WEST DAVIS
CORRIDOR

Technical Memorandum 13: Alternatives Development and Screening Process

in support of the
Environmental Impact Statement

West Davis Corridor Project

Federal Highway Administration
Utah Department of Transportation

UDOT Project No. S-0067(14)0

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July 12, 2011

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1.0 Introduction

The purpose of this memorandum is to present the proposed alternatives development and screening process for the West Davis Corridor (WDC) Environmental Impact Statement (EIS). The process consists of the following three basic phases:

- Developing preliminary project alternatives
- Applying first-level (Level 1) screening criteria, identifying alternatives that will move to the next level, and refining alternatives that pass the first-level screening
- Applying second-level (Level 2) screening criteria and identifying alternatives that pass second-level screening and will be analyzed in detail in the EIS

The alternatives development and screening process described in this memorandum will provide critical information about how well an alternative satisfies the project's purpose and need and whether it is reasonable and feasible. The criteria used in both the first- and second-level screening analyses will be used to generate measures that will let the Utah Department of Transportation (UDOT) and the Federal Highway Administration (FHWA) systematically and objectively identify reasonable alternatives and screen out unreasonable alternatives. The entire process will take place over several months and will consider agency and public input.

Reasons Why Alternatives Might Be Eliminated

FHWA and CEQ Regulations and Guidance. According to National Environmental Policy Act (NEPA) regulations and guidance from FHWA and the Council of Environmental Quality (CEQ), there are three primary reasons why an alternative might be determined to be not reasonable and eliminated from further consideration.

1. The alternative does not satisfy the purpose of and need for the project.
2. The alternative is determined to be not practical or feasible from a technical and/or economic standpoint.
3. The alternative substantially duplicates another alternative; that is, it is otherwise reasonable but offers little or no advantage for satisfying the project's purpose, and it has impacts and/or costs that are similar to or greater than other similar alternatives.

Clean Water Act Requirements. Because the project study area supports federally regulated wetlands, FHWA and UDOT will also consider the *Clean Water Act Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* and Executive Order 11990, Protection of Wetlands, during alternatives development. If a build alternative is ultimately selected and that alternative would discharge fill material to wetlands (which are classified as "special aquatic sites"), then UDOT and FHWA would need to demonstrate that the selected alternative complies with Section 404(b)(1).

The 404 (b)(1) guidelines state that "no discharge of dredged or fill material [to 404-regulated waters] shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (Section 230.10[a]). This section of the guidelines further states that:

1. For the purpose of this requirement, practicable alternatives include but are not limited to:
    i. Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;
    ii. Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;
2. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity may be considered.
3. Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in Subpart E of the guidelines) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not water dependent), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.

Section 4(f)/Section 6(f) Requirements. Section 4(f) (49 United States Code [USC] 303) of the Department of Transportation Act of 1966 applies to publicly owned parks, recreation areas, and wildlife and waterfowl refuges and publicly or privately owned significant historic properties. The requirements of Section 4(f) apply only to agencies within USDOT (for example, FHWA, the Federal Transit Administration, and the Federal Aviation Administration).

Section 4(f)and Section 6(f) prohibit USDOT agencies from approving the use of any Section 4(f) land for a transportation project, except as follows:

- First, the USDOT agency can approve the use of Section 4(f) land by making a determination that (1) there is no prudent and feasible alternative that would avoid the use of the Section 4(f) resource, *and* (2) the project includes all possible planning to minimize harm to that property.
- Second, the USDOT agency can approve the use of Section 4(f) property by making a finding of *de minimis* impact for that property.

An alternative that would have substantially more 4(f) impacts could be eliminated during the screening process.

2.0 Overview of the Alternatives Development and Screening Process

2.1 Alternatives Development Phase

The alternatives development phase consists of identifying the initial list of preliminary alternatives from previous studies, from public and agency input, and from transportation and land-use plans. This initial list will include modes (for example, transit, automobile, walking, and bicycling) and the locations of the modes. After the preliminary list of alternatives is developed, the alternatives will be put through the screening phases.

