COLORADO
Department of Transportation

Mobility Hub Program

Transit and Rail Advisory Committee
May 14, 2021

Mobility Hub Vision and Goals

Vision Statement: CDOT plans to re-envision the traditional park-and-ride transit locations into "Mobility Hubs"—transportation centers at select locations, which emphasize multimodal options, seamless mode to mode transitions, real-time passenger information, convenience, and opportunities to create higher intensity transit friendly development surrounding these hubs.

INCREASE TRANSIT RIDERSHIP AND MULTIMODAL OPTIONS

INCREASE SAFETY, TRAVEL TIME, RELIABILITY, ECONOMIC VITALITY, AND AIR QUALITY

DECREASE THE NUMBER OF VEHICLE MILES TRAVELED BY COLORADO RESIDENTS

DECREASE OR MITIGATE AIR POLLUTION ACROSS THE STATE

DECREASE OR MITIGATE GROWING CONGESTION ON CORRIDORS THROUGHOUT THE STATE

Station Definitions and Characteristics

Park-N-Rides: Transit stops that allows drivers to leave their vehicles at a parking lot and take public transportation for the remainder of their trip. Park-and-rides do not typically have connections to other transit routes. Amenities at park-and-rides usually include a parking lot and a shelter.

Transit Centers: Locally owned and operated transit facilities that Bustang is stopping at but are not CDOT owned and operated. The local agencies have jurisdiction over the name and operations of the facility.

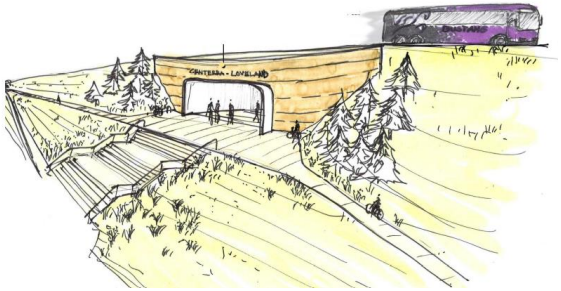
- Frisco Transit Center
- Pueblo Transit Center

Mobility Hubs: Focal point in the transportation network that seamlessly integrates different types of modes of transportation, multimodal supportive infrastructure, and place-making strategies to create activity centers that maximize first- and last-mile connectivity.

