Appendix E
Stakeholder Meeting Materials

COLORADO HIGHWAY 71
(Limon north to Colorado/Nebraska state line)
TRUCK FREIGHT DIVERSION FEASIBILITY STUDY

PREPARED FOR:

COLORADO
Department of Transportation

CDOT Region 4
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PREPARED BY:

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SH 71 – Truck Freight Diversion Feasibility Study

Stakeholder Meeting Log

DATE	MEETING
10-03-2017	SH 71 Stakeholder Meeting
10-20-2017	Pro15 Meeting
11-29-2017	Department of Agriculture
11-30-2017	Economic Development Stakeholders Meeting
12-07-2017	UFR TPR Meeting
12-13-2017	Colorado Motor Carriers Association (CMCA)
01-04-2018	CMCA
01-08-2018	Eastern TPR Meeting
01-23-2018	CDOT Freight Advisory Council
02-15-2018	CMCA Small Group Meeting
01-24-2019	Eastern TPR Meeting
04-08-2019	Eastern TPR Meeting
05-16-2019	Heartland Express

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SH 71 – Truck Freight Diversion Feasibility Study

(Super-2 Design, Limon to Nebraska)

Stakeholder Kick-off

October 3, 2017

1. Introductions
    a. Heather Paddock, CDOT
    b. Rich Christy, CDOT
    c. Eric Salemi, CDOT
    d. Travis Miller, CDOT
    e. Jeff Dollerschell, CDOT
    f. Jeff Vickers, CDOT
    g. Johnny Olsen, CDOT
    h. Kathy Gilliland, CDOT
    i. Karen Schneiders, CDOT
    j. Joe Kiley, Ports to Plains
    k. Cathy Shull, Pro 15
    l. Monte Torres, Brush!
    m. Melody Christensen – Brush! Chamber of Commerce
    n. Jason Wallis, CDOT
    o. Kipp Parker, Veris Environmental in Limon
    p. Gary Beedy, ETPR
    q. Travis Taylor, CSU Extension
    r. Dave Stone, Limon
    s. Jim Flesher -Weld County
    t. Myron Hora – WSP
    u. Randy Grauberger – WSP
    v. Nick Amrhein – WSP
    w. Lisa Nguyen – WSP
    x. Ryan Mulligan – WSP
    y. Jamie Grim - WSP
    z. Jon Yamamoto - Reporter from Brush! News/Fort Morgan Times
2. Safety Moment
    a. Don't text and drive
    b. Watch for others who may be texting and driving
3. Project Concept - Scope and Overview
    a. Purpose and Objectives
        i. SH 71 is already a freight corridor- this study does not need to reaffirm that
        ii. This study will build on some of the findings in the Eastern mobility study
        iii. Analyze the freight movement that wasn't looked at in the Eastern Mobility Study

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iv. Identify what (if anything) can be done to incentivize truckers to use SH 71
v. Identify types of needed improvements
    1. Is it shoulders? is it passing lanes? is it pull outs?
    2. Looking at operational factors, i.e. plowing regulations, etc.
vi. Are Incremental improvements appropriate?
vii. Focus on Economic benefits to set the corridor up for future grant opportunities

General Discussion:

Monte Torres: when you say that it's the last section of the Ports to Plains Alliance corridors left to improve - is there any money allocated? Is there a timeline to do this? Is this a shelf plan?

Heather Paddock: it's a feasibility study-we don't yet know what to ask for when it comes to funding. This will help us prioritize when we look for grant funding

Joe Kiley- one of the difficulties has been because there is no plan for SH 71 so when money came along there were not projects we could do. With the Federal potential of another Transportation Bill in 2018, it may bring more funding and having projects identified helps us compete

Johnny Olson- The big question is how much traffic can we divert out of downtown Denver from I-25 and I-70? How much freight can be diverted if we are planning for a 4-lane or super 2? What does the corridor look like, we don't know, we need to plan for it. We see it in segments. What are our highest safety concerns? There is nothing on SH 71 that is shovel ready.

