Chapter 2: Alternatives

2.1 Introduction

This chapter describes the concepts that were considered for meeting the purpose of the Heber Valley Corridor Project as described in Chapter 1, *Purpose and Need*, and the alternatives that passed through screening that are considered in detail in this Draft Environmental Impact Statement (EIS).

To do so, this chapter describes the concepts that were developed during the scoping process and as part of public engagement opportunities, reviews the concepts that were eliminated from further study through the alternatives screening process, describes the No-action Alternative and the action alternatives that were carried forward for further study in this EIS, summarizes the advantages and disadvantages of the No-action and action alternatives, and identifies the preferred alternative for the Heber Valley Corridor Project.

What is the difference between a concept and an alternative?

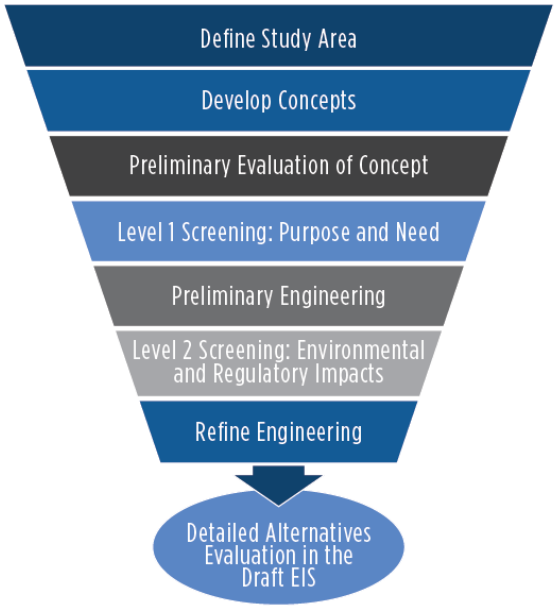
A concept is a preliminary solution that is considered during the alternatives development and screening process. If a concept passes through the screening process, it is further designed to become an alternative to be evaluated in detail.

2.2 Alternatives Development and Screening Process

The Utah Department of Transportation (UDOT) conducted a three-level (preliminary, Level 1, and Level 2) screening evaluation of concepts suggested by stakeholders, identified in previous studies, and developed by the project team for this EIS (Figure 2.2-1). This section provides a summary overview of the alternatives development and screening process as documented in the *Final Alternatives Development and Screening Report* and the *Addendum to the Final Alternatives Development and Screening Report* (https://hebervalleyeis.udot.utah.gov/alternative-screening) (see Appendix 2A, *Final Alternatives Development and Screening Report*, and Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*).

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

Figure 2.2-1. Screening Process Overview



2.2.1 Background of the Alternatives Development and Screening Process

The Heber Valley Corridor alternatives-development process started in 2021 shortly after the initiation of the EIS process. Throughout the EIS process, whenever new information became available, UDOT updated the alternatives development process to ensure that all of the concepts were rigorously explored and evaluated. The following is a chronology of the alternatives-development process.

- **Fall 2020.** UDOT conducted early scoping and identification of preliminary concepts. Preliminary concepts were identified with public and agency input and comment. A comment period was held from August 26 to October 3, 2020 (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2020/11/HVC-EIS-Scoping-Summary-Report-Final-11-13-2020.pdf).
- **Summer 2021.** UDOT conducted formal scoping, issued a Notice of Intent (NOI) to prepare an EIS, and published a range of preliminary concepts. A comment period was held from April 30 to June 14, 2021 (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2021/09/HVC-EIS-Scoping-Summary-Report-Final_9-20-2021.pdf).
- **Fall 2021.** UDOT offered alternatives development review and solicited input from the public and agencies. UDOT presented 18 initial concepts, including the No-action Alternative, to resource agencies, city and county councils, stakeholder working groups, and the public. A comment period was held from October 5 to November 4, 2021 (https://hebervalleyeis.udot.utah.gov/alternative-concepts).
- **Early Winter 2022.** UDOT met with the Mountainland Association of Governments (MAG) to review and validate the population, household, and employment growth assumptions in the Summit-Wasatch travel demand model (version 1 2020-06-10). MAG is the metropolitan planning organization for the project area. UDOT noted its observations about planned residential development in the Heber Valley and discrepancies in the travel demand model. In this meeting, MAG recommended that UDOT continue to use the county control totals and not make adjustments to the travel demand model for planned development.

What are county control totals?

County control totals are the baseline socioeconomic data, such as employment, population, and household size, in a travel demand model.

- **Spring 2022.** UDOT conducted concept refinement. Based on agency and public feedback received in 2021, UDOT refined concepts and began the screening process.
- **Summer 2022.** UDOT published the *Draft Alternatives Development and Screening Report*, which included 23 concepts. A comment period was held from June 7 to July 22, 2022 (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2022/06/Heber-Valley-Corridor-EIS-Final-Alternatives-Development-and-Screening-Report-6-7-2022.pdf).
- **Early Winter 2023.** UDOT published the final screening report with refinements based on the feedback received and on further preliminary engineering. The final screening report reviewed 23 concepts, 5 of which passed screening (not including the No-action Alternative) (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2023/01/Heber-Valley-Corridor-EIS-Final-Alternatives-Development-and-Screening-Report-1-16-2023.pdf).

- **Spring and Summer 2023.** UDOT prepared EIS documentation with the intent to publish a Draft EIS and preferred alternative in 2023.
- **Fall 2023.** UDOT reviewed internal drafts of MAG's 2023–2050 rural long-range transportation plan and travel demand model. These drafts forecasted a 30% increase in traffic on north U.S. Highway 40 (US-40) and a 10% increase in traffic on Main Street in Heber City, and UDOT began to investigate version 2 of the travel demand model. Travel demand typically fluctuates between model versions; however, this increase required UDOT to understand the implications for the Heber Valley Corridor alternatives that passed screening.
- **December 2023.** UDOT met with MAG to discuss the differences between the previous Summit-Wasatch travel demand model (version 1 2020-06-10) and the updated travel demand model (version 2.1 2024-03-28) and to understand why the projected population and household growth had shifted and the resulting traffic had substantially increased. The travel demand models used similar socioeconomic information; however, version 2 of the travel demand model had assumptions for secondary homes (which do not affect county control totals) and faster overall development along north US-40. Version 1 of the travel demand model did not have assumptions for secondary homes and assumed that residential development would be more distributed between the North Village and Red Ledges. The meeting summaries are provided in Appendix 5A, *UDOT and MAG Travel Demand Model Meetings*.
- **Early Winter 2024.** In response to the rapidly changing conditions in the Heber Valley, UDOT paused work related to publishing the Draft EIS, in part for the following reasons:
    - A federal conservation easement proposal that overlapped all five alternatives, if approved, would prevent UDOT from proceeding with the EIS. UDOT would have been prevented from condemning the land it needs for the bypass. UDOT initiated meetings with the Natural Resources Conservation Service (NRCS) to discuss a path forward. NRCS determined that it will not proceed with a conservation easement at this this time.
    - UDOT conducted a sensitivity analysis using a draft version of the updated Summit-Wasatch travel demand model. This sensitivity analysis found that none of the alternatives that passed screening in January 2023 would accommodate the future traffic forecasted by the updated model unless the alternatives were refined (that is, modified to add additional capacity). The projected traffic volumes warranted the investigation of "free-flow" or grade separation of intersections for capacity and safety.
- **Spring 2024.** The updated travel demand model (version 2.1 2024-03-28) was calibrated and accepted by MAG as the official model version. UDOT conducted in-depth traffic analysis using version 2.1 2024-03-28 of the model, and the alternatives design refinement and screening process was initiated.
    - Alternatives were refined based on the existing alternatives and were made responsive to the updated travel demand model. Design of alternatives is time-intensive. These changes included additional travel and/or turning lanes on north US-40 for at-grade alternatives and grade-separated interchanges and free-flow ramps for free-flow alternatives. These revisions were necessary due to the increased volume of traffic and to ensure that UDOT was using the best available data for the Heber Valley.

- **Early Spring 2025.** The alternatives screening process was finalized based on version 2.1 of the travel demand model, and the screening addendum was published (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2025/03/Heber-Valley-Corridor-EIS-Final-Alternatives-Development-and-Screening-Report-Addendum.pdf).
    - UDOT used the same screening criteria that were used in 2023 but looked at the criteria in greater detail. The additional detail summarized in the screening addendum was important for decision-making and differentiating among the alternatives. Additional details included considering safety through the number of conflict points, additional regional travel time origin and destination pairs, the ability to attract trucks away from Main Street, and impacts to Section 4(f) archaeological sites and the sewer farm. None of the original screening criteria were removed or replaced.
    - A public comment period was not held in 2025. A public comment period was held June 7 through July 22, 2022, and is documented in Appendix 2A, *Final Alternatives Development and Screening Report.*
- **Summer and Fall 2025.** Additional fieldwork was conducted to document aquatic and cultural resources in areas that had not been previously surveyed for the refined alternatives.

The discussion in this Draft EIS is focused primarily on the alternatives development process conducted in 2024 and 2025 because the process was updated at this point and uses the updated travel demand model data. Detailed information about the complete alternatives development process is provided in Appendix 2A, *Final Alternatives Development and Screening Report*, and Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*.

2.2.2 Range of Alternatives Considered

UDOT developed the preliminary concepts based on previous planning studies and through the EIS scoping and outreach processes. The preliminary concepts were developed with input from existing transportation plans, the public, local municipal governments, and resource agencies. The input was collected during the EIS public scoping periods (an early scoping period from August 26 to October 3, 2020, and a formal scoping period from April 30 to June 14, 2021) and in stakeholder interviews.

UDOT identified potential concepts from the following previous transportation plans and studies:

- *Transportation Plan 2017* (Heber City 2017)
- *Wasatch County General Plan 2001–2016* (Wasatch County 2010)
- *Heber City Highway Bypass Study* (PEC 2008)
- *Heber Valley Parkway Planning Study*, prepared for UDOT, MAG, Heber City, and Wasatch County (Avenue Consultants 2019)
- *Wasatch County Regional Transportation Plan 2019–2050* (MAG 2019)
- *2023 Wasatch Back RPO [Rural Planning Organization] Transportation Plan* (MAG 2023)
- *Statewide Rural Long-range Transportation Plan 2019–2050* (UDOT 2019)
- *Utah Long-range Transportation Plan 2023–2050* (UDOT 2023a)

The *Scoping Summary Report* (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2021/09/HVC-EIS-Scoping-Summary-Report-Final_9-20-2021.pdf) summarizes public and agency input gathered during the formal scoping period, which lasted 45 days. The NOI was published during the formal scoping period on May 11, 2021. The NOI and formal scoping presented the following preliminary concepts for comment:

- No action
- Improvements to US-40 such as adding lanes and intersection improvements
- Improvements to existing roads other than US-40
- A one-way-couplet system
- A new bypass west of US-40
- A new bypass east of US-40
- Transportation System Management (TSM)
- Transit

As discussed in the *Scoping Summary Report*, during the EIS scoping processes in 2020 and 2021, UDOT received close to 400 comments. During the early scoping comment period, UDOT received nearly 300 individual comments, and during the formal scoping comment period, UDOT received 90 individual comments. Some comments suggested additional concepts and alternate alignments for UDOT to consider in the EIS. These comments addressed concept locations, concept configurations, travel modes, safety, construction costs, construction methods, and logical termini (the logical endpoints for the improvements to US-40). Where applicable, UDOT incorporated the scoping comments to develop and refine a range of preliminary concepts. The additional concepts suggested during scoping included the following:

- Improvements on US-40, including:
  - Intersection improvements such as wider intersections and roundabouts
  - Tunnel under US-40 within the Heber City limits
  - Bridge over US-40 within the Heber City limits
  - Extension of improvements along US-40 between downtown Heber City and River Road/ State Route (SR) 32
- New locations for a new bypass west of US-40
- New locations for a new bypass east of US-40

From the basic concepts identified during scoping, UDOT developed the ideas into 18 distinct concepts, including the No-action Alternative, and published them for public review and input. UDOT held a public comment period (from October 5 to November 4, 2021) and hosted two public meetings: a virtual public meeting on October 5, 2021, and an in-person meeting October 6, 2021. UDOT received 670 individual comments during the public comment period. Although UDOT received many comments expressing concern about impacts to the north fields, there were also many comments suggesting that alternatives should extend through the north fields to River Road/SR-32 to bypass the rapidly developing area north of 900 North. Based on public comments, an additional 6 concepts were identified for screening, for a total of 24 concepts. The additional 6 concepts suggested by the public during the public comment period were new alignments or unique variations of the 18 concepts that were found to meet the project purpose.

These 24 concepts were published in the *Draft Alternatives Development and Screening Report* (https://hebervalleyeis.udot.utah.gov/alternative-screening/#draft-alternative-screening) on June 7, 2022, and a public comment period was held from June 7 to July 22, 2022. The process included four city council meetings, one county council meeting, two cooperating and participating agency meetings, and one stakeholder working group meeting. During the draft screening public comment period, UDOT received 441 public comments and two petitions with multiple signatures.

Similarly to the previous comment period, several comments expressed concern about truck traffic on Main Street and concern for the future character of Main Street with and without a bypass. Others opposed concepts extending through the north fields due to impacts to natural resources (such as wetlands, creeks, the aquifer, wildlife, and the Provo River) and undeveloped land, and several comments supported concepts extending through the north fields because they would bypass planned growth north of 900 North. Some comments supported no action and expressed concern for population growth and the changing character of the Heber Valley as a result. UDOT determined that concepts extending through the north fields were reasonable and should be evaluated in detail so that the benefits and drawbacks of a full range of alternatives could be considered as part of an informed decision.

After the screening comment period, UDOT collected and considered updated and new information including an amended wetlands delineation in the north fields and a historic buildings survey used for Level 2 screening. UDOT published the *Final Alternatives Development and Screening Report* on January 16, 2023. The 24 concepts, including the No-action Alternative, are described in Appendix 2A, *Final Alternatives Development and Screening Report*, and summarized in Table 2.2-1, *Concepts Evaluated in Screening*, on page 2-10.

2.2.3 Concepts Eliminated in Screening (2023)

As illustrated in Figure 2.2-1, UDOT conducted a three-level screening evaluation (Preliminary, Level 1, and Level 2) of transportation improvement concepts.

Concepts Eliminated in Preliminary Screening. Two concepts were eliminated in the preliminary level of screening.

- **Transit Concept.** The Transit Concept was based on recommendations from MAG's *Wasatch County Transit Study* and included a combination of local services connecting communities in the Heber Valley to Park City and Utah County (for example, commuter route, vanpool, and dial-a-ride). This concept would not remove enough traffic from Main Street to improve local mobility (that is, congestion issues would remain). And, the transit concept would not remove commercial truck traffic from Main Street.
- **Bridging over or Tunneling under US-40 Concept.** The bridging concept would have considerable impacts to Heber City's historic town center. A large bridge over US-40 for its entire length would obscure views and change the setting for numerous historic buildings along Main Street. It would also result in safety, operational, and maintenance concerns in a snowy environment. Structures can freeze and get icy during the winter, and removing snow from the structure is a potential safety and operation concern because snow would be dropped on buildings, vehicles, and pedestrians below. The tunneling concept would not remove commercial truck traffic from Main Street, would create substantial disruptions to downtown during construction, and would be cost-prohibitive.