2.2 Alternatives Screening Phases

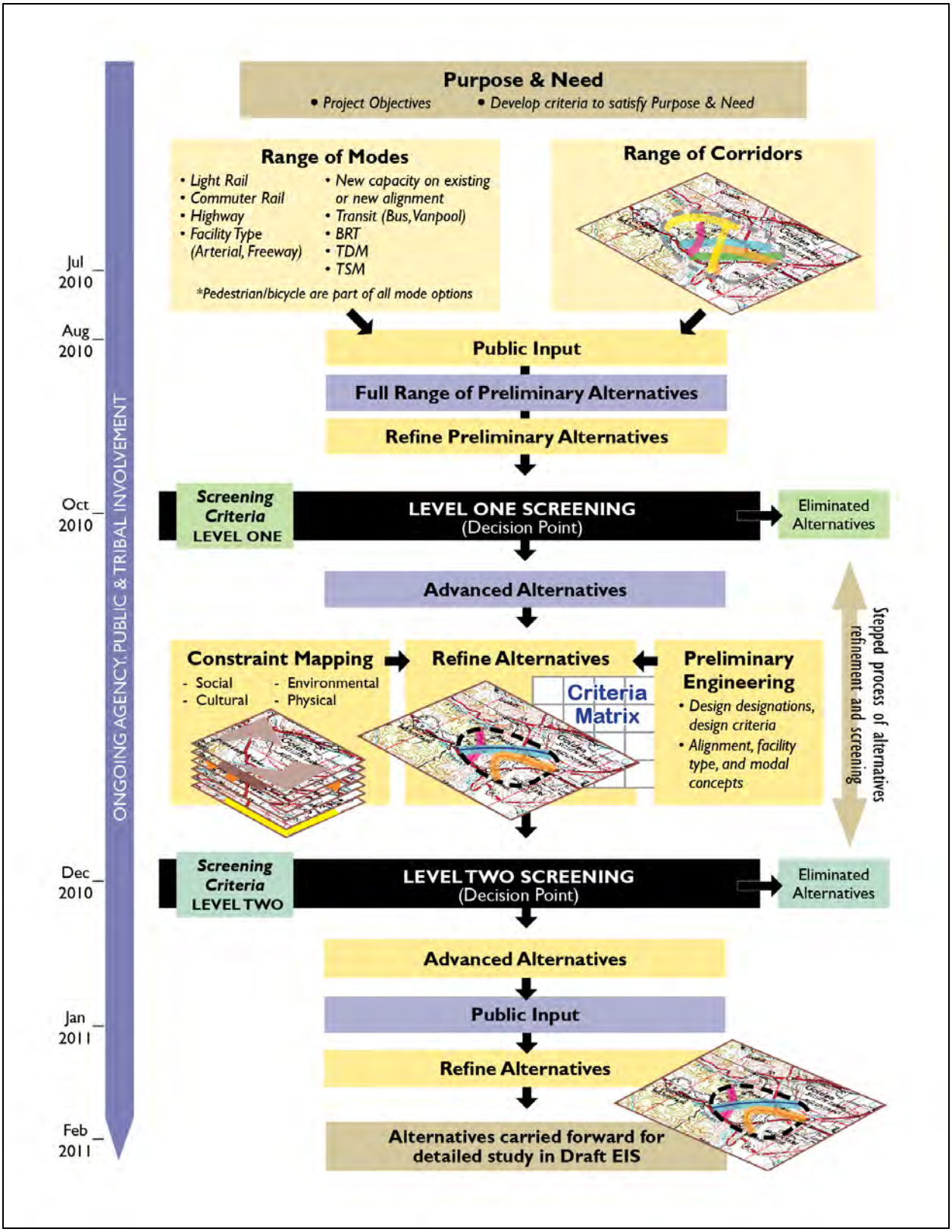
The screening process tests the performance of alternatives using criteria that identify whether an alternative reasonably meets the project's purpose and need and is acceptable from technical, environmental, and logistical, and cost perspectives.[1]

The three phases (developing preliminary alternatives, first-level screening, and second-level screening) will be supported by technical analyses to help the project team refine alternatives and identify those options that meet the purpose of and need for the project. This memorandum explains how the process will occur and the criteria that will be applied. Ultimately, the lead agencies (FHWA and UDOT) will decide which alternatives should be eliminated from consideration and will decide when the screening results are ready to be shared with the public. The results of the screening process will be fully documented in a technical memorandum.

