Chapter S: Summary

S.1 Description of Proposed Action

The Draper Transit Corridor Project is a proposed light-rail line that would begin at the existing Sandy Civic Center 10000 South Station of the Utah Transit Authority's (UTA) TRAX North-South Light-Rail Transit line and would extend about 8.2 miles south to Point of the Mountain at about 14600 South. The regional area surrounding the project is shown in Figure S-1, Regional Area, at the end of this chapter.

What is the purpose of the Draper Transit Corridor Project?

The purpose of the Draper Transit Corridor Project is to provide high-quality, high-capacity rapid transit service in the highly congested north-south travel corridor between Draper and downtown Salt Lake City. The project is intended to extend fixed-guideway public transportation service and benefits in the study corridor by providing faster, more-reliable transit services than what can be achieved by operating buses in mixed-flow traffic.

Where are the figures for the Summary?

The figures for the Summary are at the end of this chapter.

S.1.1 Project Study Area

The study area for the Draper Transit Corridor Project is about 26.5 square miles and begins at the current end-of-the line Sandy Civic Center 10000 South Station of the UTA North-South TRAX Light-Rail Transit line. The study area is generally bounded on the north by 10000 South, on the east by 1300 East and then by a line about 1 mile east of the UTA-owned right-of-way, on the south by a line 1 mile south of 14600 South, and on the west by the western Draper city limit and the Jordan River. The study area is located primarily in the cities of Sandy and Draper and includes parts of White City, South Jordan, and Bluffdale. The project study area is shown in Figure S-2, Project Study Area, at the end of this chapter.

S.1.2 Project History

Many studies and activities have led to this Environmental Impact Statement (EIS) for the Draper Transit Corridor Project. Each study has expressed the need to provide an efficient, safe, economical, and balanced transportation system (with auto, transit, and non-motorized modes of travel) that would minimize the impact to the environment and would complement the community's development patterns.

Table S.1-1 below lists the studies and activities that were conducted during the planning of a light-rail extension through Sandy and into Draper. Each of these studies or publications was conducted with full public participation, and the final documents were endorsed by local municipalities or councils made up of elected officials.

Table S.1-1. Studies and Activities That Support the Draper Transit Corridor Project

Date	Study or Activity
December 1992	Adoption of Resolution 92-25 by the Draper City Council recommending that the Board of Directors of UTA purchase the Union Pacific Railroad Company's Provo subdivision rail line located in Salt Lake County to preserve an important transportation corridor.
August 1994	Publication of the Interstate 15 (I-15)/State Street Corridor Final EIS, which recommended a light-rail corridor in the existing UTA-owned right-of-way from 1300 South to 10600 South in Salt Lake County.
January 1996	Signing of an Official License Agreement between UTA and Draper City to construct the Porter Rockwell Trail within the UTA-owned right-of-way. The engineering evaluation conducted before this agreement stated that the trail could be constructed and remain in place even when the future double-track light-rail system is operational.
December 2000	Publication of the *South Salt Lake County Transit Corridors Analysis*, which recommended a light-rail corridor in the UTA-owned right-of-way from 10000 South to 14600 South.
December 2001	Publication of the Wasatch Front Regional Council's (WFRC) Regional Transportation Plan, which showed an extension of the existing north-south light-rail line from 10000 South to 14600 South along the UTA-owned right-of-way.
December 2003	Publication of the WFRC Long-Range Transportation Plan Update, which showed an extension of the existing north-south light-rail line from 10000 South to 14600 South along the UTA-owned right-of-way.
February 2004	Signing of the Master Interlocal Agreement Regarding Fixed-Guideway Systems with Railroad Corridors between UTA, 36 Cities, and five counties along the Wasatch Front. This agreement established the terms of use within UTA's own rail rights-of-way through each jurisdiction. Draper City and Sandy City are signatories to this document.
October 2006	Publication of the *Draper Transit Alternatives Study*, which recommended as the Locally Preferred Alternative an extension of the existing north-south light-rail line from 10000 South to 14600 South along the UTA-owned right-of-way. The plan was unanimously endorsed by the Draper City Council.
November 2006	Countywide voter referendum to approve an additional ¼-cent sales tax to be used for transportation projects in Salt Lake County. UTA published Voter Information Packets that included a picture of the alignment for light rail in Draper as identified in the Regional Transportation Plan. The referendum passed with a two-thirds majority.
May 2007	Publication of the WFRC 2007–2030 Long-Range Transportation Plan, which showed an extension of the existing north-south light-rail line from 10000 South to 14600 South along the UTA-owned right-of-way.
June 2007	Publication of the Mountainland Association of Governments 2007–2030 Long-Range Transportation Plan, which showed an extension of the existing light-rail line from the Utah County border at Point of the Mountain in Draper to 1200 West in Lehi along the UTA-owned right-of-way. (Part of Draper is located in Utah County and is subject to plans and policies issued by Utah County.)
August 2008	UTA prepared an Alternatives Analysis and recommended that the Locally Preferred Alternative (LPA) consist of building and operating high-capacity light-rail transit service on the UTA-owned right-of-way alignment from the Sandy Civic Center 10000 South Station through Sandy and to 14600 South with a minimum operable segment (MOS) to the Draper Town Center Station at Pioneer Road (12400 South). WFRC adopted the UTA-owned right-of-way as the LPA at its public meeting in August 2008.