- Connectivity to local transit, employment and housing

Monument Park-and-Ride

Colorado Springs Transit Center Schematic



Centerra Loveland Mobility Hub Schematic

Bustang History

2008 Intercity and Regional Bus Network plan developed

2009 DTR created by State Legislation

2011 North I-25 FEIS Express Bus Service

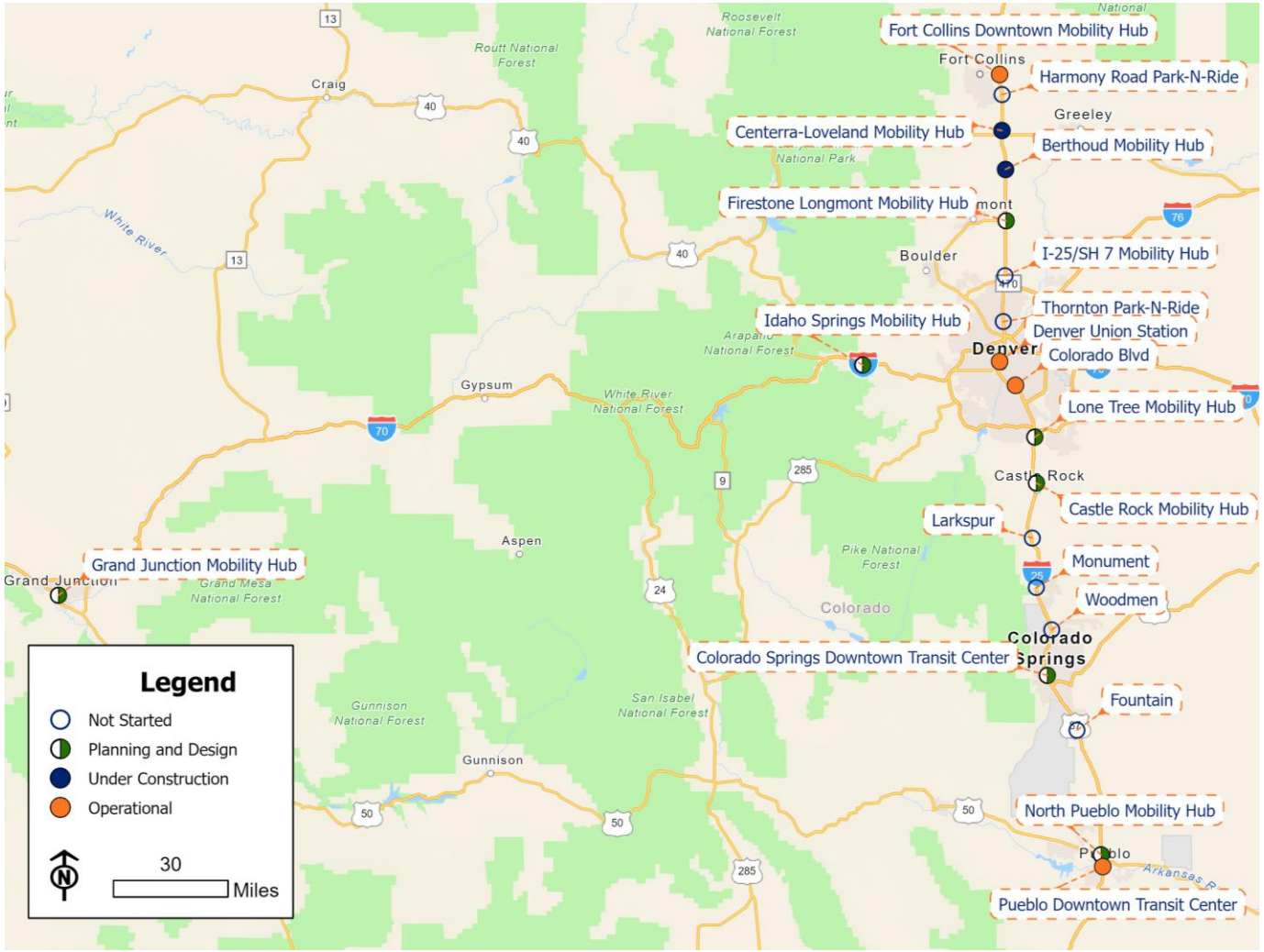
2014 Intercity and Regional Bus Network plan updated

2015 Bustang Interregional Express Bus Service began

2018 Outrider Rural Regional Bus Service began

2019 1st Mobility Hub approved for construction at Centerra Loveland

Mobility Hub Program



Planning and Design Not Started

1. Harmony Road Park-N-Ride
2. I-25/SH 7 Mobility Hub
3. Thornton Park-N-Ride
4. Larkspur
5. Monument
6. Woodmen
7. Fountain

Planning and Design In Progress

1. Firestone Longmont Mobility Hub
2. Idaho Springs Mobility Hub
3. Lone Tree Mobility Hub
4. Castle Rock Mobility Hub
5. Colorado Springs Downtown Transit Center
6. North Pueblo Mobility Hub
7. Grand Junction Mobility Hub

Under Construction

1. Centerra-Loveland Mobility Hub
2. Berthoud Mobility Hub

Completed

1. Fort Collins Downtown Mobility Hub
2. Denver Union Station
3. Colorado Blvd
4. Pueblo Downtown Transit Center

Project Selection Process

Project Readiness
- Planning Level
- Months to Construction
- Opportunities to Bundle

Statewide Transit Plan Goal Areas
- System Preservation
- Mobility Improvements
- Transit System Development
- Environmental Stewardship
- Economic Vitality
- Safety Improvements

