



COLORADO
Department of
Transportation

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DATE: January 20, 2021
TO: Colorado Transportation Commission
FROM: Aaron Willis, Transportation Planner, Division of Transportation Development
SUBJECT: Discussion on Revision to CDOT's Interchange Approval Process

Purpose

To provide an overview for the Transportation Commission on proposed revisions to the Department's interchange approval process and outreach conducted to statewide planning partners.

Action

Informational Update

Background

Earlier this year staff began a process to update and refine the Department's policies and procedures used to approve new interchanges and interchange modifications on the state highway system. While a large part of the proposed revisions are administrative and clarifying in nature, a new Transportation Demand Management (TDM) requirement is proposed. For this reason, the CDOT team has spent several months seeking input on this proposed change.

Planning Partners Conversations

To date, the staff has presented the draft policy to the following planning partners. Last month the TC received a memo summarizing the input we have received from this outreach.

- Staff from all 5 Metropolitan Planning Organizations
- Metro Area Transportation Management Associations/Organizations (TMAs/TMOs)
- The cities of Aurora and Westminster
- Jefferson, El Paso, and Douglas Counties
- North Front Range, Pikes Peak, DRCOG and Pueblo MPO Technical Advisory Committees
- Upper Front Range Transportation Planning Region
- Consultants who are currently working on interchange projects

Overarching Theme of the New TDM Requirement

The new TDM requirement is intended to help preserve the overall functionality and operability of the state highway system and serves as an additional tool to help the Department remain consistent with the Governor's Green House Gas reduction goals. The new TDM section emphasizes the benefits TDM can lend toward maximizing the existing transportation infrastructure and reducing vehicle miles traveled through strategies like increased transit, mobility hubs, ridesharing, walking, biking, and telework to reduce reliance on single-occupant vehicle usage. The revisions to the policy and procedural directive provide an applicant with a TDM scorecard and a target point system based on the type and location of the proposed improvement, in order to develop a project-specific TDM plan that will be included in the Systems Level Study.

Key Provisions in the Current Draft TDM Requirements Section

- TDM requirements apply to new interchange proposals on the interstate and state highway system. TDM strategies also apply to interchange modifications on the interstate system under certain circumstances.
- The TDM requirement does not apply to minor interchange modification proposals
- TDM strategies should result in a 3% or greater ADT reduction in MPO Boundary Areas and a 1% or greater ADT reduction for proposals outside MPO Boundary Areas.
- The applicant may appeal to the Chief Engineer for a waiver or reduction of the required TDM strategies.
- CDOT recognizes that TDM strategies can be challenging to implement in parts of the state with low population density and that are rural in nature. The policy and procedural directive include provisions for rural areas that allow for the implementation of strategies at a corridor level.
- The procedural directive identifies numerous strategies that will help an applicant achieve the stated goal for the proposed interchange improvement.
- The agreed-upon TDM strategies will be included in the final interchange approval IGA.

Next Steps

Staff will take the month of February to perform additional outreach, follow-up, and discussions with planning partners and will return to the Commission in March for potential action.

Attachments

PowerPoint Presentation



COLORADO
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1601 Interchange Approval Process

Colorado Transportation Commission

January 2021

Aaron Willis, Division of Transportation Development



What is Policy Directive (PD) 1601?

- The 1601 policy and procedural directive outline the guiding principles and steps necessary to approve a new interchange or interchange modification on the interstate, freeway, or state highway system.
- Applies to CDOT and Local applicants – applicants are responsible for interchange maintenance in perpetuity
- Each proposal is different based on the complexity of the project, thus a need for a consistent process



Policy Directive (PD) 1601 Purpose

- Preserve the state highway system's Level of Service (LOS) and operations
- Ensure fair and consistent consideration of proposals for new & existing interchanges
- Have sufficient information for CDOT to make an informed decision
- Minimize duplicative analytical, regulatory, and procedural requirements



Interchange Improvement Types

- Type 1 – New Interchanges on the Interstate and Freeway system
 - These are approved by the Transportation Commission
- Type 2 – New interchanges on the remaining state highway system and modifications to interchanges
 - These are approved by the Chief Engineer
- Type 2a – Minor modifications to interchanges, which do not require a system level analysis
 - These can be delegated by the Chief Engineer for approval to the Regional Transportation Director



1601 Process Overview Steps

1. Notification by applicant
2. Pre-application meeting
3. Initial intergovernmental agreement (IGA)
4. Prepare a System Level Study (SLS)
5. CDOT Approval of SLS
6. Approval by MPO/TPR Board (consistent with constrained RTP and TIP)
7. Conceptual design and National Environmental Policy Act (NEPA) approval process
8. Final IGA



Key Policy Changes

Key Revisions	Department Implications
Updated FHWA Interstate Access Request	Staff and applicant workload and cost benefit
Project Milestones	Additional clarity
IGA Requirements	Streamlined requirement for staff
Access Management Clarity	Strengthens the policy and addresses long-term system functionality
Transportation Demand Management (TDM) Requirement	Transportation Demand Management / Traffic Reduction strategies are required for new Type 1 and Type 2 proposals



Outreach to CDOT Planning Partners

- Staff at all 5 Metropolitan Planning Organizations
- Metro Area Transportation Management Associations/Organizations
- The cities of Aurora and Westminster
- Jefferson, El Paso, and Douglas Counties
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Why a TDM Requirement?

