-Mobility Sharing Programs – Including bike-sharing, scooter-sharing, and E-bikes that would be located at the businesses at the new interchange location.	40	3 years
Conventional Transit Service Upgrades – This may include operational improvements such as bus signal queue jumps, or infrastructure improvements such as covered bus shelters.	40	Maintenance in perpetuity
Modal Subsidies and Vouchers – Examples include RTD Eco-passes or vanpool program subsidies.	40	5 years
Transportation Management Organization Participation – Applicant becomes a financial participant or member of an already established TMA/TMO.	30	3 years
Bicycling to Work - Implementation of a Bike to Work Day event or program	20	5 years
Variable Work Hours – Implementation of variable work hours program for employees located at the businesses at the new interchange.	20	5 years
Guaranteed Ride Home* – Implementation of the Guaranteed Ride Home Program for employees who commute by alternative modes.	20	5 years
Bike and Pedestrian Supporting Infrastructure – Infrastructure like bike repair station or E-Bike chargers, bike parking, bike lockers, and/or bike shelter*	10	Maintenance in perpetuity
Applicant funds staff position to implement TDM program	10	3 years
Education and promotions of the recommended TDM strategies and programs*	10	3 years

*Complementary or supportive strategies that should be combined with existing TDM programs or other proposed TDM strategies that have a higher point value.

Appendix B. Planned Development Within the Study Area

The information provided in **Appendix B** represents research conducted in spring 2023 and is subject to change.

Table B-1. Planned Developments within the Study Area

ID	Planned Development	Jurisdiction	Size	Description
D1	Aurora Campus for Renewable Energy	City of Aurora, Adams County	1762 ac	Aurora Campus for Renewable Energy (ACRE) is a research, development, education and manufacturing center in Aurora, CO, that will focus on the development of renewable energy technologies. The ACRE site will also include natural corridors, open spaces, and trail connectivity, and both heavy and light industrial/manufacturing uses.
D2	Aurora Crossroads / High Point	City of Aurora	481 ac 731 du 1.5 Mil ft2	Aurora Crossroads/High Point is a mixed-use development located at the southeast corner of I-70 and E-470. Aurora Crossroads will include a 6-story regional hospital, medical offices, and a JP Morgan Chase bank data center. High Point, a development adjacent to Aurora Crossroads, will include 800,000 ft2 of retail, 175,000 ft2 of mixed commercial, 175,000 ft2 of office space, and 152 ac of industrial uses.
D3	Aurora Highlands	City of Aurora	2497 ac 12487 du 3.4 Mil ft2	Aurora Highlands is a new master planned mixed-use community located in Aurora, CO. This community will include residential, open spaces, trails, community facilities (activity and mixed-use centers), a school and more.
D4	Aurora One	City of Aurora	142 ac 1100 du 1.9 Mil ft2	Aurora One is a mixed-use development south of Horizon Uptown in Aurora, CO. The development will include retail, residential, open space, public art, a bike and pedestrian network, and more. The development will also have a neighborhood park and school.
D5	Bennett Crossing	Town of Bennett, Adams County	606 ac 3040 du	Bennett Crossing is a mixed-use development in Bennett, CO (Adams County). The development includes the Muegge Farms residential development, as well as additional homes, business commercial, highway commercial, a new town hall and more.
D6	Bennett Farms	Adams County	405 ac 3540 du 1 Mil ft2	Bennett Farms is a master planned mixed-use community in unincorporated Adams County, CO. The development will feature a variety of “neighborhood centers,” residential development of varying densities, recreational facilities, mixed-use, and open space.
D7	Bennett North	Adams County	153 ac	Bennett North is a low/medium density residential subdivision in Adams County. Bennett North would involve the annexation of land into the Town of Bennett.
D8	Bennett Ranch	Town of Bennett, Adams County	131 ac 370 du	Bennett Ranch is a several-tract residential development in Bennett. Two residential parcels will be the first developed. The development will also have several open spaces, a park, a fire station, a school and more. (Plans are unofficial online as of 2020 and are subject to change)

