EXECUTIVE SUMMARY

The Utah Department of Transportation (UDOT) proposes to construct approximately 1.3 miles of transportation capacity improvements on 5400 South (State Route [SR]-173) in Salt Lake County, Utah. The improvements would occur within Kearns Township and the City of Taylorsville and would address specific transportation needs of the 5400 South corridor.

PURPOSE AND NEED

The primary purpose of the proposed project is to accommodate travel demand on 5400 South through the design year 2040 and to improve the regional mobility of the corridor. A secondary purpose is to improve safety on 5400 South. Based on this, the following transportation needs have been identified on 5400 South.

- ***Travel Demand:*** Traffic volumes exceed capacity on 5400 South causing delays and congestion.
- ***Regional Mobility:*** Poor operational conditions on 5400 South adversely affect regional mobility since 5400 South is one of the primary east-west travel routes in the Salt Lake Valley.
- ***Safety:*** 5400 South has an accident rate double that of roadways with similar characteristics.

For a full description of the proposed project's purpose and need, see Chapter 1 of this State Environmental Study (SES).

ALTERNATIVES CONSIDERED

In order to establish the alternative best suited to address the proposed project's purpose and need, the study team initiated an alternatives screening process, which included four steps: identification of alternatives, preliminary screening, purpose and need screening, and comparative evaluation of alternatives. Each step of the process involved analysis, recommendations, and validation from a multidisciplinary study team composed of environmental, engineering, and traffic professionals. Nine build alternatives were developed to address traffic problems, representing a range of roadway improvements options (see Chapter 2 of this SES for a full list of alternatives) and including:

- Alternate route widening on 4700 South,
- Stand-alone intersection improvements on 5400 South,
- Different alignments for a seven-lane cross section on 5400 South, and
- Alternate operational conditions (e.g., Flex Lanes).

Based on the results of the operational evaluation completed during the preliminary and the purpose and need screening process, it was determined that the alternatives that widened 5400 South to seven lanes (Alternatives 4, 5, and 6) were the only alternatives that would improve 5400 South operations to an acceptable Level of Service (LOS) at each of the intersections along the corridor. LOS ratings, A (best) to

F (worst), are used to classify the operational performance of intersections based on vehicle delay (see Section 1.3.1 and Chapter 2).

Alternatives 4, 5, and 6 were then evaluated for engineering and environmental considerations. From this, the study team determined that Alternative 6 (widening to the south along a portion of the corridor then transitioning to the north along the remainder of the corridor) performed the best from an engineering standpoint, and Alternative 5 (widening to the south of the existing corridor) performed the best from an environmental standpoint.

BUILD ALTERNATIVE

Ultimately, the study team selected the alignment of Alternative 6 but reduced the width of the cross section to approximately 100 feet to lessen impacts and to be more consistent with the impacts of Alternative 5. A modified version of Alternative 6 is the preferred Build Alternative. For a full description of the alternative screening process, see Chapter 2 of this SES.

The Build Alternative includes widening 5400 South to seven lanes (three travel lanes in each direction, with a center turn lane) with new, wider sidewalks along both sides of 5400 South. The width of the cross section would be approximately 100 feet. Intersection improvements would occur at 4015 West and 5400 South and at 4800 West and 5400 South to increase intersection capacity. A new intersection would be constructed at 3900 West and 5400 South to improve accessibility to adjacent land uses. Improvements along the corridor may occur with initial construction or may be phased in at a later date. The Build Alternative is shown in **Figure ES-1**.

Figure ES-1: Proposed Build Alternative

ENVIRONMENTAL IMPACTS AND MITIGATION FOR THE BUILD ALTERNATIVE

Environmental impacts and mitigation for the Build Alternative were evaluated for all applicable resources. **Table ES-1** provides a summary of the impacts resulting from implementation of the proposed Build Alternative. **Table ES-1** also summarizes Mitigation Measures that may be implemented to minimize environmental impacts. For a full description of impacts and mitigation, see the appropriate resource section in Chapter 3 of this SES.