Concepts Eliminated in Level 1 Screening. Fifteen concepts were eliminated in Level 1 screening because they would not meet the purpose of the project.

- **US-40 Concepts.** Six concepts for improving US-40, including widening, intersection improvements, converting two parallel roads to a one-way couplet, and reversible lanes, were eliminated. No US-40 concepts met the project purpose. Four of the six concepts would not improve local mobility (they would not remove enough traffic from Main Street to relieve congestion), and none of the six concepts would allow Heber City to meet their vision for the historic town center (they would require demolition of historic buildings on Main Street).
- **Eastern Bypass Concepts.** Three concepts for an eastern bypass were eliminated because they would not improve local mobility. No eastern bypass concepts met the purpose of the project because they would not attract enough traffic away from Main Street. There is more traffic on the west side of the Heber Valley (US-189 heading to and from Provo Canyon), including commercial trucks, compared to the east side (US-40 heading southeast to and from Daniel's Canyon) that would continue to use Main Street to avoid out-of-direction travel.
- **Western Bypass Concepts.** Six concepts for a western bypass were eliminated because they would not sufficiently improve local or regional mobility. Concepts without a connection at 1300 South would not attract enough traffic away from Main Street because 1300 South provides an important route for traffic from the west side of the Heber Valley to access the commercial centers on the south end of Heber City. Lower-speed arterial concepts would not improve mobility because they would have more conflict points (intersections and driveways), slower travel times, and/or failing intersections (congested with excessive delays).

What are conflict points?

A conflict point is the location where the paths of vehicles, pedestrians, or bicyclists cross, merge, or diverge. Conflict points create friction, slow down traffic, and decrease safety by increasing the potential for a crash (see Figure 2.2-2).

Concepts Eliminated in Level 2 Screening. One western bypass concept was eliminated in Level 2 screening because it would perform similarly to other concepts that continued to be evaluated with respect to the purpose of the project but would result in greater impacts to wetlands.

Five western bypass concepts passed through the screening process and were advanced for further consideration as alternatives in the Draft EIS in 2023, before the travel demand model update. Four of the concepts were at grade (WB1, WB2, WB3 and WB4), and one concept included grade separation for part of its length (WA1 followed the same alignment as WB1 but included interchanges instead of at-grade intersections between 900 North and US-189). For more information, see Appendix 2A, *Final Alternatives Development and Screening Report*.

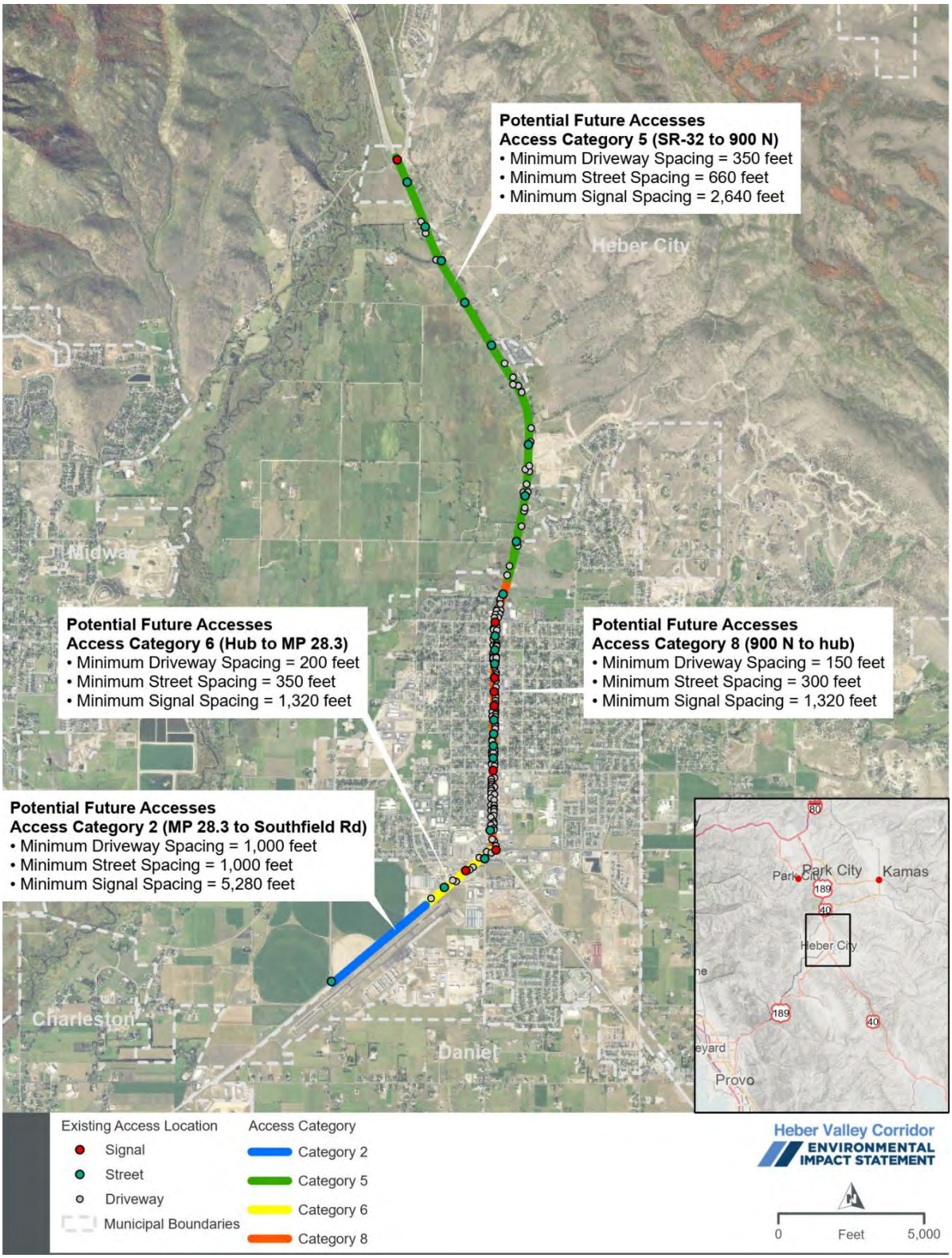
What is an at-grade intersection?

An at-grade intersection is one at which the roads cross at the same elevation. At-grade intersections are controlled with stop signs or traffic signals.

What is a free-flow intersection?

A free-flow intersection is one at which the roads are grade-separated (the roads cross over or under each other at different elevations) and vehicles do not need to stop.

Figure 2.2-2. Potential Conflict Points with the No-action Alternative (SR-32 to US-189 at Southfield Road)



2.2.4 Need for Rescreening of Alternatives

After the release of the *Final Alternatives Development and Screening Report* (January 2023), UDOT conducted a sensitivity analysis using a draft version of the updated Summit-Wasatch travel demand model and found that traffic was forecasted to increase by as much as 30% more on north US-40 and by 10% on Main Street compared to forecasts produced using the previous version of the model. This increase in traffic warranted additional analysis by UDOT to determine how the 30% increase in forecasted traffic affected the five alternatives being considered. This analysis delayed the EIS process while version 2 of the travel demand model was calibrated and finalized.

Using the output from the updated travel demand model, all five alternatives that passed screening in 2023 were determined to no longer meet the purpose of the project; specifically, these five alternatives were projected to have failing traffic operations on north US-40 in 2050. To accommodate the increased traffic forecasted in the Heber Valley and to develop a longer-term transportation solution, UDOT refined the designs of all five alternatives and screened them in 2025 using version 2.1 of the model. Design refinements included widening north US-40 to three travel lanes and larger intersections with more turning capacity to the previous four "at-grade" alternatives (WB1, WB2, WB3, and WB4) and evaluating free-flow (or grade-separated) intersections along the same alignments (revisions to previous version of WA1 and new free-flow versions of WB2, WB3, and WB4). **These design refinements, which incorporated updated data to refine the existing 2023 alternatives, resulted in eight concepts developed for screening in 2025.** The eight concepts are described in Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*, and summarized in Table 2.2-1.

2.2.4.1 Consideration of Travel Demand Management and Transportation System Management Concepts

Transportation system management (TSM) considerations typically focus on ways to maximize the efficiency of operations on an existing road, such as adding a traffic signal, improving signal timing, adding turn lanes, or changing circulation patterns. UDOT has already optimized Heber City's Main Street to the extent that is possible with minimal construction. Additional elements of TSM were incorporated into concepts along Main Street. These TSM considerations were included in the following 2023 concepts: intersection improvements (40C), reversible lanes (40E), one-way couplet (40F), and one-way couplet on 100 West and 100 East (40G). All of these concepts with elements of TSM were developed in the original suite of concepts developed during 2021 through 2023, but they screened out at Level 1 in 2023 because they would not address the capacity, mobility, and operational needs of the project.

What is transportation system management (TSM)?

TSM is a set of techniques to better manage the existing transport infrastructure.

What is travel demand management (TDM)?

TDM is a set of techniques to change human behavior to reduce traffic congestion.

Travel demand management (TDM) considerations typically focus on ways to change human behavior to reduce traffic congestion by offering greater travel choices. TDM requires collaboration with multiple entities at a regional scale. As part of transportation planning efforts, UDOT is working with the local municipalities and stakeholders to identify ways to balance travel demand and improve mobility options. The outcomes of these efforts will be used to inform and manage travel demand at the regional level. TDM concepts would not meet the purpose of the project because they would not address the capacity, mobility, safety, and operational needs of the project. Therefore, no standalone TDM concepts were identified for the project.

Table 2.2-1. Concepts Evaluated in Screening

Concept[a]	
—	No-action Alternative
—	Transit concept
US-40 Improvements	
40A	Widen US-40
40B	Improve US-40 – roundabouts
40C	Improve US-40 – intersection improvements
40D	Improve US-40 – tunneling or bridging
40E	Reversible lanes
40F	One-way couplet
40G	One-way couplet on 100 West and 100 East
East Bypasses	
EA	East bypass – limited access and grade-separated interchanges
EB	East bypass – parkway and at-grade intersections
EC	East bypass – arterial route and at-grade intersections
West Bypasses	
WA1	West bypass – limited access and grade-separated interchanges
WA2	West bypass – limited access and grade-separated interchanges and realign US-189
WA3	West bypass – limited access and grade-separated interchanges with northern extension
WB1	West bypass – parkway and at-grade intersections
WB2	West bypass – parkway and at-grade intersections and realign US-189
WB3	West bypass – parkway and at-grade intersections with northern extension
WB4	West bypass – parkway and at-grade intersections with northern extension and realign US-189
WC1	West bypass – arterial route and at-grade intersections
WC2	West bypass – arterial route and at-grade intersections and realign US-189
WD1	West bypass – parkway and turbo roundabouts
WD2	West bypass – parkway and turbo roundabouts with connection at 1300 South
WS	West bypass with southern extension – arterial route and at-grade intersections
WB1 AG[b]	West bypass – parkway and at-grade intersections
WB2 AG[b]	West bypass – parkway and at-grade intersections and realign US-189
WB3 AG[b]	West bypass – parkway and at-grade intersections with northern extension
WB4 AG[b]	West bypass – parkway and at-grade intersections with northern extension and realign US-189
WB1 FF[b]	West bypass – limited access and free-flow intersections
WB2 FF[b]	West bypass – limited access and free-flow intersections and realign US-189
WB3 FF[b]	West bypass – limited access and free-flow intersections with northern extension
WB4 FF[b]	West bypass – limited access and free-flow intersections with northern extension and realign US-189

Definitions: AG = at grade; FF = free flow; US-40 = U.S. Highway 40; US-189 = U.S. Highway 189

[a] To allow uniform screening, north US-40 improvements were added to all nontransit concepts.

[b] Concept was refined for screening in 2025.

2.2.5 Results of Final Alternatives Screening (2025)

Only the recent screening process is detailed in this Draft EIS because the process uses the updated travel demand model data and supersedes the previous screening process, which is based on data that are now obsolete. For information about the previous screening results, see Appendix 2A, *Final Alternatives Development and Screening Report*. The revised concepts considered in screening are summarized in Table 2.2-2 and in Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*.

Table 2.2-2. Final Concepts Considered in Screening

Concept[a]		Capacity and Other Refinements Made in 2024
At-grade Concepts		
WB1 AG	West bypass – parkway and at-grade intersections	• Two additional travel lanes (three lanes in each direction total) and additional turn lanes at signalized intersections were included on north US-40 to accommodate the anticipated increased demand. • A center median was added on north US-40 to improve safety. • Bypass alignment and at-grade intersections on the south end are similar to the 2023 WB1 concept.
WB2 AG	West bypass – parkway and at-grade intersections and realign US-189	• Two additional travel lanes (three lanes in each direction total) and additional turn lanes at signalized intersections were included on north US-40 to accommodate the anticipated increased demand. • A center median was added on north US-40 to improve safety. • Bypass alignment, including the realignment of US-189, and at-grade intersections on the south end are similar to the 2023 WB2 concept.
WB3 AG	West bypass – parkway and at-grade intersections with northern extension	• North US-40 has two travel lanes in each direction (similar to the existing highway). • A center median was added on north US-40 to improve safety. • Additional turn lanes at signalized intersections were included on north US-40 to accommodate the anticipated increased demand. • Bypass alignment, including the extension through the north fields, and at-grade intersections on the south end are similar to the 2023 WB3 concept.
WB4 AG	West bypass – parkway and at-grade intersections with northern extension and realigned US-189	• North US-40 has two travel lanes in each direction (similar to the existing highway). • A center median was added on north US-40 to improve safety. • Additional turn lanes at signalized intersections were included on north US-40 to accommodate the anticipated increased demand. • Bypass alignment, including the extension through the north fields and the realignment of US-189, and at-grade intersections on the south end are similar to the 2023 WB4 concept.
Free-flow Concepts		
WB1 FF	West bypass – limited access and free-flow intersections	• This was formerly Alternative WA1; it was revised for version 2.1 of the travel demand model to accommodate additional demand and improve safety. • Select intersections are grade-separated with bridges and ramps (free-flow) from River Road/SR-32 to south US-40 and US-189. • North US-40 has two travel lanes in each direction (similar to the existing highway). • Partial frontage roads were incorporated on north US-40 between River Road/SR-32 and 900 North to consolidate access to grade-separated intersections and to facilitate safe local access to properties. • 900 North includes free-flow ramps to the bypass. • The area south of the hub intersection[b] includes a redesigned free-flow connection to 1300 South.