Beginning in Section 2.3, this memorandum describes the information that will be developed in the three alternatives development and screening phases. Figure 1 below presents an overview of the alternatives development and screening process.

[1] During the initial screening process, one technical "fatal flaw" could be extraordinary cost. This criterion will be used only if the cost of an alternative greatly exceeds any reasonable expectation of future funding. This criterion will be used with discretion during the initial screening process and in the absence of a recommended cost ceiling from the project's financial evaluation and report.

Figure 1. Alternatives Development and Screening Process



As shown in Figure 1 above, the project's purpose and need are the foundation of the alternatives development and screening process.

Purpose of the Project. The WDC is intended to achieve the following purposes:

- Improve regional mobility for automobile, transit, and freight trips by reducing user delay on the road system compared to the No-Action conditions through the consideration of all transportation modes.
- Enhance mobility during the AM and PM peak periods for the main travel direction (north-south) to help accommodate the projected travel demand in the study area in 2040.

In addition to the primary purposes listed above, the WDC will also evaluate the following secondary objectives:

- Increase the interconnection between transportation modes.
- Support local growth objectives.
- Increase bicycle and pedestrian options.

Need for the Project. The major transportation needs in the WDC study area are a result of the rapidly growing population and employment projected for the area. The existing road network in the study area primarily consists of arterial streets that are not intended to accommodate a high volume of long-distance trips and freight movements. Also, west of Interstate 15 (I-15) and the FrontRunner commuter-rail line, the existing transportation infrastructure does not support efficient transit (rail and bus) use.

These conditions will result in the following deficiencies in 2040:

- Decreased mobility and increased traffic congestion in the AM and PM peak-period travel period (inadequate roadway capacity)
- Lack of adequate north-south transportation capacity to serve the main travel direction (north to south) in the AM and PM peak-period travel period, which will lead to increased east-west congestion as travelers move in this direction to access the north-south routes
- Increased user delay and lost productivity
- Inadequate interconnection of transportation modes
- Lack of continuous pedestrian/bicycle facilities

2.3 Agency and Public Involvement During the Alternatives Development and Screening Process

The project team (FHWA, UDOT, and the project consultants) will use several methods to involve agencies and the public during the development and screening of project alternatives as required under NEPA. As the alternatives are developed, the team will continually update the project website so that anyone can learn about and comment on the progress of the alternatives development and screening process. The team will also provide progress updates through monthly newsletters and press releases.

The team will also seek input through meetings and open houses. Meetings with the established Stakeholder Working Group (comprised of agency and nongovernmental organization representatives) and with cooperating and participating agencies under NEPA/ SAFETEA-LU (the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) will occur at the following times:

- As screening criteria are developed
- As a list of preliminary alternatives is being developed (see Section 3.0, Development of Preliminary Alternatives)
- After Level 1 screening
- When the team is performing Level 2 screening (see Section 5.0, Level 2 Alternatives Screening)

During each of these steps, the team will consider agency comments along with public comments to finalize the screening criteria, the preliminary list of alternatives, and the expected level of detail for the alternative analysis. The results of each step will be provided to the agencies and public for their review and comment before FHWA and UDOT select alternatives to be studied in detail.

The public will also be asked to provide input through open houses held during the same two phases. In addition, screening criteria and Level 1 screening results will be posted on the project website for public review. Written comments can be submitted to the team at any time during the process, but the team plans to define two specific periods, which will coincide with the open houses, for submitting comments. All comments will be entered into a database that will be accessible to the team as it develops the alternatives.

In some cases, team members might have focused meetings with individuals, agency representatives, city or county representatives, and representatives of nongovernmental organizations to discuss specific concerns or proposals. These meetings will be recorded in meeting minutes, and the minutes will be made available to the team as it develops the alternatives.

Finally, the team will consult with tribal representatives regarding Native American concerns about potential alternatives and the screening process. FHWA and UDOT are currently consulting with Native American tribes under Section 106 of the National Historic Preservation Act, so consultation regarding alternatives will take place as part of that process as well as through the NEPA/SAFETEA-LU process.