Kathy Gilliland- "The plan is what it's all about so that it can be incorporated into the statewide plan, this plan will give us a case to get it started. Economic opportunity is key".

Johnny Olson- history lesson about why the highways were built- military. Mobility and connectivity came out of that. Huge safety improvements. Must make it about freight so we can go after money designated for freight. We already know safety is an issue. That should help define the freight aspect.

Nick Amrhein- as important as freight is to those grants, there are opportunities here to use innovative approaches to solving safety problems. Every cylinder needs to be firing on these grants. Safety- from an average standpoint, taking a vehicle off an urban highway to a rural highway, your accident rate goes up, so for this study if we're taking them off I-25 and I-70 and putting them on rural, we need to argue that safety improves.

Kathy Gilliland- CDOT has a statewide model they've been working on internally- we would need it to show improvement to SH 71- where is the model?

Heather Paddock- we're working on it; within 1 month of existing conditions being finished.

Joe Kiley- big picture- I don't want the study limited to a Super-2. Look at a 4-lane divided. Don't limit it

Johnny Olson- when you design for a Super-2 you are designing for a 4-lane highway eventually.

Myron Hora- The reason there isn't a sample Super - 2 cross section in today's presentation is that we don't want to come in with a restricted vision or preconceived solution - we want to look at everything in this study.

Gary Beedy- How will autonomous vehicles use SH 71; will they stay on the main highways because of the safety aspects and liability. Where does RoadX fit in? Will you be modeling the technology?

Jon Yamamoto (the reporter)- where is highway state patrol- ACTION: Add to the stakeholders list

Project Schedule

4. Work Flow
    a. Existing Conditions
    b. Identify Improvements
    c. Modeling and estimates
        i. Modeling a large enough area to capture decision points for drivers – take I-25 or SH 71
        ii. Nick Amrhein – what we're doing is fright analysis is based on the states and then urban areas. Mary Lupa (WSP) geocoded the info and boiled it down to counties. The model can tell you by commodity what is happening with commodities, which is converted back into truck / traffic volumes.
        iii. Iowa freight study – Includes information on fright, economic benefit, travel time, etc. Mary Lupa is familiar with this
            1. ACTION: Add Iowa Freight Study to other studies/references for project

Kathy Gilliland: Will trucks help in gathering data for this project?

Myron Hora: Team will work with Greg Fulton of CMCA to verify trucking information

Jason Wallis: CDOT uses TransSoft; Could this possibly replace the FAF test data? It would link out with other data sets.

Nick: Not sure about TransSoft; will check with Mary Lupa

ACTION: Follow-up with Mary Lupa on TransSoft and her model's compatibility with existing CDOT data

            2. We have permission to use the statewide model per Johnny Olson
5. Implementation Plan

Joe Kiley- how does the corridor connect in Limon with the Ports to Plains corridor and how do you get through Brush with the railroads?

            1. ACTION: CSU did a study for alternatives on SH 71- get from Joe
6. Opportunities for Involvement
    a. Stakeholder slide
    b. Establish a TAG
        i. We're looking for publics works, folks with technical experience to guide the process
7. Discussion on Potential Improvements
    a. Discuss Areas of Concern and challenges
        i. Roadway Improvements

Monty Torres- reach out to communities to see what the towns are looking at that might impact the corridor- i.e. 34 in Brush- floodplain work. SH 71 north of Brush- the city is improving an old feed lot- CDOT controls access - where do they a deceleration lane. Value talking to local communities about their projects and upcoming CDOT projects so money isn't wasted

Gary Beedy- consider oversize, over weight vehicles on the corridor.

ii. Truck Parking?
    1. Monty Torres- parking for truck drivers is so important – heard there are federal grants for pull offs?
    2. Where is a good place for a pullover?
        a. Truck parking study?
        b. Last Chance? Logical choice?
            i. No water
            ii. Maybe Woodrow?
            iii. Need rest areas, recently closed rest areas include Deer Trail, Bennet, and Lady Bird Park
    3. What about energy traffic – short haul?
    4. Truck Fleet Services are needed, i.e., flat repair
iii. Truck Amenities – Wi-Fi? Are there plans in place for any city-wide Wi-Fi projects underway? None are known
iv. Cell service – lots of dead spots on SH 71- even lose radio service
v. Need an interchange connecting I-70 and SH71

