

- 1. Determining the Reason for the PEL Study
- 2. Purpose & Need
- **3.**Alternatives to be Evaluated during the PEL Study
- 4. PEL Document





Project: State Highway (CO) 52 PEL/ACP Study (21656)

To: Brian Dobling - Federal Highway Administration, Project Manager

From: Chad Hall, PE – CDOT R4, Project Manager

Date: May 13, 2020

Subject: PEL Study for State Highway (CO) 52 Corridor between CO 119 and CO 79 – FHWA

Check-In #1

CDOT, in agreement with the Federal Highway Administration (FHWA), has determined that a Planning and Environmental Linkages (PEL) Study and Access Control Plan (ACP) is the correct study approach for the State Highway (CO) 52 corridor between CO 119 north of Boulder in Boulder County to CO 79 east of Hudson in Weld County. The PEL/ACP provides a preliminary step to a National Environmental Protect Act (NEPA) review of specific transportation improvement projects that will be developed during the PEL/ACP process. The PEL documentation includes a FHWA PEL Questionnaire which may be used during NEPA environmental permitting and approval.

On July 23, 2019, CDOT and FHWA held a pre-scoping meeting to determine the appropriate approach for the CO 52 corridor that would identify a vision to inform alternative transportation improvement projects. Participants of the meeting concluded that a PEL/ACP is an appropriate method to study the CO 52 corridor since rapid expansion along the corridor community is anticipated. As such, the PEL/ACP will fulfill a need to understand future demand and develop a list of transportation improvement alternatives.

CDOT determined the scope of work for the PEL Study should include the development of purpose and need which will provide a basis for future NEPA work. The report should also summarize research and define the existing and future transportation systems as well as a comprehensive environmental evaluation. The study will also include a range of feasible alternatives. The PEL Study will encourage communication among the local agencies along the corridor with a defined goal and vision for CO 52.

Should you have any additional questions please do not hesitate to reach out through email, chad.hall@state.co.us or 970-350-2227.





CDOT R4 10601 W 10th Street Greeley, CO 80634

October 30, 2020

Troy Halouska CDOT Environmental Programs Branch 2829 W Howard Place Denver CO, 80204

Subject: CO 52 Planning and Environmental Linkages (PEL) Study - Final Purpose and Need Memo

Dear Mr. Halouska:

The Colorado Department of Transportation (CDOT) has revised the Purpose and Need Memo to address FHWA comments for CO 52 PEL Study (CO 119 to CO 79). Please submit to Stephanie Gibson, Environmental Program Manager and Brian Dobling, FHWA Area Engineering, as acknowledgement and completion of this second FHWA Coordination Point as a part of the Planning and Environmental Linkages process.

Should you have any additional questions or comments please do not hesitate to reach out through email, chad.hall@state.co.us or 970-350-2227.

Sincerely.

Chad Hall

Project Manager

Attachment:

CO 52 PEL Final Purpose and Need Memo





Project: CO 52 Planning and Environmental Linkages Study (PEL) / Access Control Plan (ACP)

To: Brian Dobling, FHWA; Stephanie Gibson, FHWA

From: Chad Hall, CDOT R4; Troy Halouska, CDOT HQ

Date: October 28, 2020

Subject: CO 52 PEL Purpose and Need Memo

CDOT initiated this PEL Study to identify and assess potential transportation solutions along the CO 52 corridor in Weld and Boulder Counties. The Purpose and Need statement was developed in coordination with stakeholders, including the state and local jurisdictions located along the corridor and those represented in the CO 52 Coalition

PURPOSE OF TRANSPORTATION IMPROVEMENTS

The purpose of the recommended transportation improvements is to increase safety, accommodate increased travel and freight demand, and support multi-modal connections.

NEED FOR TRANSPORTATION IMPROVEMENTS

This section summarizes the transportation needs for the CO 52 corridor with a more detailed description that supports of each of the needs from the Existing Conditions Report. In summary, transportation improvements are needed to:

- Increase Safety Increased highway access from continued development, high percentages of truck traffic, poor pedestrian and bicycle facilities, and geometric issues have resulted in safety concerns along the corridor.
- Accommodate increased travel and freight demand Traffic congestion from additional commuter and freight traffic has decreased travel time reliability. Increased corridor use requires roadway improvements to accommodate the movement of people, goods, and services.
- Support multimodal connections Stakeholder input and prior planning efforts identified the need to improve north-south pedestrian mobility and support enhanced parallel connectivity.

INCREASE SAFETY

The need for corridor improvements to support the increases in development has resulted in safety concerns at intersections and other locations along the CO 52 corridor.

Crash Data

A review of CDOT's statewide crash history between July 1, 2014 to June 30, 2019 indicates that 1,603 crashes were reported on CO 52 in the study corridor. Of the total crashes, 1,095 were property damage only (PDO), 495 resulted in injuries, and 13 crashes resulted in 15 fatalities (



Figure 1). Rear-end crashes accounted for 50 percent of all crashes, primarily occurring near intersections and urban areas with concentrated access points. Overall, the frequency and severity of crashes at intersection locations were about average when compared to similar facilities. The next most common crash types were broadside and approach turn at 13 percent and 11 percent, respectively. These crashes were focused at intersections, both signalized and stop-controlled side street approaches, where gaps in traffic are less frequent for motorists attempting to turn onto or cross CO 52. Of the total crashes, 69 percent were classified as intersection or intersection-related crashes. Most crashes occurred in the western half of the corridor and tend to be clustered near major intersections and adjacent development. As development continues, there is concern that crashes will continue to rise near major intersections and adjacent to developments.

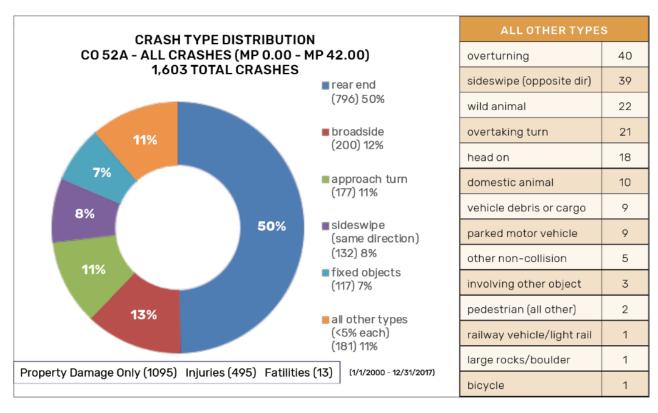


Figure 1 CO 52 Crash Distribution Breakdown

CDOT's Safety Performance Function (SPF) analysis procedure revealed 17 intersections that exhibited high crash frequency and have a high potential for crash reduction. Two intersections were rated with a level of service safety (LOSS) III but were the location of a fatal crash occurrence and could be considered at an equal priority level for improvement recommendations as intersections with a LOSS IV (Table 1).



Table 1 Intersections with High Potential for Crash Reduction

W.B.		LEGS		NUMBER OF CRASHES					
MP	MP DESCRIPTION		SIGNAL	PD0 ¹	INJURY	FATAL	TOTAL	LOSS TOTAL	LOSS SEVERE
4.67	US 287	4	Yes	47	59	1	107	Ш	IV
8.17	WCR 3	3	No	12	3	0	15	IV	Ш
10.39	Puritan Way	3	No	28	7	0	35	IV	IV
10.95	West Frontage Road (I-25)	4	Yes	26	17	0	43	IV	IV
11.08	SB I-25 Ramps	4	Yes	28	6	0	34	IV	II
11.21	NB I-25 Ramps	4	Yes	99	23	0	122	IV	IV
11.45	East Frontage Road (I-25)	4	Yes	79	29	0	108	IV	IV
12.81	Flying Circle Boulevard	3	Yes	20	11	0	31	IV	IV
13.19	Colorado Ave (WCR 13)	4	Yes	40	15	1	56	Ш	Ш
13.45	Cherry Street	3	No	5	2	1	8	Ш	III
13.64	Forest Street	3	No	10	2	0	12	IV	Ш
13.9	Mac Davidson Drive	3	No	3	3	0	6	IV	IV
16.42	WCR 19	4	No	20	5	0	25	IV	IV
25.46	WCR 37	4	No	4	7	1	12	IV	IV
27.46	WCR 41	4	No	5	6	3	14	IV	IV
29.07	West Frontage Road (I-76)	4	No	11	1	0	12	IV	II
36.92	WCR 59	4	No	3	2	0	5	IV	III
37.92	WCR 61	4	No	3	1	0	4	IV	IV
41.94	CO 79 (WCR 69)	4	No	4	0	0	4	IV	II

Although non-intersection crashes are less prevalent (31 percent of total crashes), three head-on collisions and one fatality occurred near the reverse curves segment situated in the vicinity of WCR 17 (MP 15.50 and MP 15.70). Field observations also identified two non-standard intersections on the reverse curves (MP 15.00 and MP15.65).

Truck Freight

The presence of truck freight varies along the corridor. In the Boulder County portion of the corridor, the percentage of truck traffic varies from 2.8 percent near CO 119 to 5 percent at County Line Road. A large increase in truck traffic occurs along the Weld County portion of the corridor from west to east. Truck traffic accounts for 6.5 percent of traffic at I-25 and increases to 19 percent in the final section nearing CO 79. In addition to truck freight, CO 52 is designated as a hazardous materials and oversize vehicle route from CO 119 to CO 79. The corridor provides an east-west freight route for the northern Denver metropolitan area that has relatively few horizontal and vertical clearance issues. Among the types of oversized cargo are wind turbine blades from the Windsor and Greeley area.

Due to the corridor's crucial role in moving freight, CO 52 improvements must ensure that freight mobility is maintained in a safe and efficient manner. Intersections, turning paths, lane widths, horizontal and vertical clearances, and shoulders should be designed to accommodate the frequent movement of semi-tractor trailer trucks and oversized loads. Stretches of the corridor with higher truck traffic can significantly increase travel time and bottleneck situations which can lead to safety concerns and impact the travel time reliability of the corridor.



Geometric Issues

Geometric issues result in a significant safety issue along CO 52. Spot deficiencies were identified throughout the corridor where headwalls, narrow bridges, or irrigation features are located directly adjacent to the roadway or within the clear zone. Ditches and trees were observed encroaching on the clear zone along corridor stretches east of Fort Lupton. These geometric deficiencies increase the risk and severity of potential crash occurrences.

Poor pavement conditions were observed from east of I-25 through Dacono to WCR 19 and from east of US 85 through Fort Lupton to WCR 29 ½. Shoulder widths are inconsistent along the corridor, ranging from 2- and 10-feet throughout most of the corridor and no shoulders east of Hudson. Improved pavement conditions and consistent shoulder widths are necessary should a motorist need to take evasive action, recover control of their vehicle, or pull a disabled vehicle out of the path of traffic.

Safety concerns occur at locations along the corridor where vertical curves do not meet design criteria (MP 21.5, WCR 43, MP 32.15, WCR 53, and WCR 55). Vertical sight issues can increase the risk and severity of crashes due to lowered sight distances decreasing reaction times and ability to safely evade obstacles. Noncompliant grades can also cause issues with safely braking a vehicle or with rider comfort.

There are 51 bridge structures along the project corridor. Major structures account for 22 of the identified structures. Results of a structures field visit identified an absence of guardrail at several major and minor structures along the corridor. The presence of guardrail helps cars to maintain travel along the roadway prism, as well as prevent major accidents where vehicles leave the roadway prism along major structures (span length of 20 feet or greater) and minor structures (span length between 4 feet and 20 feet).

Bicycle and Pedestrian Facilities

High traffic volumes and high travel speeds along CO 52, paired with a lack of bicycle and pedestrian facilities along the corridor, create safety concerns for bicyclists and pedestrians traveling along and across CO 52. There are currently no designated bicycle routes along CO 52; however, shoulders along much of the western section from CO 119 to US 85 are 4-feet or greater. The shoulders provide some physical infrastructure for east-west bicycle connectivity between CO 119 and Fort Lupton, but high vehicle travel speeds result in a level of traffic stress (LTS) of 4 (Figure 2). In addition, gaps in shoulders at major intersections (95th St, US 287, I-25, and US 85) make it challenging for bicycle crossings. Shoulders east of Fort Lupton to CO 79 vary from less than 2-feet to not present. Bicyclists are forced to mix with vehicular traffic in these sections, further increasing difficulty and discomfort.



Figure 2 Level of Traffic Stress (LTS) Analysis





Crossing CO 52 is a significant challenge for bicyclists and pedestrians. Of 80 intersections, only 20 are signalized intersections and only two existing multi-use trails cross CO 52; the LOBO Trail crosses at an underpass just west of 79th St, and the Firestone/Legacy/Old Railroad Trail crosses CO 52 at-grade at Colorado Boulevard.

ACCOMMODATE INCREASED TRAVEL AND FREIGHT DEMAND

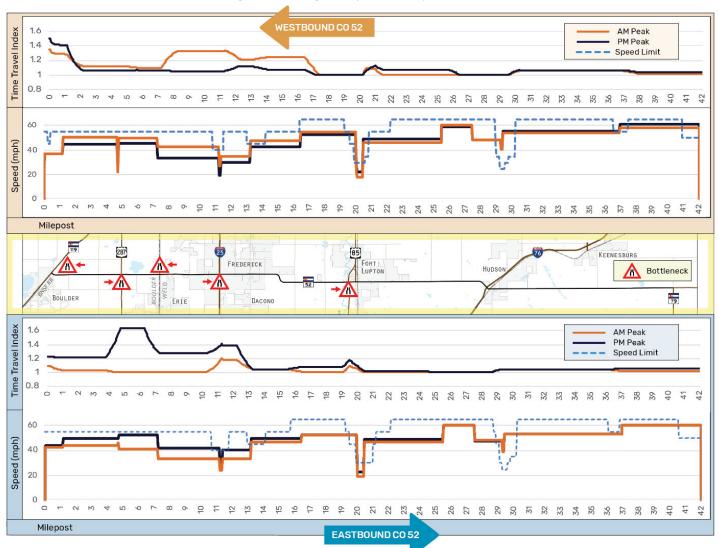
A review of data from the Existing Conditions Report supports the need for improvements to anticipate the continued growth of both residential communities and freight movement along the project corridor.

Traffic Volumes

Existing traffic volumes create areas of congestion throughout the CO 52 corridor; lack of capacity at major signalized intersections is a major contributor. The result is delay to the traveling public with lengthy queues forming at multiple locations along the corridor. Between CO 119 and WCR 19 there are current delays with travel time indices at 1.3 (AM, in westbound direction) and 1.2 (PM, in eastbound direction). By 2045 they are expected to range from 1.8 to 2.1. From WCR 19 to WCR 31, the travel time index will increase to 1.2 to 1.4 (Figure 3). East of this location, the travel time index is expected to remain at or near 1.0. In the 2045 No Action scenario, travel times for the entire corridor are expected to increase by 22 percent to 31 percent during peak hours, with the western half expected to see increases of up to 71 percent in travel times.



Figure 3 CO 52 Segment Operations - September 2019





Corridor Growth and Development

CDOT's travel demand model, StateFocus (Version 1.4), uses socioeconomic growth projections to generate projected travel demand. 2045 No Action traffic volumes are projected to increase 40 to 55 percent in Boulder County, and over 90 percent in Weld County between Colorado Boulevard and US 85. Between US 85 and I-76, an increase of 6,000-7,000 vehicles per day is projected; east of I-76 will see an increase of 1,500 vehicles per day or less. Vehicle miles traveled (VMT) on CO 52 is projected to increase 74 percent between CO 119 and CO 79, from 308,000 VMT in 2015 to 534,000 in 2045.

This growth is due in part to increases in residential development along the corridor. As current agricultural or undeveloped land along the corridor becomes developed, into mostly residential areas, CO 52 will be utilized more frequently to connect to employment centers within the region. This is accentuated due to CO 52 serving as one of the main east-west corridors in the area. This may particularly affect connections to major north-south roadways such as CO 119, I-25, US 85, and I-76. Improvements will need to anticipate the projected traffic volumes to identify potential improvements that will increase travel time reliability along the project corridor.

CDOT's StateFocus model projects that the number of households within the corridor study area (defined as 3-mile buffer on either side of CO 52 extending from CO 119 to CO 79) will more than double by 2045, adding over 30,000 households for a total of nearly 54,000. As current agricultural or undeveloped land along the corridor is developed, CO 52 will be utilized more and more to connect employment centers within the region, significantly increasing the commuter traffic in the area. This growth could further increase congestion and reliability issues near major intersections.

Freight

The Upper Front Range 2045 Regional Transportation Plan identified CO 52 as a freight corridor in Colorado, which is a critical route that facilitates the movement of goods. Approximately 35-miles of CO 52 is located in Weld County, which is one of the state's top three agricultural producers and the number one producer of oil and gas in the state of Colorado. These industries require substantial amounts of heavy, lower-speed, and oversized vehicles. When roadway characteristics do not accommodate vehicle travel around slow-moving equipment, bottlenecks occur.

Freight rail lines traverse the corridor at three locations. The western crossing is located immediately east of CO 119, is 56-feet wide, has one set of tracks, and averages 6 trains per day. The central crossing is in Fort Lupton, is 56-feet wide, has one set of tracks, and averages 10 trains per day. The eastern crossing is in Hudson, is 40-feet wide, has three sets of tracks, and averages 18 trains per day. All crossings are at grade and have active signalization. Rail crossings slow traffic as trains traverse the corridor and are an additional cause for low travel time reliability.

