Transportation Commission of Colorado
Transit and Intermodal Committee Meeting

Meeting Agenda

Thursday, December 16, 2014 – 9:30 A.M. – 10:00 A.M.
4201 East Arkansas Avenue
Denver, Colorado

Mark Imhoff, Director
Division of Transit and Rail

Debra Perkins-Smith, Director
Division of Transportation Development

Ed Peterson, Chair
District 2, Lakewood

Kathy Gilliland
District 5, Livermore

Bill Thiebaut
District 10, Pueblo

Shannon Gifford
District 1, Denver

Kathy Connell
District 6, Steamboat Springs

- **Introductions & Approve minutes of November Transit & Intermodal Committee Meeting - Ed Peterson - 5 minutes**
- **FY 2015 FASTER Transit Project Recommendations/Future Years FASTER Redistribution – Mark Imhoff - 15 minutes**
- **Colorado High Speed Transit/ICS and AGS status and project completion – David Krutsinger – 10 minutes**
- **Adjourn**

<u>THE AGENDA MAY BE ALTERED AT THE CHAIR'S DISCRETION.</u>

Transit & Intermodal Committee Meeting Minutes

November 21, 2013

Committee Members Attending: Ed Peterson (Chair), Shannon Gifford, Kathy Gilliland, Kathy Connell, and Bill Thiebaut

Also attending were DTD Director Debra Perkins-Smith and Bike/Ped Section Manager, Betsy Jacobsen

Chairman Peterson called the meeting to order at 9:30 am.

1. **Approval of October 2013 Minutes**: The minutes of the October 2013 meeting were approved unanimously as written.

2. **Bicycle Strategy Presentation**: Betsy Jacobsen presented information about the League of American Bicyclists' Bicycle Friendly State Program. Currently, Colorado is ranked Number Two, and Governor Hickenlooper wants the state to be Number One by 2015. Jacobsen presented six strategies to move Colorado in that direction:
    1. Establish a statewide bicycle advisory committee that would be appointed by the Governor to advise on policy and issues affecting the state.
    2. Add bicycle safety to the Strategic Highway Safety Plan. CDOT's Traffic and Safety Branch is examining this as they currently move forward with their plan.
    3. Implement Performance Measures. Measurements are currently being developed as Phase II of the Statewide Bicycle and Pedestrian Plan. It was noted that developing an inventory of bicycle/pedestrian facilities was necessary; as well as a way to determine specific funds spent on bike/ped projects when they're part of a larger road project.
    4. Implement AASHTO's US Bike Route System. This is a developing network of routes throughout the United States (much like the Interstate System is for motorized vehicles). CDOT would need to coordinate with local agencies and neighboring states to determine the best routes. Funding for appropriate signage and outreach would also be required.
    5. Adopt a Mode Share Goal for Biking. This strategy would encourage integration of bicycle transportation needs into all transportation and land use policies. CDOT can work with MPOs to develop a mode share goal and add it to PD 14. Additionally, continued expansion of CDOT's Bike/Ped Counting Program will provide more accurate data regarding actual usage.
    6. Dedicate Funding for Safe Routes to School. MAP-21 eliminated dedicated funding. Colorado has received national recognition for its program, yet unless another funding mechanism is provided, the program will expire.

Committee members commented that the six strategies were a good idea. There were no questions or comments regarding implementation. Perkins-Smith said we would come back to them with more details regarding budget needs and timelines for implementing.

The meeting was adjourned at 10:00 am.

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

DATE: January 3, 2014

TO: Transportation Commission/Transit & Intermodal Committee

FROM: Mark Imhoff, Director, Division of Transit & Rail

SUBJECT: 2015 FASTER Transit Project Recommendations

Purpose

The purpose of this memo is to brief the Transit & Intermodal Committee on the FY 2015 FASTER Transit project recommendations, and to present the proposed guidelines for the development of a FASTER Transit funds redistribution for FY 2016 and beyond.

Action Requested

No action is requested in January; the agenda item is for information only, and T&I input is sought. The FY 2015 FASTER Transit project recommendations will be brought to the Transportation Commission in February for approval.

Executive Summary

The FY 2015 recommended projects for FASTER Local funds and FASTER Statewide funds are listed in the attachment following this memo; a table is also included for projects not recommended, with a brief reason. The FY 2015 project recommendations will come before the Transportation Commission in February for approval.