ID	Planned Development	Jurisdiction	Size	Description
D9	Bennett Village	Town of Bennett, Adams County	21 ac 133 du	Bennett Village is a residential development in Bennett, CO. The development will mainly consist of low-density single family residential dwellings, as well as open spaces.
D10	Colorado Air and Space Port	Adams County	3349 ac	The Colorado Air and Space Port (CASP or CFO) is one of 12 Federal Aviation Administration (FAA) licensed commercial launch sites in the United States and one of nine that can support horizontal launch and landing activities. Landside development includes a terminal building, fixed base operator facilities, an aerospace test facility, and aircraft hangars.
D11	Cottonwood Creek	City of Aurora	1156 ac 3768 du 152000 ft2	Cottonwood Creek is a master planned mixed-use community in Aurora, CO. The development will include residential units of varying densities, commercial, and two schools, trails, parks, open spaces and other public amenities/services.
D12	East Aurora Annexation Area FDP	City of Aurora	19698 ac	The EAA FDP Land Use plan was planned in 2016 as a part of and in conjunction with a larger land use plan called the East Aurora Annexation Study, developed by Mark A. Nuzser Consultants (MAN Consultants). Currently, plans and drawing provided by the city of Aurora are only initial studies of the area and are intended to provide guidance for integration of the development into the city of Aurora and inform a larger master planning concept.
D13	East Gate Industrial Park	City of Aurora	359 ac 6 Mil ft2	East Gate Industrial Park is an industrial development in Aurora, CO. The site either currently includes, or will include businesses such as Safilo, Amazon and Ferguson. The development is a part of the E-470 Light Industrial/Flex Office zone.
D14	Eastern Hills	City of Aurora	3271 ac 16356 du	Eastern Hills is a large future mixed-use development in Aurora. CO. The development will include residential, commercial, mixed uses, neighborhood parks, open space, and more spread throughout a series of 5 villages. Each village will have a K-8 school, and there will be one high school in Village 5.
D15	First Aurora Commerce Center	City of Aurora	138 ac 588,000 ft2	First Aurora Commerce Center (FACC) is a master planned industrial park adjacent to the E-470 and I-70 interchange in Aurora, CO. FACC can support a wide range of industrial businesses given the range of facility sizes and options available.
D16	Green Valley Ranch East	City of Aurora	1273 ac 5112 du	Green Valley Ranch East is a residential development in Aurora, CO on the west-side of E-470. The development will include residential uses, neighborhood activity centers/a clubhouse, neighborhood parks, a high school and a K-8 school, open spaces and more.

ID	Planned Development	Jurisdiction	Size	Description
D17	Harmony (Sandy Creek)	City of Aurora	1061 ac 3010 du	Harmony Colorado (Sandy Creek) is a residential development in Aurora, CO. The development will feature several types of residential dwellings, public art, community park and amenities, a Community Center, a school, trails and more.
D18	Horizon Uptown	City of Aurora	503 ac 3012 du 3.7 Mil ft2	Horizon Uptown is a proposed mixed-use development with single (Horizon Uptown) and multifamily dwellings (Ascend at Horizon Uptown) in Aurora, CO. The development will include mixed-use, activity centers, commercial, and retail. The development will likely have links into local transit.
D19	Kiowa Creek Preserve	Adams County	314 ac 915 du 164000 ft2	Kiowa Creek is a master planned mixed-use community in unincorporated Adams County, CO. The development will include a variety of housing types including mixed-use, and medium to high density residential housing. Kiowa Creek will feature a large contiguous open system with a variety of active and passive recreation facilities can be accommodated including an expansive trail system.
D20	Majestic Commerce Center	City of Aurora	1527 ac 67 Mil ft2	Majestic Commerce Center is a large industrial center in Aurora, CO in the E-470 Light Industrial/Flex Office and E-470 Regional Retail/Commercial Subarea zones. The development will accommodate a variety of industrial and commercial uses.
D21	Port Colorado (Dataport)	City of Aurora, Adams County	6500 ac 2.2 Mil ft2	Port Colorado is a master-planned industrial development in Adams County/Aurora, CO. This development is proximate to the I-70 corridor and borders the Union Pacific (UP) Railroad, Colorado Air and Space Port, and will feature industrial, commercial, and manufacturing uses.
D22	Pride of Bennett/Walls Subdivision	Town of Bennett, Adams County	125 ac 105,000 ft2	Pride of Bennett/Walls Subdivision are planned developments in Bennett, CO. Pride of Bennett is a planned commercial center with retail, a Safeway, and other future commercial uses. Walls Subdivision is currently made up of two parcels – one sited for industrial uses and the other sited as agriculture. It is unknown what the future uses of this lot will include at this time.
D23	Prologis Park 70	City of Aurora	300 ac 5.7 Mil ft2	Prologis Park 70 is an industrial development in Aurora, CO at the intersection of I-70 and E-470. The development is within a few miles of Denver International Airport and is proximate to the Denver metropolitan area. The park is rail served by Union Pacific.
D24	Prospect Ridge	Adams County	372 ac	The Prospect Ridge development, located west of Harback Rd. from I-70 to Highway 36, is proposed to be developed into single-family and commercial lots and has an Outline Development Plan approved with the Town of Bennett.