The team will use information gathered during the agency and public involvement process to help define, refine, and screen the alternatives. A technical memorandum describing the results of the alternatives development and screening process will contain a summary of comments received. The screening process will also be summarized in the EIS.

2.4 Tools Used During the Alternatives Development and Screening Process

2.4.1 Travel Demand Model

The Wasatch Front Regional Council (WFRC) and the Mountainland Association of Governments (MAG) jointly maintain a travel demand forecasting model for the four-county metropolitan region (Weber, Davis, Salt Lake, and Utah Counties). The travel demand model (TDM) predicts future travel demand based on projections of land use, socioeconomic patterns, and transportation system characteristics. The model is based on the TP+/Cube software (currently version 5.1.1). References to "the model" in this memorandum refer to the scripts and data maintained by WFRC and MAG, not to the Cube software.

The current WFRC/MAG official version of the TDM is version 7.0, which is calibrated to 2007 and which uses 2040 as the forecast year. The WDC EIS collected traffic data in the study area in 2009 and calibrated version 7.0 of the TDM for the WDC study area with the 2009 data. This version of the model was used to perform initial analyses, including identifying the purpose of and need for the project.

2.4.2 GIS Data

Geographic information system (GIS)–based information will be used during the screening analyses to help the team understand the location and extent of a number of resources. Some GIS data are managed by the State of Utah, Cities, or Counties and are readily available to the team. Some of these data are regularly updated by the data managers, so the team will regularly check to make sure the information being used is current and will update it as necessary. The data that will be checked regularly include layers that show streets, parcels, land ownership, parks, and land-use designations. The team will also use other layers available from the State that provide information such as the locations of rivers, streams, and water bodies; hazardous materials sites; jurisdictional boundaries (such as city and county boundaries); wildlife habitats; and geology.

The team is also developing GIS databases through reconnaissance-level field surveys in the study area. Specific layers that the team is creating and that will be used during alternatives screening include wetland locations and types, wildlife habitat types by location, and cultural (prehistoric and historic) resources.

3.0 Development of Preliminary Alternatives

The first phase in the alternatives development and screening process is used to identify a list of potential alternatives. The team gathered an extensive list of preliminary alternatives during the EIS scoping period; during meetings with agencies, key stakeholders, and Cities; and from previous corridor studies that evaluated transportation needs in the study area.

All of the initial alternatives must be applicable to the study area and must present a type of solution that could meet the project purpose and basic transportation need. For example, the alternatives must be compatible with the area's topography, climate, and available technology and must be capable of addressing regional mobility challenges, especially during the peak travel hours.

To address these considerations, the team expects to review general information about the following issues:

- Appropriate transportation modes for the area (for example, types of transit, types of roads, and mode combinations)
- Appropriate locations in the study area (for example, north-south corridors in the eastern or western half and east-west corridors in the northern or southern half)

The team will also seek and consider public and agency input and will review the results of preliminary travel demand modeling and findings presented in previous transportation studies. The previous transportation studies include:

- 2001 North Legacy Transportation Corridor Study
- 2007 WFRC Regional Transportation Plan
- 2007 North Legacy to Legacy Connection Study
- 2009 North Legacy Transportation Corridor Supplemental Study
- City transportation master plans

The initial list of alternatives will be general in nature. For example, assume that the team identifies two general locations in the study area that could support some kind of transportation corridor and two appropriate modes. The potential alternatives might look like the following list:

- Alternative A: Mode 1 + Location 1
- Alternative B: Mode 2 + Location 1
- Alternative C: Mode 1 + Location 2
- Alternative D: Mode 2 + Location 2
- Alternative E: Combination of Modes + Location 1
- Alternative F: Combination of Modes + Location 2
- Alternative G: Mode 1 + Combination of Locations
- Alternative H: Mode 2 + Combination of Locations

The above list is an example only. The team might find that some combinations are not compatible for the WDC study area. In general, the list of preliminary alternatives will likely include the following elements, either singly or in combination, throughout the study area:

- Establish a new transportation corridor (roadway or transit line).
- Make changes to an existing transportation corridor (such as I-15, existing arterial streets, bus routes, and commuter rail).
- Increase existing Travel Demand Management (TDM) strategies and/or add new TDM strategies.
- Increase existing Transportation System Management (TSM) strategies and/or add new TSM strategies.
- Add new routes and/or options for pedestrians and bicyclists.
- Modify existing routes and/or options for pedestrians and bicyclists.