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Table 2.2-2. Final Concepts Considered in Screening

Concept[a]		Capacity and Other Refinements Made in 2024
WB2 FF	West bypass – limited access and free-flow intersections and realign US-189	• This bypass alignment is similar to WB2 AG, but select concept intersections are grade-separated with bridges and ramps (interchanges) from River Road/SR-32 to south US-40 and US-189 to increase capacity and improve safety. • North US-40 has two travel lanes in each direction (similar to the existing highway). • Partial frontage roads were incorporated on north US-40 between River Road/SR-32 and 900 North to consolidate access to grade-separated intersections and to provide safe access to properties. • 900 North includes free-flow ramps to the bypass. • US-189 is realigned through the sewer fields (no change from 2023). • The area south of the hub intersection[b] includes a redesigned free-flow connection to 1300 South.
WB3 FF	West bypass – limited access and free-flow intersections with northern extension	• This bypass alignment is similar to Alternative WB3 AG, but select concept intersections are grade-separated with bridges and ramps from River Road/SR-32 to south US-40 and US-189 to increase capacity and improve safety. • North US-40 is two travel lanes in each direction between Potter Lane/College Way and 900 North. • Coyote Canyon Parkway and 900 North are at-grade signalized intersections. • Partial frontage roads were incorporated on north US-40 between River Road/SR-32 and Potter Lane/College Way. • North fields extension starts near Potter Lane/College Way to maintain interchange spacing standards between River Road/SR-32 and the bypass. • The area south of the hub intersection[b] includes a redesigned free-flow connection to 1300 South.
WB4 FF	West bypass – limited access and free-flow intersections with northern extension and realigned US-189	• This bypass alignment is similar to Alternative WB4 AG, but select intersections are grade-separated from River Road/SR-32 to south US-40 and US-189 to increase capacity and improve safety. • North US-40 is two travel lanes in each direction between Potter Lane/College Way and 900 North. • Coyote Canyon Parkway and 900 North are at-grade signalized intersections. • Partial frontage roads were incorporated on north US-40 between River Road/SR-32 and Potter Lane/College Way. • North fields extension starts near Potter Lane/College Way to maintain interchange spacing standards between River Road/SR-32 and the bypass. • US-189 is realigned through the sewer fields (no change from 2023). • The area south of the hub intersection[b] includes a redesigned free-flow connection to 1300 South.

Definitions: US-40 = U.S. Highway 40; US-189 = U.S. Highway 189

[a] AG stands for "at-grade" and FF stands for "free-flow."

[b] The hub intersection is the intersection of US-40 and US-189 on the south side of Heber City.

2.2.5.1 Preliminary Evaluation of Concepts

UDOT first evaluated the eight concepts in Table 2.2-1, *Concepts Evaluated in Screening*, above for fatal flaws or redundancy with other concepts to determine whether they should be further developed and advanced to Level 1 screening. Concepts were eliminated in the preliminary evaluation if they:

- Did not meet the project purpose
- Were redundant with other concepts
- Were outside the project area
- Were planned as a separate project
- Were part of a larger concept
- Were not technically or economically feasible

Four concepts—all concepts that would realign U.S. Highway 189 (US-189)—were eliminated in the preliminary evaluation and were not further developed by UDOT. According to initial public comments, some people believed that UDOT considered realigning US-189 to make it easier to expand the airport. However; the four concepts that would realign US-189 (WB2 AG, WB4 AG, WB2 FF, and WB4 FF)[1] were eliminated for being redundant with, or very similar to, the remaining four concepts that would not realign US-189 (WB1 AG, WB3 AG, WB1 FF, and WB3 FF) without providing any obvious benefit. The four concepts that would realign US-189 perform similarly with respect to traffic operations compared to their counterparts that do not realign US-189 (that is, there would be no traffic benefit from realigning US-189). However, there would be negative effects from realigning US-189, such as greater impacts to the sewer fields and more traffic on 1300 South, which abuts a residential neighborhood. Additional information about the preliminary evaluation is provided in Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report.*

2.2.5.2 Level 1 Screening Process and Results

Level 1 screening was performed to eliminate concepts that would not meet the purpose of the project. The concepts were screened with regard to the following project purpose elements:

- Improve regional and local mobility on US-40 from River Road/SR-32 to US-189 through 2050.
- Provide opportunities for nonmotorized transportation.
- Allow Heber City to meet their vision for the historic town center.

The concepts that passed Level 1 screening were refined with additional engineering and were then evaluated in Level 2 screening in terms of their expected impacts to key resources. Table 2.2-3 lists the Level 1 screening criteria.

Table 2.2-3. Level 1 Screening Criteria and Measures (Project Purpose)

Criterion	Measure[a]
Improve regional mobility through 2050	• Substantially decrease through traffic travel time from River Road/SR-32 to US-189 and from River Road/SR-32 to south US-40. • Minimize conflicts (driveway accesses, intersections, etc.) to north-south mobility for through traffic. Minimizing conflicts also improves safety to the traveling public.
Improve local mobility on Main Street through 2050	• Improve arterial and intersection level of service on US-40. • Decrease travel time on Main Street (River Road/SR-32 to hub intersection). • Substantially decrease vehicle queue lengths on US-40.
Provide opportunities for nonmotorized transportation	• Provide opportunities for nonmotorized transportation consistent with local and regional planning documents.
Allow Heber City to meet their vision for the historic town center	• Avoid or minimize impacts to valued places and historic buildings in the historic town center (along Main Street, 100 East, and 100 West). • Avoid improvements that would preclude Heber City from implementing strategies to achieve their vision for Main Street (wide sidewalks, bike lanes, landscaping, and a reduced speed limit). • Provide an attractive alternative to Main Street for truck and regional through traffic through improved travel times and fewer stops.

[a] For more detail regarding measures, see Section 2.2.2, *Level 1 Screening*, in Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*.

[1] AG stands for “at-grade” and FF stands for “free-flow.”

2.2.5.2.1 Results of Level 1 Screening

Based on the screening results for local and regional mobility, nonmotorized transportation, and Heber City's vision criteria, two of the four concepts passed Level 1 screening (Table 2.2-4). For more information regarding these concepts, see Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*.

Table 2.2-4. Final Level 1 Screening Results

Concept		Improves Regional Mobility and Safety in the Heber Valley in 2050?	Allows Heber City to Meet Their Vision for the Historic Town Center?	Improves Local Mobility on US-40 through 2050?	Recommended for Level 2 Screening?
West Bypasses					
WB1 AG	West bypass – parkway and at-grade intersections	No	No	Yes	No
WB3 AG	West bypass – parkway and at-grade intersections with northern extension	No	No	Yes	No
WB1 FF	West bypass – limited access and free-flow intersections	Yes	Yes	Yes	Yes
WB3 FF	West bypass – limited access and free-flow intersections with northern extension	Yes	Yes	Yes	Yes

Definitions: AG = at grade; FF = free flow

2.2.5.2.2 Concepts Eliminated in Level 1 Screening

Both at-grade concepts (WB1 AG and WB3 AG) were eliminated in Level 1 screening for similar reasons. The at-grade concepts would be the slowest for regional travel times (30% to 50% slower than the free-flow concepts) and would have additional conflict points (that is, additional intersections, driveways, and other accesses), making them less safe than the free-flow concepts. In addition, Concept WB1 AG would require local traffic to cross three lanes when making left-hand turns at intersections on north US-40 (a challenging maneuver). These additional travel lanes and conflict points would impede traffic (as vehicles turn onto an intersecting road) and would increase the potential for unsafe vehicle interactions as traffic increases in the Heber Valley. With more traffic, there is a greater potential for collisions when a road has more conflict points. The free-flow concepts (WB1 FF and WB3 FF) would enhance safety and protect regional mobility while still accommodating local traffic, thereby satisfying the purpose of the project by supporting the increase in forecasted traffic and better supporting of the Heber Valley over the long term as development and population increase.

The rapid pace of development in the Heber Valley is evident in the increasing population and traffic assumptions between version 1 and version 2.1 of the travel demand model. Additionally, more development proposals have been submitted to local agencies that are not included in version 2.1 of the model. The at-grade concepts (WB1 AG and WB3 AG) are not forward-compatible with the continued population and development growth in the valley, nor does UDOT expect them to support regional mobility in

the long term. Section 2.2.5.2.2, *Concepts Eliminated in Level 1 Screening*, summarizes the reasons why the at-grade concepts were eliminated.

UDOT identified the free-flow concepts WB1 FF and WB3 FF as reasonable concepts for Level 2 screening. These concepts are most prudent investment and are the best-performing concepts that meet the purpose of the project.

2.2.5.3 Level 2 Screening Process and Results

The purpose of Level 2 screening is to eliminate concepts that perform similarly in meeting the purpose of the project compared to other concepts but would result in greater impacts to key resources. The concepts that passed Level 1 screening were refined with additional engineering and were then evaluated in Level 2 screening in terms of their expected impacts to key resources. During Level 2 screening, UDOT evaluated the two concepts that passed Level 1 screening (WB1 FF and WB3 FF) against criteria that focus on each concept's impacts to key resources, residents and landowners, and project costs. Table 2.2-5 lists the Level 2 screening criteria.

Table 2.2-5. Level 2 Screening Criteria and Measures

Criterion	Measure
Waters of the United States	• Acres and types of wetlands and other waters of the United States affected • Linear feet of ditches and creeks affected
Section 4(f) resources	• Number of Section 4(f) historic properties affected (all properties in addition to the historic town center) • Number of Section 4(f) recreation resources affected • Number of Section 4(f) wildlife and waterfowl refuges affected • Number of Section 4(f) archaeological sites affected (historic rail lines, canals, and ditches)
Right-of-way	• Number of full property acquisitions and relocations (commercial and residential) • Number of partial property acquisitions • Acres of sewer fields affected
Cost	• Concept's cost compared to other concepts (concepts would not be eliminated based on cost unless the cost is an order of magnitude greater)

Definitions: Section 4(f) = Section 4(f) of the Department of Transportation Act of 1966

Table 2.2-6 shows the Level 2 screening results. Neither free-flow concept was eliminated as a result of Level 2 screening, and both were further refined for the Draft EIS. There are tradeoffs between the two free-flow concepts (shown in Table 2.2-6) that warrant additional review, and this additional review was conducted for the Draft EIS. This review also provides more information for the public to consider during the Draft EIS public comment period (see Chapter 3, *Affected Environment, Environmental Consequences, and Mitigation Measures*). For more information regarding these concepts, see Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report*. The two concepts that passed screening are the two alternatives that are studied in detail in this Draft EIS.

Table 2.2-6. Final Level 2 Screening Results

Concept		Impacts			Cost	Recommended for Evaluation in Draft EIS?
		Waters of the U.S.	Section 4(f) Resources	Property Acquisitions		
WB1 FF	West bypass – limited access and free-flow intersections	22.3 ac	5 structures 3.36 ac of archaeological sites	22	$590.4 million	Yes
WB3 FF	West bypass – limited access and free-flow intersections with northern extension	51.2 ac	1 structure 4.62 ac of archaeological sites	10	$583.9 million	Yes

Definitions: ac = acres; FF = free flow; Section 4(f) = Section 4(f) of the Department of Transportation Act of 1966

2.3 Alternatives Refinement Process

The purposes of the alternatives refinement process were to further refine and develop the two alternatives and to develop a construction footprint for evaluating the impacts of the reasonable alternatives in the Draft EIS. The alternatives refinement process was conducted to address:

- Nonmotorized transportation components (bicycle and pedestrian accommodations)
- Drainage design and stormwater management
- Vertical alignments
- Access and connectivity to local road networks
- Conflicts with major infrastructure and utilities
- Avoidance or minimization of impacts to key resources
- Avoidance or minimization of impacts to private property
- Avoidance or minimization of impacts to recreation areas and trails

When refining the alternative alignments, UDOT used input from stakeholders during the scoping process, public and agency input during the alternative development process, and stakeholder interviews. These activities and input included the following:

- Meetings with Heber City and Wasatch County to review alternatives and identify:
  - Trail locations
  - Frontage roads on US-40
  - Connectivity to existing roads
  - Planned local roads
  - Planned development
  - Stormwater treatment approach
  - New conservation easements
  - Planned airport improvements
- Meetings with major utility providers:
  - Heber Light & Power
  - Rocky Mountain Power
  - Heber Valley Special Service District
  - Central Utah Water Conservancy District
- City council meetings to provide updates, answer questions, and listen to comments
- Meetings with the Wasatch Open Lands Board and Utah Open Lands to identify parcels held in conservation easement and a process to identify additional parcels that might be put into conservation easement
- Meetings with the airport master plan team and the Federal Aviation Administration to understand potential improvements to the Heber Valley Airport

2.3.1 Roadway Design

UDOT follows established design standards during project development. UDOT's standards are in place to ensure the safety of the traveling public by providing curvature, grade, and dimensional standards and providing for separation from roadside obstructions, providing space for vehicles to pull out of traffic in an emergency, having adequate distance to see intersections, and providing a safe place for cyclists and pedestrians. Standards are also important for roadway operations such as providing an area for storing plowed snow and conducting routine maintenance safely.

Following screening, engineers revised the free-flow alternatives (WB1 FF and WB3 FF) in accord with the following UDOT adopted standards. The right-of-way dimensions used for the free-flow alternatives' design are based on the roadway geometric standards in *A Policy on Geometric Design of Highways and Streets*, 7th Edition (AASHTO 2018) and in *Roadside Design Guide*, 4th Edition (AASHTO 2011), and on UDOT's standards, including UDOT's *Roadway Design Manual* (UDOT 2021), *Roadway Design Manual Drawings* (UDOT 2023b), and *2024 Standard Specifications for Road and Bridge Construction* (UDOT 2024). UDOT uses these standards when planning roadway projects to ensure that safety standards are met.

2.3.2 Avoidance and Minimization

2.3.2.1 Local Government Preservation Corridor

Heber City and Wasatch County have been considering a bypass around Heber City for over 20 years and passed resolutions of support to preserve a corridor for a specific alignment in 2006 and 2007. The corridor preservation alignment is shown in Figure 1.1-2, *Local Government Preservation Corridor*. The County established a corridor preservation fund through vehicle registration fees. Both local governments have been acquiring rights-of-way through annexation requests, developer approvals, exactions, purchases, density bonuses, and other means. Throughout the alternatives development process, UDOT heard comments that alternatives should follow this corridor. Both free-flow alternatives that were advanced to the Draft EIS follow the preservation corridor where possible. The free-flow alternatives follow the preservation corridor along the east-west connection to US-40 at 900 North and along the east-west connection to US-189 along 1300 South.

Neither of the free-flow alternatives follows the local government preservation corridor between SR-113 and 1300 South because the local government preservation corridor is not wide enough, and because the Western Corridor segment of the proposed Heber Valley Corridor in this location would impact a new substation and two developments that are under construction. The preserved corridor is as narrow as 84 feet wide in this area and assumes a narrower road than what UDOT has determined is needed. The free-flow alternatives require a corridor 250 feet wide to accommodate two 12-foot-wide lanes in each direction for a total of four lanes, 12-foot-wide inside and outside shoulders, a 50-foot-wide median and a clear zone for safety, stormwater treatment facilities, and a multi-use trail. By shifting the alignment west of the preservation corridor between SR-113 and 1300 South for both action alternatives, UDOT avoided impacts to the new power substation, the Kimball Villas (senior living community), and the Parkview Place (housing development with priority given to essential workers).

Both action alternatives were shifted north of the local government preservation corridor south of the hub intersection to minimize business impacts and provide a more direct alignment for the free-flow alternatives (fewer curves). The local government preservation corridor alignment ties into US-40 at about 1500 South to provide adequate space between signalized intersections. The action alternatives would cross over local

roads on bridges, so minimum intersection spacing is not a factor, and the action alternatives could cross undeveloped land. As a result, the action alternatives would impact fewer businesses, requiring only one business relocation in the area south of the hub intersection.

Where the local government preservation corridor is not used for the Heber Valley Corridor, it could be repurposed to other uses such as linear parks or trails in the future.