- Department policies can help to preserve new infrastructure investment
- Policies can help make new infrastructure ready for TDM strategies
- CDOT should seek every opportunity to promote multimodal options
- Ensure CDOT policies are consistent with the Governor's GHG emissions reduction and help meet Climate Action Plan goals
- VMT reduction through the implementation of alternative modes of travel



Colorado Daily Commuter Participation 2015

Means of Getting to Work	Participants
Carpooling (2 to 4 Occupants)	233,000
Telecommuting/Working from Home	172,000
Transit (Local/Regional)	82,400
Walking	76,100
Bicycling	34,200
Vanpooling	9,700
Intercity Transit (long-distance)	300
Park-and-Ride Lots	Including above



TDM Success Stories

- RTD's Alameda Station Pilot Project completed in August 2014, specifically designed for residents who want to use transit.
- Private shuttles carry 1,300 riders daily to Cripple Creek and at least 400 riders daily to Black Hawk/Central City.
- The Boulder Junction TOD development will create up to 300 residential units, with perhaps another 600 persons living near a light rail station.
- The TDM mitigation plan for the US 36 corridor Express Lanes project exceeded expectations, reducing vehicle miles traveled by an estimated 12,500 per day.



TDM Section Progress Key Elements

TDM Section Overview:

- Preserve the overall functionality and operability of the state highway system
- Applicant will use a TDM scorecard to hit target goals and develop a TDM project specific plan to include in the SLS

TDM requirements apply to:

- Type 1: New interchange on the interstate
- Type 2: New interchange on the rest of the system
 - Requirements do not apply to Type 2a interchange modifications
- TDM commitments will be captured in the final IGA



- TDM strategies should result in:
 - a 3% or greater ADT reduction in MPO Areas
 - a 1% or greater ADT reduction outside MPO Areas
- The trip reduction goal applies to traffic volumes for the new interchange ramps as identified in the systems level study.
- The reduction threshold goal is calculated from the opening day of the new facility, or 5-years if the TDM strategies are implemented on a phased schedule



TDM Exemption

- It is the discretion of the Chief Engineer as to if TDM strategies are required for interchange applications based on factors such as changes in land use and future traffic volumes.
- That determination will be made based on the following factors:
 - Freight / Intermodal Facility
 - Existing TDM sufficient to address future demand
 - Rural areas considerations



TDM Improvement Scoring Range

Interchange Improvement Type	MPO Boundary Area / Rural Area	Scoring Range
Type 1 (New Interchange / Interstate System)	MPO Boundary Area	100-80
Type 1 (New Interchange / Interstate System)	Rural Area	80-60
Type 2 (New Interchange / State Highway System)	MPO Boundary Area	80-50
Type 2 (New Interchange / State Highway System)	Rural Area	60-40
Type 2 Modification (Interstate System)	MPO Boundary Area	70-50



TDM Strategy Scorecard

TDM Strategies	Points	Time Commitment of Strategy
Multimodal Hubs	80	5 Years
Shuttles, Feeders, and Paratransit (public or privately operated)	80	5 Years
Vanpool Programs	80	5 Years
Mixed-use Development	80	Maintenance in perpetuity
Intercity Transit	80	5 Years
Comprehensive ITS Solution	80	Maintenance in perpetuity



TDM Strategy Scorecard (60-50 Points)

Parking Management	60	10 Years
Bus Only Lanes, Queue Jumps, Bus Slip Ramps	60	Maintenance in perpetuity
Local Transit	60	5 Years
Park-and-Ride Lots	50	Maintenance in perpetuity
Creation of a TMA or TMO or financial participation in an existing TMO or TMA that would implement the TDM strategies	50	3-5 Years



TDM Strategy Scorecard (50-40 Points)

Bicycle and Pedestrian Facilities	40	Maintenance in perpetuity
Regional Ridesharing Programs - including carpool matching)	40	5 Years
Car-sharing	40	5 Years
Micro-Mobility Sharing Programs - including bike-sharing, scooter-sharing, and E-bikes	40	3 Years
Transit Service Upgrades	40	Maintenance in perpetuity



Project Specific TDM Plan

- The applicant is expected to put forth a good-faith effort in developing a project-specific TDM plan that includes the following elements:
 - Explanation of the strategies
 - How the strategies will function within the context of the proposed new interchange improvement
 - Implementation schedule
 - Ensure improvements do not detract or serve as a replacement from existing TDM strategies



Project Specific TDM Plan (2)

- Analysis of how the proposed TDM strategies will achieve the stated goal. This analysis can be performed through traffic modeling or a reasonable estimate developed by a traffic engineer.
- An estimated cost for the proposed TDM strategies
- Marketing or promotion strategies for the proposed TDM improvements
- Discussion on TDM strategies during construction if appropriate
- Identification of responsible parties and partner organizations for TDM implementation and include any agreements in the final IGA
- Project evaluation after one year



Results from Planning Partner Discussions

Planning Partner Comments	CDOT Response
Apply TDM requirements to interchange modifications on the interstate system in MPO boundary areas.	The current draft broadens the TDM requirement to include interchange modifications.
Consider traffic reduction at a larger scale that could adjacent or parallel facilities or at a corridor level.	Staff has addressed this for rural areas in certain circumstances and added clarity to the list of strategies that consider adjacent facilities
Provide additional clarity for TDM reductions or exemptions	Wavier/reduction for TDM requirements if interchange serves a freight transfer or intermodal facility Sufficient functioning TDM strategies already in place able to reduce future traffic at the interchange location Rural considerations



Results from Planning Partner Discussions

Planning Partner Comments	CDOT Response
<p>Rural areas are both inside and outside MPO boundary areas where TDM strategies are more difficult to implement due to low population densities.</p>	<p>Staff has developed a rural area considerations section that provides alternatives for rural area interchange proposals</p>
<p>Add time durations for TDM strategies.</p>	<p>Time commitment durations have been added to the TDM strategy table</p>



Questions?