Burlington Northern Santa Fe (BNSF) is building a Logistics Center at I-76 and CR 49, just north of the CO 52 corridor. This 430-acre facility will feature 15 sites for customers to ship via individual railcars and a unit train site for customers to ship entire trainloads. The improvements are designed to help customers more easily reach Denver and the surrounding markets via new rail-served sites. It is anticipated that this Logistics Center will increase the number of trains as well as motor vehicle freight in the surrounding area, directly impacting the CO 52 corridor.



SUPPORT MULTIMODAL CONNECTIONS

Stakeholder input and prior planning efforts identified the need to improve north-south mobility and support enhanced parallel connectivity.

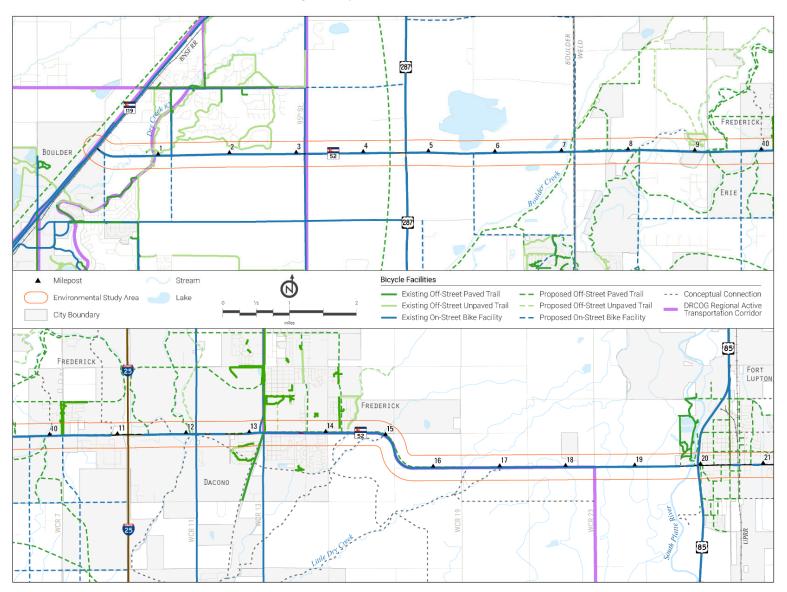
Multimodal Plans

It is anticipated that increased multimodal use of the corridor will continue to occur as local agencies plan for additional pedestrian and bicycle facilities parallel to and crossing the corridor. CO 52 is a critical link between many communities from east to west. However, in several communities the corridor acts as a multimodal barrier between residential areas on one side and schools, parks, or businesses on the other.

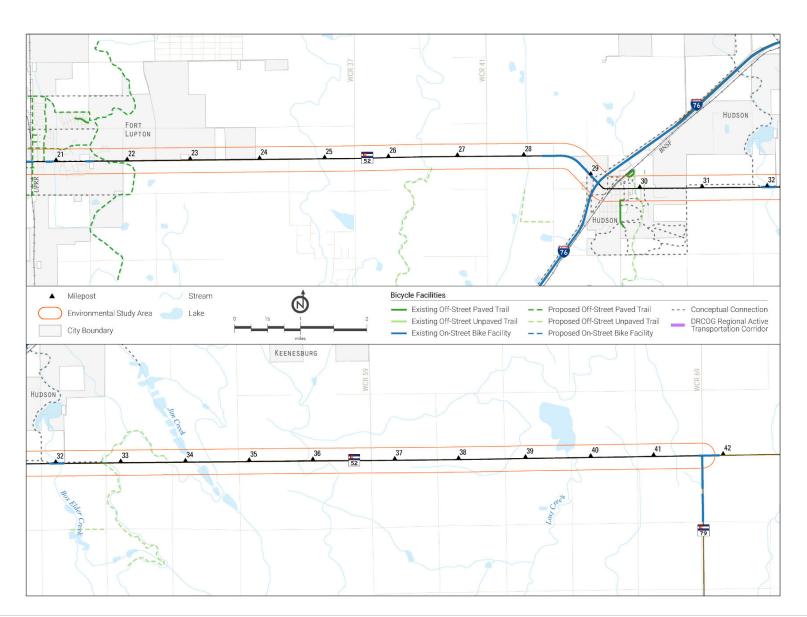
The few existing pedestrian and bicyclist facilities that cross or run parallel to CO 52 are mostly located near Dacono, Frederick, Fort Lupton, and Hudson(Figure 4). Pedestrian needs are limited to these municipalities that are bisected by the corridor. Pedestrian travel is generated by schools, parks, and commercial use. In Frederick, Thunder Valley K-8 and Carbon Valley Parks and Recreation District have facilities located adjacent to or in the vicinity of CO 52. Within Fort Lupton, Fort Lupton Middle School, Butler Elementary, and Community Center Park and Recreation Center are located close to the corridor. The proximity of these facilities requires many students to cross CO 52 from the northern residential areas to these schools south of the corridor. Similar conditions exist in Hudson with Hudson Elementary and most residential areas to the south, and Hudson Memorial Park and many commercial uses primarily to the north. Overall needs of this corridor include improvements to safety and comfort level of existing pedestrian facilities by means of expanding sidewalk networks, increasing widths, detaching sidewalks from roadway edges, and installing controlled crossings where demand exists, and physical conditions allow.



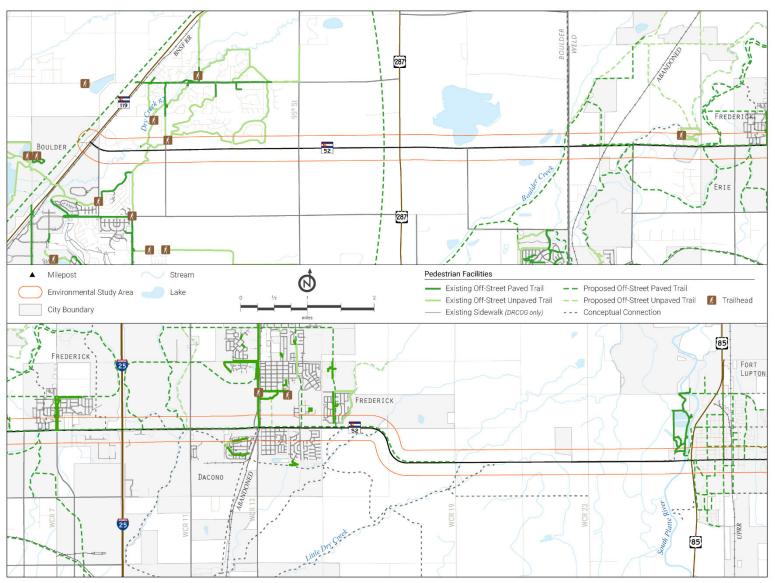
Figure 4 Bicycle and Pedestrian Facilities



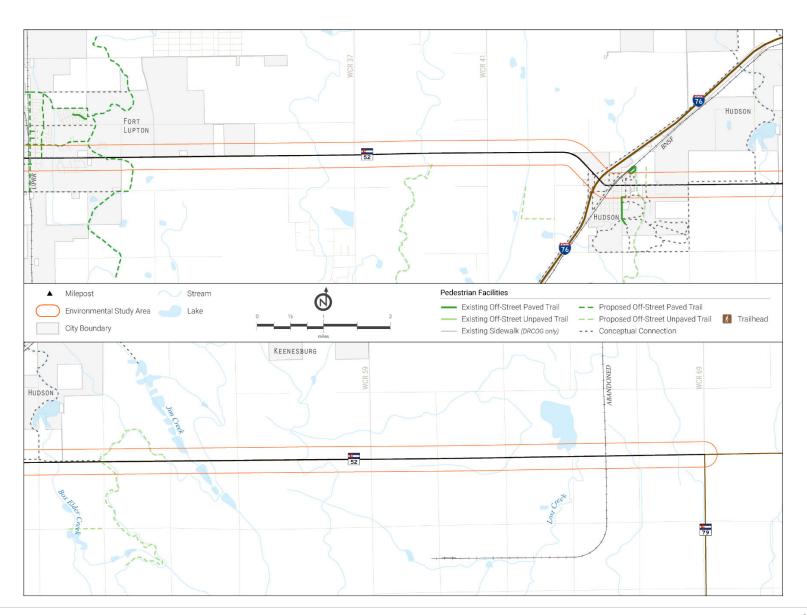














Each of the individual municipalities has proposed regional bicycle facilities and improvements, including extending and building new paths as the jurisdictional populations grow (Figure 4).

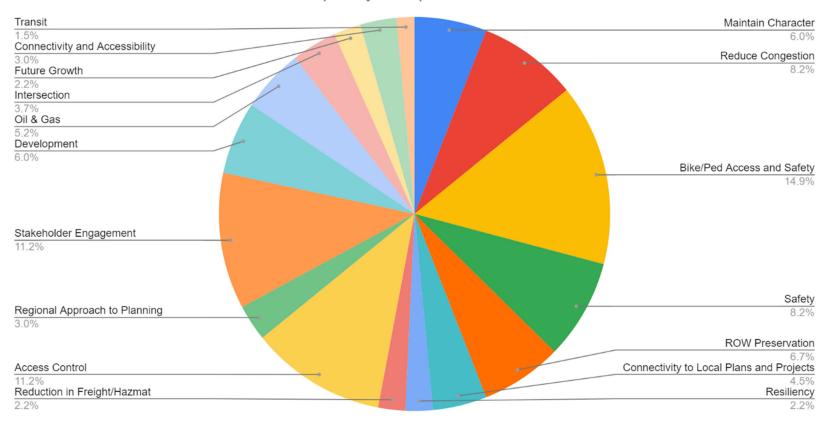
Stakeholder Interviews

Many project stakeholders, including Fort Lupton, Hudson, Dacono, Frederick, Erie, Keenesburg, and Boulder County, have expressed a strong desire to increase the pedestrian and bicycle facilities along and across the corridor (Figure 5). An assessment of the frequency of stakeholder mentions of corridor concerns indicates that multimodal improvements has the highest number of mentions during stakeholder discussions about the project. Specific multimodal needs mentioned by stakeholders include safe crossings and connectivity to existing trails, and safe travel between residential neighborhoods, business districts, parks, and schools. On the eastern end of the corridor, Keenesburg highlighted the lack of available shoulders or bicycle facilities. As described above, the CO 52 corridor provides a critical connection for bicyclists traveling east since bicycles are not allowed on I-76. Expanded shoulder widths are essential for cyclist safety on the eastern end of the corridor. Overall, improvements are needed to meet the expected growth in travel demand for pedestrians and bicyclists between communities along and across the corridor.



Figure 5 Frequency of Stakeholder Topic Mentions

Frequency of Topics Mentioned

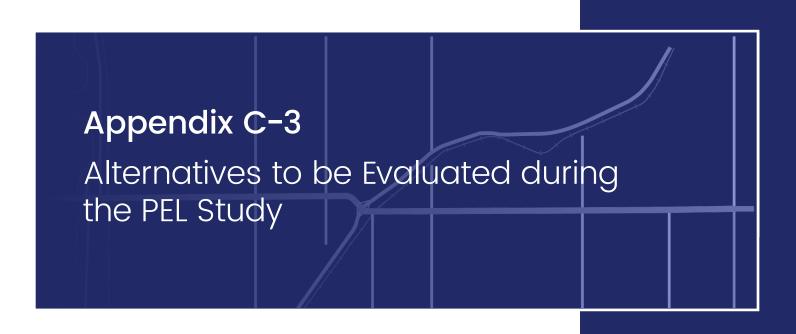




GOALS OF TRANSPORTATION IMPROVEMENTS

The recommended transportation improvements were developed to support the project needs. The project goals should:

- Consider the natural and built environment Improvements should minimize impacts to documented environmental resource constraints to the greatest extent possible. Environmental resource constraints documented in the Existing Conditions Report included wetlands, stream channels, floodplains, potential habitat for threatened and endangered (T&E) species and general wildlife, underground and above ground utilities, historic resources, and hazardous materials. Improvements should consider the built environment through a context-sensitive approach to land uses and character along the corridor that should consider both function and aesthetic of the surrounding land uses and character.
- Support local and regional planning efforts Improvements should consider planning efforts by recognizing spatial recommendations for future and proposed local agency plans, such as multimodal connections, adjacent multi-use paths, and streetscape plans.
- Identify estimated ROW needs Recommended project alternatives will be used to define the
 estimated ROW needs to support future growth along the corridor. Although a separate and
 concurrent process, the ACP will show the estimated ROW line developed during the PEL
 process to support local agencies in land use decision making.
- Accommodate future technology Improvements should consider that increases in development and traffic volumes will result in changes in implementation and advancement of technology along the corridor. Transportation technology is anticipated to change within the next 20 to 30 years and improvements should consider the potential for technological advancement.





CDOT R4 10601 W 10th Street Greeley, CO 80634

September 30, 2021

Troy Halouska CDOT Environmental Programs Branch 2829 W Howard Place Denver CO, 80204

Subject: CO 52 Planning and Environmental Linkages (PEL) Study – FHWA Check in Point 3: Evaluation Criteria and Alternatives to be Evaluated

Dear Mr. Halouska:

The Colorado Department of Transportation (CDOT) with support from a consultant team and stakeholders has finalized the Evaluation Criteria and Alternatives to be Evaluated for CO 52 PEL Study (CO 119 to CO 79). Please submit to Stephanie Gibson, Environmental Program Manager and Brian Dobling, FHWA Area Engineering, as acknowledgement and completion of this third FHWA Coordination Point as a part of the Planning and Environmental Linkages process.

Should you have any additional questions please do not hesitate to reach out through email, chad.hall@state.co.us or 970-350-2227.

Sincerely,

Chad Hall

Project Manager

Attachment: CO 52 PEL Evaluation Criteria and Alternatives to be Evaluated Memo

Project: CO 52 Planning and Environmental Linkages Study/Access Control Plan (21656)

To: Troy Halouska - CDOT, Planning and Environmental Linkages/NEPA

Chad Hall, PE - CDOT R4, Project Manager From:

Date: September 28, 2021

PEL Study for State Highway (CO) 52 Corridor between CO 119 and CO 79 Subject:

FHWA Check in Point 3: Evaluation Criteria and Alternatives to be Evaluated

CDOT, in agreement with the Federal Highway Administration (FHWA), has determined that the attached Alternatives Evaluation Criteria (Attachment A) and Alternatives to be Evaluated (please see below) are sufficient in addressing the established Purpose & Need and Goals of the CO 52 PEL, while avoiding excessive analysis.

EVALUATION CRITERIA AND PERFORMANCE MEASURES

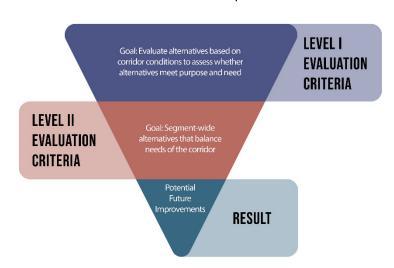
Development, evaluation, and refinement of alternatives focused on identifying alternatives that meet Purpose & Need for the corridor and that match corridor context. Evaluation criteria and performance measures were developed prior to beginning the alternatives development and evaluation process. The Project Team reviewed the proposed Evaluation Criteria with the Project Management Team (PMT) and Technical Team (TT) at numerous meetings, incorporating their revisions to ensure that the final Evaluation Criteria would address the project's established Purpose & Need and Goals. These meetings included representatives of all coordinating agencies along the corridor, as well as representatives from FHWA.

Two-tiered Approach

A two-tiered evaluation process was developed to evaluate alternatives. Evaluation criteria were developed for each level of evaluation and were used to assess alternatives relative to the Purpose & Need. The Level 1

performance measures assess the ability of each alternative to meet Purpose & Need at a high level. The Level 2 performance measures delve into more detail for each category of Purpose and Need and as well as evaluate how well alternatives meet project goals.

The final Evaluation Criteria are included as Attachment A.





ALTERNATIVES DEVELOPMENT AND EVALUATION PROCESS

Alternatives were developed through a multi-level iterative process. The process began with a large number of alternatives that led to a smaller number of more detailed alternatives, following a focused evaluation effort. Agency coordination and public involvement played a major role in the alternative development process.

Corridor Segments

In order to better analyze the 42-mile-long CO 52 study corridor, the study team divided the corridor into meaningful segments (Figure 1). Segment divisions considered political boundaries, community characteristics, and land use similarities. Other than Segment 2, which includes the communities of Erie, Frederick, and Dacono, the other segments only include one community along the corridor allowing individual community desires to be accommodated in the context of the overall corridor vision.

- Segment 1: CO 119 to Boulder/Weld County line
- Segment 2: Boulder/Weld County line to Weld CR 19 (eastern DRCOG planning boundary)
- Segment 3: Weld CR 19 to Weld CR 31 (East of Fort Lupton)
- Segment 4: Weld CR 31 to Weld CR 49 (East of Hudson)
- Segment 5: Weld CR 49 to CO 79



Figure 1. CO 52 Segments Map

No Action Alternative

The No Action Alternative anticipates future conditions of the CO 52 corridor without completing any transportation improvements that are recommended by this PEL. The No Action Alternative does include required safety and maintenance improvements to maintain an operational transportation system, as well as those fiscally constrained projects that have committed funding sources that will be built regardless of other improvements recommended in the PEL. Funding sources for those fiscally constrained projects include the State Transportation Improvement Program (STIP), regional Transportation Improvement Programs (TIP) funded by Metropolitan Planning Organizations (MPOs), and local agency Capital Improvement Programs (CIPs). The No Action Alternative does not meet the Purpose and Need of this PEL but is used as a baseline for comparison to the operational and safety benefits that would result from recommended transportation improvements resulting from this PEL.

Table 1 provides information on 2045 fiscally constrained projects that have been included in the No Action Model.