2.3.2.2 Property Impacts

During the alternatives design process, UDOT evaluated opportunities to avoid and minimize right-of-way impacts to private properties and recreation resources. These steps included the following:

- Optimize the design of US-40 to include retaining walls to reduce the number of residential and business relocations.
- Modify the partial frontage roads to reduce the number of potential residential and business relocations and to avoid historic buildings.
- Make minor alignment shifts to minimize property impacts.
- Avoid the Royal Coachman Mobile Home Park.
- Avoid Kimball Villas, a senior living community.
- Avoid Parkview Place, community housing for essential workers.
- Develop the horizontal and vertical alignments to inform potential right-of-way and easement extents.
- Locate the planned multi-use trail along north US-40 inside the existing right-of-way in certain locations to avoid residential relocations.
- Coordination with Utah Open Lands to avoid parcels considered for conservation easements in progress.

2.3.2.3 Impact to Water Quality and Water Resources

During the design process, UDOT evaluated opportunities to further avoid and minimize water resource impacts. These steps included the following:

- UDOT obtained an additional aquatic resources delineation during summer 2022 for the north fields to support design refinements.
- UDOT optimized the alignment through the undeveloped land and north fields west of Heber City to minimize potential impacts to waters of the United States.
- UDOT optimized the alignment near the future high school west of Heber City and north of SR-113 to minimize potential impacts to waters of the United States.
- UDOT received public comments that the alternatives should connect to US-40 farther north at 1200 North instead of at 900 North. UDOT developed a conceptual alternative near 1200 North and

determined that the impacts to waters of the United States would be greater than with the original alternative alignment near 900 North.

- UDOT received public comments suggesting realigning 2023 Alternatives WB3 and WB4 east of 600 West to minimize impacts to the local road network and access to agricultural fields. (Alternatives WB3 and WB4 were determined to be obsolete for the 2025 screening and were revised as WB3 AG and WB4 AG with the same alignments through the north fields.) UDOT developed three concepts and determined that the impacts to waters of the United States would be greater with the realigned alternatives than with the original alternative alignment. Alternative alignments were developed based on minimizing impacts to waters of the United States.
- Stormwater treatment design incorporated several best management practices (BMPs) designed to manage and minimize the effects of roadway stormwater discharges to surface and groundwater quality by reducing the total volume of water that runs off a roadway and reducing the concentrations of pollutants in the stormwater.

Additional wetland delineation was necessary to fully understand the impacts of Alternative WB3 FF. The area surrounding the proposed ramps near Potter Lane/College Way was delineated by UDOT during summer 2025. Due to the timing of this information, this delineation will inform the Final EIS and is not included in this Draft EIS. This Draft EIS uses National Wetland Inventory data that have been verified with aerial images to estimate wetland impacts near Potter Lane/College Way; therefore, the acreage of aquatic resource impacts might change in the Final EIS.

2.3.3 Pedestrian and Bicycle Facilities

For all alternatives that passed screening, UDOT developed conceptual designs that would add a multi-use trail as described in the purpose and need statement: "… [to] provide opportunities for nonmotorized transportation." The primary purpose of the multi-use trail is active transportation, not recreation. Trail alternatives are based on UDOT's discussions with Heber City and Wasatch County and follow the following adopted trail plans:

- Heber City
  - *Heber City Envision 2050 General Plan* (Heber City 2023)
  - *Heber City Parks, Trails, and Open Space Master Plan* (Heber City 2021)
- Wasatch County
  - *Railroad Trail Feasibility Study* (Wasatch County 2015)
  - *Heber Valley Nonmotorized Trail Plan* (Wasatch County 2024)

The multi-use trail would be parallel to the free-flow alternatives. For Alternative WB1 FF, the trail would parallel the new alignments of the Heber Valley Corridor west and south of Heber City and parallel north US-40 north of 900 North. The trail is included in the cross sections for the alternatives (Figure 2.4-3 through Figure 2.4-5). The trail would be constructed in part by UDOT and in part by multiple different developers along the east side of north US-40. Each proposed development plan along North US-40 includes a parallel trail facility as required by Heber City. UDOT would build the trail segments between the developments where there is overlap with the alternatives. For Alternative WB3 FF, the trail would be the same as

Alternative WB1 FF in every location except for the North Fields Extension segment of the proposed Heber Valley Corridor, where the trail would parallel the freeway through the north fields instead of paralleling the North US-40 segment.

Where either free-flow alternative crosses an existing trail (such as the Midway Lane Connector Trail), UDOT would reconnect the trail.

2.4 Alternatives Considered for Detailed Study

The alternatives carried forward for detailed study in this EIS are the No-action Alternative (to be used as a baseline) and two free-flow alternatives, WB1 FF and WB3 FF (Table 2.4-1). The alternative names used in the scoping and screening processes were created to identify the location of each alternative (east of Heber City, west of Heber City, or on US-40) and to describe the features that made the alternative unique compared to other alternatives in the same location. Moving forward in the EIS, these alternative names have been simplified to Alternative A and Alternative B (Table 2.4-1). For detailed alternatives figures, see Appendix 2D, *Action Alternatives Figures*.

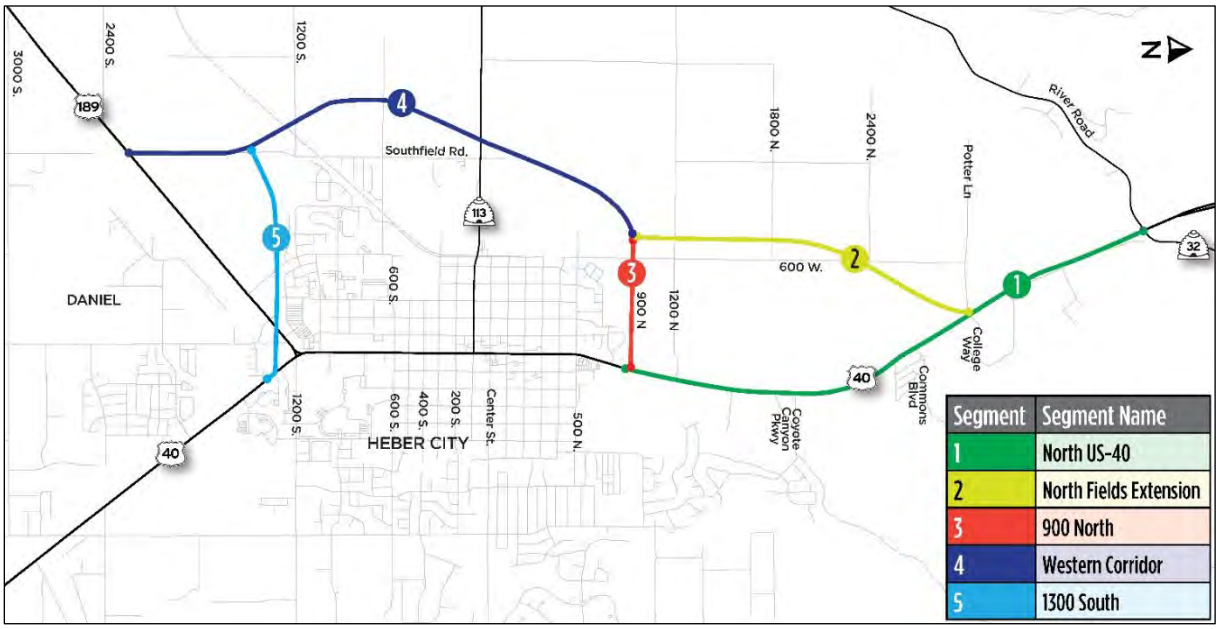
Table 2.4-1. New Alternative Names for Free-flow Alternatives Advanced to the EIS

Alternative Identifier	Scoping and Screening Report Name	EIS Name
WB1 FF	West bypass – limited access and free-flow intersections	Alternative A (on US-40 alignment)
WB3 FF	West bypass – limited access and free-flow intersections with northern extension	Alternative B (off US-40 alignment)

2.4.1 Naming Convention for Segments of the Action Alternatives

The name Heber Valley Corridor refers to the full scope of an alternative from River Road/SR-32 to US-189 and south US-40. For consistency in describing the locations of segments of the action alternatives, UDOT used a segment naming convention (Figure 2.4-1) to geographically describe the Heber Valley Corridor. This naming convention is used throughout this Draft EIS when describing the alternatives and their expected resource impacts.

Figure 2.4-1. Naming Conventions for Segments of the Action Alternatives



2.4.2 No-action Alternative

The National Environmental Policy Act (NEPA) requires an analysis of the No-action Alternative. This alternative serves as a baseline so that decision-makers can compare the environmental effects of the action alternatives. For the No-action Alternative, UDOT assumed that all funded road projects in the *Utah Long-range Transportation Plan 2023–2050* would be in place except for the west bypass improvements that are being evaluated in this EIS. For more information regarding the assumed road projects, see Section 1.1.3.2, *Regional Transportation Planning*.

Wasatch County and Heber City have allowed development along the east side of US-40, and UDOT assumes that development would continue as planned along the east side of US-40 between River Road/SR-32 and the Heber City downtown area. To accommodate this development, a corridor agreement has been drafted and executed allowing four additional traffic signals on US-40 in the future: at University Avenue, Commons Boulevard, Coyote Canyon Parkway, and 900 North (UDOT, Wasatch County, and Heber City 2018, 2023a, 2023b).

If no action is taken, UDOT would continue to make safety and minor maintenance improvements on US-40 such as rehabilitating pavement, maintaining drainage facilities, approving accesses to US-40 as applicable to the corridor agreement, installing traffic signals, and making minor operational improvements such as signal timing.

Overall, with the No-action Alternative, the basic layout of US-40 would remain the same, and the operation and function of the highway would continue to accommodate approved and planned future development, new accesses to the developments, and the addition of four new traffic signals in accord with the corridor agreement. For more information about approved subdivisions in the Heber Valley, see Section 3.2, *Land Use*; for information about the traffic and safety, see Section 3.7, *Transportation*; and for more information regarding adopted trail plans, see Section 3.8, *Pedestrian and Bicyclist Issues*.

2.4.3 Action Alternatives

2.4.3.1 Common Considerations for Both Action Alternatives

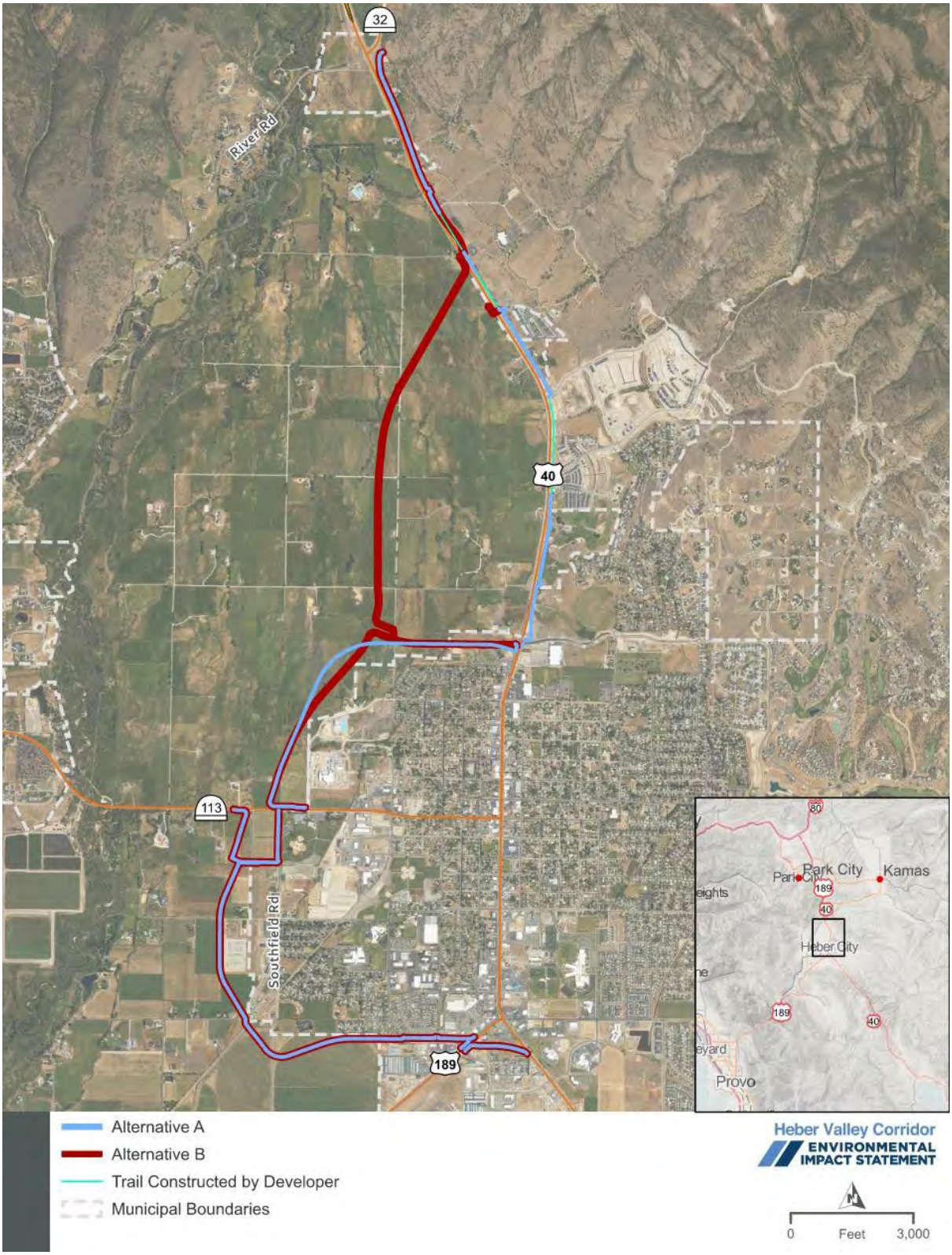
2.4.3.1.1 Multi-use Trail

With both action alternatives, a 12-foot-wide paved trail would be located on the east side of the North US-40 segment of the proposed Heber Valley Corridor, on the east side of the North US-40 segment between River Road/SR-32 and Potter Lane/College Way, on the east side of the Western Corridor segment between the 900 North and 1300 South segments, and on the north side of the 1300 South segment (Figure 2.4-2). More details regarding the multi-use trail are included in Section 2.4.3.2, *Alternative A*, and Section 2.4.3.3, *Alternative B*. The purpose of the trail would be active transportation, not recreation.

2.4.3.1.2 Drainage Design

During coordination with project stakeholders including Heber City, Wasatch County, and the local irrigation and canal companies, UDOT heard a strong preference that the stormwater BMPs for the action alternatives be designed to infiltrate 100% of the stormwater that comes off the roadway pavement and right-of-way for the selected alternative, and that no stormwater be directly discharged to surface waters near the alignment for the selected alternative. The BMPs that UDOT is proposing for the action alternatives would provide 100% infiltration of stormwater. These BMPs include infiltration trenches (both lined with sand and unlined, depending on the location) and large, shallow basins that would allow both infiltration of stormwater and evaporation over time. The specific BMPs that would be used, and their specific locations, would be determined during the final design of the selected alternative. Additional information is provided in Appendix 3K, *Water Quality Technical Report*.

Figure 2.4-2. Multi-use Trail Locations for the Action Alternatives



2.4.3.2 Alternative A

Alternative A would be a four-lane freeway, would improve existing US-40 north of downtown Heber City between River Road/SR-32 and 900 North, and would traverse around the west side of Heber City between 900 North and US-189 (shown in Figure 2.4-3 through Figure 2.4-6 below). This alternative would include a combination of free-flow ramps and bridges to create grade-separated interchanges at certain locations and would include a multi-use trail. Access to the freeway would be limited to interchanges and free-flow ramps. This alternative's features are described below using the segments (North US-40, North Fields Extension, 900 North, Western Corridor, and 1300 South segments) defined in Figure 2.4-1, *Naming Conventions for Segments of the Action Alternatives*, above.