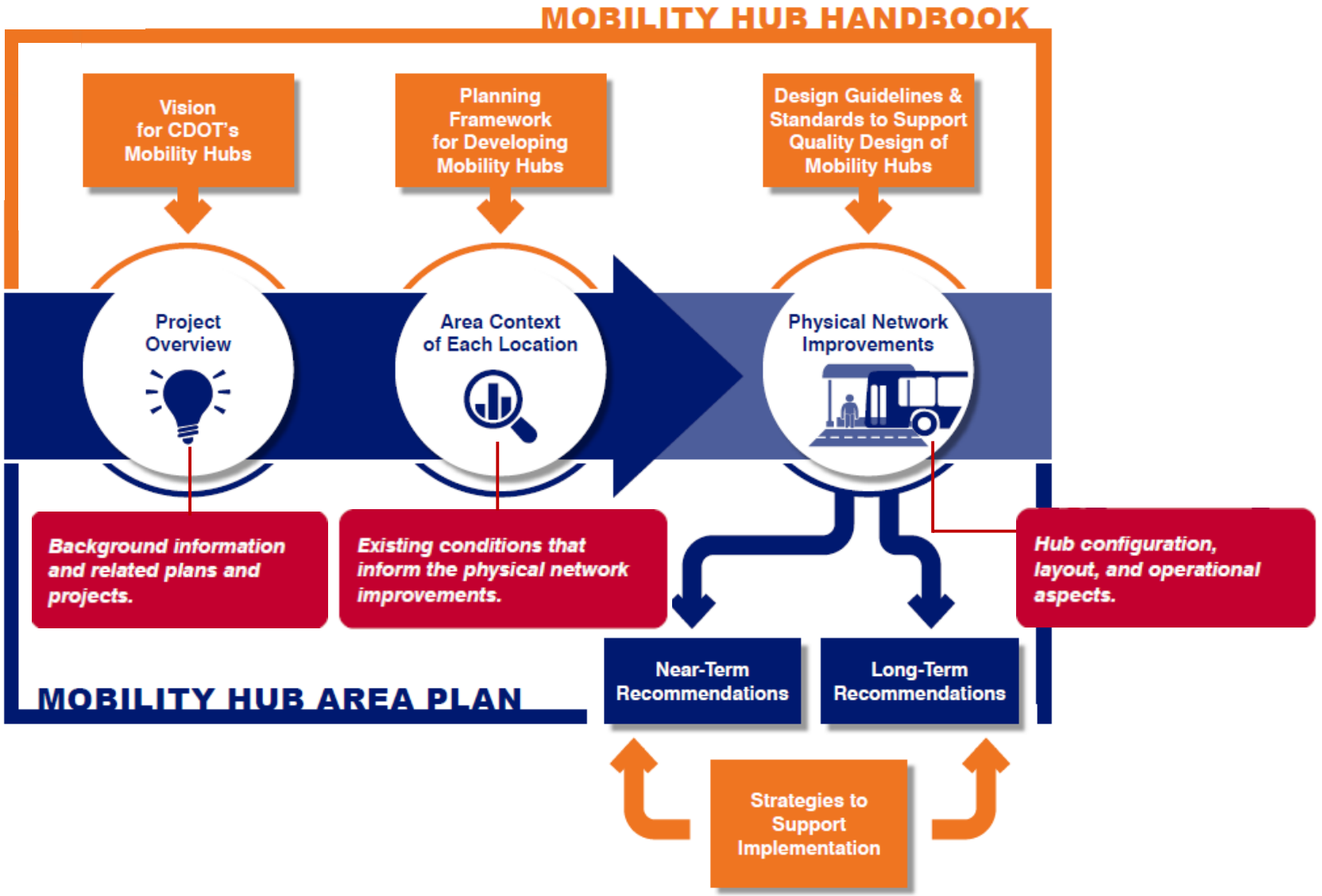
Strategic Nature
- Significance
- Matching Funds
- Grant Funding

Planning Support
- Planning Document
- Transit Development Program Priority
- Ridership Improvement
- Travel Time Savings/Reliability

Supports Statewide System
- Meaningful Connections
- Serves Needs
- Serves Activity Centers

Additional Factors
- County Size
- Environmental Justice
- Project Category
- Cost Estimate
- Partner Capital
- Annual Operating Cost

Mobility Hub Planning Process



Mobility Hub Location Criteria & Metrics

Criteria	Metrics
Distance from Nearby Mobility Hub	• Miles from the nearest mobility hub(s) • Recommended 10 mile spacing on I-25/ 30 mile spacing on I-70
Transit Operations	• Accommodate a center median transit stop • Streamlined operations and routing • Efficient transit travel times • Ability to utilize managed lanes
Vision and Goals	• Alignment with project vision and goals
Site Constraints	• Site accessibility and right-of-way availability • Topography and terrain • Presence of other barriers • Space availability
Travel Patterns	• Average daily traffic volumes • Existing transit ridership (boardings and alightings) • Projected transit ridership (boardings and alightings)
Connectivity	• Miles of existing and planned sidewalk • Miles of existing and planned bicycle facilities • Miles of existing and planned trails • Connections to local transit • Front Range Passenger Rail
Community Support	• Political support • Stakeholder support
Development and Land Use Characteristics	• Existing adjacent supporting land uses • Compatible with local land use zoning • Ability to promote and implement Transit Oriented Development • Planned supporting development is underway