Table 1. 2045 Fiscally Constrained Projects Considered in No Action Alternative Model (STIP/TIP)

Facility	Project Name	Project Description	ID	Source
CO 52	CO 52 & US 287 Intersection	Intersection Improvements	SR46666.071	CDOT (STIP)
CO 52	CO 52 & I-76 Interchange	Interchange improvements	SR46600.055	CDOT (STIP)
CO 52	CO 52 & WCR 41 Intersection	Intersection improvements	1414	CDOT (Upper Front Range, TRP)
I-25	MP 214-269	Congestion, safety, travel time and freight reliability improvements	2008-081	CDOT (TIP)
N 71 st St	Lookout Rd to CO 52	Realignment and widening of intersection		Boulder (CIP)
WCR 7	CO 52 to Erie Pkwy	Realignment and widening to 4 lanes	30	Erie Transportation Plan (CIP)

Range of Alternatives

To develop a range of alternatives for consideration, the study team utilized data from the existing conditions report as well as input collected from stakeholders (Table 2).

Table 2. Stakeholder Meeting Highlights

Agency	Summary of Input
Boulder County	Relationship building
(Segment 1)	 Intersection to accommodate transit, queue jump, and bypass lanes Keep the rural feel Fiscally responsible building Acknowledge policy against widening roads between intersections Improve safety Desire for separate bike trail (west end)



COLORADO

Department of Transportation

Weld County (Segment 2-5)	 Right-of-way preservation Work with community partners Identify future bottleneck locations Interest in widening corridor to 4 lanes
Erie (Segment 2)	 Improve traffic flow North/South turn lane improvements Congestion at WCR 7 Commercial Development at WCR 7 Improvements for bicycles Identify right-of-way needs
Frederick (Segment 2)	 Safety improvements for I-25 Frontage Road intersection Improve North-South pedestrian connectivity Consider adequate turn lanes to improve congestion Improve roadway safety
Dacono (Segment 2)	 Safety concerns at WCR 17 Improve pedestrian safety at Colorado (WCR 13) Improve pedestrian safety at Glenn Creighton Interest in improving connections for vulnerable populations
Fort Lupton (Segment 3)	 Potential to close Grand Ave intersection Extension of lower "in-town" speed limits Right-of-way preservation Intersection improvements at WCR 19 Pedestrian crossings desired near the river (overpass or underpass)
Hudson (Segment 4)	 Improve bike/ped movements across CO 52 Improve railroad crossings Maintain town character Discourage truck use along CO 52 Right-of-way preservation
Keenesburg (Segment 5)	 Roadway improvements for freight Widen shoulders Right-of-way preservation Commercial development planned at CO 52 / WCR 59 Wild animal sanctuary traffic on WCR 53

The study corridor is primarily rural apart from more urban areas near I-25 and Fort Lupton. In addition to the I-25 and Fort Lupton areas, urban sections are also being considered between WCR 7/Aggregate Blvd. and Silver Birch and through Hudson due to the more urban feel in these locations. Rural roadway sections are also being considered in these areas, consistent with existing conditions.



The rural roadway character alternatives include adding or widening a shoulder to increase safety as well as adding general purpose lanes, auxiliary lanes, and medians treatments where traffic projections and access warrant.

The team held several meetings that focused on individual segments to develop alternatives that had potential to meet project needs and goals while still addressing stakeholder concerns. The list of Alternatives to be Evaluated below summarizes the alternatives considered along the corridor.

<u>Final Range of Alternatives to be Evaluated</u>

- No Action
- 2 Lane Rural
- 2 Lane Urban
- 2 Lanes with Peak Period Shoulder
- 2 +1 Alternating Passing Lane
- 2 Lanes + Reversible Lane
- 2 Lanes + HOV/Managed Lanes
- 4 Lane Rural
- 4 Lane urban
- 6 Lane urban

Based on adjacent land use, environmental concerns, traffic and safety concerns, truck percentages, and geometric evaluation, not all alternatives were considered throughout the entire corridor.

LEVEL 1 EVALUATION

The goal of the Level 1 Evaluation was to assess a full range of alternatives based on the corridor Existing Conditions Report to determine whether alternatives would meet purpose and need appropriately. The Needs defined for the corridor were to increase in safety, accommodation of increased travel and freight demand, and support of multimodal connections. Each Alternative was evaluated according to the established evaluation criteria.

- Does this alternative have the potential to improve safety by way of crash frequency, crash severity, ped/bike safety, roadway geometry, truck/oversize vehicle safety, and freight safety?
- Does this alternative have the potential to accommodate projected travel and freight demand by way of congestion, corridor capacity travel times, travel reliability, and quality of traffic operations?
- Does this alternative have the potential to increase and not preclude multimodal mobility by way of local and regional route connectivity, non-motorized opportunities, bicycle connectivity, and pedestrian crossings?

Level 1 evaluation was limited to a simple yes or no to the questions above for alternatives to advance to Level 2. Study team members, as well as members of the Project Management and Technical teams had the opportunity to review and discuss inputs to this table as well as the alternatives progressing to the next tier. The full Level 1 Evaluation Matrix can be found in **Attachment B**.



Result of Level 1

Multiple alternatives were screened within each segment and the following language was used to document the findings:

Carried Forward: meets Purpose and Need, considered reasonable and feasible, and may be considered for further evaluation in this study or subsequent NEPA and Project development

Retained as Element: does not fully meet Purpose and Need, but will be evaluated as packaged element of a larger-scale alternative

Eliminated: does not meet Purpose and Need, has a fatal flaw, and/or is considered unreasonable. A project alternative that is Eliminated is removed from further consideration in the PEL Study.

The Project Team conducted the evaluation and several alternatives were considered to not meet the needs of the Study and therefore not carried to Level 2 for further evaluation. Eliminated alternatives are shown below in Table 3.



Table 3. Eliminated Alternatives

Segment	Alternative	Reason		
1	2+1 Alternating Passing Lanes	Configuration does not accommodate access or traffic needs along the segment.		
1	2 Lanes plus Reversible Lane	Configuration does not accommodate access or traffic nee along the segment.		
2	HOV/Managed Lane	Demand for HOV/Managed lane insufficient		
3	2 Lanes w/ 10' shoulder and turn lanes at intersections	Minimal benefit over No Action		
3	2 Lanes w/ 10' shoulder and turn lanes at intersections	Precluding passing reduces operations performance; limited safety benefit over no-build option		
3	2 Lane w/ Peak Period Shoulder Lane	Precluding passing reduces operations performance; limited safety benefit over no-build option		
3	Fort Lupton Bypass	Evaluation was filled out by route perspective (SH 52), some outcomes may vary if evaluated at regional level. (per the City of Fort Lupton concern for economic vitality with a bypass)		
4	2 Lanes w/ 10' shoulder and turn lanes at intersections	Minimal benefit over No Action		
4	2 Lanes w/ 10' shoulder and turn lanes at intersections	Precluding passing reduces operations performance; limited safety benefit over no-build option		
4	2 Lanes w/ Peak Period Shoulder Lane	Precluding passing reduces operations performance; limited safety benefit over no-build option		
4	2 Lanes plus Reversible Lane	Configuration does not accommodate access or traffic needs along the segment.		

LEVEL 2 EVALUATION

After assessing the full range of alternatives in Level 1 and narrowing the options to only the alternatives that meet project needs, the team moved to Level 2. During the Level 2 analysis, alternatives were evaluated based on more detailed criteria related to project needs as well as how well they met the project goals. Each Alternative was evaluated according to the established evaluation criteria shown in **Attachment A**.



The full Level 2 Evaluation Matrix can be viewed in **Attachment C**.

Design Refinements and Advanced Study Areas

The more detailed analysis completed during Level 2 allowed the team to make design refinements to the alternatives put forth in Level 1, mostly related to location. For example, the team added a 6-lane alternative between WCR 7 and Silver Birch/York St. to better manage the expected traffic volumes and thereby creating a sub-segment within Segment 2. Similarly, the analysis indicated that a four-lane section wasn't required in Segment 3 east of Denver Avenue so a 2-lane section was introduced in this area.

As part of the study, a few key locations were identified for a more in-depth study than the remainder of the corridor. These included the US 287 and CO 52 intersection in Segment 1, the Reverse Curves between WCR 15 and WCR 19 in Segment 2, and the WCR 59 and CO 52 intersection in Segment 5.



CORRIDOR RECOMMENDATIONS

The following map show the Recommended corridor alternatives.



Figure 2. Recommended Corridor Alternatives Map

In addition to the recommended alternatives, additional alternatives were Carried Forward. These are alternatives that are considered reasonable and feasible and would be expected to perform well if implemented but were not the strongest-performing alternative.

Table 4. Alternatives Carried Forward

Segment	Alternative		
1	2 Lanes with Peak Period Shoulder Lane		
2A	4 Lane Urban		
2B	4 Lane Rural		
2B	4 Lane Urban		
2C	4 Lane Urban		
2D	4 Lane with Median Cable Rail		
3B	2 Lane Urban		
4A	4 Lane Rural		

Should you have any additional questions please do not hesitate to call or reach out through email, 970-350-2227 or chad.hall@state.co.us.

Sincerely,

Chad Hall Project Manager



Attachment A: Evaluation Criteria and Performance Measures



Attachment B: Level 1 Evaluation Matrix



Attachment C: Level 2 Evaluation Matrix

Attachment A

Category	Criteria	Performance Measure Evaluation					
Category	Citteria	Level 1	Level 2				
PROJECT NEEDS							
Increase Safety	 Crash frequency Crash severity Ped/bike safety Roadway geometry Presence of truck freight 	Potential to improve safety (Y/N)	Reduce frequency and severity of crashes. Reduce vehicle/pedestrian conflict points (number) Reduce Level of Traffic Stress (LTS) Implement geometric features that accommodate truck freight				
Accommodate Increased Travel and Freight Demand	 Congestion Corridor capacity Travel times Travel reliability Quality of Traffic Operations 	Potential to accommodate projected travel demand (Y/N)	Decrease Travel Time Index (ratio) Decrease Travel time by minutes (minutes) Reduce Delay Accommodates Freight Destinations (Improves/Neutral/Limits)				
Support Multimodal Connections	 Local and Regional Route Connectivity Non-Motorized Opportunities Bicycle connectivity Pedestrian crossings 	Potential to increase multimodal mobility (Y/N)	Reduce barriers for N/S pedestrian and bicycle travel (qualitative) Improve continuity for E/W bicycle and pedestrian travel (qualitative) Reduce uncontrolled vehicle/pedestrian conflict points (number) Increase shoulder width to accommodate bicycle traffic. (Y/N)				

Category	Criteria	Performand	ce Measure Evaluation
Category	Citteria	Level 1	Level 2
	PROJI	ECT GOALS	
Consider the Natural and Built Environment	 Environmental resource constraints Contextual function and aesthetics of surrounding land uses 	Not evaluated in Level 1	Identification of critical resources impacted based on footprints. No quantitative impacts will be done. Qualitative measurement of context sensitive approach of land use and character along the corridor
Support Local and Regional Planning Efforts	 Included in community land use plans for multimodal connections, multi-use paths, and streetscapes 	Not evaluated in Level 1	Relative improvement/spatial alignment with goals of local agency plans [Good (closely aligned), Fair (some variations between alternatives), Poor (significant variations)
Identify Estimated ROW Needs	Opportunity to preserve ROW	Not evaluated in Level 1	Complexity of acquisition (based on presence of structures, land use type) Relative expected ROW cost
Accommodate Future Technology	 Inclusion of technology along the corridor that will counteract increases in development and traffic volumes 	Not evaluated in Level 1	Accommodate present and future implementation of emerging existing and future technology

			Category					Increase	e Safety	•		Accon	nmodate Frei	e Increas ight Den		el and	Su	upport M Conne	Aultimod ections	lal	Action
		Pe	erformance Meas	sures			Pote	ential to i	mprove sa	afety		Potenti	al to accon	nmodate pr eight dema		avel and	Potentia	al to increas multimoda	se and not al mobility	preclude	
						Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
			Criteria			Crash Frequency	Crash Severity	Ped/Bike Safety	Roadway Geometry	Truck/Oversize Vehicle Safety	Freight Safety	Congestion	Corridor Capacity	Travel Times	Travel Reliability	Quality of Traffic Operations	Local and Regional Route Connectivity	Non-Motorized Opportunities	Bicycle Connectivity	Pedestrian Crossings	Carried Forward Retained as an Element Eliminated
Location	To Build	Lanes	Shoulder	Median/Turn Lane	Bike/Peds																
	No Build	2 Lanes	8'	At Intersections	Shoulder																
	Typical		10'	Two-Way Left Turn	Bikes on shoulder																
	Element	2 Lanes	10'		Rumble strips and bikes on shoulders																
	Element	Z Lunes	10'	Two-Way Left Turn	Off Street Bikes																
	Element		10'		Transit Accommodations																
Segment 1	Typical	2 Lanes	12'	Two-Way Left Turn	Rumble strips and bikes on shoulders																
Segm	Element	Z Lailes	12'	Two-Way Left Turn	Transit Accommodations																
,	Typical		10'	Two-Way Left Turn	Bikes on shoulder																
	Element		10'		Rumble strips and bikes on shoulders																
	Element	4 Lanes	10'	Two-Way Left Turn	Off Street Bikes																
	Element		12'	Two-way Left Turn	Rumble strips and bikes on shoulders																
	Element		12'		Transit Accommodations																

				Category	,				Increas	e Safety	,		Accom		e Increas ight Dem		el and	Su	upport M Conne		ial	Action
			Pe	rformance Mea	asures			Pote	ential to i	mprove sa	afety		Potenti		nmodate pr eight dema		avel and		al to increas multimoda			
							Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
				Criteria			Crash Frequency	Crash Severity	Ped/Bike Safety	Roadway Geometry	Truck/Oversize Vehicle Safety	Freight Safety	Congestion	Corridor Capacity	Travel Times	Travel Reliability	Quality of Traffic Operations	Local and Regional Route Connectivity	Non-Motorized Opportunities	Bicycle Connectivity	Pedestrian Crossings	Carried Forward Retained as an Element Eliminated
I	ocation	To Build	Lanes	Shoulder	Median/Turn Lane	Bike/Peds																
		No Build	2 Lanes	8-10'	At Intersections	None																
	CO Line Rd. to WCR 7	Typical	4 Lanes	10'	Two-Way Left Turn Raised Median	None										0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
ent 2	ontage everse ves	Typical	4 Lane Urban	None													ā					
Segment 2	E 125 Frontage Rd to Reverse Curves	Typical	6 Lane Urban	N/A	16' Median/12' Turn Lane	None																понивания под
	Reverse Curves	Typical	4 Lanes	None																		
		No Build	2 Lanes	6-8'	At Intersections	None																
		No Build 2 Lanes 6-8' At Intersections Typical 4 Lanes 10' None				None																
ent 3		Typical 4 Lanes 10' Level Median Typical 4 Lanes 10' Depressed Median No Build 2 Lane Urban N/A Two-Way Left Turn Element 2 Lane Urban N/A Two-Way Left Turn		None None																		
Segment 3				None																		
	Lupton	Element 2 Lane Urban N/A Two Way Left Turn			Multi-Use Path (North Side)																	
	7 . L	Typical	4 Lane Urban	N/A	Multi-Use Path (North Side)										<u> </u>							
					Bypass																	

				Category					Increas	e Safety			Accom	nmodate Frei	Increas ght Den		el and	Su	ipport <i>N</i> Conne	Aultimod ections	al	Action
			Pe	rformance Meas	sures			Pote	ential to i	mprove sa	fety		Potenti	ial to accom fre	nmodate pr eight dema		ivel and		l to increas multimoda	se and not p al mobility	oreclude	
							Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
				Criteria			Crash Frequency	Crash Severity	Ped/Bike Safety	Roadway Geometry	Truck/Oversize Vehicle Safety	Freight Safety	Congestion	Corridor Capacity	Travel Times	Travel Reliability	Quality of Traffic Operations	Local and Regional Route Connectivity	Non-Motorized Opportunities	Bicycle Connectivity	Pedestrian Crossings	Carried Forward Retained as an Element Eliminated
Loc	ation	To Build	Lanes	Shoulder	Median/Turn Lane	Bike/Peds																
		No Build	2 Lanes	2'	At Intersections	None										1						
4		Typical	4 Lanes	10'	None	None																
Segment 4		No Build	2 Lanes	2-10'	At Intersections	None																
Seg	Hudson	Typical Typical	4 Lanes 2 Lane Urban	10' N/A	Two-Way Left Turn Two-Way Left Turn	None Sidewalk																
	_	Typical	4 Lane Urban	N/A	Two-Way Left Turn	Sidewalk																
5		No Build	2 Lanes	0'-8'	At Intersections	None																
nent		No Build 2 Lanes 0'-8' At Intersections Typical 2 Lanes 10' None					j															
Segi		Typical	2 Lanes	8'	None	None	<u></u>															
		Element		Traditio	nal Intersection Improvemen	its																
Inters	ection	Element		Non-Tradit	cional Intersection Improvem	ents																
8	/pe	Element		Gra	de Separated Interchange							ē	ē									
		Element			Roundabout			ā				ā	ā			ā						