ID	Planned Development	Jurisdiction	Size	Description
D25	Prosper	Arapahoe County	5310 ac 18136 du 23 Mil ft2	Prosper will be a mixed-use development in Arapahoe County, CO. The development will feature some commercial/retail space, mixed use and single-family residential, commercial space, open space, an employment center, preserved agricultural land and open space and a trail system.
D26	Rocky Mountain Rail Park	City of Aurora	620 ac 15 Mil ft^2	Rocky Mountain Rail Park is a large rail-served industrial park. At full buildout, the rail park platform will host both unit-train and manifest service environments on approximately 15 miles of private track. The facility has direct access to Union Pacific mainline and will likely serve as an industrial center for Unincorporated Adams County and Colorado Air and Space Port.
D27	Stafford Logistics Center	City of Aurora	368 ac 4.4 Mil ft^2	Stafford Logistics Center is a proposed industrial park in Aurora, CO. The park will include approximately 4.4 Mil square feet on ±368 ac. In addition, the property will benefit from the new interchange at I-70 and Picadilly, in addition to access to I-70 and E-470.
D28	Sky Ranch	Arapahoe County	775 ac 2901 du 2.1 Mil ft^2	Sky Ranch is a masterplan residential community in Arapahoe County, CO. The proposed development consists of a mix of land uses including single family residential (attached and detached), multi-family residential, commercial, light and heavy industrial, open space, a recreation center, fire station, school, water storage facilities and oil and gas development.
D29	Skyview/Pernith Park	Arapahoe County	50 ac 176 du	Skyview (formerly called Pernith Park) is a residential development in Arapahoe County, CO. The subdivision includes approximately 176 single-family homes and is approximately 50 ac.
D30	Sun Meadows	City of Aurora	318 ac 1350 du	Sun Meadow is a proposed residential development in Aurora, CO. The development is primarily residential, but will include several mini parks, sports fields, open spaces, an elementary school and residential. There are plans for the site to connect into a more regional bike/pedestrian trail network.
D31	Waterstone	City of Aurora	240 ac 780 du	Waterstone is a proposed residential development in Aurora CO. The site will include a regional trail, neighborhood parks, open space, and a mix of residential uses. Waterstone will likely connect into a regional bike/pedestrian trail network.

ID	Planned Development	Jurisdiction	Size	Description
D32	Wolf Creek Run	City of Strasburg, Adams County	217 ac 429 du	Wolf Creek Run is a proposed residential development in Strasburg, CO. The site includes residential homes, as well as open space, a park and ball fields.
—	Strasburg Station	Town of Strasburg, Arapahoe County	29.14 ac 224 du 140,699 ft^2	Strasburg Station is a proposed mixed-use development in Strasburg, CO. The development will include light industrial, office and, retail, and residential uses in either planned unit development or straight zoning requests.

Sources: Arapahoe County, Adams County, City of Aurora, and Town of Bennett

Abbreviations/acronyms: ac: acres, du: dwelling units, ft^2: square feet, Mil: million

Appendix C. CDOT 1601 Process Resources

Policy Directive 1601 Interchange Approval Process materials

https://www.codot.gov/programs/planning/data-studies/data-studies