Gary Beedy- weight station can be moved to make interchange work

    1. CSU alternatives looked at that
vi. Passing and Climbing Lanes
vii. Typical sections – how to build the road - thickness
    1. Current design on 287 isn't ideal – passing lanes aren't long enough
    2. Generally- would like to see design around communities (Brush!, Limon). Would prefer to widen roads upfront, if needed. Possibly within 3 miles each way of towns
viii. Safety Improvements
    1. Concerns regarding blowing snow and plowing
    2. ACTION: touch base with maintenance personnel about snow and ice
ix. Through Brush!
    1. Straighten SH 71 to connect with CR 29
    2. Exits are too close for another interchange

8. Next Steps
    a. Johnny- communities please let us know about access requests- they could impact this study
    b. TAC:
        i. Volunteers
            1. Monte Torres
            2. Joe Kiley

3. Kathy Gilliland
4. Jim Flesher
5. Cathy Shull

ii. Let us know if there is anyone else
iii. ACTION: WSP to contact agencies for TAG representation

c. Additional stakeholder meetings
   i. Colorado Motor Carriers Association
   ii. Economic Development
   iii. TPRs
   iv. Who in Ag?
      1. Wheat growers
      2. Corn growers
      3. JBS
      4. ACTION: Add Colorado Department of Agriculture
   v. Clean Harbor
   vi. Floodplain coordination
      1. Need a resiliency contact?
      2. Pawnee, Limon, etc.

State Highway 71 Truck Freight Diversion Feasibility Study

Project Team

CDOT	
Eric Salemi	Project Manager
Rich Christy	Resident Engineer
Heather Paddock	Program Engineer
Travis Miller	Resident Engineer
Jeff Vickers	Resident Engineer

WSP	
Myron Hora	Project Manager
Randy Grauberger	Deputy Project Manager/Freight Specialist
Mary Lupa	Travel Demand Modeling
Nick Amrhein	Economic Analysis
Andy Garton	Cost Estimates
Lisa Nguyen	Traffic Analysis
Shane Roberts	GIS Mapping
Jamie Grim	Existing Conditions and Report

SH 71 Truck Freight Diversion Feasibility Study

Purpose and Objectives

- Analyze freight movement and the impact of SH 71 improvements on truck traffic
- Identify the types and cost of improvements to SH 71 that will draw additional truck traffic
- Determine the potential economic benefit to the trucking industry and local economies
- Develop funding options and implementation scenarios

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SH 71 Truck Freight Diversion Feasibility Study

State Highway 71

- High priority designation as part of the Heartland Expressway Corridor
- Part of the Ports to Plains Alliance (P2P)
- Surrounding states have made significant improvements to their segments
- **SH 71 is the only segment of the P2P corridor in Colorado that remains unimproved**

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SH 71 Truck Freight Diversion Feasibility Study

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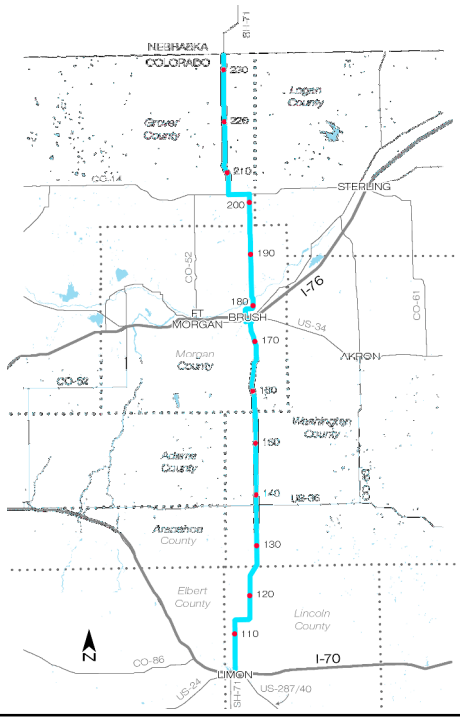