Sky Ridge Station Example

Criteria	Metric	Sky Ridge Station
Distance from Nearest Mobility Hub	Miles from the nearest mobility hub(s)	Denver Union Station: 19.2 Castle Rock: 9.7
Transit Operations	Accommodate for a center-loading transit stop	Compatible
	Streamlined operations and routing	Compatible
	Efficient transit travel times (NB/SB)	$9.92/$10.59
	Ability to utilize managed lanes	Compatible
Vision and Goals	Alignment with project vision and goals	Compatible
Site Constraints	Site accessibility and right-of-way availability	Compatible
	Topography and terrain	Somewhat Compatible
	Presence of other barriers	Compatible
	Space availability	Compatible
Travel Patterns	Average daily traffic volumes	157,000
	Existing transit ridership	LRT: 634 FlexRide: 39
	Projected transit ridership	TBD
Regional Connectivity	Miles of existing and planned sidewalk	361
	Miles of existing and planned bicycle facilities	85
	Connections to local transit	LRT and FlexRide
	Front Range Passenger Rail	TBD
Community Support	Political support	TBD
	Stakeholder support	TBD
Development and Land Use Characteristics	Existing adjacent supporting land uses	Somewhat Compatible
	Residents within walking distance (1/2 mile)	383
	Residents within biking distance (3 miles)	15,457
	Residents within driving distance (5 miles)	33,751
	Jobs within walking distance (1/2 mile)	335
	Jobs within biking distance (3 miles)	20,507
	Jobs within driving distance (5 miles)	54,534
	Compatible with Local Land Zoning	Compatible
	Ability to promote and implement Transit Oriented Development	Compatible
	Planned supporting development is underway	Somewhat Compatible
	Projected residents within walking distance (1/2 mile) in 2030	891
	Projected residents within biking distance (3 miles) in 2030	17,140
	Projected residents within driving distance (5 miles) in 2030	41,164
	Projected jobs within walking distance (1/2 mile) in 2030	6,341
	Projected jobs within biking distance (3 miles) in 2030	46,828
	Projected jobs within driving distance (5 miles) in 2030	106,404
	Projected number of service jobs within walking distance (1/2 mile)	5,795
	Projected number of service jobs within biking distance (3 miles)	20,404
	Projected number of service jobs within driving distance (5 miles)	71,728

Mobility Hub Typologies

Type of Mobility Hub	Contextual Characteristics	Level of Amenities
Type I: **Larkspur**	• **Transit Activity:** Low number of boardings and alightings • **Land Use Characteristics:** Low residential or employment density or development potential • **Population Demographics:** Low percentage of seniors, households living below the poverty level, and zero-vehicle households	Low
Type II: **Berthoud**	• **Transit Activity:** Medium number of boardings and alightings • **Land Use Characteristics:** Medium residential or employment density or development potential • **Population Demographics:** Medium percentage of seniors, households living below the poverty level, and zero-vehicle households	Medium
Type III: **Centerra** **Loveland**	• **Transit Activity:** High number of boardings and alightings • **Land Use Characteristics:** High residential or employment density or development potential • **Population Demographics:** High percentage of seniors, households living below the poverty level, and zero-vehicle households	High