Staff is developing a recommendation for a redistribution process for allocating the FASTER Transit funds to begin in FY 2016, with emphasis on achieving the PD 14 performance objectives:

- Performance Goal, Infrastructure Condition; Transit Asset Condition.
- Performance Goal, System Performance; Transit Utilization and Transit Connectivity.

We have begun a process through the Transit & Rail Advisory Committee (TRAC), and including the Region Planners and CASTA, to devise a more effective project selection process. We seek Transit & Intermodal Committee input on the redistribution guiding principles:

- Transit Utilization - Fund the highest priority transit projects throughout the state.
- Transit Asset Condition – Utilizing the capital inventory of local bus fleets, identify a replacement schedule for all urban and rural transit vehicles (excluding RTD). Focus the FASTER Transit Local funds, in combination with the FTA capital programs, toward replacing local vehicles when needed. Over time the goal would be to replace all transit vehicles (subject to funding availability); this is thought to be an equitable distribution of FASTER Local transit funds.

- Transit Connectivity – The annual allocation of FASTER Statewide Transit funds to the Interregional Express bus program is a key element of the redistribution. In addition, encouragement to local entities to provide more regional services is sought, possibly through an annual allocation of Statewide Transit funds as operating assistance to local transit providers that operate regional service.
- Streamline the FASTER Transit distribution process if possible.

Background

In the past, FASTER Local funds were distributed to the Regions by formula, and each Region selected the respective projects following an application process and working in conjunction with the local MPOs and TPRs. FASTER Statewide funds were distributed based upon a statewide competition, using an application and evaluation process. Both the FASTER Local and Statewide processes followed a two-year planning horizon. Therefore, during the FY 2014-15 cycle FY 2014 projects were finalized and FY 2015 projects were tentatively (preliminary) selected, pending updates, additions, withdrawals and formalization during the FY 2015 cycle. Local entities have used the FY 2015 preliminary program of projects as a planning guide for their capital programs. Therefore, significant deviation from the FY 2015 preliminary list would be problematic at the local level, and is not recommended. The Regions have agreed to honor the FY 2015 preliminary program of projects.

MAP-21 made a number of significant changes to transit funding. Under SAFETEA-LU the FTA Section 5309 program utilized "earmarks" for distributing bus and facility capital funds. Colorado, through the Colorado Transit Coalition, submitted one 5309 application for the state's bus and facility needs, and did very well in the "earmark" system ($8-13M/year in recent years). MAP-21 replaced this program with Section 5339, Bus and Bus Facilities, and now distributes funds to states on a formula basis. The MAP-21 Section 5339 program allocates Colorado $2.1 Million to Colorado by formula for small urban and rural transit systems; the three large urbanized areas each receive their own formula funding, totaling $2.7M. The resulting funding gap at the local level has caused a reassessment of the best utilization of FASTER Transit Local funds, and how best to ensure safe and reliable bus fleets. The PD 14 category, Transit Asset Condition, emphasizes this priority.

Regional transit connectivity is also a needed element in the statewide transit system/network. The development of the Statewide Transit Plan (on-going) is getting consistent feedback that more interregional and regional transit services are needed. The TBD Colorado effort of 2012 also received similar input around the state which led to a TBD recommendation: "The state should play an enhanced role in helping to catalyze and secure funding for transit projects, such as interregional bus service". In addition, during the Interregional Express Bus plan development, the supporting local transit entities stressed the need for operating assistance for local entities that provide regional service; without such operating assistance the ability to provide needed regional service at the local level likely will be infeasible. The PD 14 category, Transit Connectivity, emphasizes this priority.

These considerations prompted the evaluation of the FASTER Transit program, and whether a redistribution of funds could help to better meet the PD 14 performance objectives. The

proposed guiding principles listed above have been developed, and are proposed to guide staff and the TRAC Sub-Committee in re-structuring the distribution of FASTER Transit funds beginning in FY 2016. .

Details

The immediate need is to finalize the FY 2015 FASTER Transit projects; the recommended projects for both Local and Statewide are listed in the attachment at the end of this memo. The FY 2015 project recommendations honors the FY 2014-2015 two-year planning cycle, and incorporates the Regional distribution formulas from that time. A revised system will be developed over the course of the winter for use starting in FY 2016.