Once the team identifies a list of preliminary alternatives, each alternative will be refined in a way that will allow a fair comparison during the next phase—Level 1 screening.

4.0 Level 1 Alternatives Screening

The purpose of Level 1 screening is to identify alternatives that meet the purpose of and need for the project. Alternatives that are determined to not meet the purpose of and need for the project will be considered unreasonable for NEPA purposes and not practicable for Clean Water Act Section 404(b)(1) purposes and will not be carried forward for further analysis.

Level 1 alternatives screening is the first major decision point at which alternatives can be eliminated based on specific screening criteria. During Level 1 screening, the preliminary alternatives will be screened against delay, congestion, demand and capacity, and project status criteria (see Table 1 below). To accommodate Level 1 screening, the preliminary alternatives will be developed in enough detail to allow use of the TDM to forecast future traffic for roadway alternatives and future transit ridership for transit alternatives. As these preliminary alternatives are screened and the lead agencies review the results, some of these preliminary alternatives will be eliminated.

Table 1. Level 1 Screening Criteria for the Preliminary Alternatives

Criterion	Measure[a]
Reduce delay (improve regional mobility)	• Substantial reduction in daily hours of delay • Substantial reduction in lost productivity (dollars)[b]
Reduce congestion (enhance peak-hour mobility)	• Substantial reduction of lane-miles of roads operating at level of service (LOS) E and F in the PM peak period • Substantial reduction of vehicle-miles traveled (VMT) in congestion during the PM peak period • Substantial improvement in vehicle-hours traveled (VHT) at LOS E or F during the PM peak period[c]
Have adequate capacity	• Transit alternative would have enough capacity to meet ridership demands • Roadway alternative would be designed to achieve LOS D or better in the PM peak period

[a] The project team will determine what constitutes "substantial" once the traffic evaluation has been completed.

[b] Lost productivity is based on an aggregate user rate of $25.80 using $15.50/hour for passenger vehicles, $56.00/hour for box trucks, and $102.00/hour for tractor trailer trucks. Assuming an average traffic composition of 86% passenger vehicles, 4% box trucks, and 10% tractor trailer trucks, the average cost is $25.80/hour for travel time.

[c] Other information, such as travel time by specific trips, could also be considered in comparing alternatives.

Preliminary alternatives that are not eliminated during Level 1 screening will then be further refined to determine a more specific alignment location, type of facility (such as freeway or arterial), number of lanes, and potential mode combinations. Potential transit alternatives that make it through Level 1 screening will also be developed in more detail during Level 2 screening. This development will include determining the type of transit and refining the alignment location.

If preliminary alternatives are identified that are also projects included in the Regional Transportation Plan (RTP) and/or transportation master plans (excluding the WDC project), they will be included in the No-Action Alternative and therefore would be eliminated during Level 1 screening. However, additional improvements to these alternatives would be considered. For example, widening 1800 North to five lanes is in the RTP and is part of the No-Action Alternative and therefore would be eliminated from detailed study. However, the team would consider widening 1800 North to seven lanes as an alternative.

5.0 Level 2 Alternatives Screening

The purpose of Level 2 screening is to determine which reasonable alternatives will be evaluated in detail in the EIS. The reasonable alternatives will be determined by collectively evaluating the alternatives that were found to meet the purpose of and need for the project in Level 1 screening while also considering the degree to which these alternatives meet the purpose and need, the impacts to the natural and built environment, the estimated project costs, logistical considerations, and overall feasibility.

During Level 2 screening, the potential alternatives will be measured against criteria that focus on how well each alternative meets the purpose of and need for the project (this might require refined travel demand modeling), impacts to the natural and built environments, estimated project costs, logistical considerations, and overall feasibility. Alternatives that are not eliminated during Level 2 screening will be carried forward for detailed study in the EIS.