Mobility Hub Amenities by Typology

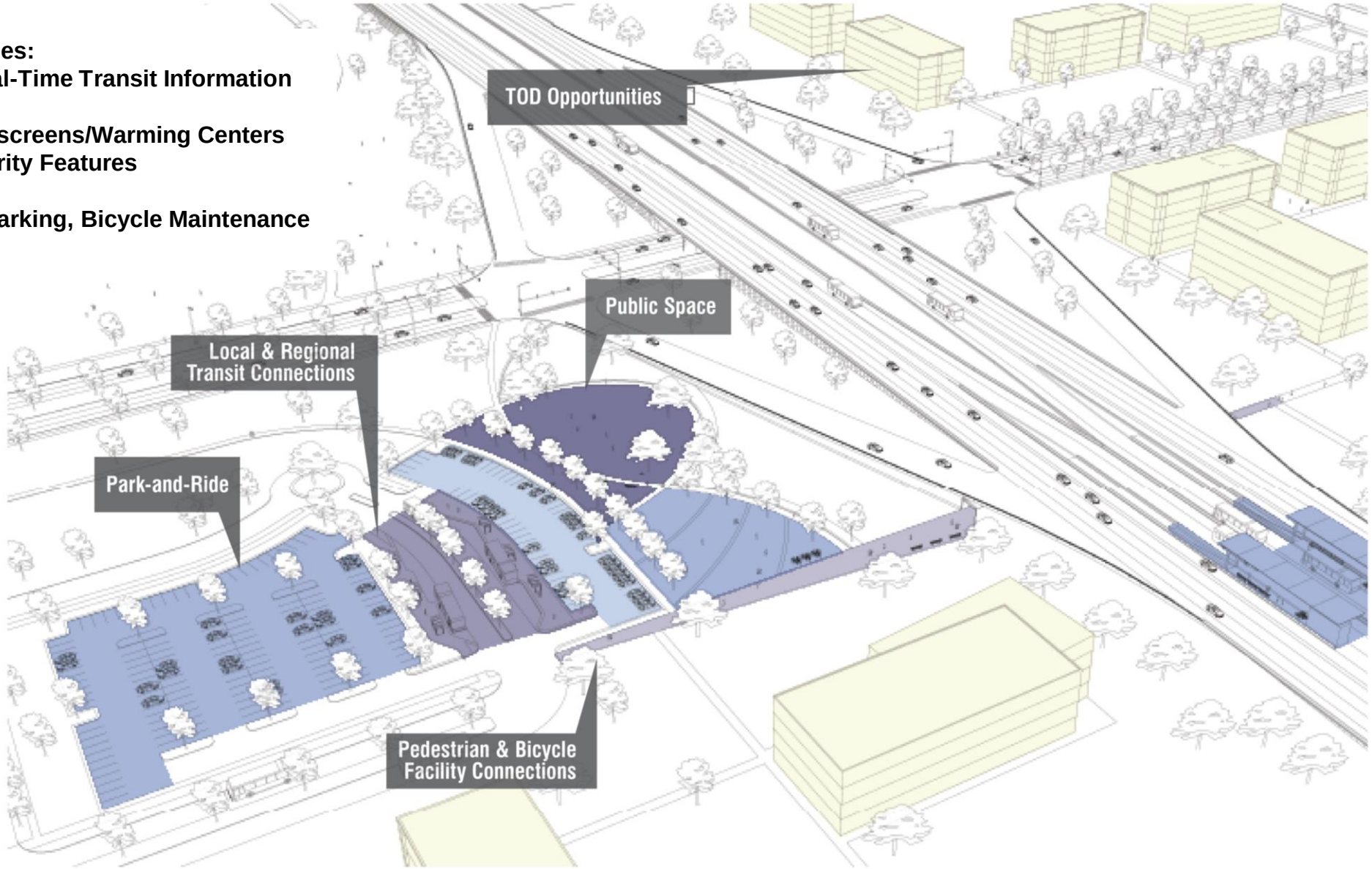
Amenity	Type I	Type II	Type III
Regional Connections			
Connections to State Highway System	Optional	Optional	Recommended
Multimodal Connections			
Local/Regional Transit Connections	Recommended	Recommended	Recommended
Pedestrian Facility Connections	Recommended	Recommended	Recommended
Bicycle Facility Connections	Recommended	Recommended	Recommended
Park-and-Ride	Recommended	Recommended	Recommended
Passenger Pick-Up / Drop-Off	Recommended	Recommended	Recommended
TOD Opportunities Nearby	Optional	Optional	Recommended
Station Amenities			
Route Information	Recommended	Recommended	Recommended
Real-Time Transit Information	Optional	Recommended	Recommended
Universal Ticketing	Optional	Optional	Optional
Furniture	Recommended	Recommended	Recommended
Shelter/Canopy	Recommended	Recommended	Recommended
Windscreens	Recommended	Recommended	Recommended
Warming Centers	Optional	Optional	Optional
Lighting	Recommended	Recommended	Recommended
Paper Schedules	Optional	Optional	Optional
Bicycle Racks	Recommended	Recommended	Recommended
Bicycle Lockers	Optional	Optional	Optional
Security Cameras	Recommended	Recommended	Recommended
Wayfinding Information	Optional	Optional	Optional
EV Charging Stations	Recommended	Recommended	Recommended
Parking Counting System	Not Required	Optional	Optional
Bicycle/Scooter Share Parking	Optional	Optional	Optional
Bicycle Maintenance Facilities	Not Required	Optional	Optional
Public Space	Optional	Optional	Optional
Enhanced Station Amenities			
Restrooms	Optional	Optional	Optional
Welcome Center	Not Required	Optional	Optional
Artistic Elements	Not Required	Optional	Optional
Emergency Call In Box	Recommended	Recommended	Recommended
Wi-Fi/ Smartphone Connectivity	Optional	Recommended	Recommended
Other Multimodal Connections			
Existing/Future Rail Connection	Optional	Optional	Optional
National Bus Service Connection	Optional	Optional	Optional
Resort Shuttle Connection	Optional	Optional	Optional
Car Share Options	Optional	Optional	Optional
Community Related Facilities			
Parcel Pickup	Optional	Optional	Optional