The FY 2015/16 call for "capital" projects was a combined call for both FASTER (Local and Statewide) and the FTA capital programs (Sections 5310, 5311 and 5339). Assessing and programming all capital requests in one batch is a more comprehensive approach to capital funding. In total, for FY 2015 $18.78M in capital funding is available:

- $5.0M – FASTER Local pool
- $6.0 M – FASTER Statewide pool (note: Total Statewide pool is $9.0M with $3.0M allocated to Interregional Express Bus program.)
- $1.38 M – FTA Section 5310
- $4.3 M – FTA Section 5311
- $2.1M - FTA Section 5339

For FY 2015 109 applications were received from 46 transit entities, totaling $50.6M. The attached tables represent the FY 2015 FASTER project recommendations; FY 2016 was portrayed as a planning exercise to prepare for the revised FASTER distribution model. The FTA capital project awards have tentatively been assigned, and will be finalized and announced once funding becomes available through the federal FY 2014 cycle.

Key Benefits

Beginning in 2016, achieve a better utilization of the FASTER Transit funds, alignment with the PD 14 performance objectives and coordination with the award of FTA capital funds.

Next Steps

It is recommended that the Transportation Commission approve the FY 2015 FASTER Transit projects in February 2014.

A revised distribution program will be developed over the winter using the guiding principles listed above (updated to include T&I Committee input as appropriate) for use in distributing FY 2016 FASTER Transit funds. Recommendations will be brought to the Transportation Commission for approval by July 2014

Table A: Projects Recommended for FY15 FASTER Transit Statewide Funding, 1/3/2014

Applicant (agency rank if more than one application)	Project	FY15 request	FY15 Preliminary Awards (a)	FY 15 Additional Awards (b)	FY15 recommended award
NFRMPO (c*)	Vanpool replacement vehicles (36)	$64,000	$64,000		$64,000
RTD 2	Thornton Park-n-Ride Expansion	$997,404	$997,404		$997,404
Mountain Metro 2	Vanpool Vehicle Replacements (9)	$216,000	$216,000		$216,000
DTR	Service Development Plan for North Front Range Commuter Rail	$95,100	$95,100		$95,100
Superior/Louisville	DDI Transit Improvements	$463,610	$463,610		$463,610
Aspen 1	Rubey Park Transit Center Redevelopment	$1,000,000	$1,000,000		$1,000,000
Thornton	SH 7 at I-25 Carpool Lot	$521,988	$521,988		$521,988
City of Greeley	Greeley Evans Transit Regional Transfer Facility (d)	$1,509,920	$0	$1,176,035	$1,176,035
RTD 6	Church Ranch P-n-R Boarding Platforms Relocation	$2,604,781	$0	$1,031,978	$1,265,863
City of Fort Collins	Preventative Maintenance for FLEX	$200,000	$0	$200,000	$200,000
	Totals	$4,314,701	$3,358,102	$2,408,013	$6,000,000

NOTES:

(a): FY15 Preliminary Awards were made in February 2013

(b): FY 15 Additional Awards are recommended based on consolidated call for capital projects issued 10/18/13 and utilizing funds not committed in February 2013

(c*): Denotes funds that will be used to match federal grant funds

(d): Remainder of City of Greeley project funded from FASTER Local (Table B)