Table ES-1: Summary of Environmental Impacts and Mitigation Measures for the Build Alternative

SES Section	Environmental Impacts	Mitigation Measures
3.1 Land Use	The Build Alternative would convert approximately 6 acres of residential, 3.5 acres of commercial, and less than 0.25 acres of institutional uses to transportation use. Because this is a small percentage of the overall land uses in Kearns Township, no impacts are expected as a result of the Build Alternative.	No mitigation is required.
3.2 Social	The proposed project would not result in substantial changes to community character and cohesion or impact public services. A number of utilities may be relocated as a result of the Build Alternative, but these relocations would not affect utility services. However, the Veteran's Memorial located on the corner of 4015 West and 5400 South would have to be relocated.	Relocation of the Veteran's Memorial.
3.3 Relocations	The Build Alternative would require the relocation of 38 residences, relocation of 8 businesses, and partial acquisition of 22 properties.	Comply with the Utah Relocation Assistance Act.
3.4 Economics	The Build Alternative would impact approximately 3.5 acres of commercial property and relocate 7 businesses in Kearns Township and 1 business in Taylorsville. Because these changes would not substantially affect the City of Taylorsville or Kearns Township tax base or affect the feasibility of Kearns Township incorporation in the future, no impacts are expected under the Build Alternative.	No mitigation is required.
3.5 Bicyclists and Pedestrian Considerations	The Build Alternative would improve conditions by constructing wider sidewalks that would meet Americans with Disability Act standards. The wider sidewalks would also allow better accommodations for students who walk along 5400 South. The Build Alternative also includes provisions for a shared roadway bicycle facility, which is an improvement over existing conditions.	No mitigation is required.
3.6 Water Resources	During severe storms, flooding has occurred in the study area. The Build Alternative would address these existing drainage issues by adding new storm drain lines and detention basins to help alleviate flooding and to accommodate additional runoff from the wider roadway.	Obtain Utah Pollutant Discharge Elimination System (UPDES) Permit prior to construction.

Table ES-1: Summary of Environmental Impacts and Mitigation Measures for the Build Alternative (continued)

SES Section	Environmental Impacts	Mitigation Measures
3.7 Natural Resources	The proposed project is located in an urbanized corridor, and no impacts to natural resources are expected.	No mitigation is required.
3.8 Air Quality	Air quality impacts resulting from the Build Alternative have been evaluated, and the proposed project would conform to all regional and state requirements. There are no anticipated impacts associated with air quality.	No mitigation is required.
3.9 Noise	Existing noise levels along 5400 South are already high, but generally the future noise levels are not anticipated to increase substantially (10-dBA or more). 46 noise-sensitive receivers would be impacted by the project.	Noise barriers were considered in four areas for impacted noise-sensitive receivers, but were determined not to be feasible. No mitigation is required.
3.10 Hazardous Materials	The Build Alternative could disturb 7 sites with potential hazardous material contamination. Additionally, 45 buildings potentially containing asbestos or lead-based paint would be demolished.	No mitigation is required.
3.11 Cultural Resources	The Build Alternative would have an Adverse Effect on 32 historic buildings eligible for the National Register of Historic Places (NRHP).	Memorandum of Agreement (MOA) Stipulations.
3.12 Visual Quality	The Build Alternative would result in visual changes (e.g., a wider roadway, new sidewalks, demolition of some buildings), but it would not degrade the visual quality of the study area.	No mitigation is required.

PUBLIC COORDINATION

UDOT completed a formal scoping process to gather public input and identify issues related to the proposed project that merit further study. UDOT coordinated with the public and agencies that oversee the management of natural resources, public services, and planning in the study area. UDOT also employed the following methods to educate, inform, and solicit feedback from the public, including: leaving flyers on doors in the study area; placing legal advertisements in regional newspapers; mailing 6,600 postcards; sending an e-newsletter; posting online advertisements on Facebook; establishing a Facebook event page; distributing notification on Twitter; posting event information on the City of Taylorsville, Kearns Township, and UDOT's websites; and sending information home with local school children.

UDOT hosted a public open house on January 27, 2011, from 5:30 PM to 7:30 PM at Oquirrh Hills Elementary School (5241 South 4280 West, Kearns Township). More than 200 people attended the open house to voice their concerns, comments, and suggestions.

UDOT received 122 comments during the scoping process. Comments and responses are discussed in more detail in Chapter 4 and Appendix C of this SES.