In preparation for Level 2 screening, the team will use GIS to estimate how each alternative might affect resources such as wetlands, waters of the United States, wildlife habitat, farmland, existing and planned transit systems, existing and planned parks and trail systems, cultural resources, and community facilities (such as schools, senior centers, fire stations, and community gathering places). The amount of impacts will be determined by estimating the right-of-way needed for each potential alternative. The team will also identify the expected number of impacts to homes and businesses, potential property acquisitions, and potential community impacts. Table 2 below lists the Level 2 screening criteria.

The project team will collectively evaluate the reasonable alternatives for their ability to meet the project's purpose and need as well as their impacts, costs, logistical considerations, and so on. If an alternative is determined to have substantially higher impacts or costs without having substantially higher benefits, it will be considered unreasonable for NEPA purposes and will not be carried forward for detailed analysis in the EIS. Similarly, alternatives that have substantially higher costs, logistical difficulties, technical issues, or other substantial adverse impacts will be considered not practicable for Clean Water Act Section 404(b)(1) purposes. Alternatives with substantial Section 4(f) uses could be eliminated on a similar basis.

Although public and agency involvement is critical throughout the entire screening process, the comments received from the public regarding the screening process will become particularly relevant during Level 2 screening. Several of the Level 2 criteria focus on local and community elements, so input received from the Stakeholder Working Group, SAFETEA-LU agencies, and public open houses will be critical to Level 2 screening.

The alternatives that pass Level 2 screening will be further refined and carried forward for detailed study in the EIS. The results will be presented in a memorandum that also describes the process and outcomes of each phase.

Table 2. Level 2 Screening Criteria

Criterion	Measure
Access to transit and pedestrian facilities	• Number of mode transfer locations (for example, park-and-ride lots, bus stops, and so on). • Mode share. • Rate of growth in VMT. • 2040 daily VMT • 2040 daily VMT per capita
Support for local growth objectives	• Alternative's consistency with local and regional land-use and transportation plans.[a]
Impacts to trail connections	• Number of trails that will be connected.
Cost, technology, and logistics	• Estimated project cost (general). • Constructability given available technology. • Logistical considerations.[b]
Impacts to natural resources	• Acres and types of wetlands and other waters of the U.S. affected.[c] • Acres and types of sensitive wildlife habitat affected. • Number of drainage crossings (includes streams, canals, or ditches) • Number and acres of Agriculture Protection Areas affected. • Acres of irrigated prime or unique farmland affected.[d] • Acres of floodplain affected. • Percent increase in vehicle emissions (that is, reduction in air quality) based on VMT.
Impacts to the built environment	• Number and area of parks and trails affected. • Number of community facilities affected. • Number of potential property acquisitions, including residential, business, and utility acquisitions. • Number of Section 4(f)/Section 6(f) uses.[e] • Potential for impacts to low-income of minority populations(environmental justice populations).[f] • Number of cultural resources affected (for example, historic and archaeological).
Extent to which the alternative meets the project's purpose and need	• Relative effectiveness of alternative with regard to regional mobility, peak-period mobility, mode interconnection, local growth objectives, and bicycle and pedestrian options compared to other alternatives. Similar alternatives could be combined to optimize performance.

Table 2. Level 2 Screening Criteria

Criterion	Measure

[a] This criterion will not be used to determine if an alternative is reasonable or practicable but will be used to make minor shifts to alignments.

[b] Logistical considerations for each alternative are described in more detail in the *Section 404(b)(1) Practicability Analysis*.

[c] Based on Clean Water Act requirements, an alternative with a substantially greater number of wetland impacts could be eliminated from detailed study.

[d] Acres of prime or unique irrigated farmland were added to the Level 2 screening criteria based on comments from the Utah Department of Agriculture and farmers during the comment period in the spring of 2011. This metric estimates the effects to soils identified by the U.S. Department of Agriculture as being prime or unique that are irrigated and actively farmed.

[e] Based on Section 4(f) of the Department of Transportation Act of 1966 requirements and Section 6(f) of the Land and Water Conservation Fund Act requirements, an alternative with a substantially greater number of Section 4(f) or Section 6(f) impacts could be eliminated from detailed study.