Table B: Projects Recommended for FY15 FASTER Transit Local Funding, 1/3/2014

Applicant (agency rank)	Project	FY15 request	FY15 preliminary award (a)	FY15 Additional Awards (b)	FY 15 Recommended Awards
Region 1: $2,535,750 available					
Breckenridge 2	Replacement buses (2)	$637,500	$450,000	$0	$450,000
Douglas County	Replacement Vehicles to be Leased to private operator (4)	$0 (c*)	$48,000	$0	$48,000
Seniors' Resource Center 2 (d)	Replacement Vehicles (4)	$24,720	$24,000	$0	$24,000
Summity County 2	Bicycle Racks	$0 (c*)	$13,405	$0	$13,405
Arvada 2	Olde Town Arvada Bus Transfer Facility phase 2	$1,338,521	$1,338,521	$0	$1,338,521
RTD 1	Civic Center Station Phase II	$594,879	$594,879	$0	$594,879
Seniors' Resource Center 1 (d)	Vehicle Replacements - SRC Urban and A-Lift (8)	$48,000	$48,000	$0	$48,000
		$2,643,620	$2,516,805	$0	$2,516,805
Region 2 $765,500 available					
Mountain Metro 4	Fixed Routed Vehicle Replacment (4)	$1,216,000	$765,000	$0	$765,000
		$1,216,000	$765,000	$0	$765,000
Region 3 $608,250 available					
Allpoints 1 (d)	Replacement Buses (7)	$46,883	$46,883	$0	$46,883
Crested Butte 3	Replacement 38 foot bus #28	$132,000	$132,000	$0	$132,000
Eagle County	Cutaway Replacement (3)	$0 (c*)	$50,000	$0	$50,000
Mesa County 1 (d)	Grand Valley Transit bus replacement (7)	$521,737	$239,367	$0	$239,367
Snowmass 2	Light-Duty Medium-Sized Cutaway Vans (4)	$100,000	$40,000	$0	$40,000
Town of Avon	Bus Replacements (3)	$656,000	$100,000	$0	$100,000
		$1,456,620	$608,250	$0	$608,250
Region 4 $830,050 available					
Boulder 2	Boulder Transit Stop Enhancements	$54,800	$54,800	$0	$54,800
Fort Collins 2	Implementation of Network Management System	$120,000	$120,000	$0	$120,000
Greeley 3 (d)	Fixed Route Service Vehicle Replacements (3)	$179,478	$179,478	$0	$179,478
Greeley 4 (d)	Paratransit/Demand Response Vehicle Replacements (4)	$47,099	$47,099	$0	$47,099
NECALG	Vehicle Replacement	$94,788	0	$94,788	$94,788
City of Greeley	Greeley Evans Transit Regional Transfer Facility (e)	$1,509,920	0	$333,885	$333,885
		$2,006,085	$401,377	$428,673	$830,050
Region 5 $260,450 available					
Durango 2	Type I vehicle replacement	$0 (c*)	64,000	0	64,000
SUCAP 1 (d)	Road Runner Transit Fixed Route Bus Repl. (3)	$11,200	11,200	0	11,200
Town of Mountain Village 1	Gondola - Main Drives and Motors End-of-Service-Life Replacement	$466,000	176,741	0	176,741
		$477,200	$251,941	$0	$251,941

NOTES:

(a): FY15 Preliminary Awards were made in February 2013

(b): FY 15 Additional Awards are recommended based on consolidated call for capital projects issued 10/18/13 and utilizing funds not committed in February 2013

(c*): Requests shown as $0 were requested for 2014 but deferred to FY15 due to lack of available funding in FY14

(d): Denotes funds that will be used to match federal grant funds

(e): Remainder of City of Greeley project funded from FASTER Statewide (Table A)

Table C: Key Factors in the Evaluation of Proposed Projects Not Recommended for Full FY15 FASTER Statewide Transit Funding

Applicant	Project	FY15 request	FY 15 Recommended Award	Key Factors
RTD 6	Church Ranch P-n-R Boarding Platforms Relocation	$2,604,781	$1,031,978	Partial award - large request relative to amount of funding available; consider additonal funding if any other funds are returned
Blackhills Stage Lines	Vehicle Replacement (1)	$448,800	$0	Route might be profitable enough for private funding; will be considered for FTA funding; DTR would have to sponsor, as FASTER cannot be awarded to a for-profit entity
Burlington Trailways	Vehicle Replacement (1)	$497,970	$0	Route might be profitable enough for private funding; DTR would have to sponsor and lease bus, as FASTER cannot be awarded to a for-profit entity; will be considered for FTA funding
Colorado State University	University Station MAX/BRT Bike Shelter and Wayfinding	$115,709	$0	Considered a lower priority overall, especially as an expansion; unsure of impact on transit ridership; unsure of how many bike securements used by transit riders as opposed to general student population
Vride	Public/Private Vanpool Partnership	$289,075	$0	No local match proposed; DTR essentially asked to sponsor the project but is not prepared to do so; needs further review; expansion project