What is a grade-separated interchange?

A grade-separated interchange is a type of intersection where roads cross each other at different elevations, thereby eliminating the need for traffic to stop or yield at an at-grade signalized intersection.

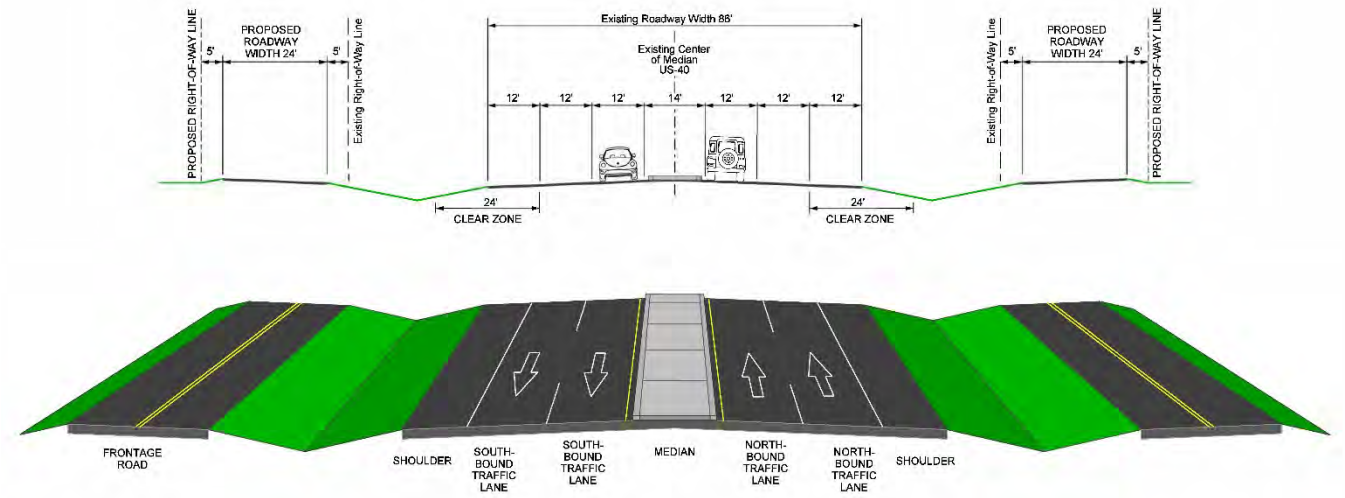
What is a discontinuous frontage road system?

A discontinuous frontage road system has gaps in its network. The proposed discontinuous frontage road system would not parallel north US-40 for its full extent. To limit right-of-way impacts, the proposed frontage roads connect existing and planned local roads at the proposed interchanges only.

North US-40. Between River Road/SR-32 and 900 North along existing US-40, Alternative A would include a discontinuous frontage road system to consolidate local access and improve safety to meet minimum spacing standards for interchanges. The existing north US-40 would be reconstructed to include four 12-foot-wide travel lanes, two in each direction, separated by a center median (Figure 2.4-3). Three interchanges would be constructed—at River Road/SR-32, Potter Lane/ College Way, and Coyote Canyon Parkway. The speed limit would be 55 miles per hour (mph) in the North US-40 segment.

In this segment, a 12-foot-wide paved trail would be located on the east side of US-40 starting at River Road/SR-32 and going north to 900 North. Heber City has required that developers construct a trail for active transportation parallel to US-40. UDOT would build the trail in segments between the approved developments to create a continuous trail.

Figure 2.4-3. Cross Section for Alternatives A and B in the North US-40 Segment



900 North. At 900 North, traffic traveling to and from downtown Heber City on Main Street would encounter an at-grade traffic signal. Traffic using the Heber Valley Corridor on Alternative A (that is, those traveling farther north or south or around the city) would have free-flow ramp connections to travel west on the 900 North segment or northbound to the North US-40 segment. The speed limit would be reduced from 55 mph (the existing speed limit on the North US-40 segment) to 45 mph in the 900 North segment.

In this segment, the trail would cross the signalized intersection of 900 North on the east side of US-40, cross again on the south side of 900 North, then connect to the trail segment on the south side of the Heber Valley Corridor.

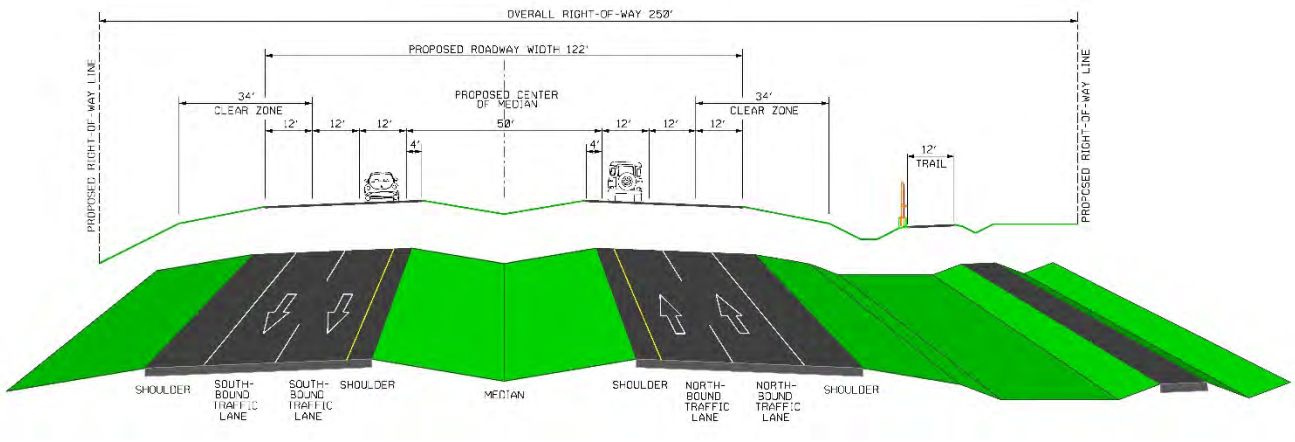
North Fields Extension. Alternative A does not extend through the north fields.

Western Corridor. The Western Corridor segment of Alternative A would connect the 900 North segment with US-189 in the south at its existing junction with Southfield Road. This segment of the alternative includes four 12-foot-wide travel lanes, two in each direction, and a 50-foot-wide center median (see Figure 2.4-4 for the cross section). The speed limit would be 65 mph. The 50-foot-wide center median is necessary for safety per UDOT design standards for the design speed. This alternative includes two grade-separated interchanges: at 1300 South and SR-113. The grade-separated interchange at SR-113, proposed in this EIS, would have a single-point urban interchange (SPUI) configuration. The interchange with the 1300 South segment would be a system interchange with free-flow ramp connections for every direction of travel between the Western Corridor and 1300 South segments.

Local road and trail connections would be maintained by underpasses at 1200 South, the Heber Valley Railroad rail line, 650 South, SR-113, and 600 West.

In the Western Corridor segment, a 12-foot-wide paved trail would be located on the east side of US-40 starting at the 900 North segment, crossing SR-113 east of Southfield Road, and connecting to the existing east-west Midway Lane Connector Trail. The trail would then continue south parallel to Southfield Road, replacing the existing sidewalk with a multi-use trail. The trail would then cross over the Western Corridor segment of the Heber Valley Corridor and connect to the Midway Lane Connector Trail west of the Western Corridor segment. South of the trail crossing, the trail would parallel the Western Corridor segment on the east side until it connects with the 1300 South segment. No trail is proposed for the Western Corridor segment between its connection to the 1300 South segment and US-189.

Figure 2.4-4. Cross Section in the North Fields Extension Segment (Alternative B) and the Western Corridor Segment (Alternatives A and B)



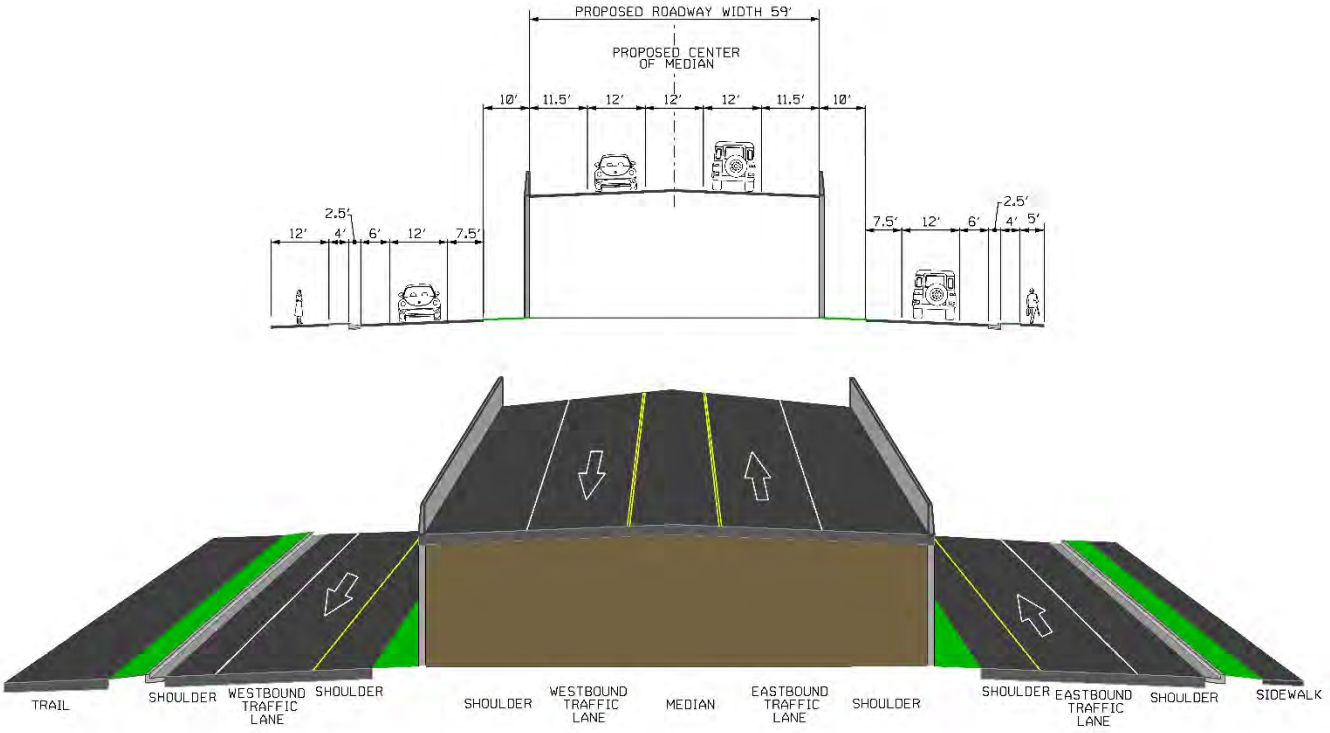
1300 South. The 1300 South segment would include two elevated 12-foot-wide travel lanes, one in each direction, and a paved 14-foot-wide center median (Figure 2.4-5). The speed limit would be 45 mph in this segment. A one-way frontage road system, on the existing ground level and parallel to the elevated section, would facilitate local traffic movements to and from the commercial area in southern Heber City and the Heber Valley Corridor. The existing 1300 South intersection with Industrial Parkway would be removed and replaced with a right-in, right-out access to the one-way frontage road system. Removing this intersection would improve regional mobility by limiting the access points and therefore consolidating slow-moving traffic that needs to get up to speed. The existing at-grade intersection of 1300 South and 300 West would be grade-separated. An at-grade traffic signal at 300 West would allow traffic on the one-way frontage road system to travel underneath 1300 South and access the commercial area. Grade separation at 300 West is important to both local and regional traffic movements because it would allow the traffic on the Heber Valley Corridor to move unimpeded.

This segment of the Heber Valley Corridor would remain elevated over US-189 and Daniels Road before terminating with connections to south US-40. On south US-40, in the northbound direction, a free-flow ramp would be constructed north of 1500 South to provide a connection to the Heber Valley Corridor.

In this segment, a 12-foot-wide paved trail would be located on the north side of the 1300 South segment between its connection with the Western Corridor segment and US-189 near the hub intersection. The trail would replace the existing trail at 1300 South and Industrial Parkway. A sidewalk would be constructed on the south side of 1300 South. East of US-189, the trail would follow the south side of the 1300 South segment and would connect to the planned regional trail system that would parallel south US-40 on the west side of the freeway.

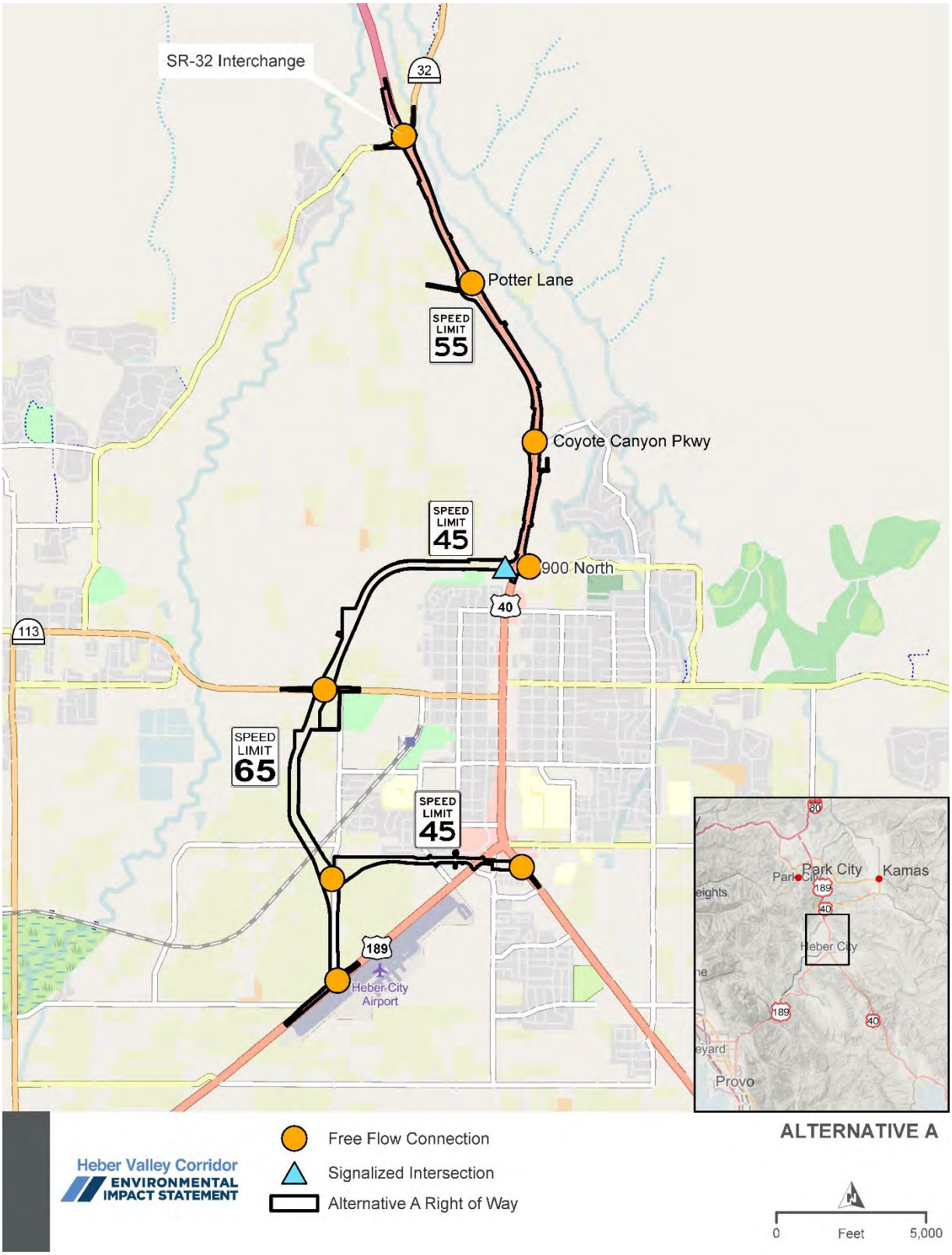
Alternative A Overview. Figure 2.4-6 shows the overall design layout for Alternative A.

