

3.18 CONSTRUCTION IMPACTS AND MITIGATION

Constructing the Midvalley Highway would cause temporary impacts to the natural and built environment. These impacts would be a result of the use of heavy equipment, borrow sites, staging areas, and hauling routes to the construction site. These temporary impacts are discussed in this section in terms of the specific resource; the construction impacts and mitigation would be the same regardless of alternative.

3.18.1 Traffic

The construction of the Midvalley Highway would have the potential for short-term and temporary impacts to motorists and pedestrians. These may include traffic delays along intersected roadways (SR-36, SR-112, Sheep Lane¹, Erda Way, SR-138, and I-80), possible detours, and access to businesses and residences. The majority of the Midvalley Highway would be constructed along a new alignment; however, it would intersect with several major roadways within the project study area. These include a new intersection with SR-36 on the south end, a new intersection with SR-112 located near the Utah Industrial Depot, a new crossing over Sheep Lane for the Midvalley Highway West Option A, a new crossing over Erda Way, a new interchange with SR-138, and a new freeway-to-freeway interchange with I-80. In addition, interchanges are proposed at the future 1000 North roadway and future parkway (3400 North).

Access to residential and commercial areas would be temporarily disrupted and may result in a potential loss of business revenues to affected businesses. Most of these impacts would occur at the SR-112 intersection, the Erda Way overpass, and the SR-138 interchange.

Construction activities could temporarily affect access to businesses in the area – mainly at the SR-112 intersection and the crossing over Erda Way. The dairy farm at the intersection of SR-138 and Sheep Lane may also have some temporary impacts due to rerouting and changes in travel patterns.

Mitigation Measures

To minimize impacts during construction the contractor would be required to follow the specifications in the *Manual on Uniform Traffic Control Devices* (MUTCD), provide advance notice for road closures and delay, and maintain access to residences and businesses (FHWA, 2003). The impacts to traffic would be temporary in nature and not have any long-term delays. Access to property would be maintained during construction to the extent possible.

3.18.2 Utilities, Canals, and Railroads

Construction would require the relocation and/or reconstruction of several municipal utility systems and irrigation systems and would disrupt railroad service through the project study area. The affected utilities could include electrical, gas, water, sewer, storm drain, telephone, cable, and the Ezra Taft Canal. In addition, all of the Midvalley Highway alternatives would cross the existing and active railroad tracks owned by the UPRR.

¹ Sheep Lane is only crossed by the Midvalley Highway West Option B Alternative.

Mitigation Measures

Utility agreements would be required between UDOT, Tooele County, and the affected utility companies prior to their relocation or disturbance. UDOT and Tooele County would coordinate with the UPRR during the design phase to ensure that their concerns are addressed. Also, UDOT and Tooele County would require a railroad right of entry to be obtained by the contractor prior to any work being performed within railroad right-of-way.

Advance notice would be given of all anticipated disruptions to utility service. Water carried by the irrigation facilities would continue to reach farmers and businesses during construction. Best Management Practices (BMPs) would be used to maintain the quality of the water within the irrigation facilities during construction.

3.18.3 Agricultural Lands

Construction of the Midvalley Highway would temporarily restrict access to some agricultural properties. The construction of this project could also affect water delivery systems for the agricultural areas within the project study area.

Mitigation Measures

Tooele County would maintain access to existing farmland and agricultural areas during the construction phase of this project. Potential effects on the irrigation systems, including ditches, canals, and ponds, would be avoided or reconstructed as part of the design and construction of the Midvalley Highway. These facilities would be relocated and reconstructed to maintain continuity and use of the water delivery systems. Tooele County would coordinate with the affected property owners to ensure that to the extent possible their concerns are met and addressed.

3.18.4 Pedestrian and Bicycle Considerations

The construction of the Midvalley Highway would disrupt pedestrian and bicycle routes within the project study area. There are two existing multi-use trails that would be impacted by this project; Sheep Lane Trail and the Midvalley Trail; both would be crossed by the Midvalley Highway. Other bicycle routes such as SR-36, SR-112, and SR-138 would also be crossed. These crossings would be temporarily affected during construction of this roadway. Temporary closures or detours would be required.