FASTER Transit Redistribution

TRANSIT & INTERMODAL COMMITTEE

JANUARY 16, 2014

MARK IMHOFF, DTR DIRECTOR

FASTER Transit Redistribution

SB 09-108 Funding Advancement for Surface Transportation and Economic Recovery (FASTER)

- $5M/year – Local Transit Projects
- $10M/year – Statewide, Interregional, Regional Transit Projects
- 5 year History
  - FY 2010-2012
  - FY 2013
  - FY 2014 (current fiscal year)

FASTER Transit Redistribution

Project Award Practice

- $5M Local Pool
  - Competitive at the Region Level
  - Formula Based Distribution to Engineering Regions
  - Regions with MPO/TPRs make award recommendations
- $10M Statewide Pool
  - Competitive at a statewide level
- FY 2014/15 cycle
  - Two year cycle to allow better planning
  - FY 2014 project awards – TC approval February 2013
  - FY 2015 "preliminary" awards

FASTER Transit Redistribution

FY 2015 Award Process

- Combined Capital Call-for-Projects
  - FASTER Local & Statewide pools
  - FTA capital programs
  - Comprehensive assessment and programming
- Total capital pool - $18.78M
  - FASTER - $5.0M Local/$6.0M Statewide
    - Excludes $3.0M allocated to IX Bus
  - FTA - $7.78M Capital programs
  - 109 applications/46 transit entities
    - Totaling $50.6M
- FY 2015 FASTER project recommendations
  - Tables in TC packet
  - Honor FY 2015 "preliminary" awards from FY 2014
    - Regions have agreed
  - Projects added through competitive process
- FTA capital awards
  - Finalized when funding becomes available

FASTER Transit Redistribution

Guiding Principles

- Transit Utilization
  - Fund highest priority projects
- Transit Asset Condition – Local Pool
  - Utilize capital inventory (on-going)
  - Focus on vehicle replacement program
- Transit Connectivity – Statewide Pool
  - Interregional Express Bus – annual allocation
  - Encourage locally provided regional service
    - Consider operating assistance
- Streamline distribution process

FASTER Transit Redistribution

Recommendations

- Approve FY 2015 FASTER projects
  - Honor/"grandfather" FY 2015 projects (FY 2014 process)
- Establish guiding principles for future years
  - FY 2016 implementation
  - Emphasize PD 14 Transit Performance Objectives
- Support FY 2016 redistribution development
  - TRAC Sub-Committee participation
  - Completed for TC approval by July 2014

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

DATE: January 3, 2013

TO: Transportation Commission/Transit & Intermodal Committee

FROM: Mark Imhoff, Director, Division of Transit & Rail

SUBJECT: Colorado High Speed Transit: Findings/ Conclusions from the AGS and ICS Studies

Purpose

The purpose of this memo is to give the Transit & Intermodal Committee a status of the Interregional Connectivity Study (ICS) and the I-70 Advanced Guideway System (AGS) Feasibility Study, and a preview of the integration and completion schedule.

Action Requested

This memo is for information only; no action.

Executive Summary

Both studies together form a long term vision for a high speed transit (HST) system in Colorado.

Background

CDOT completed its first State Passenger & Freight Rail Plan in Spring 2012. Two companion studies were undertaken to supplement the passenger transit element of the Plan.

The Interregional Connectivity Study (ICS) received a Federal Railroad Administration (FRA) planning grant to evaluate technologies, alignments and financial/funding options for potential high speed rail along the Front Range from Fort Collins to Pueblo, and the "connectivity" with RTD's FasTracks system in the Denver metro area.

The I-70 Advanced Guideway System (AGS) Feasibility Study is a follow-on element of the I-70 Mountain Corridor Programmatic Environmental Impact Study (PEIS). The AGS evaluates high speed transit options between Eagle County Regional Airport and DIA. Like the front-range ICS, the AGS Feasibility Study also evaluates technologies, alignments, and financial funding options. The study is strongly coordinated with the ICS to provide an integrated statewide answer on high speed transit options.

Together the findings and recommendations of the ICS and AGS will serve as the foundation of the state high speed transit network vision, and will be used to update the State Passenger & Freight Rail Plan.