Project Limits

- SH 71 from Milepost 102 to Milepost 232
- Limon, CO to the Colorado/Nebraska state line
- Regional connections for freight traffic
  - *Northern Texas to Nebraska/Wyoming*

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SH 71 Truck Freight Diversion Feasibility Study

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Goals of the Analysis

- Identify the types and cost of improvements to SH 71 that will draw additional truck traffic,
- Determine the potential economic benefit to the trucking industry and local economies, and
- Develop funding options and implementation scenarios.

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SH 71 Truck Freight Diversion Feasibility Study

Project Schedule

TASK	2017						2018					
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Project Mgmt				X					X			
Existing Conditions												
Modeling & Improvements Evaluation												
Implementation Plan												
Final Report												

X = Stakeholder Meeting

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SH 71 Truck Freight Diversion Feasibility Study

General Project Scope

- Existing Conditions
  - *Document current truck freight movement*
  - *Document existing roadway conditions*
- Identify Improvements
  - *Develop potential improvements*
  - *Model and analyze proposed improvements*
  - *Develop cost estimates*
- Final report with implementation plan
  - *Provide economic impact analysis*
  - *Prioritize improvements*

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SH 71 Truck Freight Diversion Feasibility Study

Stakeholder Involvement

Group	Meeting Requirements
Technical Advisory Group (TAG)	4 meetings
Corridor General Stakeholders	2 corridor-wide meetings
ETPR & UFR TPR	4 meetings (2 each)

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SH 71 Truck Freight Diversion Feasibility Study

Existing Conditions

- Environmental resources
- Vehicle counts along P2P corridor in Colorado
- Truck AADT
- Travel speeds
- Horizontal and vertical challenges
- Crash data / Level of Safety Service (LOSS)
- Bridges and other major structures
- Truck amenities
  - *Truck stops, restaurants, parking, WiFi service, rest areas*
- Railroads
- Weigh Stations

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SH 71 Truck Freight Diversion Feasibility Study

Proposed Improvements Analysis and Evaluation

- Model up to six scenarios of improvement packages, with a mixture of improvements to help differentiate their impact
- Use the model to predict potential freight increases based on proposed improvements
- Determine potential crash reductions on SH 71 and I-25 if improvements are implemented

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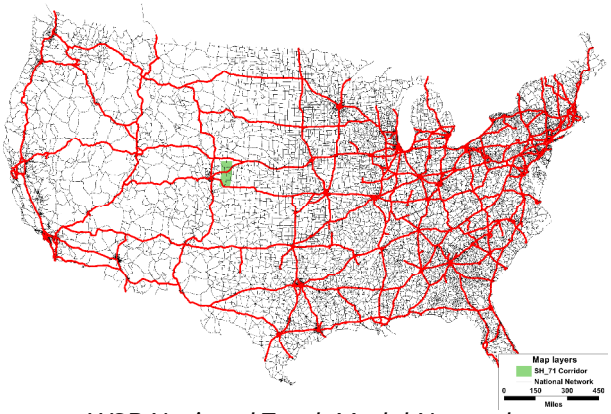
SH 71 Truck Freight Diversion Feasibility Study

Travel Demand Modeling

- Establish models to capture future growth of vehicles along the corridor
- Long term analysis through **2040**
- Additional analysis will coincide with CDOT's capital improvement plan
- Prepare current Truck Freight Movement Plan