Figure 2.4-5. Cross Section for Alternatives A and B in the 1300 South Segment at 300 West



Note: The vertical height of 1300 South would vary and would taper down to ground level near Industrial Parkway. At its highest, it would be 24 feet above ground level.

Figure 2.4-6. Design Layout for Alternative A



2.4.3.3 Alternative B

Alternative B would be a four-lane freeway from River Road/SR-32 to US-189 and would include a two-lane roadway connection to south US-40. Alternative B would be routed through the north fields and would traverse around the west side of Heber City (Figure 2.4-7). This alternative would include free-flow ramps and interchanges and a multi-use trail. Access to the freeway would be limited to interchanges and free-flow ramps. This alternative's features are described using the segments (North US-40, North Fields Extension, 900 North, Western Corridor, and 1300 South segments) defined in Figure 2.4-1, *Naming Conventions for Segments of the Action Alternatives*, above.

North US-40. In this segment, Alternative B would include an interchange at River Road/SR-32 and free-flow ramps at Potter Lane/College Way to connect to the North Fields Extension segment of the proposed Heber Valley Corridor. On the North US-40 segment, the alternative would include four 12-foot-wide travel lanes, two in each direction, and a center median. A discontinuous frontage road system would be constructed between River Road/SR-32 and Potter Lane/College Way to consolidate local access to the interchange at River Road/SR-32 and a traffic signal at Potter Lane/College Way. There would be no access to the free-flow ramps from Potter Lane or College Way because the ramps would be elevated over these streets. The speed limit would be 55 mph.

Between Potter Lane/College Way and 900 North, the existing north US-40 would be developed as an arterial street in accord with the corridor agreement, which establishes at-grade traffic signals at Potter Lane/College Way, Commons Boulevard, and Coyote Canyon Parkway. There is currently a traffic signal at 900 North. Alternative B would include additional turn lanes at these signals to accommodate the forecasted traffic in 2050. The speed limit on the North US-40 segment is anticipated to be 45 mph.

The multi-use trail parallel to the North US-40 segment would be constructed east of north US-40 between River Road/SR-32 and Potter Lane/College Way.

North Fields Extension. The North Fields Extension segment connects the North US-40 segment to the 900 North and Western Corridor segments. This segment of the alternative includes four 12-foot-wide travel lanes, two in each direction, and a 50-foot-wide center median. For the cross section in this segment, see Figure 2.4-4, *Cross Section in the North Fields Extension Segment (Alternative B) and the Western Corridor Segment (Alternatives A and B)*, above. The speed limit would be 65 mph.

The multi-use trail would be located east of the North Fields Extension segment.

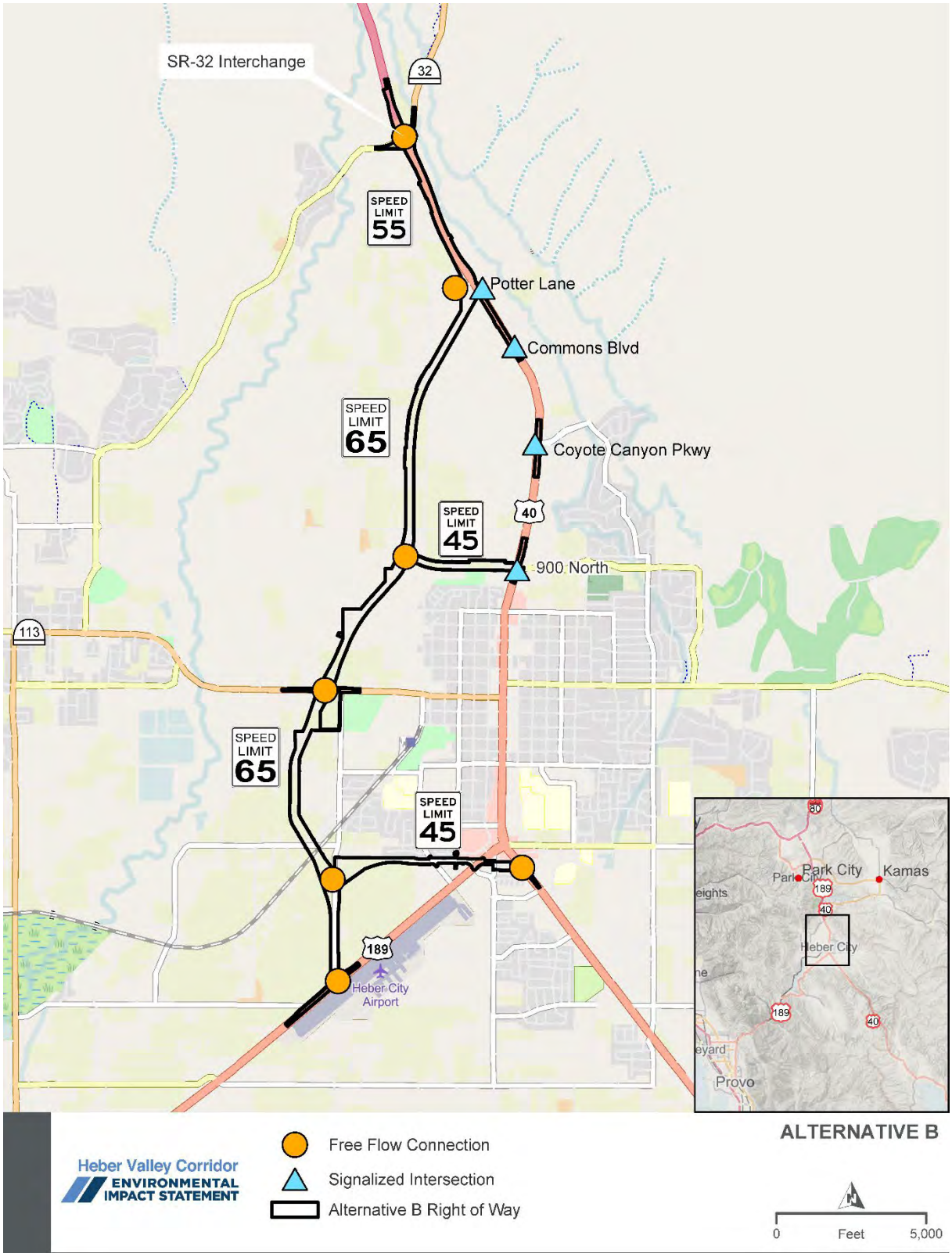
900 North. This segment and parallel multi-use trail would be the same as with Alternative A except that Alternative B includes an additional interchange with the North Fields Extension segment west of 600 West. An underpass for local road access and for connecting the multi-use trail would be constructed at 600 West. No free-flow ramps would be constructed between the North US-40 and 900 North segments.

Western Corridor. Alternative B is the same as Alternative A throughout the Western Corridor segment.

1300 South. Alternative B is the same as Alternative A throughout the 1300 South segment.

Alternative B Overview. Figure 2.4-7 shows the overall design layout for Alternative B.

Figure 2.4-7. Design Layout for Alternative B



2.4.4 Comparison of the Alternatives

2.4.4.1 Support for the Project Purpose

Both action alternatives support the purpose of the project—that is, both action alternatives would improve regional and local mobility on US-40 from River Road/SR-32 to US-189 and would provide opportunities for nonmotorized transportation while allowing Heber City to meet their vision for the historic town center. Table 2.4-2 shows the degree to which the action alternatives would meet the project purpose elements, and Table 2.4-3 presents specific data. The data in the following two tables have been updated to reflect the minor refinements in the alternatives between screening and the publication of this Draft EIS.

What is the PM peak hour?

The PM peak hour is the 1-hour period in the afternoon (PM) during which there is the greatest number of vehicles on the road system. For the Heber Valley Corridor Project, the PM peak hour is from 5 to 6 PM.

Table 2.4-2. Degree to Which Action Alternatives Would Meet the Project Purpose Elements

Alternative	Regional Mobility	Local Mobility	Nonmotorized Transportation	Vision for Historic Town Center
No-action	• Would not decrease regional travel time (23:40/21:50).[a] • Would not provide an alternate route to Main Street.	• 5 intersections with LOS F; 2 intersections with LOS E. • 2 arterial segments with LOS F; 4 arterial segments with LOS E. • Would not improve local travel time (20:30).[b] • Would not improve vehicle queue lengths (22,400 ft).[c]	Would not provide opportunities for nonmotorized transportation.	Would not allow Heber City implement their vision for Main Street. Would not provide an alternate route to Main Street for trucks.
A	• Fast regional travel time (7:25/8:10).[a] • Heber Valley Corridor would be faster than Main Street for trips to/from US-189 and US-40 during the PM peak hour.	• 1 intersection with LOS F; 2 intersections with LOS E. • 1 arterial segment with LOS F; 1 arterial segments with LOS E. • Faster local travel time (11:50).[b] • Shorter vehicle queue lengths of action alternatives (6,200 ft).[c]	Would provide opportunities for nonmotorized transportation.	Would not preclude Heber City from implementing their vision for Main Street. Would provide a fast alternate route to Main Street for trucks.
B	• Fastest regional travel time (6:15/6:55).[a] • Heber Valley Corridor would be faster than Main Street for trips to/from US-189 and US-40 during the PM peak hour.	• No intersections with LOS F; 1 intersection with LOS E. • 1 arterial segment with LOS F; 1 arterial segments with LOS E. • Fastest local travel time (10:15).[b] • Shortest vehicle queue lengths (3,200 ft).[c]	Would provide opportunities for nonmotorized transportation.	Would not preclude Heber City from implementing their vision for Main Street. Would provide the fastest alternate route to Main Street for trucks.

Definitions: ft = feet; LOS = level of service; PM = afternoon

[a] Regional travel time southbound in minutes:seconds (River Road/SR-32 to US-189 and River Road/SR-32 to US-40)

[b] Local travel time on Main Street southbound in minutes:seconds (River Road/SR-32 to the hub intersection)

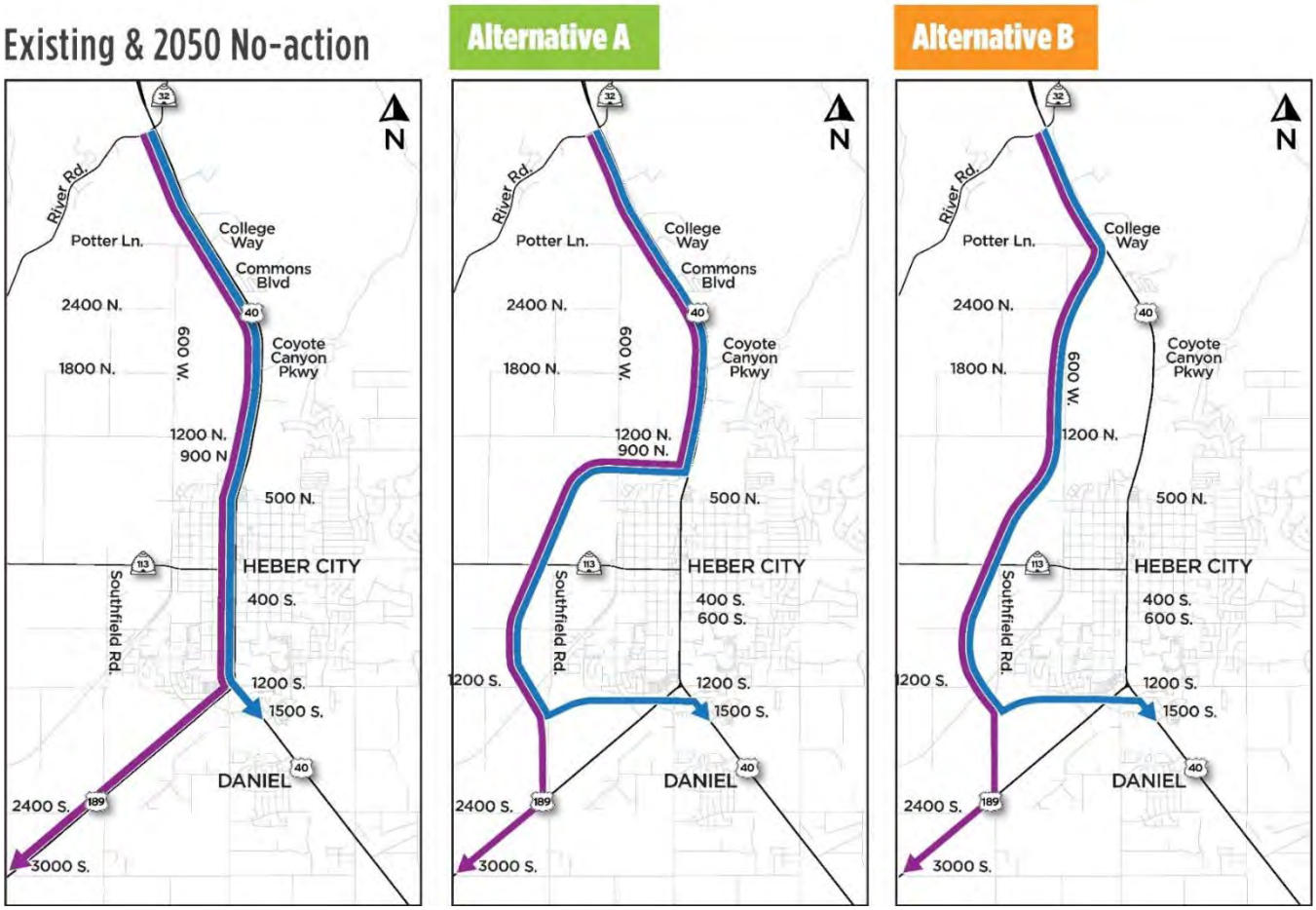
[c] Sum of vehicle queue lengths at four intersections on Main Street: southbound at 500 North, southbound at Center Street, southbound at 100 South, and eastbound at 100 South)

Table 2.4-3. Summary of PM Peak-hour Project Purpose Criteria for the Action Alternatives

Condition or Alternative	Regional Mobility[a]								Vision	Local Mobility (Southbound)[b]			
	Travel Time (Southbound) (mm:ss)				Travel Time (Northbound) (mm:ss)				Allows Heber City to Meet Their Vision for the Historic Town Center?	Number of Intersections at LOS F	Travel Time on Main Street SR-32 to Hub Intersection (mm:ss)	Southbound Queue Length at 500 North (feet)	Number of Southbound Segments at LOS F
	SR-32 to US-189 at 3000 South		SR-32 to US-40 at 1500 South		US-189 at 3000 South to SR-32		US-40 at 1500 South to SR-32						
	Via New Corridor	Via Main Street	Via New Corridor	Via Main Street	Via New Corridor	Via Main Street	Via New Corridor	Via Main Street					
Existing conditions (2019)	—	10:55	—	9:15	—	10:50	—	8:40	No	0	8:20	375	2
No-action Alternative (2050)	—	23:40	—	21:50	—	22:00	—	18:40	No	5	20:30	17,100	2
Heber Valley Corridor Alternatives													
Alternative A	7:25	15:05	8:10	13:35	7:25	12:20	8:10	10:15	Yes	1	11:50	3,500	1
Alternative B	6:15	13:25	6:55	11:55	6:15	12:55	6:55	10:55	Yes	0	10:15	700	1

Source: Appendix 2C, *Action Alternatives Traffic Memo*
Definitions: LOS = level of service; mm:ss = minutes:seconds
[a] Regional travel time is measured between SR-32 and US-189 at about 3000 South, and between SR-32 and US-40 at about 1500 South (see Figure 2.4-8).
[b] Local travel time is measured between SR-32 and the hub intersection.