[f] Areas with higher percentages of low-income or minority populations were identified using U.S. Census data. If an alternative would cause residential relocations in areas with higher percentages of low-income or minority populations, that alternative was determined to have a "high" potential for environmental justice impacts. If an alternative would not affect areas with higher percentages of low-income or minority populations, the alternative was determined to have a "low" potential for environmental justice impacts.

6.0 Screening Results: Alternatives Carried Forward for Detailed Study in the EIS

The alternatives that are not eliminated through the screening process will be further refined through preliminary engineering before detailed impact analyses begin for the EIS. This preliminary engineering will include details such as number of lanes; horizontal and vertical alignments; potential transit station, intersection, and/or interchange locations; and potential drainage designs. Each alternative will be designed to a similar level of detail. Once the preliminary design work is complete, the expected effects of the alternatives will be identified and compared at an equal level of detail as required under NEPA.

The screening process is designed to be dynamic throughout the EIS process. If a new alternative or refinement of an alternative is developed or arises later in the process, it will be subject to the same screening process as all of the other alternatives as described in this memorandum.

7.0 Results of Public Input into the Screening Process

The project team used several methods to involve agencies and the public during the development and screening of preliminary alternatives as required under NEPA and SAFETEA-LU. The project team requested agency and public input through meetings, open houses, and reviews of project materials. On August 3, 2010, the project team hosted a meeting with the established Stakeholder Working Group (comprised of SAFETEA-LU cooperating and participating agencies and representatives from nongovernmental organizations) that presented (1) the proposed alternatives screening methodology and criteria and (2) a list of preliminary alternatives from previous studies and plans.

At this meeting, the project team requested comments on the alternatives screening methodology and criteria and the preliminary alternatives for the WDC project. Additionally, the Stakeholder Working Group and the agencies were given a 40-day review and comment period between August 3, 2010, and September 12, 2010. The project team received comments from 17 members of the Stakeholder Working Group, which included comments from eleven SAFETEA-LU cooperating and participating agencies.

The public was also asked to review and provide comments on the proposed alternatives screening methodology and criteria and on the list of preliminary alternatives. Opportunities for public comments were provided at three open houses held between August 3 and August 5, 2010; at a booth at the Davis County Fair between August 18 and August 21, 2010; and through the project website, written comments, and e-mail. The proposed alternatives screening methodology and criteria and the preliminary list of alternatives were posted on the project website for public review between August 3, 2010, and September 12, 2010.

Over 500 members of the public attended the open houses between August 3 and August 5, 2010. During the 40-day comment period, the project team received 394 public or agency comments related to the development and screening of preliminary alternatives, of which 168

were submitted at the public meetings. The majority of these comments expressed support for or opposition to the preliminary corridors that were presented at the public open houses. Of the comments about the preliminary corridors, the preliminary corridors in Farmington were the subject of the largest number of comments. The project team posted a file containing all of the comments received and a summary of responses to unique comments on the project website (www.udot.utah.gov/westdavis/pages/documentation).

During the alternative review process the following input was provided on alternative alignment locations and will be evaluated during the screening and alternative development process:

- Two new preliminary alignments in the north part of the study area: one on Midland Drive and one along the Hooper Canal between 2300 North and 1200 South. Additionally, public and agency comments suggested two new alignments in the central section of the study area:
- An alignment that follows Gentile Street west from the Gentile Street/A-2 intersection to 3000 West and then follows 3000 West north to intersect with the A-3 alignment
- An alignment that connects the G-3 alignment from Antelope Drive to the A-3/300 North intersection in West Point
- The Nature Conservancy and Utah Reclamation Mitigation Conservation Commission provided alignments for A-1 and A-2.
- A proposed interchange concept for connecting WDC with I-15 and Legacy Parkway near Shepard Lane.
- Minor shift in the 2001 alignment to avoid 5100 West and impact in Syracuse City.
- Specific maps showing new developments to avoid.
- Specific interchange locations.

In addition, Table 3 below summarizes the comments to the screening criteria that were provided and how they were incorporated into the final screening criteria.