Mitigation Measures

During construction, the Sheep Lane Trail and the Midvalley Trail would still remain open and functional. However, at the location of the crossing, these trails may be closed during construction for safety reasons. Notice of these closures would be made to the public agencies that maintain and own the trails and to the general public. The impacts to trails and bicycle routes would only be temporary and during construction.

3.18.5 Air Quality

Air quality impacts during construction would be limited to short-term increases in fugitive dust, particulates, and localized pollutant emissions from heavy construction equipment. The Midvalley Highway would generate air pollutant emissions from the following construction activities:

- Excavation activities required for clearing and grubbing, placement for the road and bridge sections, and the placement of large fill quantities for bridges and other structures;
- Mobile emissions from construction vehicles including heavy equipment, light trucks, and other vehicles at the construction site;
- Mobile emissions from hauling materials and equipment to the construction site;
- Mobile emissions from vehicles using existing roadway network that are either slowed or delayed because of the construction for the Tooele Midvalley Highway; and
- Emission for the aggregate excavation, batch plant operation, and borrow pit operations.

Since the Midvalley Highway would most likely be funded and constructed in phases, it is difficult to quantify and determine the emissions associated with construction activities. Any impacts to individual air quality receptors would be temporary.

Mitigation Measures

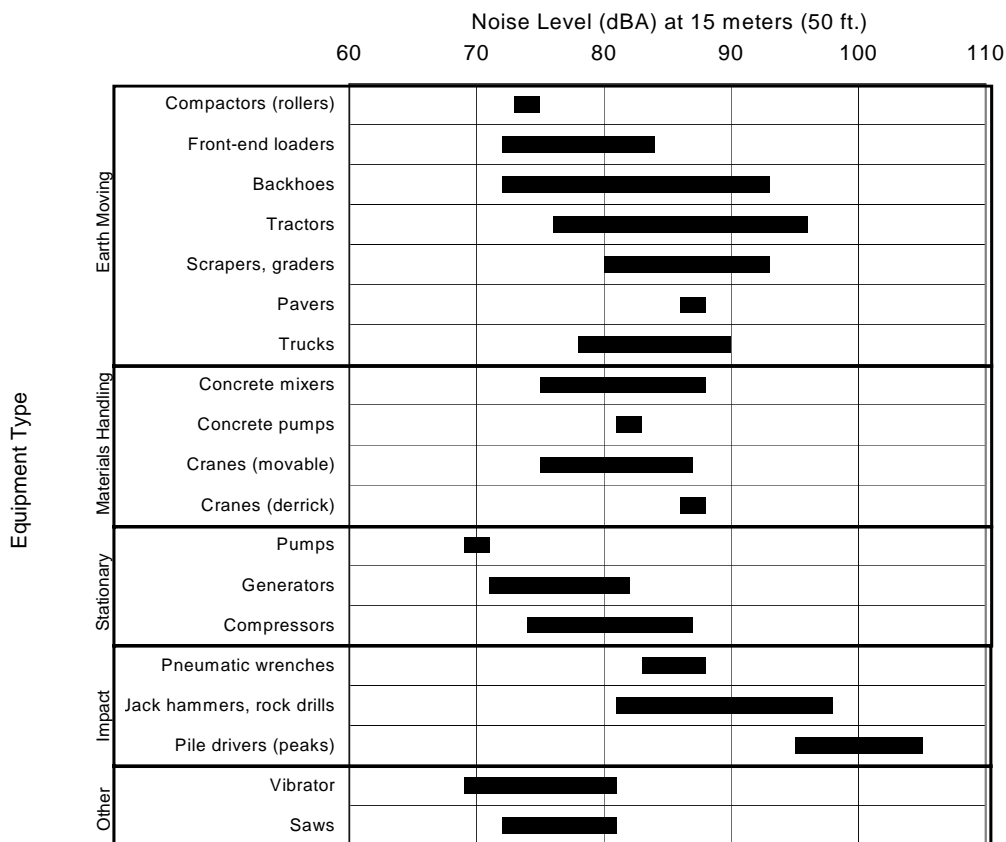
The contractor would be required to abide by the conditions of UDOT's Standard Specification for Dust Control and Watering (section 01572). The mitigation measures for construction air quality would be developed as part of the Emission Control Plan and submitted to the Utah Division of Air Quality. Measures that would be included in this plan are listed below.