Details

By 2040, the population between Fort Collins and Pueblo is predicted to grow from 4 million today, to 6 million. In rough scale, that is as much developed land area as exists within Denver's C-470/E-470 beltway today, or about three more metropolitan areas the size of Colorado Springs (2012 Est. Pop: 668,353). High speed transit is one of many possible transportation investments that could be made to serve current and future travel needs of Colorado. In many parts of the world, high speed transit offers a solution to congested highways and congested airports. It can be part of a comprehensive approach to providing a high quality of life by maintaining good air quality; delivering business, recreation, and tourist transportation, and efficiently connecting urban areas.

High speed transit would offer travel options between destinations 20-100 miles apart, at speeds twice that of automobiles or bus systems. By Federal Railroad Administration definitions, high speed inter-city transit technologies are those traveling 90 mph or faster, up to 220 mph.

The ICS confirmed commercially available technologies and engineering techniques make high speed rail a feasible technology along the Front Range. For the I-70 Mountain Corridor, the AGS study considered existing and emerging technologies against a wide range of alignment options. In the Mountain Corridor, high speed rail would require approximately 60% of its alignment in tunnels to effectively respond to curves and hills; magnetic Levitation (maglev) and/or technologies with similar magnetic motors (linear synchronous or linear induction motors) are capable of climbing the I-70 steep grades at high speeds and reducing the need for tunnels by one-third to two-thirds. Fully-electrified double-track/guideway high speed transit, capable of speeds in excess of 150 mph, is estimated to average $75 million per mile on the Front Range I-25 Corridor (rail) and maglev technology on the I-70 Mountain Corridor $105 million per mile.

The high speed transit vision connects Fort Collins on the north, through the Denver metro area via DIA, to Pueblo on the south; and Eagle County Airport on the west to DIA. The 340 mile vision network is estimated at a capital cost of $30.1 Billion (2013 dollars), $198 Million per year to operate, and carry 18.3 Million riders per year in 2035. The most effective phasing of the system would begin along the Front Range.

There are no identified funding sources at this time for any element of the HST vision. Federal funding will be required, as will a new state/local revenue stream. The I-70 Mountain Corridor PEIS required an assessment of AGS financial feasibility by 2025. It is determined that AGS is not financially feasible at this time. If funding streams become available between now and 2025, this determination may change.

As the integration of the ICS and AGS efforts come to a close this winter, a priority HST corridor or project will be identified for federal funding pursuit. A goal is to have the priority corridor "pipeline ready" for further advancement through the federal process over the coming years.

Key Benefits

Updating Colorado's State Freight & Passenger Rail Plan with these findings will keep Colorado eligible for future federal funding should Colorado pursue high speed transit.

Next Steps

- Combine the studies and system integration into a long term high speed transit vision.
- Transportation Commission Workshop in February or March.
- Update the State Freight & Passenger Rail Plan with these findings, and at least once every five years to maintain FRA eligibility.
- Identify a priority corridor or project for further advancement through the federal process, and pursue subsequent, more detailed studies as warranted.
- Request inclusion of the HST vision in the fiscally unconstrained Regional Transportation Plans for NFRMPO, DRCOG, PPACG, PACOG, and the Intermountain TPR.

AGS/ICS Briefing

Findings and Conclusions

January 3, 2014

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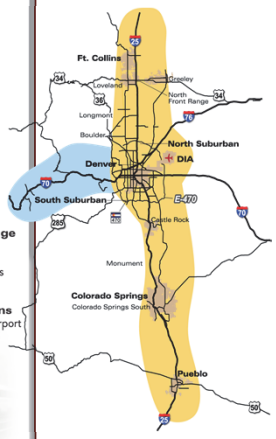
What Are the AGS & ICS Studies?

Purpose:

- The purpose of the AGS & ICS projects are to provide Colorado with a well supported modal option for the State's transportation network that connects communities and destinations for interregional business and tourism travel; builds on and strengthens Colorado's existing transportation infrastructure; supports the State's Vision, as articulated in the 'State Rail Plan'; and *offers statewide social, environmental, and economic benefits that are greater than the capital and operating costs of its implementation.*

Needs:

- Address the mobility demands of future population growth.
- Improve mobility through provision of a travel option.
- Enhance economic development through improved connectivity.
- Improve the State's environmental quality and energy efficiency.
- Provide economic benefits sufficient to receive new funding sources.