Attachment C

		Catego	rv.			Support Local and Regional Planning Efforts	Accommodate Future	Identify Estimate	d BOW Needs	Consider the Natural and Built Environment		Support Multi-	Itimodal Connections				Accommodate Increa	sed Travel and Frei	wht Demand			Increase Safety					
		Performance				Relative improvement/spetial alignment with goals of local agency plans	Technology Accommodate present and future implementation of emerging, existing and future technology	Complexity of acquisition based on impacts to primary structures and/or land use type	Relative expected	Mentification of critical renaurous impacted based on footprints. No quantitative impacts will be doze.	Qualitative measurement of contact sensitive approach of land use and character along the corridor	Improve N/S podestrian and bicycle travel connections	Improve continuity for E/W bicycle and/or pedestrian travel	Improves Bicycle Level of Service	Accommodates potential future transit options	Accommodates Freight Movements (Includes Hazmat and Oversized Vehicles)				May Meets Design Standards	Reduce vehicle/pedestrian coeffict.		Crash reduction potential for bicycle/vehicle crashes	Reduce frequency and severity of crashes.	Incorporates bicycle design standards and guidelines	Action	
						Good (classely aligned) Fair (name soriations between alternatives) Peor (algoriticant soriations)	Y/N	Mgh Medium Low	\$\$\$ (i.e. industrial) \$\$ (i.e. residential) \$ (i.e. agricultural)	Number of critical resources present that will impact schedule, Resources identified but no impacts to schedule articipated, No Critical Resources identified	High Medium Low	Substantiel Moderate Alter No Change		Major Substantial Moderate Misor No Change	Y/N	Improves Neutral Limits	Substantial Moderate No Change Worsens	Searci on PTI Comparison	Substantial Moderate No Change Worsens	No Exceptions/Variances I Exception/Variance More than I Exception/Variance		,	ubstantial Moderate Io Change Worsens		Exceeds Minimum Meets Minimum Does Not Meet Minimum	Corried Forward Not Recommended	
Location EXCLUDED AREA: CO 119 to immediately				Median/Turn Lane	Bike/Peds																						
	No Build	2 Lanes		At Intersections	Shoulder	SOULDER COUNTY Fair: 2 lanes align with TMP; have safety concerns based on crash data including roadway, lane departures and a pedestrian fatality.	N	Low	Nane	No Change	No Change	No Change	No Change	No Change	Yes, can accommodate buses	Limits	Worsens (TTI 1.56 to TTI 1.95)	Worsens (PTI 2.73 to PTI 2.95)	Worsens (TT 13.4 to TT 16.1) Worsen	No Exceptions/Variances	Worsens	No Change	No Change	Worsens	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Not Recommended	
	Typical		10'	AZ (ISSANIA-CEION)	likes on shoulder	SOCIEST COUNTY Fair: 2 seem align with TSP and 50 shoulders may help with bits per- sonance of the period of the p	Y	Low	\$c - Primarity aericultural and open	Misters: - three efficially eligible or hissel on the SEP COSS, Calarabia and Souther Ballinas, and Riginard Family, Revenuels (Revenuels Park), West Loop Stark, and Souther County Owned. Spen Spaces. The fifth from 4 efficie with colobre serring biosels are COS 179, crack hopes considered to the COS 179, crack hopes considered to the COS 179, Calarabia Cost Service and A 1793. Street, Expendition area between N 3779 Street and CES.	Bigh	Modernier 24 HV, Bat CBD real and 500 A am 180005 Repend Active Transportant Corridon. The resulting Publisher in CDD small provider control to before the facilities. Whereing the housiders is 24 - under mit is a norstall deeper and S-Connections within the speece. Deever, the provision of a TWLT weed provider width for treatments such as raised medians and median refugers as intersections for influencing bicycles.	Hiltor - Additional width for bicyclists would improve bicyclist comfort and safety	No Change - 82.05 is 8 or better. Ex. Conditions: 55 raph speed limit, 8 ft shoulder, 45 HV, 12000 AADT west of US 287	Yes, can accommodate buses	Improves Better cross-section for turns	Moderate (TTI 1.98 to TTI 1.75) w/4-Lanse e/o US287 Moderate (TTI 1.98 to TTI 1.73)	Hoderate (PTI 2.95 to PTI 2.65) w/4-Lanes e/o US287 Hoderate (PTI 2.95 to PTI 2.77)	Moderate (TT 16.1 to TT 14.1) Moderat (TT 16.1 to TT 14.1) Moderat (TT 16.1 to TT 14.0) Moderat	US287 No Exceptions./Variances	Hoderate (Consistent 10' Shoulder)	or greater than 40 mph, LT: = 4 and does not change regardless of other criteria	Hoderate - Per a FHWAs Crash Hoderication Factor (CMF) Clearinghouse study, widening a shoulder from 8 to 10 ft yields a CMF of 0.87 and CRF of 13%	(Consistent 10' Shoulder and Intersection	Exceeds Hinimum (Shoulder is wider than reinimum nequirement)	Recommended	
	Option	2 Lanes	12			SOUCER COUNTY Fair: 2 laims align with TNP and 10 shoulders may help with bile-ped salety, along with providing space for brainforms or emergency response on the shoulders. On one desire to have tnewway left turn law all the way down the corridor when there are no cross streets nor future planned development. The left turns should only be where needed.		Low			High	Moderate - See above	Minor - Additional width for bicyclists would improve bicyclist comfort and	No Change - BLOS is 8 or better. Ex. Conditions: 55 mph speed limit, 8 ft shoulder, 45 MV, 12000 AADT west of US 287	Yes, can accommodate buses	Neutral (Slightly better cross-section for turns with wider shoulders)				No Exceptions/Variances		No Change	Moderate - Per a FHWAs Crash Hodification Factor (CMF) Clearinghouse study, widening a shoulder from 8 to 12 ft yields a CMF of 0.76 and CRF of 24%		Exceeds Minimum (Shoulder is wider than minimum requirement)	Carried Forward	
	Option				Rumbie Scrips	SOLEGO CONST Foods: We have a Years Damp policy and quark supports shouth States and day should be a way to not constructing your for purpor oldes black. The course does not desire to law serving affect have been also the way state of purpors. One of the construction and no one placed directions.		Low			High	Moderate - See above	width for bicyclists and shoulder rumble strips would improve bicyclist comfort and	Ex. Conditions: 55 mph speed limit, 8 ft shoulder, 45 HV, 12000 AADT west of US 287		Neutral (Slightly better cross-section for turns with wider shoulders)				No Exceptions/Variances		No Change	Moderate - Per a FMWAs Crash Biodification Factor (CMF) Clearinghouse study, widening a shoulder from 8 to 10 ft yields a CMF of 0.87 and CRF of 13%		Exceeds Hinimum (Shoulder is wider than minimum requirement)	Carried Forward	
West of 7 Sat St. to County U	ine Typical	2 Lanes (+ PPSL)	12"	AZ INDONACTIONS	Multi-Use Path	SOLESS COENTY For: The TNB calls for a regional road in the section and during the meeting with the beginging community members. In the called they appear that type of repassions, Perdags a plantal- build are programmer previously appears to make the parties. These literal forms of the parties with the parties mouth to see the parties with the parties of the called to the parties of the called to the parties of the called to the called to the called the parties of the called to the called the called the parties of the called to the called the parties of the called the parties of the called the parties of the called the called the parties of the parties of the parties of the called the parties of the par	Y	Medium - Boulder County owns most of the land or owns a conservation easement on top of private parcels for almost the entire corridor	\$\$ - Primarily agricultural and open space. See ROW complexity.	Historic - three officially digible or listed on the SRP (CO.12, Calarado and Scathern Batroad, and Hypore Farn). Recreation (Naturch Park, Need Coop Trail, and Scalador Coarty Owned Quen Spaces. Thrift: Native Office with outdoor sesting Season and CO.119, and Scalador concentrated between 17 79th Street and N 920 Street, Parks and Trails concentrated between N 71th Street and N 920 Street, Septentian new between 18 79th Street and CO.11.	High - change would not alter surrounding Land uses. Histeral impacts from multiuse path.	Solntantial - A motify use path would provide a substantial represented to connectivity between SRI 119, the LOBO tests, and 95th St. The proposed TWLTU provides width for treatments such as raised medians and median rela	Substantial - A multi- use path would substantially improve E-W connections through this segment	Major - Moving blikes from shoulder onto separate path	Yes, can accommodate buses, allow vehicles to pass slow moving buses, and provides better first and final relie connectivity	Improves Setter cross-section for turns	Substantial (TTI 1.98 to TTI 1.60)	Hoderate (PTI 2.98 to PTI 2.69)	Substantial Substant (TT 16.1 to TT 13.1)	al No Esceptions/Variances				Limited (2houlder unavailable for emergency maneuvers in peak direction, but will benefit off-peak direction/periods)	Meets Minimum (assume 10 multiuse path)	Carried Forward	
ant 1 - West of 71 at St. t	Typical	2 Lanes (* 2 HOV/Manage Lanes)	1 10'	WOV/Wanaged Lane	likes on shoulder	SOLLOSI COUNTY Poor: TSP does not above HOV lanes on this corridor. Elles on shoulder so mail-sare path warrants additional analysis.	· ¥	Medium - Boulder County owns most of the land or owns a conservation easement on top of private parcels for almost the entire corridor	\$\$c - Primarily agricultural and open space. See ROW complexity.	Historic - three officially eligible or initiation the 1809 (CO32, Calorado and Sauthern Rallrand, and Hyporel Farry). Recreation (stoward Park). Next Loap Trail, and Souder Causty Greek Open Space), Official and see (on will insted on causty yand one) Trails: Solicie 3 fettle with 1936 (Space), Official and rate (on will insted on causty yand one) Trails Store and 1936 (Space), Equation 1937 (Space), Equation	Medium - wider footprint although the County appears to support managed lanes. Change would not alter surrounding land uses.	Moderate - A multi-use path would improve connectivity between 50 119, the LDDD trail, and 97th 5t; however, the proposed 4-lane cross-section would increase bircycle-vehicle conflicts and add complexity to crossings.	Substantial - A multi- use path would substantially improve E-W connections through this segment	Major - Moving bikes from shoulder onto separate path	Yes, can accommodate buses, allow vehicles to pass slow moving buses, and provides better first and final mile connectivity	Improves (Wider cross-section for turns, allows some passing)	Moderate (TTI 1.95 to TTI 1.71)	Worsens (PTI 2.95 to PTI 3.94)	Substantial Substant (TT 16.1 to TT 13.6)	al No Exceptions/Variances	Hoderate (Comintent 97 Shoulder)		t Moderate - Per a FHWAs Crash Hodification Factor (CMF) Clearinghouse toudy, widening a shoulder from 8 to 90 ft yields a CMF of 0.87 and CRF of 13%		Exceed: Minimum (Shoulder is wider than minimum negulaement)	Diminate	Decreases reliability. Does not have local support. Introduces safety concerns. Hould require substantial ITS investment.
s.S.	Typical	4 Lanes	10'	Two-Way Left Turn	likes on shoulder	SCELEC COUNTY For: 180° shows regional multi-use treal and has language against adding additional general purpose binon.	¥	High - Boulder County owns most of the land or owns a conservation easement on tog of private parcels for almost the entire corridor	\$\$c - Primarily agricultural and open space. See ROW complexity.	Historic - three officially eligible or listed on the SRPP (CD 52, Calorado and Southern Railroad, and Hyonet Tarns). Biocreation (Manarch Park, Nivet Loop Trail, and Soulder Causty Gweed Qwn Spaces). Traffic Moise's o	guidance. Boulder only supports 4 lanes at intersections and is opposed to 4-lanes (general purpose)	Monor - Set 119, the LODD trait and 92th 5 are DRODG Regional Active Transportation Corridons. The existing if shoulders on CO32 would previal a connection between these facilities and widening the shoulders by 2-4 would result is a nominal change to NS connections within this segment. The proposed four line cross section result in higher potential which belight conflicts than a two-law cross section, but the provision of TRICTs provide width for transports such as rather dendus and endough regions at the width for transports such as rather dendus and endough regions at the section of the control of the co	Hinor - Additional width for bicyclists would improve bicyclist comfort and safety	No Change - ELOS is 8 or better. Ex. Conditions: 35 mph speed limit, 8 ft shoulder, 45 MV, 12000 AADT west of US 287	Yes, can accommodate buses and allow vehicles to pass slow buses	Improves (Wider cross-section for turns, allows passing)	Substantial (TTI 1.98 to TTI 1.46)	Substantial (PTI 2.98 to PTI 2.11)	Substantial Substanti	al No Exceptions/Variances	Hoderate (Consistent 17 Shoulder)	None Minckness in the governing criteris for LTS for roads with speeds a or greater than 40 mph, LT3 - 4 and does not change regardless of other criteria (street width, bike lane/shoulder width, bike lan	t Hoderate - Per a FHWAs Crash Hoderication Factor (CMF) Clearinghouse study, widening a shoulder from 8 to 10 ft yields a CMF of 0.87 and CRF of 13%	Moderate (Consistent 10'	Exceeds Minimum (Shoulder is wider than ordinarum negatroment)	Not Recommended	Is not in line with local agency plans. His significan transportation and mobility benefits.
	Option		12			BOULDER COUNTY PCOR: From the County/ TMP: You new bose doubt be added between the intersections. Being to would not actually increase which capacity on the corritor"		High			Medium - see above	Miror - See above.	Minor - Additional width for bicyclists would improve bicyclist comfort and	No Change - BLOS is 8 or better. Ex. Conditions: 55 mph speed limit, 8 ft shoulder, 45 MV, 12000 AADT west of US 287	Yes, can accommodate buses and allow vehicles to pass slow buses	(Wider cross-section for turns.)				No Exceptions/Variances		No Change	Moderate - Per a FHWAs Crash Hoddination Factor (CMF) Clearinghouse study, widening a shoulder from 8 to 12 ft yields a CMF of 0.76 and CRF of 24%		Euceeds Hinimum (Shoulder is wider than minimum nequirement)	Not Recommended	
	Option				Rumbie Strips	BOLLES COUNTY MODE: From the Causeys Taller: The new lower should be added between the intersections. Duling to would not actually increase vehicle capacity on the corridor _**		High			Medium - see above	Miror - See above.	width for bicyclists and shoulder rumble strips would improve bicyclist comfort and	limit, 8 ft shoulder, 4% HV, 12000 AADT west of US 287	Yes, can accommodate buses and allow vehicles to pass slow buses					No Exceptions/Variances		No Change	Moderate - Per a FHWAs Crash Hodification Factor (CMF) Clearingbouse study, widering a shoulder from 8 to 90 ft yields a CMF of 0.87 and CRF of 13%		Exceeds Hinimum (Shoulder is wider than minimum nequirement)	Not Recommended	
	US 210 intervedion		Nos-Traditional inte	mersection (assumes existing project) section (CFL Roundshout, Quadrant Road,		SOURCE COUNTY Count Our Tally shown examples of addressing staffs; though various "stadiosais" methods. The Tally emphasizes improvement to the internations to address college and operational effectives. SOURCE COUNTY Pour: We do not support CFI and the USDIT contains given above quince jumps for his Royal Trainast at the international of CHIST and the USDIT foundating plan above quince jumps for his Royal Trainast at the international of CHIST and the USDIT foundating plan above quince jumps for his Royal Trainast at the international of CHIST and the USDIT foundating plan above quince jumps for the Royal Trainast and CHIST and Tally and World in the substance count of the CHIST and Tally and Ta	performance measures are used to compare alternatives.																			Carried Forward Carried Forward	