- **Fugitive Dust Control** – Fugitive dust emissions would be controlled during the construction phase of this project. A Fugitive Dust Emission – Control Plan would be required of the contractor. It would outline project-specific activities for emission control and monitoring throughout the construction phase of this project and would be in accordance with state and federal regulations. Specific measures for controlling fugitive dust may include watering excavated areas, unpaved staging and parking areas, and onsite stockpiles; chemical stabilization of excavated areas (depending on receiving waters); planting and revegetation of disturbed areas as soon as feasible; synthetic covers; reducing construction speeds on unpaved roads; covering loads; and washing haul trucks before entering the existing roadway network.
- **Street Sweeping** – Street sweeping would be required of the contractor at paved site access points.
- **Equipment Emissions** – Equipment emissions would be reduced. The contractor would be required to shut-off construction equipment when it is not used to reduce emissions from idling.

3.18.6 Noise

Noise would be generated as a result of construction activities and equipment. Construction noise impacts could be an inconvenience to nearby receptors and businesses. These impacts are temporary and would only occur during the construction phase of the project. Typical construction noise levels are shown in Exhibit 3.18-1.

EXHIBIT 3.18-1, CONSTRUCTION NOISE LEVELS



Mitigation Measures

Construction noise impacts are considered temporary and would be minimized through adhering to UDOT Standard Specifications for noise control (UDOT 2008 Standard Specification – 01355 Environmental Protection). Extended disruption of normal activities is not expected because no single receptor would be exposed to construction noise of long duration. In addition to these measures, the construction related activities would follow any applicable local noise ordinances to control potential construction noise impacts. The Tooele County noise ordinance states that a noise violation occurs by “using, operating or permitting, the use or operation of any... machine or device for the production or reproduction of sound between the hours of 10 p.m. and 7 a.m. in a way that is plainly audible...” (Tooele County Code 6-21-5).

3.18.7 Water Resources

During construction of the Midvalley Highway the effects to ground and surface water would be minimal. Effects from storm water runoff would also be minimal during construction due to implementation of appropriate BMPs and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Mitigation Measures

The SWPPP would be developed during the design phase of this project to comply with the

required Utah Pollutant Discharge Elimination System (UPDES permit). It would include such measures as silt fences, fiber rolls, and other techniques to minimize storm water impacts to receiving waters. There may be a temporary increase in erosion due to the relocation or reconstruction of irrigation systems.

Due to the nature of the project, the potential for groundwater contamination is minimal. BMPs would be implemented to protect against spills or leakage of contaminants into soils. The Contractor would be required to follow UDOT's Standard Specification 01355 – Environmental Protection.

An erosion control plan would be implemented to address any potential high-water flows from onsite and offsite that would need to be mitigated as these enter the construction site. BMPs may include the use of high flow silt fences, check dams, fiber rolls, and/or stilling basins. Disturbed areas would also need to be seeded and stabilized as soon as possible after construction. Regular inspections would ensure that measures implemented remain effective. Construction practices would be managed to limit the duration of exposed soil to wind and rain.

3.18.8 Wetlands and Waters of the U.S.

During construction of the Midvalley Highway, direct impacts to wetlands and waters of the U.S. would occur.

Mitigation Measures

To ensure that the minimal acreage of impact to wetlands occurs, the following mitigation measures would be followed as discussed below.

The use of environmental fencing, slit fences, and other measures to ensure the contractor does not impact additional wetland areas would be used during construction. The wetland areas could be mapped, staked, and fenced prior to commencing construction related activities.

If additional wetland areas are impacted that have not been disclosed in the Final EIS and the Department of the Army permit (Section 404(b)1), the contractor would be required to identify those impacts. The contractor would be required to obtain the necessary environmental clearances and permits if such an impact occurred.