Not Required | Optional | Recommended

Mobility Hub Design Features

Examples of Other Amenities:

- **Route Information & Real-Time Transit Information**
- **Furniture**
- **Shelters/Canopies/Windscreens/Warming Centers**
- **Adequate Lighting/Security Features**
- **Wayfinding Information**
- **Bicycle/Scooter Share Parking, Bicycle Maintenance Facilities**



Typology Approximate Costs

- Costs of mobility hubs are directly tied to the typology and can vary, center loading vs slip ramps, and parking demand
  - These costs include amenities such as Fixtures, EV Chargers, Wayfinding Signs, Passenger Information Display Signs, etc.

Project	Description	Low - High, [Average]
Project 1	A large parking lot (350 spaces) with two slip ramps (similar to Firestone-Longmont)	$9M - $18M, [$13M]
Project 1b	A small parking lot (150 spaces) with two slip ramps	$6M - $15M, [$10M]
Project 2	A small parking lot with off-street bus bays (similar to Fairplay)	$3.5M - $8M, [$6M]
Project 3	A large parking lot and a center loading station (similar to Centerra-Loveland)	$16M - $30M, [$23M]
Project 4	A location w/o parking, but with slip ramps and ped. connections (similar to Lone Tree)	$7M - $18M, [$13M]
Project 5	A downtown transit center with a parking deck and off-street bus bays	$11M - $16M, [$14M]

Baseline Amenity Approximate Costs

Element	Low	High
Slip Ramps	$1M	$3M
Center Loading Station	$4M	$7M
Large Parking Lot	$3M	$5M
Small Parking Lot	$1M	$3M
Off Street Bus Bays	$500K	$1.5M
Bike/Ped Connections	$450K	$550K
Pedestrian Tunnel/Overpass	$2M	$5M
Custom Shelters	$180K	$220K
Stock Shelters	$25K	$35K
Large Parking Lot EV Charging	$225K	$275K
Small Parking Lot EV Charging	$100K	$150K
Lighting	$200K	$250K
Passenger Information Displays	$125K	$175K
Wayfinding Signage	$80K	$120K
Street Furniture	$30K	$50K

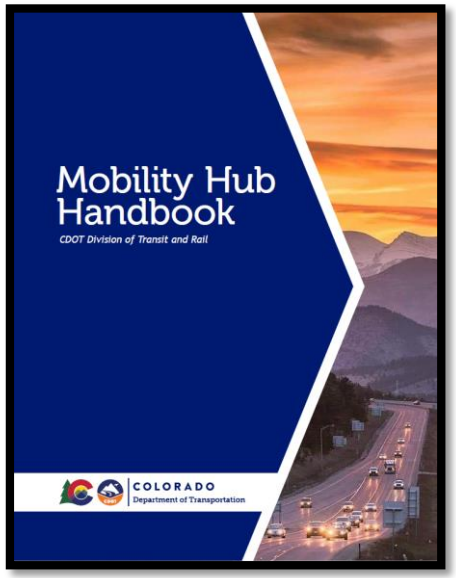
Partnership Funding

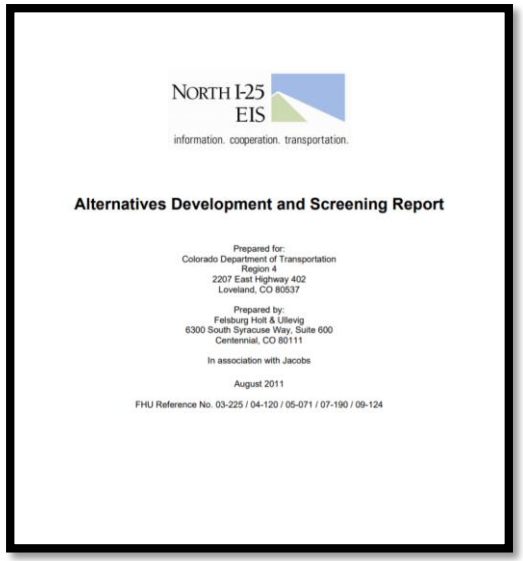
- Partnership funding can come in the form of cash, land donations, or other work that helps with the base project scope
  - Base project scope is defined as the project elements that must be constructed to enable Bustang operations at a hub
- "Partner funds" are defined as any funds which aren't budgeted to DTR SB 267 Transit
- The amount of match required depends on the type of project (see below)