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					Arrommodate Future																		
		Category		Support Local and Regional Planning Efforts	Accommodate Future Technology	Identify Estimate Complexity of acquisition		Consider the Natural and Built Environment	Qualitative measurement of	Support Multi	modal Connections				Accommodate Increased Travel and Fre			Increase S					
	Queles	emano Havenes		Relative improvement/spatial alignment with goals of local agency plans	implementation of emerging, existing and future technology	based on impacts to primary structures and/or land use type	Relative expected & ROW cost	identification of critical resources impacted based on footprints. No quantitative impacts will be done.	Qualitative measurement of context sensitive approach of land use and character along the corridor	Improve N/S pedestrian and bicycle travel connections	E/W bicycle and/or pedestrian travel	sproves Bicycle Level of Acc Service 8	future transit options and	ommodates Freight sents (Includes Hazmat Oversized Vehicles)	Decrease Travel Time Index (TTI)	Decrease Travel time by minutes	y Meets Design Standards	Reduce Peduce Level of Vehicle/pedestrian Coeffict.	Fraffic Crash reduction potential for scycles bicycle/vehicle crashes	r Reduce frequency and i severity of crashes.	Incorporates bicycle design standards and guidelines		Notes
	Perior	rmance measures		Good (sissely allymed) Fair (name variations between alternatives) Poor (algorificant sentations)	Y/N	Migh Medium Low	\$\$\$ (i.e. industrial) \$\$ (i.e. residential) \$ (i.e. ogricultural)	Number of critical resources present that will impact schedule, Resources Identified but no impacts to an harbital preferences. No Critical Becommon Identified	htigh Medium Low	Substantial Molecute Minor No Change		Major Substantial Moderate Minor No Change	Y/N	Improves Neutral Limits	Substantial Based on PTI No Change Comparison Worsens	Substantial Moderate No Change Worsma	No Exceptions/Variances If Exception/Variance		Substantial Moderate No Change Worsens		Exceeds Minimum Meets Minimum Does Not Meet Minimum	Corried Forward Hot Recommended	
Location	To Build Li	Lanes Shoulder	Median/Turn Lane	Peor (significant variations) Bilke/Peds		Low	\$ (i.e. agricultural)	regional to an income unanigurately, no or the air resources awarely no	Low	No Charge		Minor No Change		Limits	Worsens	Worzens	More than 1 Exception/Variance		Worsens		Does Not Heet Minimum	Not Recommended	
	No Build 2	2 Lanes 8-10'	At intersections	WELD CORNTY No. Commerc DACONS Nave following Fin Shoulder DES from FERENCE for FERENCE for	н	Low	None	No Change	No Change	No Change	No Change	No Change Yes,	, can accommodate buses	Limits	Worsens Worsens (TTI 1.70 to TTI 3.53) (FTI 3.54 to PTI 7.92)	Worsers (TT 5.4 to TT 11.3) Worsers	No Exceptions/Variances	Worsens No Chang	No Change	Worsers	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Not Recommended	
									Medium - may be insufficient for	No Chapte More air. On 19 Indexes of Double All and MICT Products several proposed of the Microscope Chapter of the Micro								No Change - Beca is the governing o	se speed teria for				
	Typical 2	2 Lanes 10'	Two-Way Left Turn	bilisable shoulders will help improve safety. DMCONO Not with Gazono Plan DREP Door FREDERICK Good - Increase in politicity displanes. Would rather see 4 lanes.	Y	Low	\$ - Primarity agricultural and open space	Historic - six officially eligible or listed on the \$RPP (CD 52, South Platte Supply Careal Disch, South Platte Supply Careal Segment, highway 23 segment, community disch segment, and Cottomwood extension disch segment). Parks and Recreation (Related apple.), Traffic Notice (nural homes concentrated between CR 1 and CR 5, Park and recreation area concentrated	commercial development. This segment of corridor	would result in no change to N-5 connections within this segment; however, the provision of TWLTLs would provide width for treatments such as raised medians and median refuges at intersections for left-turning bicycles from the	Winor - Additional II width for bicyclists would improve Ex. 6 bicyclist comfort and limit	No Change - BLOS is 8. Conditions: 55 mph speed Yes, t, 8-10 ft shoulder, 6% MV,	, can accommodate buses. (Better	Improves cross-section for turns)	Worsens Worsens (TTI 1.70 to TTI 3.53) (PTI 3.54 to PTI 7.92)	Worsers (TT 5.4 to TT 11.3) Worsers	No Exceptions/Variances	Hoderate or greater than 40 (Consistent 90" = 4 and does no Shoulder) regardless of oth	se speed teris for peeds at Moderate - Per a FHWAs Cran Popt, 175 Woodfication Factor (CMF) Clearinghouse study, widening shoulder from 8 to 90 ft yields the CMF of 0.87 and CRF of 13% of 0.87 and CRF of 0.87 and	Moderate g a (Consistent 10' s a Shoulder)	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Not Recommended	Traffic operations will worsen with expected growth in the area.
				FYZLUDOLA LODO - incresse in pearoscycle options. Would rather see 4 sames.				between CR 3 1/2 and CR 5)	growing residential areas.	minor succession.	safety	19000 AADT near I-25						(street width Lane/shoulder w Lane blocks	blike CMF of 0.87 and CRF of 13% th, blike e).	•			
									High - area slated for future commercial	Mark - CO12 between CO12 or ML and WC17 includes several proposated of storest and out-street legisla facilities. The entiring if shadows not CO12 would provide a connection between them facilities and entirely the shadows for provide a connection between them facilities and entirely the shadows for would result in on charge in 1% connection within this segment. The proposed for their care care section with in higher protest in the size place of the time core served certain in high personnel service size of the facilities are considered in the high protest service size of the section of the service of the section of the time of the section of the section of the section of the time of the section of the section of the section of the time of the section of the time of the section of the time of time of the time of ti								No Change - Beca is the governing o	se speed teria for				
CO Line Rd. to WCR 7			Two-Way Left Turn	WILD COUNTY Good - Our preference would be to maintain the bey-way left turn lane with as open media. BACHO Bick with Talcoron Plan DIST FIRE FREEDING Good - preferred option	Υ	Low	\$ - Primarity agricultural and open	Historic - six officially eligible or listed on the SEPP (CO 32, South Platte Supply Canal Disch, South Platte Supply Canal Disch, South Platte Supply Canal Expent, Ingleway S2 segment, community disch segment, and Cottomoud detailments offich segments, Parks and Ricercastics (Reliefund Park). Traffic Rolate (rural hones concentrated between CF, 1 and CF, 3 pirk and recreation area concentrated between CF, 3 st 27 and CF, 3 pirk and recreation area concentrated between CF, 3 st 27 and CF, 3 st 27 and CF.	in general, commercial establishments prefer	would retait in no change to M-> connects on which this tegeret. The proposed four lane cross-section results in higher potential vehicle-blockle conflicts than a two-lane cross section, but the provision of TWLTLs provide width for theatments such as raised medians and median refuges at intersections for left-	Winor - Additional III width for bicyclists would improve Ex. 6	No Change - BLOS is 8. Yes, Conditions: 55 mph speed and	can accommodate buses d allow vehicles to pass (Wider c	Improves cross-section for turns,	(TTI 1.53 to TTI 1.35) (FTI 7.92 to FTI 1.86) w/4-Lanes e/o US287 w/4-Lanes e/o US287	SUBSTANCIAL (TT 11.3 to TT 4.3) Substantial w/4-Lanes e/o US287 w/4-Lanes e/o US	No Exceptions/Variances	Hoderate or greater than 40 (Consistent 90' = 4 and does no	peeds at Moderate - Per a FMWAs Cras mph, LTS Hodification Factor (CMF) change Clearinghouse study, widening	h Moderate g a (Consistent 10'	Exceeds Hinimum (Shoulder is wider than minimum negatrement)	Recommended	
				FREDERICK God - preferred option			space	rural homes concentrated between CR 1 and CR 5, Park and recreation area concentrated between CR 1 1/2 and CR 5)	options that help with access, but this will depend on the ultimate site plan	s turning bicycles from the minor side streets.	bicyclist comfort and limit safety	t, 8-10 ft shoulder, 4% HV, 19000 AADT near I-25	slow buses	allows passing)	Substantial Substantial (TTI 3.53 to TTI 1.83) (PTI 7.92 to PTI 4.46)	Substantial Substantial (TT 11.3 to TT 5.9)		Shoulder) regardless of oth (street width lane/shoulder w lane blocks		i a Shoulder)			
	Typical 4	ELanes 10'							ultimate site plan Hedium - in general,	Minor - CO12 between CO1 to MI and VICET includes several proposed off- tiones and on street begind facilities. The existing \$1 Students on CO12 Student provides convention themselves them facilities and evidencing the behavior to p ₁ . The provides convention to the provides of the pr													
			Raised Hedian	WELD COUNTY Fair - A raised median is not as desirable as an open median. DMCONO Not with Sucono Plan ESE Good.		Low	\$ - Primarity agricultural and open space	Historic - six officially eligible or listed on the SEPP (CD 32, South Platte Supply Canal Disch, South Platte Supply Canal Disch, South Platte Supply Canal Exprest, Highway S2 segment, community disch segment, and Extraoreod dentation offich segments, Parks and Ricercastics (Reliefund Park). Triffic Holse (rural hones concentrated between CF. 1 and CF. 3, Park and recreation area concentrated between CF. 3 xx1 2 and CF. 3. 17 xx2 and CF.	establishments don't always like medians and prefer options	provide a connection between these facilities and widening the shoulders by Y would result in no change to N-5 connections within this segment. The proposed four lane cross-section results in higher potential vehicle-bicycle conflicts than	Minor - Additional II width for bicyclists would improve Ex. (No Change - BLOS is B. Yes, Conditions: 55 mph useed and	can accommodate buses diallow vehicles to pass (Wider o	Improves cross-section for turns.	Substantial Substantial (TTI 3.53 to TTI 1.25) (PTI 7.92 to PTI 1.86) w/4-Lanes e/o US287 w/4-Lanes e/o US287 Substantial Substantial	Substantial (TT 11.3 to TT 4.3) Substantial	No Exceptions/Variances	LTS for roads with Hoderate or greater than 4i (Comistent 10" - 4 and does no	peeds at Moderate - Per a FMWAs Cras righ, LTS Modification Factor (CMF) change Clearinghouse study, widening	h Moderate	Exceeds Minimum (Shoulder is wider than minimum negulrement)	Carried Forward	
				DECOUNTS A set and the control of th			space	rural homes concentrated between CR 1 and CR 5, Park and recreation area concentrated between CR 3 1/2 and CR 5)	that help with access, but this will depend on the ultimate site	a two-lane cross section, but the provision of TWLTLs provide width for treatments such as raised medians and median refuges at intersections for left- turning bicycles from the minor side streets.	bicyclist comfort and limit safety	t, 8-10 ft shoulder, 6% HV, 19000 AADT near I-25	slow buses	allows passing)	w/4-Lanes e/o US287 w/4-Lanes e/o US287 Substantial Substantial (TII 3.53 to TII 1.83) (PTI 7.92 to PTI 4.44)	w/4-Lanes e/o US287 w/4-Lanes e/o U Substantial Substantial (TT 11.3 to TT 5.9)	287	Shoulder) regardless of oth (street width lane/shoulder w	criteria shoulder from 8 to 10 ft yields blke CMF of 0.87 and CRF of 13% th, blke	a Shoulder)	minimum requirement)		
	No Build 2	Lanes 8-10'	at intersections	WLD COUNTY No Comment Shoulder BacONG Not with Damon Plan FRENCH C - Fair	N	Low	None	No Change	plan No Change	No Change					Worsens Worsens (TTI 1.16 to TTI 2.20) (PTI 1.34 to PTI 6.34)	Worsers Worsers	No Exceptions/Variances		·		Exceeds Hinimum (Shoulder is wider than minimum requirement)		
				FESSION - Fair					Medium - may be		No	Change - SLOS is 8 and						No Change - Barra	se speed				
	Troice 2	Llanes 10'	Two-Way Left Turn	MELO COUNTY Cood - This is the preferred interim candition. Bities on shoulder FRECERIC Fair - area identified for commercial development with desire for increased ingress options. Developing area with increased quickly will require address at translation of an option of the country.	γ,	Hedium - Potential Impact to	\$s - Commercial and residential	Historic - two officially eligible or listed on the SRIP (CD 52 and Highway 52 Segment) Traffic Note (rectaurant with outdoor sesting and rural homes disableed around CR 7)	Medium - may be insufficient for commercial development. This	No Change - There are no major existing/proposed N-5 bicycle facilities along	Minor - Additional Width for bicyclists birds would improve	Conditions: 40 mph speed it east of Glacier Way and	. can accommodate buses	Improves	Worsens Worsens	Worsens Worsens	No Exceptions/Variances	It the governing of LTS for roads with Moderate or greater than 40 (Consistent 97 = 4 and does no	peeds at Moderate - Per a FMWAs Cras mph, LTS Hodification Factor (CMF) thange Clearinghouse study, widening	h Moderate	Exceeds Hisimum (Shoulder is wider than minimum requirement)	Not Recommended	
				* PRIMERICA FAY — area sometimed for commerciae development with opener for increased registed options. Developing area with increasing density will negative additional travel lanest for capacity.		commercial property	ressencial	some (restaurant with outdoor seating and rural nomes outdoesd around UK /)	among the fastest growing residential areas.	No Change - There are no major existing/proposed N-5 blcycle facilities along this segment that would be connected by a blcycle facility along CO 52	bicyclist comfort and Glac safety 65.1	tipn speed strict wast of tier Way, 8-10 ft shoulder, HV, 19000 AADT near I-25	parter	cross-section for furns)	Worsens Worsens (1711 1.16 to 711 2.20) (711 1.24 to 711 4.24)	(110.5 to 110.4)				a Shoulder)	minimum requirement)		
									High - area slated for									lane blocks					
				WILD COUNTY Good - professed alignment at this location.					future commercial and is fast growing. in general, commercial examinates prefer options that help with access, but this will depend on the		Minor - Additional width		can accommodate hores	Improve				No Change - Boca Is the governing of LTS for roads with or greater than 44 No Change = 4 and does no regardless of other highter width lane/ shoulder w	e speed teria for peeds at mob. LTS	Moderate			
			Two-Way Left Turn	WILD COUNTY Good - preferred alignment at this location. BLOCHO Nat with Distance Plan FREECHCK Good - area laterative for commercial development with desire for increased ingress options Developing area with increasing density will require additional travel lanes for capacity	· •	Medium - Potential Impact to commercial property	\$\$ - Commercial and residential	Historic - two officially eligible or listed on the SHIP (CO S2 and Highway S2 Segment) Traffic Naise (retainant with outdoor seating and rural homes clustered around CR 7)	commercial establishments prefer options that help with	No Change	for bicyclists would improve bicyclist comfort and safety	No Change and	dallow vehicles to pass (Wider slow buses	cross-section for turns, allows passing)	Subtractiol Subtraction (TTI 2.20 to TTI 1.25) (PTI 6.34 to PTI 1.63)	Substantial Substantial (TT 0.9 to TT 0.5)	No Exceptions/Variances	No Change = 4 and does no regardless of oth (street width	change Moderate criteria bike	(Consistent 10' Shoulder)	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Carried Forward	
	Typical 4	Lanes 10'		Bites on shoulder					depend on the ultimate site plan									tane/shoulder w tane blocks	th, bike ej.				
									Medium - in general, commercial establishments don't			hange - SLOS is 8 and better.						No Change - Beca is the governing of LTS for roads with	se speed teris for peeds at Moderate - Per a FHWAs Cras				
			Raised Median	WELD COUNTY Fair - A naked median is not as decinable as an open median. DACONO Not with Dozono Plan FREEERICK Fair option. Like raised median sections to do not want to make it difficult for commercia ZODEL.	M Y A	Medium - Potential Impact to commercial property	\$\$ - Commercial and residential	Historic - two officially eligible or Stand on the SHP (CO S2 and Highway S2 Segment) Traffic Nake (restaurant with outdoor seating and rural homes clustered around CR 7)	always like medians and prefer options that help with access,	No Change - There are no major existing/proposed H-5 bicycle facilities along this segment that would be connected by a bicycle facility along CO 52	for bicyclists would improve bicyclists comfort and safety	t of Glader Way and 55 mgh. Yes, d d limit west of Glader Way, 8- and shoulder, 4% HV, 19000 AADT	can accommodate buses d allow vehicles to pass (Wider slow buses	improves cross-section for turns, allows passing)	Subtractiol Subtractiol (TTI 2.20 to TTI 1.25) (PTI 6.34 to PTI 1.63)	Substantial Substantial	No Exceptions/Variances	(Consistent 10" or greater than 40 "Shoulder and Hedian Refuse) regardless of oth	mph, LTS Hodification Factor (CMF) change Clearinghouse study, widening criteria shoulder from 8 to 93 ft yields	Moderate g a (Consistent 10' s a Shoulder)	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Carried Forward	
WCR 7 to SR I-25 Frontage Road									but this will depend on the ultimate site plan			8815						Hoderate (Consistent 97 Shoulder and Hedlan Refuge) Hoderate (Consistent 197 Shoulder and Hedlan Refuge) Hoderate Lane/shoulder set Lane/shoulder set Lane/shoulder set Lane/shoulder set Lane/shoulder set Lane/shoulder set	blike CMF of 0.87 and CRF of 13% th, blike e).				
																			Significant - Per a PHWA Cras Hedification Factor (CMF)	a			
																		No Change - Beca is the governing o	Clearinghouse study, installing bicycle lanes yields a CMF of 0. se speed and Crash Reduction Factor of teria for 49% for vehicle/bicycle crashe	51 4 8.			
	Typical 4 Lar	ane Urban NA	16' Median/12' Turn Lane	WILD COUNTY Good Share on didewalk, blike latest Developing quickly, increasing desity is immediate area with adjacent recidental vocal area from the control of the cont	. v *	Medium - Potential impact to	\$\$ - Commercial and	Historic - two officially eligible or listed on the SHH (CO S2 and Highway S2 Segment) Traffic Nature (Hestavisat with outdoor stating and rural homes clustered around CR 7)	High	No Change - There are no major existing/proposed H-5 bicycle facilities along this segment.	Substantial - Que to the	Yes, lajor - Dedicated bike lanes allow to	, can accommodate buse, whicles to pass slow moving or and ornoide burser first	improves cross-section for turns,	Substantial Substantial	Substantial Substantial	No Exceptions/Variances	LTS for roads with Moderate or greater than 40 (Sidewalk and Median = 4 and does no	bicycle lanes yields a CMF of C. se typed and Crash Reduction Pactor or ters for a MFS for vehicle (Sicycle crash- pendin at mph, LTS. Per the study, this CMF was developed for bicycle lane developed for bicycle lane study developed for bicycle lane developed for bicycle lane developed for bicycle lane developed for bicycle study developed developed for bicycle study developed for bicycle study developed for bicycle study developed for bicycle study developed for bicycle study developed for bicycle study developed for bicycle study developed for bicycle study for bicycle s	Moderate (Median Separation)	Meets Minimum"	Carried Forward	
				Developing quickly, increasing density in immediate area with adjacent recidental would see need for alternate modes of stansportation.								×	nd final mile connectivity	allows passing)				Refuge) regardless of oth (street width lane/shoulder w	criteria addition resulting in reduced blike shoulder or lane width and 2 th, blike percent increase in average da	d o uity			
61 51																			condition was 11-ft lanes, no shoulder, no median, and fou lane urban collector or local ro	o r- md.			
2 2 2																			Matthewise Dates (IMD)				
any the															Substantial No Change	Substantial		No Change - Becau the governing crite	Clearinghouse study, installing bicy lanes yields a CRF of 0.51 and Cra speed is Reduction Factor of 49% for a for LTS weblicke/bicycle crashes.	icia icia			
ent 2- Go	Typical 6 Lar	ane Urban NA	16' Median/12' Turn Lane	Peds on sidewalk, bike lanes: FREERICK - Fair - the community apports large connecting and the proposed 4-base is concerning.	. v .	Medium - Potential Impact to commercial property	\$\$ - Commercial and residential	Historic - two officially eligible or listed on the SRHP (CD S2 and Highway S2 Segment) Traffic Nake (I)retaurant with outdoor seating and rural homes clustered around CR T)	potentially support future commercial mixed use development, but not	* So Change - There are no major existing/imposed H-5 big/or facilities along this segment that would be connected by a big/or facility along CO 53	Substantial - Due to the provision of bike lanes	Yes, allow v buses as	, can accommodate buses, whicles to pass slow moving rs, and provides better first and final mile connectivity	improves cross-section for turns, allows passing)	Substantial No Change (TTI 2.20 to TTI 1.24) (PTI 6.34 to PTI 6.17) w/4-Lanet e/o US287 w/4-Lanet e/o US287 Worsess Worsess	(TT 0.9 to TT 0.5) Substantial w/+Lanet e/o USB7 w/+Lanet e/o US Worsens Worsens	197 No Euceptions/Variances	(Sidewalk and Median greater than 40 mg	ICTS = 4 Per the study, this CNF was devok	ged Moderate	Meets Minimum*	Recommended	With expected growth in the area, may executely need 6- iance. Recommend preserving ROW for this abernative and utilizing 4-lane options in interim. If 6-lane moves into decion, include blocks connectivity into project.
E a									supported in policy duce						(TT12.28 to TT12.59) (PTI 6.24 to PTI 11.11)	(TT 0.9 to TT 1.1)		bike bne/shoulder bne blocks	regardes: for bicycle bine addition resulting or width, neduced thousier or lane width and percent increase in average daily bicycle traffic (s287). The base condition was 15-ft lanes, no shoul-	dec,			
																			collector or local road.				
EXCLUDED AREA: 1-25 between				ion up to frontage roads. Check the tie into I-25 recommendations.											Worsen Worsen	Worsers					Faranch Minimum / Desider is wider than		
	No Build 2	2 Lanes 8-10'	At Intersections	Shoulder FEEDERICK Center ours base not provided at only inventions rather than acres points in commercial	N	Low	Nane	No Change	No Change	No Change	No Change	No Change Yes,	, can accommodate buses	Limits	Worsens Worsens (TTI 1.47 to TTI 3.00) (PTI 1.75 to PTI 5.68)	(TT 4.6 to TT 9.5) Worsens	No Exceptions/Variances	Worsens No Chang	Frankland David Britis Com		minimum requirement)	Not Recommended	
																			Hodification Factor (CMF) Clearinghouse study, installin bicycle lanes yields a CMF of 0.	18 51			
				WELDO COUNTY Good - This is a good interim condition for this location. Median lane, and bikeable shoulders will help incorave safety.		High - Relatively low		Historic - five officially eligible or listed on the SRHP (CO 32, Lower Boulder Ditch/ South Platte		Significant - Colorado Blvd and the segment of CO 52 east of Colorado Blvd are		Yes	, can accommodate bures.		Full Section Full Section Substantial Substantial (TTI 1.00 to TTI 1.86) (FTI 5.68 to PTI 2.55)	Full Section Substantial Full Section		is the governing of	ie speed and Crash Reduction Factor of teria for 49% for vehicle/bicycle crashe peeds at mph, LTS Per the study, this CMF was			Carried Forward (NB I-25 Frontage	
	Typical 4 Lar	ane Urban NA	16' Median/12' Turn Lane	WELDO COUNTY Good - This is a good interim condition for this location, shedow laws, and blandle Profit on offereals, Ball Bases RECECCE Good - Laws interested for commercial development with order for increased ingress option. Developing quickly, increased energy in immediate laws and placent reductable would see need for alternative and ordinative ordinative and placent reductable would see need for	. Y	complexity of acquisition, except for one oil well conflict.	commercial, and residential	Historic - five officially eligible or listed on the SMM (CO 52, Lower Boulder Disch/ South Platte Supply Canal, Lower Boulder Disch Segment, Nelson Farm, Union Pacific SR Deet Branch Segment). Traffic Noise (restaurants with outdoor seating and rural homes located in Dacono and Prodrick	High	Significant - Colorado Bivd and the segment of CO 32 east of Colorado Bivd are DRCOC Regional Active Transportation Corridor. Providing bike leaves on CO 32 would improve the connection for blocyldrist stratifies by Exbeview TMC 81 and WCR 21 and would improve local bicycle connectivity within Dacono and Frederick.	the provision of bike Maj	jor - Dedicated bike lanes buse ar			Silver Birch to WCR 15 Silver Birch to WCR 15 Substantial Substantial (TTI 2.60 to TTI 1.88) (TTI 4.57 to TTI 2.87)						Meets Rinknum*	Road to Silver Birch) Recommended (Silver Birch to WCR 1	
				and the same same same same same same same sam											(TTI 2.60 to TTI 1.88) (TTI 4.57 to TTI 2.87)	(TTI 6.2 to TTI 4.6)		lane/shoulder w lane blocks	criteria addition resulting in reduced shoulder or lane width and 2 e). blue h, blue e). bluech is a swerage da bicycle traffic (ADBT). The bar condition was 11-ft lanes, m thoulder, no medium, and four lane urban collector or local related to the condition was the condition was the condition was 11-ft lanes.	elly se o			
Northbound I-25 Frontage Rd to WCR 15																			shoulder, no median, and fou lane urban collector or local ro	and.			
																			Significant - Per a PHIKA Cras Hedification Factor (CMF)	- 1			
																		No Change - Beca	Clearinghouse study, installin bicycle lanes yields a CMF of 0.	ng .51			
	Typical 6 Lar	ane Urban NIA	16' Median/12' Turn Lane	WELD COONTY Good - Our perference would be to maintain the two-way left turn open mediax. BACCHIO Good Bible base FREDERICK Fair - Commercial raws, doing for this sum exements at restricted coord licendors. Increased confice with providing defibilities.	٧	High - Relatively low complexity of acquisition,	\$\$ - Agricultural, commercial, and	Historic - New difficulty eligible or listed on the SRMP (CO 32, Lower Bodder Ditch) South Plastic Supply Ceals, Lower Bodder Disch Segment, Nisions Farm, Disco Rectic RR Dest Branch Segment). Traffic Holler pressurants with bodder sating and rural homes located in Disconduct and Productio.	Medium - could potentially support future commercial mixed use	Moderate - Colorado Sivid and the segment of CO 52 east of Colorado Sivid are DRCOG Regional Active Transportation Corridors. Providing bike Lanes on CO 52 would improve the connection for bicyclists travelling N-5 between WCR 13 and	Substantial - Due to the provision of bike Maj	yes, jor - Dedicated bike lanes	, can accommodate buse, which to pass slow moving (Wilder o	Improves cross-section for turns,	I-25 FR to Silver Birch I-25 FR to Silver Birch Substantial Substantial	-25 FR to Silver Birch No Change I-25 FR to Silver B	irch No Exceptions/Variances	No Change - Ecc. is the governing or LTS for roads with Colorer Crossing Distances) No Change - Ecc. is the governing or LTS for roads with or greater than 4! * 4 and does no regentless of other conceptions of other conceptions of other conceptions of other conceptions of the color conceptions of the color conceptions of the color conceptions of the color c	peeds at mph, LTS Per the study, this CHF was thange developed for bicycle lane	Moderate (Sidewalk and Hedian	Meets Nicktum*	Recommended (Between NB 1-25 Frontage Road and Silver Birch only)	With expected growth in the area, may eventually need 4-lanes. Recommend preserving ROW for this alternative and utilizing 4-lane options in interim. If 6-lane moves into design, include bicycle
				Increased conflict with provided pedifilingtion		conflict.	residential	Segment). Framic home (rettaurants with obsoler leaving and rural nomes located is Liscond and Frederick	development, but not supported in policy door	Wick 23 and would improve social picycle connectivity within uscono and Frederick: However, the proposed six lane cross-section results in higher potential vehicle-bicycle conflicts than a four-lane cross section.	tanes	and the same of th	nd final mile connectivity	allows passing)	(TTI 3.22 to TTI 1.71) (PTI 9.56 to PTI 4.13)	(TT 1.3 to TT 1.3) No Change		Crossing Distances) regardless of oth (street width lane/shoulder wi	criteria addition resulting in reduced blike shoulder or lane width and 20 th, blike percent increase in average da e). blcycle traffic (ADBT). The bar	f Treatment) 0 slly		Not Recommended (50ver Birch to WCR 15)	6-lane moves into design, include bicycle connectivity into project.
																		une blocks	 bicycle traffic (ADBT). The bar condition was 11-ft lanes, no shoulder, no median, and four lane urban collector or local no 	r.			
			At intersections	WELL COLOR OF THE STATE OF THE	N	Low	Nane	No Change	No Change	No Change	n-0				Worsens Worsens	Worses	W-F				Esceeds Hinimum (Shoulder is wider than	Not Recommended	
	No Euro 2	2 Lanes 9-10'		DACCRO Floor FESCIONEC Fast WILD COUNTY Fast BECOMO Less about a signing with pipe and makes a fast and a fast of the signing with pipe and makes a fast of the signing with a fast of the signing with pipe and makes a fast of the signing with a fast of the signin	4	LOW	Natio	no charge	no Charge	no charge	No Crarge	no change Yes,	Cam accommonate buses		Worsens Worsens (TTI 1.14 to TTI 1.20) (PTI 1.29 to PTI 1.47)		No Exceptions/Variances	morsens No Chang	No Change	WORSEEL	Exceeds Hinimum (Shoulder is wider than minimum requirement)		Two lane afternative could include realignment and lower superelevation; median may include rumble strips or cable rail
	2	Lanes 10'	16 median	Decider V Content DCCOO For Section 1 DCCOO For Section 1 DCCOO For Section 1 DCCOO For Section 1 DCCCOO For Secti											Worsens Worsens (TTI 1.20 to TTI 1.50) (PTI 1.47 to PTI 2.04)	(TT 2.9 to TT 1.6) Worsers						Not Recommended	Must accommodate additional traffic over the No Build scenario.
									Medium - realignment		Minor - Additional width/consistent	No Change - BLOS is 8						No Change - Beca is the governing o LTS for roads with	teria for peeds at Moderate - Per a FHWAs Cras	th Substantial			
			16' Median with Rumble Strips	WILD COUNTY fair BallOND Less about aliquing with plans and more about seleny in this vection. Would defer to staffic and safety-engineers to abequainly address callery, Ball vessiblery, open lisses, etc. FRESERICK fair - Necessary canded of o-curred What is the required approach length inclusion for an iner such as their	٧	High-ROW may be a complicated acquidition with a realignment of the roadway.	SSS - Agricultural, but large takes may require full takes based on impact	Historic - one officially eligible or listed on the SRHP (CO S2), Traffic Noise (rural homes located near CR 17 and CR 19)	may have a larger impact on potential for property reducedon	No Change - Shoulders of 8-10' width exist along this segment. Widening to a consistent width of 10' would provide a nominal improvement.	shoulder width of 10° Ex 0 for bicyclists would limit improve bicyclist 12	Conditions: 55 mph speed t, 6-8 ft shoulder, 105 HV, 2000 AADT near Decono	can accommodate buses d allow vehicles to pass (Wider o slow buses	Improves cross-section for turns, allows passing)	Worsens Worsens (TTI 1.20 to TTI 1.27) (PTI 1.47 to PTI 1.37)	No Change (TT 2.9 to TT 1.0) No Change	No Exceptions/Variances	Roderate or greater than 4 (Consistent 97 = 4 and does no Shoulder) regardless of oth	npp, LTS Hodification Factor (CMF) thange Clearinghouse study, widening criteria shoulder from 8 to 10 ft yields blos CMF of 6.87 and CMF.	(Consistent Shoulder, Median, and Rumble Strips)	Esceeds Hinimum (Resider is wider than minimum requirement)	Recommended	Must accommodate additional traffic over the No Build scenario.
											comfort and safety							(street width Lane/shoulder w Lane blocks	th, bike				
MP 15 - WCR 19	Typical			WEB COUNTY Good					Medium - realignment		Minor - Additional width/consistent	No Change - BLOS is B.						No Change - Beca is the governing of LTS for roads with	teria for peeds at Moderate - Per a FHWAs Cras	a .	Exceeds Histimum (Bloulder is wider than minimum negulrenners)		
	4	Lanes 10'	16' Median with Cable Rail	DECORO Less about aligning with plans and more about safety in this section. Would defer to traffic and	٧	High-ROW may be a complicated acquisition with a realignment of the roadway.	SSS - Agricultural, but large takes may require full takes based on impact	Historic - one officially eligible or listed on the SBHP (CO S2). Traffic Noise (rural homes located near CR 17 and CR 19)	may have a larger impact on potential for property	No Change - Shoulders of 8-10' width exist along this segment. Widening to a consistent width of 10' would provide a nominal improvement.	shoulder width of 10' Ex. (for bicyclists would improve bicyclist	Conditions: 55 mph speed and t, 8-10 ft shoulder, 65 HV, 92000 AADT near 1.75	can accommodate buses d allow vehicles to pass (Wider o slow buses	improves cross-section for turns, allows passing)	Worsens Worsens (TTI 1.20 to TTI 1.27) (PTI 1.47 to PTI 1.57)	No Change (TT 2.9 to TT 3.0) No Change	No Exceptions/Variances	Roderate or greater than 4 (Consistent 97 = 4 and does no Shoulder) regardless of oth	mph, LTS Hodification Factor (CMF) thange Clearinghouse study, widening criteria shoulder from 8 to 93 ft yields	Substantial g a (Consistent Shoulder s a and Cable Rull)	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Carried Forward	Must accommodate additional traffic over the No Build scenario.
									recevelopment.		comfort and safety	FRANCISCO PROPERTY - 25						(street width Lane/shoulder w Lane blocks	th, bike e).				
				WELD COUNTY Fair					Medium - realignment		Minor - Additional swidth/consistent	No Change - SLOS is S.											
			Depressed Median	TRECOND Less about adjusting with plant and more about today in this section. Would define to stuffic and under prosposes to adjuster, address series, that weathers, queed bases, etc. FRECORICE this - inacreasy custode of t-curied beats in the programed approach integrit inclusion for an item such as this?	٧	High-ROW may be a complicated acquisition with a realignment of the roadway.	555 - Agricultural, but brige takes may require full takes based on impact	Historic - one officially eligible or listed on the SRHP (CO S2). Traffic Noise (rural homes located near CR 17 and CR 19)	impact on potential for property reduced	No Change - Shoulders of 8-10' width eacht along this segment. Widening to a consistent width of 10' would provide a nominal improvement.	shoulder width of 10' Ex. (for bicyclists would improve bicyclist	Conditions: 55 mph speed t, 8-10 ft shoulder, 65 HV, 19000 AADT mear I-2*	can accommodate buses d allow vehicles to pass (Wider o slow buses	improves cross-section for turns, allows passing)	Worsens Worsens (TTI 1.20 to TTI 1.27) (PTI 1.47 to PTI 1.57)	No Change (TT 2.9 to TT 1.0) No Change	No Exceptions/Variances	Hoderate or greater than 4 (Consistent 10" = 4 and does no Shoulder) regardless of oth (street width	npn, LTS Hodification Factor (CMF) thange Clearinghouse study, widening criteria shoulder from 8 to 90 ft yields blike CMF of 6.87 and CMF.	a (Consistent Shoulder and Median Separation)	Exceeds Histman (Seudder is wider than minimum requirement)	Not Recommended	Small benefits that could come from depressed median do not outweigh the additional impact to adjacent properties. Would also not match character of the remainder of the corridor.
											comfort and safety							Lane/shoulder will Lane blocks	th, bike				Maste minimum design criteria, but does not remaide
ı			BS Curves	SECOND TO COUNTY TO COMMON																			any advantages. Imposes additional restrictions on future improvements.
Remarks			6% Curves	distributions of will be automa edge of highest desired development. Alone fricibility is better, but retires option between 45 and 65 transition. Fefer to filtere convert from college perspective, Alon goo to maximize room allowed for development. CROSPORY Gends, registered that overfeed the overfeed.	of intersections were evaluated separately dr	since other performance measures	are used to compare alternat	EWK.														Recommended	Improved safety. Allows for centralized signal location in future (consistent with ACP).
			45 Curves	WLD COOKIT 15F																		Carried Forward	Improved safety, but 6% option preferred by local