The contractor would be required to comply with the conditions of the USACE Section 404 permit and UDOT Standard Specification 01571 Environmental Controls. Many of the mitigation measures specified to protect water quality and vegetation during construction would also serve to protect wetlands and waters of the U.S. In addition, the following wetland protection and impact avoidance measures would be implemented:

- Before construction begins, the perimeter wetland areas outside the limits of disturbance would be marked by environmental fencing (as per UDOT Standard Specification 01571, part 2.1) to identify no-work zones.
- Free flow of waters into and across wetlands would be maintained by installing culverts at existing grade.
- Embankments, bridges, and culverts would be designed to minimize adverse impacts on wetland areas.

- Upon beginning construction, administrative and environmental controls would be in place to ensure that the wetland areas outside the construction zone are not impacted.
- Erosion control measures would be used to ensure that sediment from the construction area does not reach wetlands.
- Any changes to the construction plans by the contractor, UDOT and/or Tooele County would require review and approval by the appropriate state or federal agencies if there is the potential for impacts on wetlands or waters of the U.S. not previously identified.
- Contract specifications would ensure that all contractors are aware of the CWA Section 404 permit conditions and of the various plans and measures developed to control and minimize wetland impacts. UDOT and Tooele County would monitor contractor activities to ensure all permit conditions are met.
- The complete restoration of temporarily disturbed wetlands would include rough grading and revegetation to approximate pre-construction conditions.
- Compensatory mitigation for unavoidable wetland impacts will be implemented in a final mitigation plan.

3.18.9 Wildlife

Construction related activities may disturb wildlife and their habits due to higher noise levels, construction equipment activity, lights, and other effects. UDOT and Tooele County and in accordance with the U.S. Fish and Wildlife Service may include additional wildlife studies to determine the presence wildlife species sensitive to construction related activities. In addition, the contractor will be required to adhere to UDOT Standard Specification Section 01355 – Environmental Protection.

3.18.10 Vegetation and Invasive Species

Construction related activities, especially excavation, would disturb existing vegetation within the right-of-way of the selected alternative. Construction also has the potential to spread noxious and invasive species.

Mitigation Measures

The contractor would be required to follow UDOT's Special Provision 02924S – Invasive Weed Control, during construction activities. The BMPs listed in this specification include washing equipment (i.e. earth movers, graders) prior to their use and applying an herbicide along the project corridor to control the spreading of these noxious species. Also, disturbed areas would be revegetated with native, non-invasive species as soon as feasible.

3.18.11 Historic, Archaeological, and Paleontological Resources

During construction, unidentified historic, archaeological, or paleontological resources might be discovered other than those identified during the cultural resources surveys for this project.

Mitigation Measures

The Contractor would be required to follow UDOT's Standard Specification 01355 - Environmental Protection. If cultural resources are discovered during construction, activities in the area would immediately stop and the contractor would notify Tooele County and UDOT.

3.18.12 Hazardous Materials

There are two concerns with hazardous materials during the construction phase of a project. The first is the discovery of a hazardous material during construction; the second is a contractor caused hazardous material spill.

Mitigation Measures

Both of these types of hazardous materials concerns (discovery during construction and contractor caused) are addressed in UDOT's Standard Specification 01355 - Environmental Protection. The contractor would be required to adhere to this specification.

3.18.13 Visual Quality

During construction, the work zone would be cleared of vegetation and the bare ground would contrast visually with the surrounding area. The views of the construction area would contrast with the agricultural and open areas surrounding the Midvalley Highway. In addition, construction equipment and materials would be located within the project corridor during the construction phase.

For nighttime construction, lights would be used to illuminate the construction zone. These lights could disturb surrounding areas.

Mitigation Measures

Impacts from lights used during nighttime construction would be minimized by aiming or shielding the construction lights away from residential neighborhoods or other sensitive areas.

3.18.14 Public Information and Coordination

A public information plan would be developed and implemented during the construction of this project. The plan would be designed to distribute construction related information to the local jurisdictions, affected businesses and residents, the traveling public, and the stakeholders.

3.18.15 Construction Work Hours

The work hours would be coordinated with the local jurisdictions prior to construction.



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