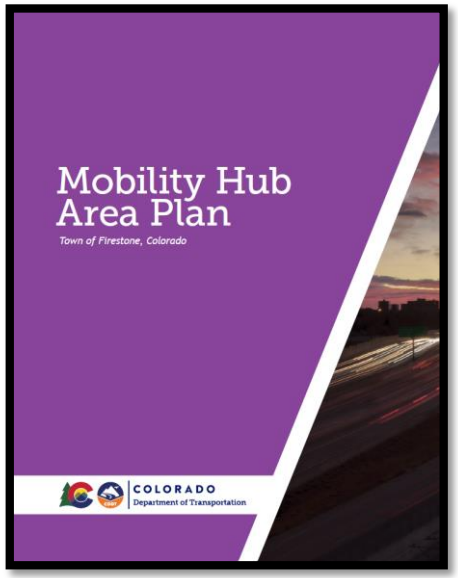
Project Type	Preconstruction	Construction
Mobility Hub – Phase 2 – Fully Built[1]	100% DTR	50% DTR/50% Partner
Mobility Hub – Phase 1[1]	100% DTR	100% DTR
Local Agency Project < $2.5M	80% DTR/20% Partner	80% DTR/20% Partner
Partner Project > $2.5M[2]	50% DTR/50% Partner	50% DTR/50% Partner
DTR Project	100% DTR	100% DTR

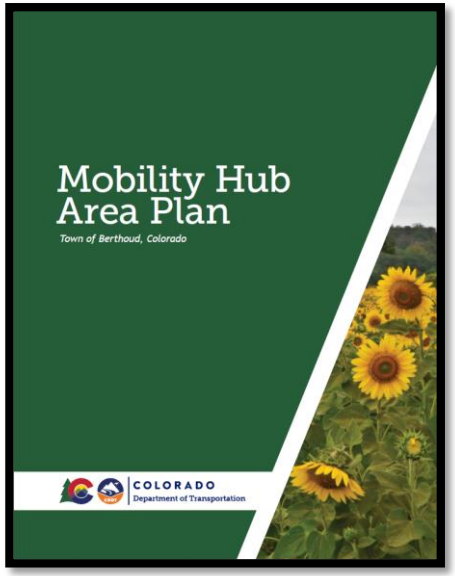
1. *An Interim Mobility Hub is a location in which CDOT is making an improvement within their existing property. A Long-Term Mobility Hub is a location in which CDOT anticipates acquiring new property to make an improvement.*
2. *The first $2.5M of project cost will get an 80/20 match; the remaining cost will require a 50/50 match.*