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			Category				Support Local and Regional Planning Efforts	Accommodate Future Technology	Identify Estimate	ed ROW Needs	Consider the Natural and Built Environment		Support Mul	itimodal Connections				Accommodate Inc	reased Travel and Freigh	t Demand			Increase Safety					
		Pao	rformance Mea	Kurak			Relative improvement/spatial alignment with goals of local agency plans	Accommodate present and future implementation of emerging, existing and future technology	Complexity of acquisition based on impacts to primary structures and/or land use type	y Relative expected ROW cost	Identification of critical resources impacted based on footprints. No quantitative impacts will done.	Qualitative measurement of the context sensitive approach of land use and character along the corridor	Improve N/S pedestrian and bicycle travel connections	Improve continuity for E/W bicycle and/or pedestrian travel	Improves Bicycle Level of Service	Accommodates potential future transit options	Accommodates Freight Movements (includes Hazmar and Oversized Vehicles)	Decrease Travel Ti Index (TTI)		onease Travel time by minutes	ecrease Delay Alects Design S	Reduce vehicle/ped conflic		Crash reduction potential for bicycle/vehicle crashes		incorporates bicycle design standards and guidelines		Notes
							Cood (stately aligned) Fair (some sociations between alternatives) Poor (significant sociations)	Y/N	high Medium Low	\$\$\$ (i.e. industrial) \$\$ (i.e. residential) \$ (i.e. agricultural)	Number of critical resources present that will impact schedule, Resources identified but no impacts to schedule articipated, No Critical Resources identified	High Medium Low	Substantied Moderate Allucr No Change		Major Substantial Moderate Minor Ho Change	Y/N	Improves Neutral Limits	Substantial Maderate No Change Worsess	Soled on PTI Comparison	Substantial Moderate No Change Worsens		sance		Substantial Moderate No Change Worsens		Exceeds Minimum Meets Winimum Does Not Heet Minimum	Corried Forward Not Recommended Eliminated	
Location		To Build	Lanes	Shoulder	Median/Turn Lane	Bike/Peds				1																		
		No Build	2 Lanes	6-8'	At intersections	Bikes on shoulder	WELD COUNTY No comment FORT LUFTON Poor	N	Low	None	No Impact	No Impact	No Change	No Change	No Change	Yes, can accommodate buse	s Limits	(TTI 1.13 to TTI 1.	Worsens (8) (PTI 1.23 to PTI 2.50) (Worsens TT 3.3 to TT 4.1)	Worsens No Exceptions/	riances Worse	s No Change	No Change	Worsens	Exceeds Hinimum (Shoulder is wider than minimum requirement)	Not Recommended	
		Typical 2*	+1 (Alternating Passing Lane)	10'		Bikes on shoulder	WELD COUNTY Fair - This valuable in a corporatio treatm condition. Not openue. FORT LIMITON Fair	Y	Medium - Both Bratner and Lupton Bottom ditches run parallel to 2 and may need t be relocated.	S - Primarily to agricultural	Hebert - one efficiely eligible er listed en the SRB (COS), Revealtier Plants Plants, Trab Note (Bard Itame, concentrated between mile marker 17 and 20)	High - unlikely to impact whether area land uses stay the same or redevelop long term	Associated - Mr. E. 1, W.C.L.2, and C.J. 5 developed 1, and 2, are as I McCu. Associated - Mr. E. 1, and C.J. 5 developed 1, and 2, are as I McCu. Associated - Mr. E. 1, and C.J. 5 developed 1, and Mr. C.J. 5	width for bicyclists would improve d bicyclist comfort and safety	Moderate - BLOS would improve from BLOS D to BLOS C due to widered shoulder Ex Conditions: 35 mph speed limit, 4-8 ft shoulder, 10% My, 12000 AADT near Discono	Yes, can accommodate buse	Neutral (Slightly better cross-section for turns, allows some passin	No Change" (TII 1.23 to TII 1.	Substantial" 510 1711 2.23 to 9711 1.72) (No Change" IT 3.9 to TT 3.5)	No Change" No Exceptions://	riances Pendir	g No Change	Moderate - Per a PTHWAs Crash Hodification Factor (CMF) Clearinghouse study, widering a shoulder from 6 to 10 ft yields a CMF of 0.76 and Crash Reduction Factor of 2.4% for evelocifying crashes. Widering a shoulder from 8 to 10 ft yields a CMF of 0.87 and CRF of 13%	consistent 10' shoulder and provides	Exceeds Minimum (Roculder is wider than minimum requirement)	Not Recommended	High level of Impact to access points along segment not offset by operational Improvements.
WCR SB to	US RS SB Ramps	Typical	4 Lanne	10'	Level Median	Biles on shoulder	WELL-COUNTY Goal FORT LIFTON Goal - Wastil perfor separated bits lawn from reaching	Y	Medium - Both Bratner and Lupton Bottom ditches run parallel to 2 and may need to be relocated. Two relocation, it impact to non primary structures, and clos proximity of RDW to homes. Potential impact to nearby sporting complex.	SS - Primarily agricultural	i Historic - one efficially eligible er listed on the SREP (CS 33). Revisetion (Planson Plank), Trai Note (Burd home concentrated between mile marker 17 and 20)			Hinor - Additional width for bicyclists would improve bicyclist comfort and		Yes, can accommodate buser and allow vehicles to pass slow buses	improves (Wider cross-section for turns allows passing)	Substantial (TTI 1.38 to TTI 1.	Substantial (3) (PTI 2.50 to PTI 1.25)	Substantial TT 4.1 to TT 3.3)	Substantial No Exceptions/1	riances Modera	e No Change	Moderate - Per a PHWAs Crash Hoddication Factor (CMF) Cleaninghouse study, widering a shoulder from 6 to 10 ft yields a CMF of 0.76 and Crash Reduction Factor of 24% for vehicle/Pilcyd crashes. Widering a shoulder from 8 to 10 ft yields a CMF of 0.87 and CRF of 13%	Moderate - consistent	Exceeds Hinimum (Shoulder Is wider than minimum requirement)	Recommended	Meat accommodate additional traffic over the No Eddistocustio.
Segment 3 - WCL19to WCR31		Typical	4 Lannes	10'	Degressed Median	Bikes on shoulder	MELO COURT Good - Improved or towl models to acceptable. FORT LISTON Good - Wront prefer opported John borr Stron Insolately	*	Medium - Both Bratner and Lupton Bottom ditches run parallel to 2 and may need to be relocated. Two relocation, it impact to non primary structures, and clos proximity of ROW to homes. Potential impact to nearby sporting complex.	SS - Primarily agricultural	Haber - oer efficielly eligible er listed en the SREP (25.33). Revention (Harris Ruck), Trat Note (Bard home concentrated between orde marker (7 and 20)		ellinor—lect 1.1, VCC 1.2, and CO 3 between 1.3 and 21 are all diffCOD Regions Activity Transportation Corrollon. Michine (see 1.3) and a diffCOD Regions disprove the connection for big-plate transfering 6.5 between NCC 1.2 and VCC 2.1 these transfering for the connection of the co	Hinor - Additional width for bicyclists would improve bicyclist comfort and		Yes, can accommodate buse and allow vehicles to pass	improves (Wilder cross-section for turns allows passing)	Substantial (TTI 1.35 to TTI 1.	Substantial (3) (PTI 2.50 to PTI 1.25) (Substantial TT 4.1 to TT 3.3)	Substantial No Exceptions/	riances Modera	e No Change	Moderate - Per a FYMAx Crash Biodification Factor (EMF) Clearinghouse study, widering a shoulder from 6 to 30 tylends CMF of 0.76 and Crash Reductio Factor of 24% for vehicler/bicycl crashes. Widering a shoulder from 8 to 10 ft yields a CVF 0.87 and CRF of 13%	shoulder and full median separation (removes opposite	Exceeds Histman (Decider is wider than minimum requirement)	Not Recommended	Depressed median not consistent with the remainder of the convider. Additional impacts to access points not other by potential benefits
EXCLUDED A	AREA: North and:	outhbound US 85	5 ramps. Proje	t team to make	corridor recommendation	ns for CO 52. There wil	I not be any recommendations made for the CO 52/US 85 interchange.																					
		No Build	2 Lane Urban	N/A	Two-Way Left Turn	None	WELD COUNTY NO Comment FORT LUPTON Puter	N	Low	None	Ne Impact	No Impact	No Change	No Change	No Change	Yes, can accommodate buse	Limits	Note: Includes	(9) (PTI 2.75 to PTI 10.61) (Note: Includes i widening at US 85 v	TT 5.6 to TT 16.4) Note: Includes ridening at US 85	Worsens No Exceptions //	riances Worse	s No Change	No Change	Worsers	Does Not Heet Minimum (in travel lane with no shoulder)	Not Recommended	
	amps to WCR 21 Lupton)	Typical	2 Lane Urban	NO.	Two-Way Left Turn	10' Multi-Use Path (North Side), 5' Sidewalk (South Side	WILD COUNTY Good FORT LUPTON - Addresses lack of pedecrare facilities using this overal. And because this is a high- glocal title mean 12 feet bases are required. 11 % laces would recluse speed/	nag, Y	Low	\$\$¢ - Residential and commercial impacts	Historic - two officially eligible or lated on the SIHP (CD 52 and Denver Pacific Raineadi Un Pacific Rained Segment, 1977). Including borner from CR 20 to CR 21, including borner for CR Lipton. Also included are glaces of working, restaurants with cacker sessing, and part all located within Fort Lupton. Secretation (Peanon Park, Kostalo Park, Community Center Pa- da Secretation (Peanon Park, Kostalo Park, Community Center Pa-	ion in high-(no change to ix, land use and rk, character)	Substactial - A multi-use path under a 2-lane configuration would provide a substactial improvement to local blockle connectivity within the City of Pt. Lupton. TWITL provides width for treatments such as raised mediam and median refuges at interactions for left-suring blockles from the minor side storests.	Substantial - A multi- use provide would substantially improve E-W connections through this segment.		Yes, can accommodate bases and provides better first and final mile connectivity	improves (Better cross-section for turn		Substantial IS) (PTI 10.61 to PTI 5.31) (Note: Includes i widening at US 85 v interchange	Note: Includes ridening at US 85	No Exceptions/N Substantial (pending Sections) coordinati	s 106 Hodera	desirable bicycling score e LTS 1, applies to multi-u paths that are separate	Substantial - Providing an off- street facility would eliminate e conflicts between vehicles and bicyclists, thereby reducing the crash potential.	conflict points but	Meets Minimum - Per COOTs Roadway Design Guide, the minimum width of pavement for a two-directional shared use path is 10 feet.	Carried Forward	Anticipate significant queuing with this option. 4- Ians preferred west of Deriver Ave. 2-Ians section espected to operate acceptably east of Deriver Ave.
		Typical •	4 Lane Urban	NCA.	Two-Way Left Turn	10' Multi-Liue Path (North Side), 5' Sidewalk (South Side	WILD COUNTY Good FORT LISTON Good. There are namow sections between skillship and Server that may not accommon to the configuration curveniently. Some occurren regarding predestate crossing safety. Way need such configuration curveniently. Controlled access to intermediate street.	odine Y	High - Potential impact to many property owners and business accesses.	555 - Residential and commercial impacts	Historic - two officially oligida or listed on the SBIP (CO 32 and Denver Pacific Rainsad/ Uh. Pacific Rainsad Segment). Traffic Notice (Bara Nones from C2 30 to CR 21), including homes Fort Lupton. Also included are places of worship, restaurant with outdoor sealing, and part all located within Fort Lupton). Recreasion (Parenos Paris, Rossian) Community, Community, and Rainsad Park.	ion in High (4-lane section in dectified in multiple ct., planning documents through Ft. Lupton)	Moderate - The provision of a multi-use path under a four-lare law body and provided a noderate improvement to local north-outh local commission within the Clay of L. Lupton. A four laws cross-section results in higher potential which elopois conflicts than a two-law cross section. THEIL provide width for treatment such as raised medians and median refuges at intersections for left-suring bloyles from the mistor side store.	use provide would substantially improve E-W connections	travel lane to path)		improves (Wider cross-section for turns allows passing)	Note: Includes	(2) (PTI 10.61 to PTI 3.29) (Note: Includes i widening at US 85 v	Note: Includes	No Exceptions/No Substantial (pending Sections) coordinati	riances Potentially V n 106 (Pedestrian n) cross addition	orsens desirable bicycling score must LTS 1, applies to multi-u il lanes) paths that are separate	Substantial - Providing an off- street facility would eliminate conflicts between vehicles and bicyclists, thereby reducing the crash potential.	Crashes but increases Conflict Points (which can be mitigated with	Meets Minimum - Per CDOTs Roadway Design Guide, the minimum width of pavement for a two-directional shared use pash is 10 feet.	Recommended	Setter accommodates anticipated future traffic over 2-lane section.