Table 3. Comments on the Screening Criteria

Comment	How Incorporated
Air quality should be considered as a screening criterion.	Air quality has been added as a Level 2 screening criterion as it relates to VMT.
The criterion *Support for local growth objectives* should be moved from Level 2 screening to Level 1 screening.	For the West Davis Corridor EIS, Level 1 screening is being used to determine if an alternative meets the project transportation need. The degree of consistency with land-use plans is an appropriate factor to consider when comparing alternatives that meet the transportation need but the failure of an alternative to be consistent with land use plans is not an appropriate factor for Level 1 screening. If consistency with land-use plans were moved to Level 1 screening, all alternatives except those in the plans of the Cities would be eliminated. This would eliminate other potentially reasonable and practicable alternatives that could potentially have fewer impacts to the natural environment. Therefore, consistency with land-use plans has not been moved to Level 1 screening.
Mode share and VMT should be added as screening criteria.	Mode share and VMT have been added to the Level 2 screening criteria as measures to consider.
The criterion *No substantial impacts to the natural environment* should be moved from Level 2 screening to Level 1.	Level 1 screening is used to determine if an alternative meets the project's purpose and need. Since impacts to the natural environment are not elements of the purpose and need, this criterion was not moved to Level 1 screening. The project purpose is based on the transportation need. Minimizing or avoiding impacts to the natural environment will be considered in Level 2 screening.
Delay should include the extra time spent covering a particular distance due to congestion.	The criterion of reducing delay is based on the extra time it takes a traveler to cover a distance.
Is the *lost productivity* criterion based on the vehicle or person?	Lost productivity is based on the person. It is the estimated value of the extra time a person spends in congestion.
How do the criteria account for the extra miles traveled by users when they use a new roadway? I suggest VMT be included as a criterion.	VMT has been included in Level 2 screening.
Should impacts to agriculture protection areas be by number of acres versus just the impact to the parcel?	Level 2 screening will identify the number and acres of agricultural protection areas affected by each alternative.
We support performance and screening criteria that measure and support a balanced mode-share split between transit, walk/bike, and automobile trips, especially at the AM and PM peaks.	The WDC Team will evaluate mode share as part of Level 2 screening. Mode share has been added to the list of measures to consider in this memorandum.
We should utilize performance criteria that optimize access to I-15 and FrontRunner commuter rail as the main north-south facilities.	Optimizing access to I-15 and FrontRunner includes reducing congestion on east-west streets. The Level 1 screening criteria include reducing congestion on east-west streets. In addition, one of the Level 2 screening criteria is to look at how access to transit can be improved.

Table 3. Comments on the Screening Criteria

Comment	How Incorporated
Level 1 screening should focus on no increase in commute time.	Level 1 screening is used to determine if an alternative meets the project's purpose and need. Several criteria will be used to evaluate how alternatives reduce congestion and thus commuting time. Given the expected growth in population and employment in the project area over the next 30 years, it might not be possible to develop an alternative that would actually reduce commuting time compared to current conditions.
Level 2 screening: *impacts to the built environment* should carry more weight than *Impacts to natural resources*.	All Level 2 screening criteria will be evaluated to determine the alternative that provides the best transportation solution while minimizing impacts to the human and natural environment.
I think screening is biased toward highways by having Level 1 screening before Level 2 screening.	Level 1 screening is designed to determine which alternatives solve the transportation problem, whether they be a highway or transit improvement. Before UDOT and FHWA can evaluate Level 2 criteria, they must first determine that a given alternative can meet the purpose of and need for the project.
The safety of the community and the effects to the community should be considered first and foremost.	To ensure the safety of the traveling public, any new transportation facility would be designed to meet all current safety standards. Additionally, Level 2 screening evaluates community impacts such as impacts to homes, businesses, community facilities, schools, and parks. Impacts to the safety of a community is a very subjective criterion, and transportation facilities are not known to increase crime rates. Therefore, it would be difficult to measure such criteria.
Noise pollution should be considered in screening.	The impacts of noise will be evaluated in detail in the EIS for those alternatives carried forward for detailed study.
Impacts to property values should be considered in screening.	How a transportation project may affect property values depends on many factors. There is a large measure of subjectivity and variability in evaluating how a property might increase or decrease in value as a result of transportation improvements. Due to this uncertainty, impact to property values is not included as a criterion.

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