WSP National Truck Model Network
Includes all Interstates and State Highways

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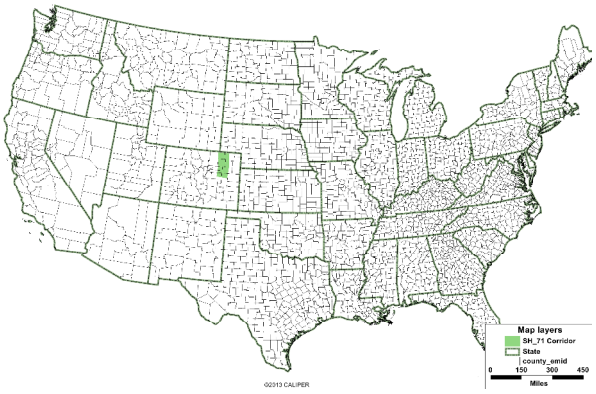
SH 71 Truck Freight Diversion Feasibility Study

WSP National Truck Model Zones

- Covers the Lower 48 states + Alaska
- Provides base 2014 and 2040 truck demand
- Can be fitted to a smaller sub-county zone system.
- Covers 43 commodities
- Based on Fright Analysis Framework (FAF), version 4.2



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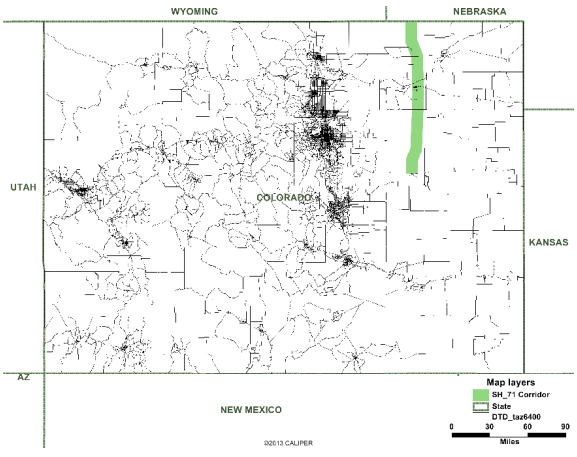
SH 71 Truck Freight Diversion Feasibility Study

Colorado Statewide Model (under development)

- Covers all of Colorado
- 6440 TAZs
- Integrates all the MPO TAZ level data in Colorado + rural areas
- Being developed by CDOT



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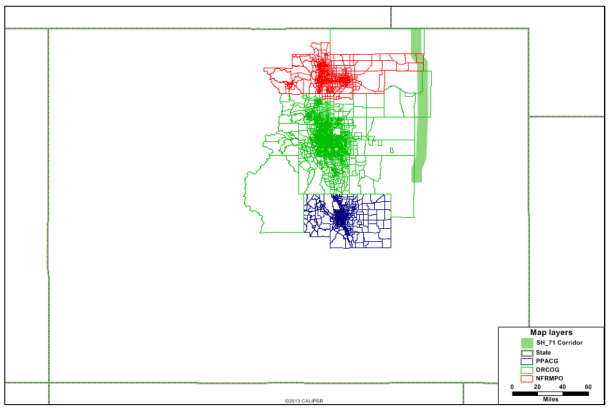
SH 71 Truck Freight Diversion Feasibility Study

Three Key MPO TAZ System Extents

- North Front Range MPO – (red) – 1032 TAZ
- DRCOG – (green) – 2815 TAZ Compass Model
- Pikes Peak Area Council of Governments – (blue) 786 TAZ



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SH 71 Truck Freight Diversion Feasibility Study

Develop Implementation plan

- Develop cost estimates for top 10 rated improvement packages
- Develop rating criteria for potential improvements
- Prepare funding options and scenarios

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SH 71 Truck Freight Diversion Feasibility Study

Opportunities for Improvements

- Passing Lanes
- Climbing Lanes
- Safety Improvements

- Roadway Improvements
  - *Shoulders*
  - *Geometry*
  - *Sight Distance*

Where are areas of concern?

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SH 71 Truck Freight Diversion Feasibility Study

Next Steps

- Establish TAC
- Host Additional Stakeholder Meetings
- Complete Existing Conditions
- Finish Initial Modeling
  - *Traffic Counts*
  - *Validation*
- Begin Improvement Identification
  - *Analysis*
  - *Alternatives Packages*

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