Figure 2.4-8. Travel Routes Measured for Regional Mobility



2.4.4.2 Preliminary Cost Estimates

To help compare the action alternatives, UDOT developed cost estimates (Table 2.4-4). These cost estimates include more-detailed assumptions than the screening-level cost estimates in Table 2.2-6, *Final Level 2 Screening Results*, above and are therefore higher than the initial estimates. The construction cost was estimated using quantities for roadway, earthwork, structures, walls, drainage, utilities, and per acre of right-of-way and wetland mitigation for the current year (2025).

Table 2.4-4. Preliminary Cost Estimates for the Action Alternatives

In millions of 2025 dollars

Alternative	Total Cost
A	$711.9
B	$760.5

2.4.4.3 Traffic Volumes

The travel demand forecasts for the action alternatives were developed using the Summit-Wasatch travel demand model version 2.1 2024-03-28. Details about the development and use of the Summit-Wasatch travel demand model for no-action analysis and alternatives screening are available in the *Addendum to the Final Alternatives Development Screening Report* and the *Existing and 2050 No-build Traffic and Safety Analysis* (Appendix 1A, *Existing and 2050 No-build Traffic Report*).

What is a travel demand model?

A travel demand model predicts future travel demand based on projections of land use, socio-economic patterns, and transportation system characteristics.

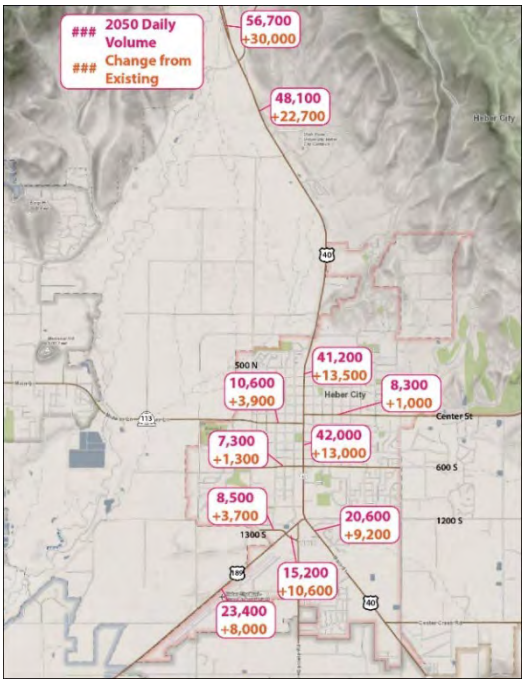
Figure 2.4-9 and Figure 2.4-10 illustrate the changes in daily traffic on key roads for existing conditions (in 2019), in 2050 with the No-action Alternative, and in 2050 with the action alternatives. The action alternatives would reduce traffic on the downtown segments of US-40 (Main Street) by about 7,000 to 9,000 vehicles per day (about 16 to 21%) compared to the No-action Alternative in 2050.

No-action Alternative. The No-action Alternative uses north US-40, and without improvements, traffic is projected to increase on north US-40 by about 22,700 vehicles per day (about 89%) compared to the existing conditions. On Main Street, traffic is projected to increase by about 13,000 vehicles per day (about 45%) compared to the existing conditions.

Alternative A. Alternative A uses north US-40 and would increase traffic on north US-40 by about 8,500 vehicles per day (about 18%) compared to the No-action Alternative in 2050. The higher speeds and free-flow conditions on the North US-40 segment and the lack of a North Fields Extension segment would attract and concentrate more traffic on the North US-40 segment.

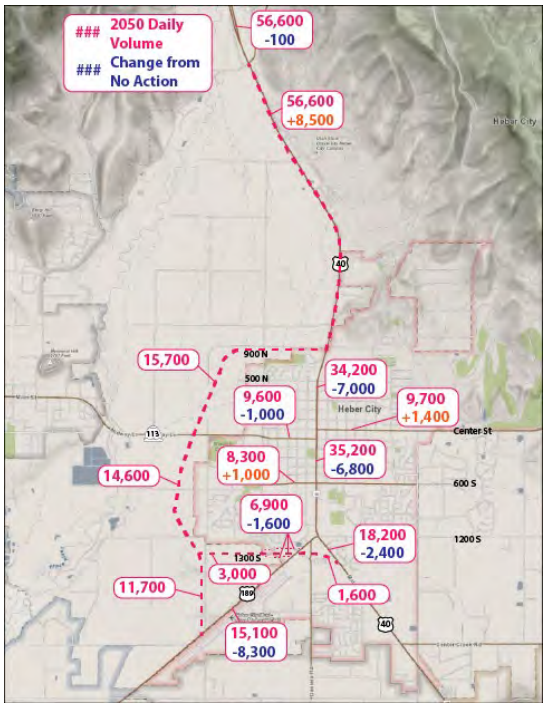
Compared to the No-action Alternative, Alternative A would reduce traffic on major local roads that intersect the alternative (River Road/SR-32, Main Street, Midway Lane, US-189, 1300 South, and south US-40).

Figure 2.4-9. Daily Traffic Volume with the No-action Alternative in 2050

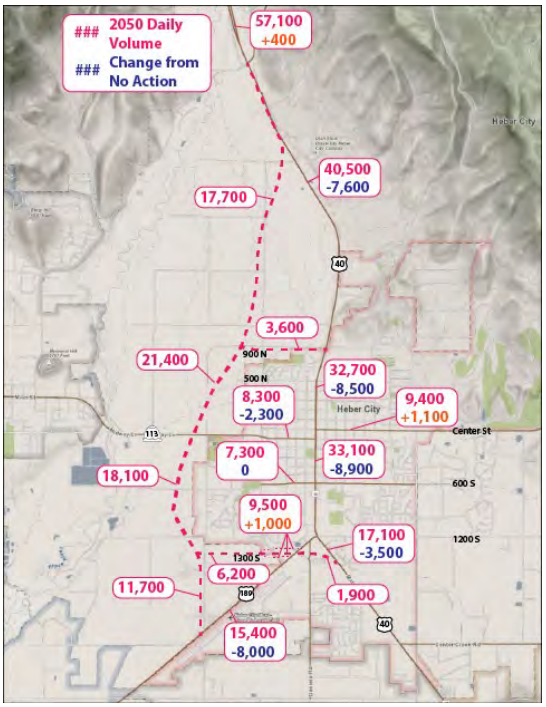


No-action Alternative

Figure 2.4-10. Daily Traffic Volumes with Alternatives A and B in 2050



Alternative A



Alternative B

Alternative B. Alternative B traverses the north fields. It would reduce traffic north US-40 between Potter Lane/College Way and 900 North by about 7,600 vehicles per day (about 16%) compared to the No-action Alternative in 2050. Compared to the No-action Alternative, Alternative B would reduce traffic on major local roads that intersect the alternative (River Road/SR-32, Main Street, Midway Lane, US-189, and south US-40) except 1300 South.

Alternative B would increase traffic on 1300 South by about 1,000 vehicles per day (about 12%) compared to the No-action Alternative in 2050. With Alternative B, there would be more traffic on 1300 South and the adjacent, one-way local access roads than there would be on 1300 South alone with the No-action Alternative in 2050. With Alternative B, these roads would have more traffic; Alternative B is projected to attract more traffic in general, compared to the No-action Alternative and Alternative A, because the North Fields Extension segment would offer a more direct travel path to US-40 and improved local and regional mobility.

2.4.4.4 Design and Operational Considerations

The action alternatives have additional design and operational considerations for the future.

Operations in 2050. Both action alternatives support the planning time horizon of 2050 and are projected to support local and regional mobility in 2050 and beyond. The grade-separated (free-flow) interchanges support regional mobility in the long term.

Travel Patterns and Accessibility. As stated in Section 3.7, *Transportation*, either action alternative would change some travel patterns and access and would affect mobility. Figure 2.4-9 and Figure 2.4-10 above illustrate the changes in daily traffic volumes on key roads for existing conditions (in 2019), in 2050 with the No-action Alternative, and in 2050 with the action alternatives.

Commercial Truck Traffic on Main Street. Although neither action alternative can eliminate commercial truck traffic on Main Street, both action alternatives would provide an attractive route for commercial trucks compared to Main Street. Travel on the Heber Valley Corridor would be 42% to 50% faster than continuing on Main Street, and both action alternatives are projected to be attractive to truck traffic.

2.4.4.5 Summary of Advantages and Disadvantages

Table 2.4-5 lists the major advantages and disadvantages of each alternative that was evaluated in detail in this EIS.

Table 2.4-5. Primary Advantages and Disadvantages of the No-action and Action Alternatives

Alternative	Primary Advantages	Primary Disadvantages
No-action Alternative	• Few environmental impacts because no major improvements would be made to US-40. A new freeway would not be constructed in the north fields or west of Heber City. • No impacts to property owners or adjacent residents.	• Would not meet the purpose of the project. • Would not be consistent with regional transportation plans. • Traffic congestion would increase on US-40 and in downtown Heber City, resulting in poor local and regional mobility. • Would not allow Heber City to implement their vision for a walkable downtown. • Degrades safety by retaining over 150 potential conflict points from driveways and intersections.
Alternative A	• Would meet the purpose of the project. • Grade-separated interchanges and high forward compatibility with population and development growth in the long term. • Benefits local and regional mobility. • Enhances safety by having fewer conflict points from driveways and intersections.	• Highest residential and business impacts.
Alternative B	• Would meet the purpose of the project. • Grade-separated interchanges and high forward compatibility with population and development growth in the long term. • Benefits local and regional mobility. • Provides north-south transportation system redundancy for the Heber Valley. • Fastest regional travel time due to the shorter, more-direct North Fields Extension segment. • Enhances safety by having fewer conflict points from driveways and intersections.	• Highest impacts to wetlands.

2.4.4.6 Impact Comparison

Table 2.4-6 summarizes the main resource impacts of each project alternative for comparison. For detailed information about the environmental impacts of the project alternatives, see Chapter 3, *Affected Environment, Environmental Consequences, and Mitigation Measures*.

Table 2.4-6. Environmental Impacts of the No-action and Action Alternatives

Impact Category	Unit	No-action	Alt A	Alt B	Notes
Land converted to roadway use	Acres	0	251	276	None.
Consistent with local land use and transportation plans	Yes/no	No	No	No	The No-action Alternative does not implement a western bypass (shown in plans adopted by Heber City and Wasatch County). Alternative B includes a North Fields Extension segment, which is not shown in adopted plans. Neither Alternative A nor Alternative B is consistent with the *North Village Master Transportation Plan* or with corridor access agreements for north US-40.
Federally regulated farmland impacts	Acres	0	179	223	This impact is acreage of land protected by the Farmland Protection Policy Act (prime farmland and farmland of statewide importance).
Agriculture Protection Areas impacts	Acres	0	11.8	38.4	This impact is acreage of land protected by state and local laws that would unreasonably restrict farming.
Sewer farm impacts	Acres	0	64.2	64.2	Impacts to the "sewer farm" where the Heber Valley Special Service District disposes of treated wastewater by farming alfalfa.
Economic impacts	Yes/no	Yes	Yes	Yes	Businesses on Main Street would be affected by changes in congestion and changes in traffic volumes. Destination businesses could be positively impacted by reduced congestion; convenience businesses could be negatively impacted by reduced traffic.
Right-of-way: Potential business relocations	Number	0	15	2	Alternatives A and B would require relocating two businesses along 1300 South. Alternative A would also require relocating an additional 13 businesses that are in various stages of approval or construction at the intersection of 900 North and US-40.
Right-of-way: Potential residential relocations	Number	0	12	6	Most of the residential relocations for Alternatives A and B would be on the North US-40 segment.
Right-of-way: Acquisition	Acres	0	295	328	None.
Air quality impacts above regulations	Yes/no	No	No	No	None.

(*Continued on next page*)

Table 2.4-6. Environmental Impacts of the No-action and Action Alternatives

Impact Category	Unit	No-action	Alt A	Alt B	Notes
Receptors with modeled noise levels above criteria	Number (residential receptors)	105 – Alt. A 102 – Alt. B	230 (227)	277 (273)	The traffic noise analysis included receptors for planned developments (some buildings with modeled impacted receptors have not been constructed yet). For the No-action Alternative, receptors were modeled near the alterative alignments for comparison with the action alternatives.
Impact to historic buildings	Number	0	4	1	Impacts to historic buildings would result in an adverse effect under Section 106 of the of the National Historic Preservation Act.
Adverse impacts to archaeological sites	Number	0	0	0	Archaeological sites include a historic railroad and five canal/ditch systems. Impacts would result in no adverse effect under Section 106.
Section 4(f) uses (with greater–than–*de minimis* impact)	Number	0	4	1	These impacts would be greater than *de minimis* due to demolition of historic structures.
Water quality standards exceeded in Provo River or aquifer	Yes/no	No	No	No	None.
Aquatic resources impacts	Acres	0	22.52	53.92	Assumptions about jurisdictional waters (wetlands, streams, canals, and ditches) are based on the professional judgment of aquatic resource specialists.
Threatened and endangered species (suitable habitat)	Acres	0	0	0	None.
Floodplain impacts	Acres	0	3.2	3.4	None.
Hazardous waste sites affected (high, moderate, and low risk sites combined)	Number	0	23	20	None.
Adverse visual impacts	Qualitative	*See notes*	*See notes*	*See notes*	The No-action Alternative would not result in visual impacts other than a congested Main Street. Alternative A would be more visually impactful to the north US-40 corridor. Alternative B would be more visually impactful to the north fields.

Definitions: Section 106 = Section 106 of the National Historic Preservation Act of 1966; Section 4(f) = Section 4(f) of the Department of Transportation Act of 1966

2.4.4.7 Public and Agency Input

UDOT considered public and agency input during the scoping process and the alternatives development, screening, and refinement process. Some commenters suggested that screening criteria should consider impacts to the north fields. UDOT explained that Level 2 screening already accounts for wetland impacts because of strong regulatory protections, and that other potential impacts—such as land use, water quality, wildlife, and visual effects—would be evaluated for any alternatives that moved forward. Some commenters asked why UDOT didn't follow the local preservation corridor; UDOT responded that it used this corridor where possible but adjusted the alignment to avoid wetlands, a substation, and development. Others opposed a 1300 South connection, but UDOT clarified that without this connection, traffic would not shift enough from Main Street to meet the project's purpose.