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What is High Speed Transit?

Federal Railroad Administration's (FRA) Definition of High Speed Intercity Passenger Rail (HSIPR)

High Speed - Express	High Speed - Regional	Emerging High Speed Rail	Conventional Rail
▪ Frequent, express service ▪ Serves major population centers 200–600 miles apart ▪ Few intermediate stops ▪ Top speed at least 150 mph ▪ Grade-separated, dedicated rights-of way (some exceptions)	▪ Relatively frequent service ▪ Serves major/moderate population centers 100–500 miles apart ▪ Some intermediate stops ▪ Top speed of 110–150 mph ▪ Grade-separated (some dedicated and shared track)	▪ Developing corridors of 100–500 miles ▪ Strong potential for future HSR Regional and/or Express service ▪ Top speed up to 90–110 mph ▪ Primarily shared track	▪ Traditional IPR services of more than 100 miles ▪ One to 12 daily frequencies ▪ Potential for future HSR service ▪ Top speed up to 79 to 90 mph ▪ Generally on shared track

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HST Study Findings

- **Public and community interest /enthusiasm throughout service area**
- **Speed and convenience induce ridership**
  - Faster than driving
  - One-seat ride best/minimal transfers next
- **DIA major origin/destination**
- **RTD FasTracks interface/"Connectivity"**
  - Avoid redundancy
  - Beltway around Denver metro area
  - Transfer stations at FasTracks rail corridors
  - Shared track to CBD/DUS possible (rail, not high speed)

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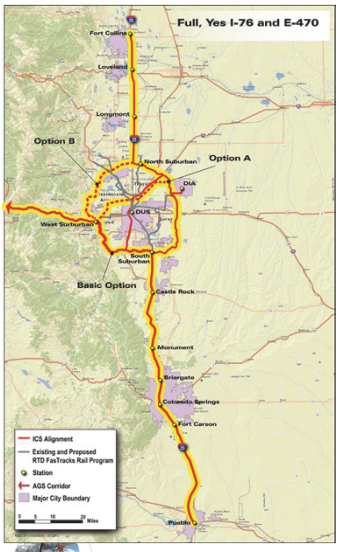
HST Study Findings, continued

- **HSR not compatible with Railroads for shared track**
  - No available RR capacity/extensive single track sections
  - Slow speed & operating constraints
- **Greenfield alignments preferred**
- **Viable Technologies (in commercial operation)**
  - High speed rail (HSR) – steel wheel on steel rail
  - High speed magnetic levitation (maglev)
  - Other emerging linear induction technologies possible over time
- **Capital costs**
  - HSR - $75 Million/mile
  - Maglev - $105 Million/mile
  - Mountain terrain requires 20-60% tunnels
    - Maglev more cost effective
- **AGS not financially feasible at this time**

Overall Conclusions

- **Vision for HST is feasible, long term**
  - Calculated benefits outweigh costs
- **No funding sources identified**
  - Federal funding is a must to implement HST in Colorado
  - Evaluate local match for 16 counties within service area, rather than statewide
  - P3 Concession will require significant federal and state/municipal investment ("local match")
- **Additional agreements and studies needed to further Vision**
  - No funding identified

HST Vision forms the basis…



Scenario Description

- **North:**
  - North Suburban to Fort Collins
- **Metro:**
  - West Suburban to DIA via C-470, I-76 or NWQ
  - North to South Suburban via E-470
- **South:**
  - South Suburban to Pueblo
- **West:**
  - West Suburban to Eagle County Regional Airport

Measure

- **Total Mileage – 340**
- **Capital Cost - ~$30.1 B**
- **OPEX - $198.4 M/yr**
- **Ridership - 18.3 M**
- **Revenue - $344 M**
- **OPEX Ratio - 1.7**

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Next Steps

- **Study completion and integration**
- **TC Workshop in February or March**
- **Identify priority corridor(s) or project**
  - Federal "Pipeline" ready
- **Update State Freight & Passenger Rail Plan**
  - Required for federal funding eligibility
- **Request Inclusion in fiscally-unconstrained Regional Transportation Plans**
  - NFRMPO, DRCOG, PPACG, PACOG, Intermountain TPR – 2040 Plans
  - Required for federal funding eligibility

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