

## **INTRODUCTION TO CHAPTER 3 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION**

Chapter 3 describes the existing or affected environment, and the impacts or consequences to the natural and manmade environment resulting from the No Build Alternative, the Midvalley Highway East Alternative (Options A and B), and the Midvalley Highway West Alternative (Options A and B). In addition, this chapter outlines possible mitigation when impacts cannot be avoided.

The analysis for determining environmental impacts is based on federal and state regulatory requirements and guidelines. The National Environmental Policy Act of 1969 (NEPA) requires the evaluation of potential effects of proposed government actions on the environment. The Utah Department of Transportation (UDOT), through the Federal Highway Administration (FHWA), has adopted regulations to implement NEPA.

### **Project Study Area**

The project study area is located in the Tooele Valley. The Tooele Valley is bounded by the Oquirrh Mountains to the east, the Stansbury Mountains to the west, the Tooele Army Depot (TEAD) and Tooele City to the south, and the Great Salt Lake to the north. The project study area is generally situated in the middle of Tooele Valley and extends ¼ mile west of Sheep Lane and a ¼ mile east of SR-36. The southern portion of the project study area extends to the southern limits of Tooele City and the northern border of TEAD, and includes the Utah Industrial Depot. The northern boundary of the project study area is I-80 and includes the Lake Point interchange (SR-36 connection with I-80). The project study area for the Midvalley Highway Project is shown in Figure 1-1 (as part of Chapter 1 – Purpose and Need).

Within the project study area, there are three distinct communities; Tooele City, Erda Township, and Stansbury Park. In addition, there are surrounding communities located within Tooele Valley, but outside of the project study area including Lake Point, Grantsville, Pine Canyon, Rush Valley and Stockton. The study area for specific resources varies at times from the overall project study area to best represent the analysis. The specific study area is described in each resource section.

### **Supporting Documentation**

The existing conditions have been defined based on literature reviews, coordination with local, state, and federal agencies, and on-site field investigations and surveys. Separate detailed technical studies were conducted and incorporated into this chapter by reference:

- Midvalley Highway EIS Traffic Report (April 2009);
- Tooele Midvalley Highway Air Quality Technical Report (October 2008);
- Cultural Resources Survey (February 2009);
- Reconnaissance Level Architectural Survey (February 2009);
- Wetland Delineation Report (January 2009);
- Special Status Species (wildlife) Technical Memorandum (April 2008); and

- Hazardous Materials Survey and Inventory (November 2008).

In addition to these reports, FHWA Technical Advisory (T6640.8A) was followed as a guidance document and assisted with the preparation of this EIS. As the alternatives are refined, these studies are updated.

## Analysis of Impacts

The impact analysis for the Midvalley Highway alternatives examined three categories of impacts, as required by the Council on Environmental Quality (CEQ). Congress established CEQ within the Executive Office of the President as part of NEPA. In enacting NEPA, Congress recognized that nearly all federal activities affect the environment in some way and mandated that before federal agencies make decisions, they must consider the effects of their actions on the quality of the human and natural environments. NEPA assigns CEQ the task of ensuring that federal agencies meet their obligations under the act. The analysis of impacts fall into one of three categories as found in 23 CFR 771 and include:

- **Direct impacts** – These are defined in the CEQ regulations as “effects which are caused by the [proposed] action and occur at the same time and place.” For this project, an example of a direct impact would be taking a wetland for a new interchange at I-80. Direct impacts are discussed by alternative or resource in each section of this chapter. The impact numbers used for Level II Screening as documented in Chapter 2 – Alternatives Considered, may differ from the impact numbers of Chapter 3. The impact numbers in chapter 2 were for screening purposes only; the direct impact numbers of this chapter reflect the impact within the potential right-of-way for the Midvalley Highway.
- **Indirect impacts** – These are defined by the CEQ regulations as “effects which are caused by the [proposed] action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate...” The indirect impacts are discussed in sections 3.1 through 3.17 of this chapter.
- **Cumulative impacts** are defined by the CEQ regulations in 40 Code of Federal Regulations (CFR) 1508.7. The CEQ regulations define cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.” The cumulative impacts are discussed in section 3.19. By definition, this project must have an adverse effect or have a cumulative effect.

## Description of Alternatives

### No Build Alternative

As part of the NEPA process, the No Build Alternative must be considered; it serves as a baseline for which other alternatives are compared. The No Build Alternative assumes that the Midvalley Highway would not be constructed, but that other projects contained within the

*Tooele Valley Regional Long Range Transportation Plan* and others from the *Tooele City Transportation Master Plan* would be built. Although the Midvalley Highway Draft EIS assumes that these future roadways would be built, the environmental impacts associated with these planned projects would be studied in separate documents. The roadway improvements included in the No Build Alternative are listed in Table 2-1 and shown in Figure 2-3 of Chapter 2 – Alternatives Considered.