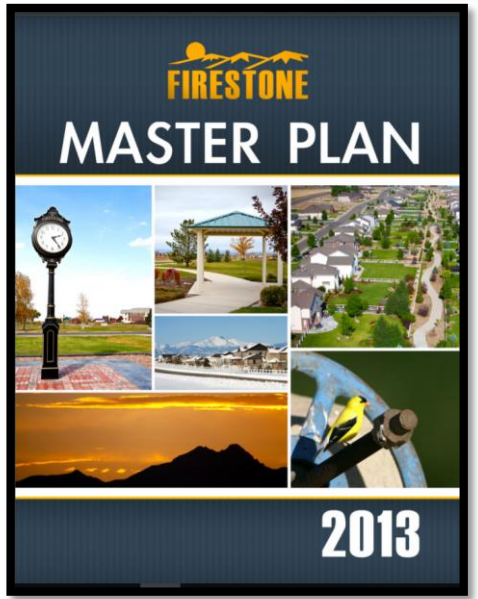
Supporting Documents

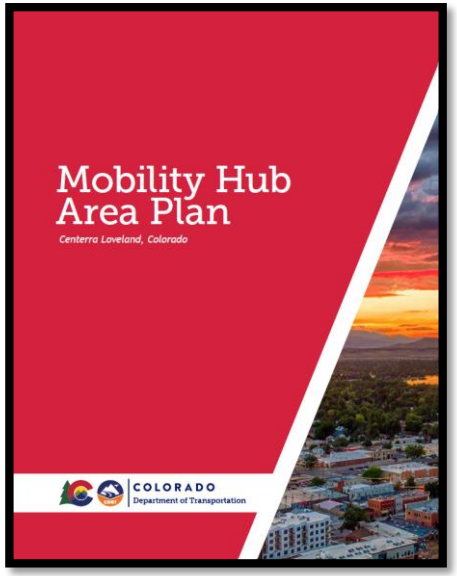










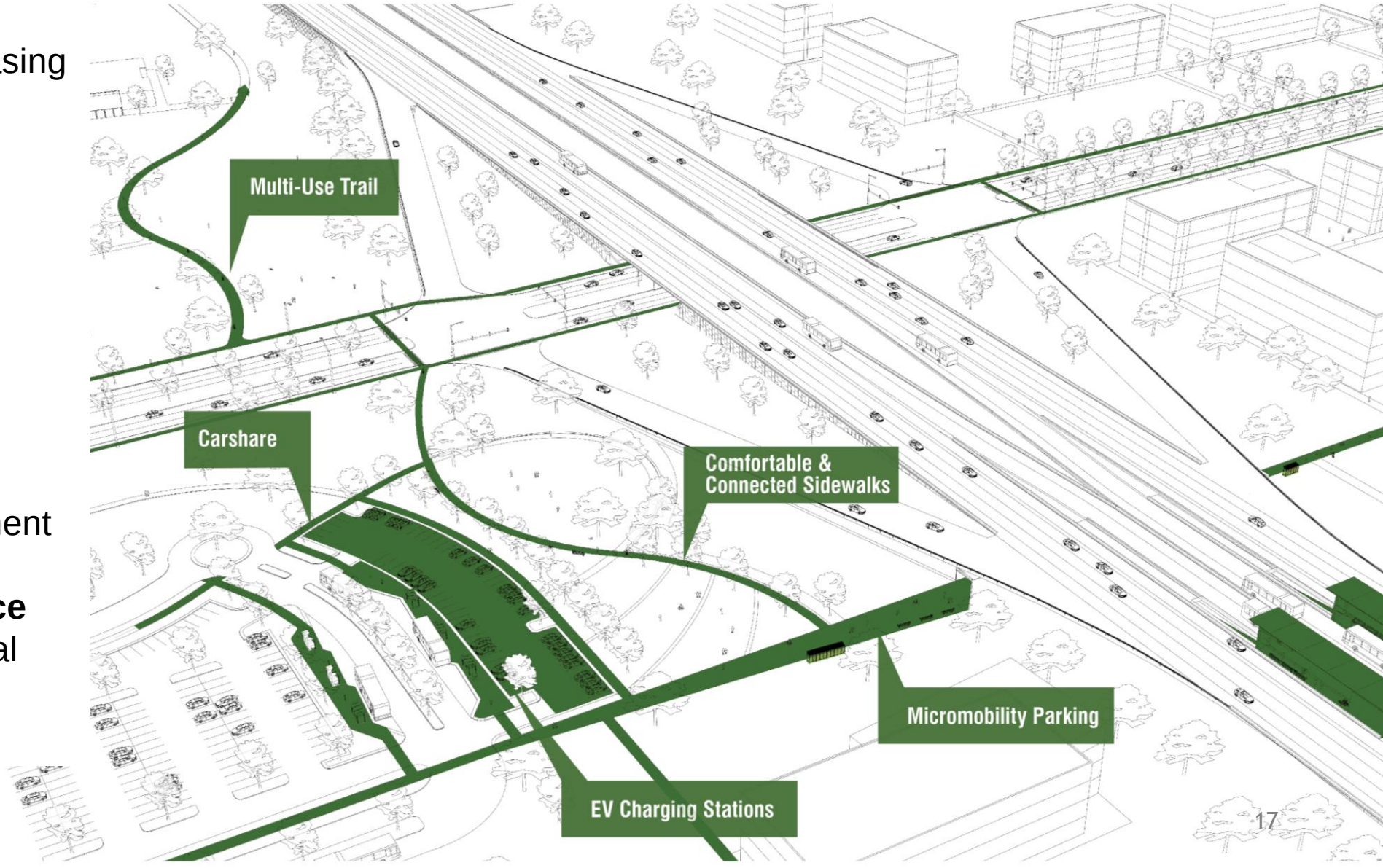


1601 TDM Process and Mobility Hubs

TDM "Core Efforts" = increasing access to:
-- Local/Regional/Intercity Transit
-- Carpools (Park-n-rides)
-- Bike/Walk connections

TDM "Support Strategies" include:
-- Parking management

Mobility Hub capital investment supports TDM efforts by encouraging **mobility choice** and streamlining multi-modal connectivity.



Next Steps

- Staff will incorporate comments provided by the Transportation Commission and Transit and Rail Advisory Committee into the Mobility Hub Handbook and post when it's finalized

Thank You!

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