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								Accommodate Future																					
			Category				Support Local and Regional Planning Efforts	Technology	Identify Estimat	ed ROW Needs	Consider the Natural and Built Environment	Qualitative	Support Multi	imodal Connections				Accommodate Incr	eased Travel and Freigh	t Demand				Increase Safety					
		Perfor	mance Measures				Relative improvement/spatial alignment with goals of local agency plans	Accommodate present and future implementation of emerging, existing and future technology	Complexity of acquisition based on impacts to primar structures and/or land use type	y Relative expected ROW cost	identification of critical resources impacted based on footprints. No quantitative impacts will b date.	measurement of e context sensitive approach of land us and character alon the corridor	e Improve N/S pedestrian and bicycle travel connections	Improve continuity for E/W bicycle and/or pedestrian travel	Improves Bicycle Level of Service	Accommodates potential future transit options	Accommodates Freight Hovements (Includes Hazmat and Oversized Vehicles)	Decrease Travel Time Index (TTI)	e Increase Reliability Dec	nease Travel time by minutes	ase Delay Meets Des	ign Standards ve	Reduce Re- ehicle/pedestrian Sco conflict.	duce Level of Traffic ess (LTS) for bicycles	Crash reduction potential for bicycle/vehicle crashes	Reduce frequency and I severity of crashes.	incorporates bicycle design standards and guidelines	Action	Notes
							Good (clasely aligned) Fair pome variations between alternatives) Poor (algor)(cont variations)	Y/M	High Medium Low	\$\$\$ (i.e. Industrial) \$\$ (i.e. residential) \$ (i.e. agricultural)	Number of critical resources present that will impact schedule, Resources identified but no impacts to schedule anticipated, No Critical Resources identified	Medium Low	Substantial Modera te Misor No Change		Major Substantial Moderate Misor No Change	Y/N	Improves Meutral Limits	Substantial Moderate No Change Worsess	Sesed on PTI Comparison	Substantial Moderate No Change Worsens	1 Except	ons/Variances ion/Variance sception/Variance		Subst Mod No C Wo	Senate		Exceeds Minimum Meets Winimum Does Not Heet Minimum	Corried Forward Not Recommended	
Location	Toi	Build La	anes Sho	ılder	Median/Turn Lane	Bike/Peds																		hange - Because speed				27000000A	
	No	Bulld 21	Lanes		Az listemections	Mone	WILD COUNTY No Comment FORT LUPTON This HISSELD Rose (significant variations)	N	Low	None	No Impact	No Impact	No Change - There are no major existing/proposed N-5 kicycle facilities along this segment that would be connected by a blockele facility along CO 32	No Change		Yes, can accommodate buses	Limits	Worsens (TTI 1.08 to TTI 1.14	Worsens l) (PTI 1.21 to PTI 1.28) (1	No Change IT 6.2 to TT 6.5) No	Change No Escopti	ions/Variances	Worsens = 4 regar (Lane	e governing criteria for or roads with speeds at reater than 40 mph, LTS and does not change roless of other criteria ptreet width, bike Unboulder width, bike Lane blockage).	No Change	Worsens	Does Not Weet Minimum	Reconstructed - with improvements at intersections	
MCR 31 to MC	7/1	plosi 21	Lanes	ø	Az listemaccions	Blars on shoulder	NGC CORN'T for Section 1 to the boson will be set as it was a finite appropriate last see has not self-or appropriate last see has not self-or a local variation in the self-order and see that the self-order and self-	¥	Low (mainly ag)	\$ - Primarily agricultural	This re- use which gridging at listed on the JPP COSS, Officed Lent Shing SS at an edge wells, Traffic Nature purel boson in descent CS In ECRIFI (National for different and Classed Mills of the principles.)	in Mgs		not include shoulders.	icadway Design Guide Table 14-3, the ADT, Hir's, Speed Limit, and Shoulder Width ong this segment result in a BLOS of B	Yes, can accommodate buses	Neutral (Slightly better cross-section for turns with wider shoulders	No Change (TII 1.14 to TII 1.54	No Change 971 1.28 to 971 1.27) (1	No Change No IT 6.3 to TT 6.4) No	Change ^a No Escepti	ons/Variances	Moderate		Substantial - PriVisi Crash Rodiffication Factor (MV) Clear-inghouse includes a study that states that violening a shoulder from 2 to 0 10 ft yields a shoulder from 2 to 0 10 ft yields a for 4 of 3.8 and Crash Roduction Factor of 40 ft for violence crashes.	Moderate	Eucosch Minimum	Recommended	I have alternative worsh included in Levil 1, but now brills modeling was completed, found that a I control of the Complete Complete Complete Complete Interaction improvements after benefits over the built and there in a supplement operation of differences between 3-laws and 4-laws sections.
	791	pical 2+1 (Al gasoli	inernating ing lane)	ø		Billies on shoulder	With Color? See "See See See See See See See See Se	Y Y	Low (mainly ag)	agr.co.co.	Millors: use efficially effigitive or Instead on the SIPP CC ISS, Ellimont Lend blood 27 oil and colors width, Traffic fisher proof bottom between CC IST is CC INF). Normatil for different and colored to diverge persons		Ni Congo	Substantial - This segment includes 2 gravel shoulders, which are not unable by bicyclists. Therefore, 10° pured should accommodate bikes where there were not previously accommodated and would be a substantial improvement.	Magor	Yes, can accommodate bases	Neutral (Slightly better cross-section for turns, allows some gassing	No Change" (TT 1.14 to TT 1.12	No Change [*]) (PTI 1.23 to PTI 1.26) (1	No Change" No	Change* No Except	ions/Variances	Moderate		Substantial - FPMAs Crash Medification Tacter (EM) Clearinghouse locales a study that states that widening a shoulder from 2 to 30 ft yields a CMF of 2.58 and Crash Reduction Factor of 42% for whole fibitycle crashes.	Moderate	Exceeds Minimum	Not Recommended	Plightenini of Impact to accome points along segment and affect by operational temperorements.
9	76	pical 41	Lanes	ø	Two-Way Left Turn	likes on shoulder	WILD COUNTY Good FORT LEPTON Good - Profer opparated biles have from readway HEDSON Good (closely aligned)	Y	Low	\$ - Primarily agricultural	Platoric - one officially eligible or listed on the SRIP (CO 52) Difficult Land Uses (20 oil and gas wells), Traffic Notse (rural homes between CR 31 to CRAI) Potential for 40 (permit and Colorad BL/drodge permit	o High	No Change	Substantial - See cell O45	Hajor	Yes, can accommodate buses and allow vehicles to pass slow buses	Improves (Wider cross-section for turns allows passing)	No Change (TTI 1.14 to TTI 1.13	No Change () (PTI 1.25 to PTI 1.27) (1	No Change No FT 6.5 to TT 6.3)	Change No Excepti	ions/Variances	Moderate	No Change	Substantial - See cell above	Moderate	Exceeds Minimum	Carried Forward	
S EXCLUDED AREA: 1	76 from WCR 43 to	Dahlia St. Interch	sange constructed	1 2020/2021.																									
4. wo	No	Build 21	Lanes 2	10'	At intersections	None	WELD COUNTY No Comment FORT LLSPECH No Comment HISTORY Or (significant variations)	N	Low	None	No Impact	No Change	No Change	No Change	No Change	Yes, can accommodate buses	Limits	No Change (TTI 1.05 to TTI 1.09	No Change i) (PTI 1.25 to PTI 1.23) (1	No Change FT 2.2 to TT 2.2)	Change No Escepti	ons/Variances		No Change	No Change	Worsens	Does Not Heet Minimum	Not Recommended	
need of	Tys	pical 21	Lanes	ď	Two-May Left Tuts	Blas on shoulder	WEB COST Gual OFF SIGNAL STATE RESIDENT TO COST COST COST COST COST COST COST	٧	Low	\$\$ - Hudson	Waters, three effects) rights or based on the SIMP (Littings in bother and Seals As, No. 100. Coal Septemb, CO (3) (SHALL Lead Uses C) and capta water, one oriented consents, Parks and Coals Septemb, CO (3) (SHALL Lead Uses C) and Equate Water to the coal of Station and Seals (Seals C). Coals Septemb (Seals C) and Seals Seals (Seals C) and Seals Seals (Seals C) and Seals Seals (Seals C). Coals Seals (Seals C) and Seals Seals (Seals C) and Seals (Seals C) and Seals (Seals C).	4	raised medians and median ruslages at intersections for left-curring bicycles.	shoulders existing along the short	Magor - BLOS is B	Yes, can accommodate buses	Improves dester cross-section for turn	No Change (TTI 1.09 to TTI 1.11	No Change 971 1.23 to 971 1.25) (1	No Change No IT 2.2 to TT 2.2)	Change No Except	ont/Variances	3 with base bicy The Inches In the posts of the posts 30	rate - LTS improves for horizonan shador horizonal shador for chiracter shador into the chiracter of chiracter in segment of CO 32 data a tingle travel tame such direction and has direction and has the specific of 35 - mph through Hudson.	Substantial		Exceech Minimum	Carried Forward (within Hudson) Recommended (aut.ide of Hudson)	Interruction Ingrovements are adequate. Cottowax towary lift form land it not regard compensat.
Cashila St. 5a Wil (Hudson)	DR 69	pial 41	Lanes	ø	Two-Way Left Turn	Billies on shoulder	WILD COUNTY Good FORT LUFTON IN Comment MICHAEL STATE COUNTY WITH STATE	٧	tow	555 - Hudson residential and commercial	Thistoric - three officially eligible or insted on the SIDF (Eurlington Northern and Sosta Fe, New Card Segment, CO 31) Official Listed Dans () of and gas wells, one relimed creasing, Porks are Ques Space (shadon Nervord Porks, Tartist, Misse Joness in the stone of Halann and places of worship in the same of Halann - Frost III. The Mode, Jones Nervord ONE, and Conse Listed and Conse	Hudson town cents	 section. TWLTL provides width for treatments such as raised medians and median refuges at intersections for left-curning bicycles. 	Substantial - See cell above	Major - BLOS is B	Yes, can accommodate buses and allow vehicles to pass slow buses		No Change (Not Explicitly Modeled)		(Not Explicitly (Not	Change Depletity No Excepti deled)	ions/Variances	3 with base bicy. Moderate This class in a post-	rate - LTS improves to h continuous shoulders ed on the criteria for dists in mixed traffic, its segment of CO 52 den a single travel lane ach direction and has ed speed limits of 25 - mph through Hudson.	Substantial		Exceeds Minimum	Not Recommended	
	7/1	pical 2 Lan	se Urban I	A.	Two-Way Left Turn	Peds on údewalk, bike lanes	MELE COUNTY Good FOT LUPTON his Comment HUSSON Good (chang aliqued)	Y	law	\$\$ - Hudson residential and commercial	Philoric - three officially eligible or bised on the SDP (butington Harthern and Santa Fe, New Card Segment, CO S) (Pillead). Land Donn () of and gas wells, over relined creating, Parks an Query Quary (hubber Newszia Park). The IR wither powers in the trave of Hubbon and places of worship in the town of Hubbon - Print Equal Chardo, James Nemorial (DMC, and Gross Lathers).	n High; especially is d Hadson town center area identified as community center.		Substantial - Due to the provision of bike lanes	Hajor	Yes, can accommodate buses	Improves (Better cross-section for turn	No Change i) (TTI 1.09 to TTI 1.11	No Change () (PTI 1.23 to PTI 1.25) (No Change No TT 2.2 to TT 2.2) No	Change No Escepti	ions/Variances	to 1 v fo segmenting dire speci	tantial - LTS improves with the provision of 6- oot bike lanes. This ent of CO 52 includes a file travel lane in each oction and has posted d limits of 25 - 30 mph through Hudson.	Substantial		Dicereds Minimum	Carried Forward (within Hudson) lot Recommended (outside of Hudson	n).
	791	pical 4 Lan	se Urban I	/A	Two-Way Left Turn	Peds on tidewalk, bike lanes	WELLE FOOMTY Cloud FORT LUMFORM In Comment WECKO'R Goal primary aligned	٧	Medium	\$55 - Hudson residential and commercial	Thistoric - three officially eligible or listed on the SIDP (Eurlington Northern and Santa Fe, Nero Comil Segment, CO 33) Difficult Land Dison CJ oil and gas wells, one rational creative, Preix an Quan Space (Fudane Neumral Perk). Traffic Notice proces in the town of Hudson and places of worship in the town of Hudson - First States Charlo, James Neumrals (SICK, and Gross Latherss).	Hedium: Low in Hadson town center area where community plans ha identified it as a community center a desire for 2 lanes, high elsewhere	reconnectivity within the Term of Hudson. A foor lane cross-section results in higher potential vehicle-bicycle conflicts than a two-lane cross section. TWI.T.I. provides vehicle for treatments such as raised medians and median refuges at intersections for left-turning bicycles from the minor side streets.	Substantial - Due to the provision of bike lanes	Major	Yes, can accommodate buses and allow vehicles to pass slow buses	Improves (Wider cross-section for turns allows passing)	No Change , (Not Explicitly Modeled)	No Change (Not Explicitly Modelind)	(Not Explicitly (Not	Change Explicitly No Except deled)	ions/Variances	to 1 v fc segme Moderate sing dire	tantial - LTS improves with the provision of 6- soch bike lanes. This ent of CO 32 includes a fe travel lane in each oction and has posted d limits of 25 - 30 mph through Hudson.	Substantial		Dicereds Minimum	Not Recommended	