UDOT recognizes that there are strengths and weaknesses for each action alternative, many of which were identified in public and agency comments. Neither action alternative has the best transportation performance, the lowest cost, and the fewest impacts to all resources. Accordingly, UDOT is undergoing an extensive EIS process to further analyze performance, cost, and impacts to resources and to meaningfully consider input from agencies, stakeholders, and the public. UDOT's coordination and communication efforts are documented in Chapter 5, *Coordination*.

2.4.4.7.1 Wasatch County Resolution 2022

Through the EIS process, UDOT received comments for and against concepts that extended through the north fields. Wasatch County submitted a signed resolution dated July 13, 2022, generally stating that Wasatch County supports the UDOT NEPA process but has concerns regarding impacts to water quality, wetlands, and the north fields. Wasatch County's comment includes statements that the Provo River and the north fields qualify as special aquatic sites under the Clean Water Act; concerns for water flow and wetland impacts in the north fields; statements that the north fields are a historic landscape and therefore are protected by Section 4(f) of the Department of Transportation Act of 1966; and statements that Wasatch County's and Heber City's general plans provide protections for the north fields, rural character, and agricultural heritage, and that UDOT is misrepresenting the vision.

UDOT provided a complete response in Appendix Q, *Responses to Screening Results Comments*, of EIS Appendix 2A, *Final Alternatives Development and Screening Report*. In summary, the concepts that extended through the north fields were reasonable to evaluate because they meet the project purpose and are technically and economically feasible. UDOT is required to evaluate a reasonable range of alternatives and provide an opportunity for public input on those alternatives; UDOT did not identify a defensible reason to eliminate them. UDOT received numerous comments from the public regarding the north fields. Many commenters view the north fields as a unique landscape that they would like to see preserved. Other commenters are concerned with the development on the north side of Heber City and want to see a bypass that would extend beyond the planned development for a long-term transportation solution. By evaluating bypass alternatives that extend to SR-32 as well as alternatives that make improvements on the existing US-40 corridor, UDOT can understand and compare the benefits, impacts, and tradeoffs.

The Heber Valley Corridor is a transportation project and, therefore, the purpose and need statement for this EIS includes the elements of the local vision for Main Street and truck traffic specifically, because these elements are applicable to US-40. This Draft EIS includes the expected impacts of both action alternatives, including impacts to water quality, wetlands, open space, Section 4(f) resources, and agricultural properties,

to allow an understanding of the benefits and drawbacks of each alternative. UDOT designers worked to minimize impacts to resources, including wetlands and historic homes, and will continue to minimize impacts in future design iterations.

UDOT determined that the north fields do not qualify as a special aquatic site or historic landscape, and the Provo River would not be directly impacted by either action alternative (Certus 2023). UDOT requested in its comment response that Wasatch County provide more information regarding the historic significance of the north fields, such as significant historical figures, if known.

UDOT incorporated the concern regarding the north and south fields in the visual analysis (see Section 3.17, *Visual and Aesthetic Resources*) and developed several visual simulations, including one of the north fields from north US-40. As stated elsewhere in this EIS, UDOT is committed to prioritizing wetland mitigation in the north fields, for either action alternative, thereby recognizing the community's desire to maintain open space and scenic buffers.

2.4.4.8 Basis for Identifying the Preferred Alternative

This section identifies and provides UDOT's basis for identifying its preferred alternative in the Draft EIS. The final selection of an alternative will be made by UDOT in the Record of Decision for the Heber Valley Corridor Project. In its evaluation process, UDOT considered the following measures:

What is UDOT's preferred alternative?

UDOT's preferred alternative in this Draft EIS is Alternative B.

- **Purpose performance:** the degree to which an alternative would meet the project purpose to improve regional and local mobility on US-40 from River Road/SR-32 to US-189 and provide opportunities for nonmotorized transportation while allowing Heber City to meet their vision for the historic town center
- **Other transportation performance considerations:** other important factors related to transportation performance (access, functional classification, and redundancy)
- **Resource impacts:** the amount and type of impacts to the natural and human environment that an alternative would have
- **Estimated cost:** how much an alternative would cost

UDOT's evaluation process did not weigh any of the above measures as being more important than the others; UDOT considered these measures, as well as public and agency input, to identify the preferred alternative. Neither alternative had the best transportation performance for all measures, the lowest cost, and the fewest impacts to all resources.

UDOT has identified **Alternative B** as its preferred alternative. UDOT's rationale for identifying its preferred alternative is described below. For more information, see Appendix 2E, *Preferred Alternative Report*.

2.4.4.8.1 Purpose Performance

UDOT analyzed the transportation performance of each project alternative to determine how well the alternative would meet the purpose of the Heber Valley Corridor Project. The purpose of the project is to improve regional and local mobility on US-40 from River Road/SR-32 to US-189 and provide opportunities for nonmotorized transportation while allowing Heber City to meet their vision for the historic town center.

Both action alternatives would meet the purpose of the Heber Valley Corridor Project. The No-action Alternative would not meet the purpose of the project. Table 2.4-2, *Degree to Which Action Alternatives Would Meet the Project Purpose Elements,* above compares the degree to which the action alternatives would meet the project purpose.

- Alternative B would provide better performance with respect to regional mobility.
- Alternative B would provide better performance with respect to local mobility.
- Alternatives A and B would perform equally with respect to nonmotorized transportation.
- Alternative B would provide better performance with respect to Heber City's vision for the historic town center.

In conclusion, Alternative B would perform better than Alternative A with respect to the overall purpose of the project.

2.4.4.8.2 Other Transportation Performance Considerations

In evaluating the action alternatives, UDOT also considered other important factors related to transportation performance:

- **Access:** how each alternative would affect connectivity to the master-planned local road network and require out-of-direction travel
- **Functional classification:** how each alternative would provide a range of different types of roads to balance mobility and access
- **Redundancy:** how each alternative would provide an alternate route in case of emergency

Because Alternatives A and B are the same except between Potter Lane/College Way and 900 North, the evaluation focused on this area to highlight the differences between the two action alternatives. Table 2.4-7 summarizes how well each action alternative would perform with respect to transportation considerations that are not included in the project purpose. With the North Fields Extension segment, Alternative B would provide the following benefits:

- More consistent with the master-planned North Village local road network
- More efficient combination of road functional classifications and less out-of-direction travel
- Provides an alternate route in case of an emergency on north US-40 between Potter Lane/College Way and 900 North (Alternative A uses north US-40 for its full extent)

Overall, Alternative B would provide better performance with respect to transportation considerations not related to the project purpose.

Table 2.4-7. Summary of Transportation Considerations Not Related to the Project Purpose

Alt.	Access	Functional Classification	Redundancy
A	Less consistent with master-planned local road network	Less efficient combination of road functional classifications, more out-of-direction travel	No alternate route to north US-40
B	More consistent with master-planned local road network	More efficient combination of road functional classifications, less out-of-direction travel	Alternate route to north US-40 between Potter Lane/College Way and 900 North

2.4.4.8.3 Resource Impacts

Table 2.4-6, *Environmental Impacts of the No-action and Action Alternatives*, above compares the resource impacts of the project alternatives. This table provides a comparison among the alternatives for the resources evaluated in the Draft EIS. Although impacts are quantified, not all resources listed favored one alternative or the other.

As shown in Table 2.4-6, some resources would experience a substantial difference in impacts from the project alternatives, while other resources would experience no difference or a very small difference in impacts from the project alternatives. Thus, some resource impacts were more helpful than others in distinguishing among the alternatives. Although Table 2.4-6 provides the quantitative information for each impact, it does not always provide the context and intensity of the impact. For some resources, the context and intensity of the impact provide relevant information for weighing alternatives. Impact context and intensity are included as appropriate in the following discussions of how UDOT's preferred primary alternative was identified.

Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) of the Department of Transportation Act of 1966 is a law that applies to the U.S. Department of Transportation and governs the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites. Title 23 *Code of Federal Regulations* (CFR) Part 774 contains the Section 4(f) implementing regulations for the Federal Highway Administration (FHWA). FHWA has also developed guidance in the form of the *Section 4(f) Policy Paper*. UDOT has assumed FHWA's responsibilities for implementing Section 4(f) pursuant to 23 United States Code (USC) Section 327.

No Section 4(f) total avoidance alternatives were determined to be feasible and prudent. Both Alternative A and Alternative B would use Section 4(f) properties. Alternative A would have a use with greater–than–*de minimis* impact to four historic architectural resources, and Alternative B would have a use with greater–than–*de minimis* impact to one historic architectural resource [for more information, see Section 4.4.2, *Historic (Architectural) Resources*]. UDOT conducted a least overall harm analysis considering the seven factors listed in 23 CFR Section 774.3(c) and determined that Alternative B would result in the least overall harm. UDOT determined that there is no feasible and prudent avoidance alternative, and UDOT may approve only the alternative that causes the least overall harm in light of the preservation purpose of Section 4(f) of the Department of Transportation Act of 1966.

Clean Water Act Permitting

NEPA does not require UDOT to select the alternative with the least environmental impacts. However, to determine whether a preferred alternative could be constructed, UDOT must consider whether the alternative could be permitted under Section 404 of the Clean Water Act. The U.S. Army Corps of Engineers (USACE) is responsible for determining compliance with the Section 404(b)(1) Guidelines under the Clean Water Act and may permit only the least environmentally damaging practicable alternative (LEDPA). The Section 404(b)(1) Guidelines state that "no discharge of dredged or fill material [to Section 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" (40 CFR Section 230.10(a)).

Alternative B would have impacts to 53.92 acres of assumed jurisdictional aquatic resources (wetlands, streams, canals, and ditches) compared to 22.52 acres for Alternative A. These aquatic resources would be filled within the proposed right-of-way for each alternative, but surface and subsurface flow connectivity would be maintained. USACE has not officially determined the jurisdictional status of these aquatic resources. The "assumed" jurisdictional status is based on the professional judgment of aquatic resource specialists taking into consideration the March 12, 2025, memorandum from the U.S. Environmental Protection Agency. This memorandum provides guidance consistent with the U.S. Supreme Court's ruling that requires wetlands to have a continuous surface connection to traditional navigable waters in order to be considered jurisdictional. On November 17, 2025, the U.S Environmental Protection Agency (EPA) and USACE announced their proposed revisions to the 2023 definition of "waters of the United States." The proposed revisions are focused on relatively permanent, standing or continuously flowing bodies of water and wetlands that are connected and indistinguishable from such waterbodies. The definition of "waters of the United States" is an evolving issue that UDOT is following closely.

Although Alternative B would have greater aquatic resource impacts than would Alternative A, UDOT believes that Alternative B is the LEDPA because Alternative A has "other significant adverse environmental consequences," as discussed below. For more information regarding the LEDPA, see Appendix 2F, *Compliance with Clean Water Act Section 404(b)(1) Guidelines Memo*.

Section 4(f) of the Department of Transportation Act of 1966. The Least Overall Harm Analysis and the LEDPA analysis each weigh multiple environmental factors in light of the project purpose to identify the alternative posing the least environmental damage or harm. UDOT has concluded that Alternative B poses the least overall harm under Section 4(f). For more information, see Section 4.7, *Least Overall Harm Analysis*. Logistically, compliance with Section 4(f) limits the availability of any build alternative that does not pose the least overall harm (Alternative A). An alternative that cannot be identified by both analyses as the least harmful is not practicable, and UDOT has determined that Alternative B would have the least overall harm.

Right-of-way and Relocations. Alternative A would require substantially greater residential and business relocations. Alternative A would require 12 residential relocations and 15 business relocations, compared to 6 residential relocations and 2 business relocations with Alternative B. These relocations present substantial social and economic impacts, which are described in Section 3.5, *Economic Conditions*, and Section 3.6, *Right-of-way and Relocations*, in Chapter 3, *Affected Environment, Environmental Consequences, and Mitigation Measures*.

Ability to Address the Purpose of the Project. Additionally, Alternative B better addresses the project's purpose. Alternative B would provide faster regional travel times and better local mobility compared to Alternative A. Alternative B would provide better performance with respect to Heber City's vision for their historic town center, and it would be more consistent with the master-planned North Village local road network. Alternative B would result in less out-of-direction travel, would be more likely to attract regional truck traffic away from Main Street, and would provide an alternate route in case of an emergency on north US-40 between Potter Lane/College Way and 900 North.

Both action alternatives would likely require aquatic resource mitigation at a minimum ratio of 2:1 (for every 1 acre of wetlands impacted, UDOT would need to provide 2 acres of wetland mitigation). This mitigation ratio could be as high as 15:1 depending on the specific mitigation needs determined in consultation with USACE. Once sites are designated as wetland mitigation sites, the sites have the potential to limit sprawl based on where they are located because they are protected in perpetuity and cannot be developed. UDOT is committed to prioritizing wetland mitigation in the north fields, and locating wetland mitigation sites in the north fields could limit development and provide a scenic buffer.

Consistency with Local Plans

Of the two action alternatives, Alternative A is more similar to the bypass that Heber City and Wasatch County have been considering, although neither alternative is entirely consistent with the local government preservation corridor. The City and County agreed on an alignment for corridor preservation and have been acquiring land for nearly 20 years. To avoid impacts to a new substation and two developments, neither of the action alternatives follows the preservation corridor alignment exactly (for more information, see Section 2.3.2.1, *Local Government Preservation Corridor*). However, Alternative A follows the local government preservation corridor more closely than Alternative B does because Alternative A does not include the North Fields Extension segment.

Alternative B is more consistent with Heber City's *North Village Master Plan* than Alternative A is, as discussed in Section 2.3.1, *North US-40 Access*, of Appendix 2E, *Preferred Alternative Report*. Alternative B would be less disruptive to the master-planned road network on the east side of north US-40 compared to Alternative A.

Property Impacts

Of the two action alternatives, Alternative A would have greater impacts to residential and commercial properties because it would use the existing north US-40 corridor, which is rapidly developing, instead of constructing a new road through the north fields. Alternative A would require 12 residential relocations and 15 business relocations, compared to 6 residential relocations and 2 business relocations with Alternative B. Thirteen of the business relocations for Alternative A would be at the New London development, which is currently under construction. Alternative A would require more than 3 times the number of relocations compared to Alternative B.

Alternative B includes a North Fields Extension segment and therefore would have greater impacts to privately owned undeveloped agricultural land. Alternative A would convert 201 acres of cropland and farmland to transportation; Alternative B would convert 241 acres (about 20% more).

2.4.4.8.4 UDOT's Preferred Alternative

UDOT identified the preferred alternative based on transportation performance, impacts to the natural and human environment, and cost. As part of identifying the preferred alternative, UDOT considered public and agency input during the scoping process and the alternatives development, screening, and refinement process. Note that there are strengths and weaknesses for each action alternative. Neither alternative had better transportation performance for all measures, lower cost, and fewer impacts to all resources.

Based on the analysis presented in this technical memorandum, UDOT has identified **Alternative B** as the primary preferred alternative in this Draft EIS. The final decision regarding the selected alternative will be made by UDOT in the Record of Decision for the Heber Valley Corridor Project.

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