#### Midvalley Highway East Alternative

This alternative includes a four lane arterial between SR-36 and SR-112 and a four lane freeway between SR-112 and I-80 (see Figure 2-21 in Chapter 2 – Alternatives Considered).

The arterial segment includes an intersection with SR-36 in the southern portion of the project study area and is located between the Union Pacific Railroad (UPRR) tracks and Utah Industrial Depot. The arterial segment is approximately 3.7 miles in length and would cross over the UPRR tracks via a new bridge. The arterial roadway transitions to a freeway between SR-112 and the future 1000 North roadway.

The freeway segment would extend between the future 1000 North roadway and I-80. Interchanges are planned at the future 1000 North roadway, the future Parkway (3400 North), SR-138, and a freeway-to-freeway interchange with I-80. Bridges would carry traffic over existing and planned roadways and trails.

Two options are being evaluated as part of this alternative between the future 1000 North roadway and Erda Way. The alignments diverge near the future 1000 North roadway and join together just south of Erda Way. Option A is a more direct route and is approximately 8.5 miles in length. Option B continues further west along the Tooele City boundary and is approximately 8.8 miles in length.

#### Midvalley Highway West Alternative

This alternative includes a four lane arterial between SR-36 and SR-112 and a four lane freeway between SR-112 and I-80 (see Figure 2-22 in Chapter 2 – Alternatives Considered).

The arterial segment includes an intersection with SR-36 in the southern portion of the project study area and is located between the UPRR tracks and Utah Industrial Depot. The arterial segment is approximately 3.7 miles in length and would cross over the UPRR tracks via a new bridge. The arterial roadway transitions to freeway between SR-112 and the future 1000 North roadway.

The freeway segment extends between the future 1000 North roadway and I-80. Interchanges are planned at the future 1000 North roadway, the future Parkway (3400 North), SR-138, and a freeway-to-freeway interchange with I-80. Bridges would carry traffic over existing and planned roadways and trails.

Two options are being evaluated as part of this alternative between the future parkway (3400 North) and SR-138. The alignments diverge near the future parkway (3400 North) and join together just north of SR-138. Option A is approximately 8.7 miles in length and extends through the eastern edge of the LDS Church agricultural property; Golden Gardens subdivision is located directly east of Option A. Option B continues further west and would cross over Sheep Lane via a bridge. It would require the realignment of approximately 1.4 miles of SR-138. Option B is approximately 9.5 miles in length.

## Chapter Organization

This chapter is organized using the resource categories as major sections; these include;

- 3.1 Transportation
- 3.2 Land Use
- 3.3 Agricultural Lands
- 3.4 Social and Community Resources
- 3.5 Economics
- 3.6 Pedestrian and Bicycle Concerns
- 3.7 Air Quality
- 3.8 Noise
- 3.9 Geology, Soils, and Topography
- 3.10 Water Resources
- 3.11 Wetlands and Waters of the U.S.
- 3.12 Wildlife; Threatened, Endangered, and Candidate Species; Utah Sensitive Species
- 3.13 Vegetation and Invasive Species
- 3.14 Historic, Archaeological and Paleontological Resources
- 3.15 Hazardous Materials
- 3.16 Visual Quality
- 3.17 Energy
- 3.18 Construction Impacts and Mitigation
- 3.19 Cumulative Impacts
- 3.20 Short-term Use versus Long-term Productivity
- 3.21 Irreversible and Irretrievable Commitment of Resources
- 3.22 Permits and Final Approvals
- 3.23 Summary Comparison of Alternatives
- 3.24 Summary of Mitigation Commitments

Each resource section in this chapter includes:

- **Regulations and Methodology** – Where applicable, the specific regulations that have been enacted by the federal or state governments for an environmental resource are outlined. The methodology discusses the study area for that resource, how the information was identified and obtained, and how impacts were determined for each resource.

- **Affected Environment** – Generally, in identifying and describing the resources for *affected environment*, each section discusses those resources within the project study area or the study area defined for the resource (i.e. wetlands and waters of the U.S. were identified along a 350 foot wide corridor but wider at interchange areas – not all wetland areas within the project study area were identified).
- **Environmental Consequences** – To describe the *environmental consequences* from the Midvalley Highway, the impacts are discussed by alternative: No Build Alternative, Midvalley Highway East Alternative (Options A and B), and Midvalley Highway West Alternative (Options A and B). In some cases, the impacts are discussed by resource. As discussed in Chapter 2 – Alternatives Considered, the Midvalley Highway alternatives include two options that are evaluated as part of this Draft EIS. These are known as Option A and Option B and are only discussed separately when their impacts differ. Otherwise, the discussion of environmental consequences for Midvalley Highway alternatives considers the impacts from both options.

The environmental consequences section also includes a discussion on the indirect impacts for each resource.

- **Mitigation** – This segment discusses the mitigation measures that UDOT and Tooele County plan to use to minimize and offset adverse impacts.



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