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			Category				Support Local and Regional Planning Efforts	Accommodate Future Technology	Identify Estimate	ed ROW Needs	Consider the Natural and Built Environment		Support Multin	imodal Connections				Accommodate Inc	eased Travel and Fre	ight Demand				Increase Safety					
		Partin	nance Measures				Relative improvement hyattid alignment with goals of local agency plans	Accommodate present and future implementation of emerging, existing and future technology	Complexity of acquisition based on impacts to primary structures and/or land use type		Maretification of critical resources impacted based on fortgrints. No quantitative impacts will be done.	Qualitative measurement of context sensitive approach of land use and character along the corridor	Improve N/S pedestrian and bicycle travel connections	Improve continuity for E/W bicycle and/or pedestrian travel	Improves Bicycle Level of Service	Accommodates potential future transit options	Accommodates Freight Hovements (includes Hazmat and Oversized Vehicles)	Decrease Travel Tin Index (TTI)		Decrease Travel time by minutes	Decrease Delay	Meets Design Standards	Reduce vehicle/pedestrian conflict.	Reduce Level of Traffic Stress (LTS) for bicycles	Crash reduction potential for bloycle/vehicle crashes	Reduce frequency and severity of crashes.	Incorporates bicycle design standards and guidelines	Action	Notes
							Good (classly aligned) Fair (name surfactions between alternatives) Place (algorificant seriations)	Y/N	Mgh Medium Law	\$\$\$ (i.e. industrial) \$\$ (i.e. residential) \$ (i.e. agricultural)	Number of critical resources present that will impact schedule, Resources identified but no impacts to schedule acticipated, No Critical Resources identified	High Medium Low	Substantial Modera to Alter No Change		Major Substantial Moderate Minor No Change	Y/N	Reproves Neutral Limits	Substantial Moderate No Change Worsens	Based on PTI Comparison	Substanti Moderob No Chong Worans	te ge .	No Exceptions/Variances 1 Exception/Variance Wore than 1 Exception/Variance		A N	bstentiel koderate o Charge Worsen		Diceeds Minimum Meets Minimum Does Not Meet Minimum	Corried Forward Not Streammended Eliminated	
Location		To Build La	nes Sho	ilder Med	ian/Turn Lane	Bike/Peds																							
		No Build 2 I	anes 0	e i	t Intersections	None	WELD COUNTY No Comment KEDNESBURG Poor - from 49 to 59, less of bicycles using the roadway. Current lack of shoulders is a	N	Low	None	No Impact	No Change	No Change	No Change	No Change	Yes, can accommodate buses	Limits	No Change	No Change 9) (PTI 1.23 to PTI 1.21)	No Change	No Change	No Exceptions/Variances		No Change	No Change		Does Not Heet Minimum	Not Recommended	
Pain S	iegmant S	Typical	anes.	g .	t liste-run-ctions	Bikes on shoulder	ulfer, counts. MELLOCATO Para GENERALIS Guid		Low - RUM adjacent to CO 70 is tight and may be a complicated acquisition.	5 - Primary	Mourn: - two efficially eligible or local as to ISPS (CS I) and Proposal Yoling School, Serve of and pas wells. Revers Lidan's Social Wildles are	High - unlikely to		of this segment does in not include shoulders. Therefore, 10' paved	cadway Design Guide Table 14-3, the ADT, HIVS, Speed Limit, and Shoulder Width ong this segment result in a BLOS of B	Yes, can accommodate buses	Neutral (Slightly better cross-section for turns with wider shoulders				No Change	No Exceptions/Verlances	Moderate		Substantial - PHWAs Crash Modification Factor (MF) Clean-liphouse includes a study that states that widening a shoulder from 10 10 ft yields a OMF of 0.51 and Crash Reduction Factor of 455 or wholes Physica crashes.		Exceeds Histimum - Per AASHTOR Policy on Concentric Design of Righways and the period of the Concentration of the Concentration of the Headers, an orientum usable shoulder width of 4 five housed be considered. Additional visibility width in also destrable of receive vehicle width in also destrable of receive vehicles with also destrable of the receive vehicles in trucks, bases, or recreational vehicles in considerable; or if static obstruction exist at the right side of the readway.	Recommended	
2		Option			» Way Left Turn		WELD COUNTY Good - Turn bases should be the priority MEDICERRY TWITE our needed	٧	Low	\$ - Primarily agricultural	Phistoric - two officially eligible or listed on the SRIP (CO 32 and Prospect Valley School). Seve of and gas wells. Barner Lakes State WEditle are.	high - unlikely to impact whether area land uses stay the same or redevelop long term	No Change	Subtractial	Major - BLOS is B	Yes, can accommodate buses	Improves (Better cross-section for turns	No Change) (TTI 1.09 to TTI 1.1	No Change 3) (PTI 1.21 to PTI 1.23)	No Change (TT 10.1 to TT 10.1)	No Change	No Exceptions/Variances	Moderate	No Change	Substantial - See cell above	Moderate	Exceeds Minimum	Not Recommended	Intersection improvements are adequate. Continuous two-way left-turn lane is not required component.
Segment 5 - WOI 4910 CO		Option					MELD COUNTY floor NEEDSCEARCH Floor - profer the vider chadder in surceptions of future growth, especially to CR 59 intersection.	٧	Low	\$ - Primarily agricultural	Phistoric - two officially eligible or listed on the SRIP (CO 32 and Prospect Valley School). Seve of and gas wells. Samer Lakes Scale WEGITe are.	High - unlikely to impact whether area land uses stay the same or redevelop long term	No Change	Substantial	Major - BLOS is B	Yes, can accommodate buses	Neutral	No Change (TTI 1.09 to TTI 1.1	No Change 3) (PTI 1.21 to PTI 1.23)	No Change (TT 10.1 to TT 10.1)	No Change	No Exceptions/Variances	Moderate	No Change	Hoderate - Widening the shoulder from 0 to 8 ft yields a CAF of 0.58 and CRF of 42%	Moderate	Diceeds Minimum	Carried Forward	Intersection improvements are adequate. Continuous two-way left-turn lane is not required component.
				No Bu	d		WELD COUNTY No Comment XEDNESSURG Poor																					Not Recommended	
				Traditional Intersect	on Improvements		WELL-COUNTY Signalization? Good XEDICRERG Fair - would be upon to considering dury term suprement (i.e. signal) to help mingate current safety concerns																					Not Recommended	Traditional intersection improvements offer minimal benefits until such time as a signal is warranted.
		WCK38		Non-traditional Interve	tian Improvements		MELE CENTY Recursion of Good 4EDCERGE Good - as a long-tone subdate, at from all a monthless at this location to help tilter traffic.	eteraction were evaluated apparately	since other performance measure	es are used to compare alben	one.																	Recommended	Floundatious provides significant safety and operational benefits when compared to non-traditional improvements at this location. Will accumulate factor traffic without requiring organization.
•		Element		Traditional Intersect	in Improvements			Y								Yes	Neutral Neutral					No Exceptions/Variances						Carried Forward	US 287 - CFI or other non-traditional should be
Intersection Type		Element	Non-Traditional In	tersection improvements	CFI, Roundabout, Quadrant	Road, etc.)		Y								Yes (but may not be transit friendly)	(Can be positive or negative					No Exceptions/Variances						Carried Forward	considered
,,,		Element		Grade Separate	Interchange			Y								Yes (but not transit friendly)	depending on design)					No Exceptions/Variances						Not Recommended	WCR 59 - Roundabout No locations along corridor warrant this level of improvement.
		Element		Transit Accor	modations			Y								Yes	Neutral					No Exceptions/Variances						Not Recommended	Improvements should not preclude transit, but no separate accommodations have been identified at
		Element	Tra	sportation Technology (A	tive Traffic Management)			Υ								Yes (could include TSP)	Improves					No Exceptions/Variances						Carried Forward	this time. Limited application
		Element		Wildlife C	seeings			Y								Yes	Neutral.					No Exceptions/Variances						Not Recommended	No locations along corridor have crash data supporting installation of large animal crossings.
Other Elements		Element		Multi-Uo	Path			Y								Yes, enhances access	Neutral.					No Exceptions/Variances						Carried Forward	As identified in segment recommendations
		Element		Enhanced Bike/Peo	estrian Crossings			Y								Yes, enhances access	Neutral.					No Exceptions/Variances						Recommended	As identified in PEL
		Element		Traffic Signal C	ptimization			Y								Yes	Improves					No Exceptions/Variances						Recommended	Best practice





Administration

Colorado Division

Lakewood, Colorado 80228 720-963-3000

12300 W. Dakota Ave., Suite #180

March 8, 2022

Heather Paddock CDOT Region 4 Transportation Director 10601 W. 10th Street Greeley, CO 80634 VIA EMAIL ONLY

Subject: Acceptance of Colorado State Highway (CO) 52 from CO 119 to CO 79 Planning and Environmental Linkages (PEL) Study

Dear Ms. Paddock:

This letter is to acknowledge the completion of the Planning and Environmental Linkages (PEL) study initiative undertaken by Colorado Department of Transportation (CDOT), for the Colorado State Highway (CO) 52 corridors in Boulder and Weld counties. The study will support CDOT, the local agencies, stakeholders, and the public to determine improvements that should be made and estimate a corridor preservation footprint for future projects. We appreciate and commend the efforts the team has undertaken to conduct this planning study in a manner consistent with the Federal Highway Administration (FHWA) PEL guidance which outlines a process similar to that required by the National Environmental Policy Act (NEPA). The benefits of this streamlining effort will undoubtedly be realized in terms of time and cost savings on future NEPA studies conducted within the area planning study limits.

The final PEL Questionnaire provides a good summary of the work completed in the PEL study and the information that will be needed as projects move forward within the corridor. The strengths of the study include: identifying and balancing different needs along the corridor; focused coordination with local, state and federal agencies; extensive public involvement through the process; the development of a corridor Purpose and Need statement; development of a robust alternatives analysis; and a list of potential projects with prioritization. As project funding becomes available, it will be necessary for FHWA to meet with the local agency sponsors and CDOT to determine the scope of the NEPA study, including level of study required, Purpose and Need, logical termini, and the extent to which the PEL study can be used to supplement or replace certain milestones in the NEPA process.

If you have any questions, please feel free to contact Brian Dobling, Area Engineer, at Brian.Dobling@dot.gov or 720-963-3032.

Sincerely,

John M. Cater, P.E. Division Administrator

CC:

Jim Eussen, CDOT Region 4 Planning and Environmental Manager Chad Hall, CDOT Region 4 Project Manager Lou Keen, CDOT Region 4 Resident Engineer Troy Halouska, CDOT HQ PEL Program Manager