S.2 Summary of Project Purpose and Need

S.2.1 Purpose of the Project

The purpose of the Draper Transit Corridor Project is to provide high-quality, high-capacity rapid transit service in the highly congested north-south travel corridor between Draper and downtown Salt Lake City as specified in the Wasatch Front Regional Council's (WFRC) *Wasatch Front Regional Transportation Plan: 2007–2030* (2030 RTP) (WFRC 2007a).

The proposed project is intended to extend fixed-guideway public transportation service and benefits in the study corridor by providing faster, more-reliable transit services than what can be achieved by operating buses in mixed-flow traffic. The proposed project would provide more-reliable mobility for transit-dependent people (such as people of limited income, students, and retirees), encourage more pedestrian access to transit and less reliance on park-and-ride access at the existing end-of-the-line station, better serve reverse-peak travel movements for employment and educational access, serve rapidly developing areas, and decrease travel times to key urban area destinations.

What is mobility?

According to the *Draper Transit Alternatives Study*, *mobility* refers to the choices—such as automobile, bus, light rail, or carpooling—that are available to people when they travel.

S.2.2 Need for the Project

The Draper Transit Corridor Project is needed because the travel demands of residents and commuters in the study area in 2030 are expected to be greater than the capacity of the existing transportation system due to population and employment growth in the area. Another factor that influences increasing travel demand in the Draper Transit Corridor study area is changing land-use patterns, including the development of new activity centers and other attractions such as major employers and shopping centers. The need for the project results from the following factors:

What is travel demand?

Travel demand is the expected number of transportation trips in an area. Travel demand can be met by various modes of travel, such as automobile, bus, light rail, carpooling, and bicycling.

- **Increasing vehicle congestion.** Past and projected increases in traffic congestion in the Draper Transit Corridor study area are due to increases in regional and corridor population and employment. Between 2005 and 2030, the amount of time that drivers spend in traffic in the Sandy and Draper areas is projected to increase by 115%, or more than double. As people travel more miles within an area, traffic slows down and is more likely to operate under stop-and-go conditions.
- **Lack of reliable travel times.** Congested traffic adds more lengthy transit travel times and reduces the reliability of public transportation in the Draper Transit Corridor study area. The average travel time for all trips originating in the Sandy and Draper areas is expected to increase by 13% by 2030. In addition, travel times are expected to be less reliable, with some trips along a given route taking substantially longer than other trips along the same route at different times of the day.
- **Lack of accessibility to the TRAX rail network.** Currently, the closest location where residents of Sandy and Draper can access the UTA rail transit network is the Sandy Civic Center 10000 South Station in Sandy. The primary means of accessing this station are by bus or automobile. If rail transit service to stations were extended into residential neighborhoods, people could easily walk to the stations, thus eliminating many short "cold-start" auto access trips.
- **Lack of travel choices.** For people who live or work in the study area but do not live close enough to walk to an existing TRAX station, the travel choices are limited to automobiles, local bus service, or travel by auto to a TRAX light-rail station.

- **Need for operational efficiency.** UTA's increasingly scarce operating resources require more-efficient transit service. Light-rail trains can carry more passengers per unit of labor cost than buses can, which improves the efficiency of the transit system.
- **Need to support local plans for transit-oriented development.** Sandy City and Draper City have identified land-use and development goals and objectives for residential, commercial, retail, and industrial development that endorse extending rail transit service to help accommodate forecasted regional population and employment growth, alleviate highway congestion during peak periods, and limit the expansion of local arterial roads.
- **Limited highway system capacity.** There are limited opportunities for expanding highways and major roads east of Interstate 15 (I-15). Travelers on both I-15 and the arterial streets through Sandy and Draper are already experiencing more congestion and longer delays during peak travel times.
- **Increasing adverse health effects due to air pollution.** The amount of time that vehicles spend in traffic (vehicle-hours per square mile) in the Draper Transit Corridor study area is projected to increase, and this will lead to greater air pollution emissions per square mile. This more-intense exposure to air pollution can have negative health effects, even if overall air pollution levels are falling.

S.3 Alternatives Considered

A range of alternatives to consider in this EIS was developed through the National Environmental Policy Act (NEPA) public and agency involvement process.

S.3.1 Development of Initial Alternatives

Ten initial alternatives were developed during the scoping phase of the project (see Table S.3-1). These initial alternatives were put through a two-step screening process to determine which alternatives would be carried forward for detailed study.

Table S.3-1. Initial Alternatives

Alternative	Description
No-Action	Includes the existing highway network (which is part of all alternatives) plus the transportation improvements included in the WFRC Regional Transportation Plan. The No-Action Alternative includes planned and committed highway and transit facilities that are likely to exist in 2030 with the exception of the Draper Transit Corridor Project itself.
TSM (Transportation Systems Management)	A relatively low-capital-cost approach for addressing the need for transit improvements in the project study area. It assumes the implementation of low-cost transit upgrades in the project study area plus the transit and highway improvements outside the study area in the 2030 Regional Transportation Plans from WFRC and the Mountainland Association of Governments.
Build Alternative A	Extension of the TRAX light-rail transit line west of I-15 (10000 South) running generally along South Jordan Gateway and Lone Peak Parkway west of I-15.
Build Alternative A1	Extension of the TRAX light-rail transit line west of I-15 (10600 South).
Build Alternative A1a	Extension of the TRAX light-rail transit line west of I-15 (intermodal terminal) route deviation to the intermodal terminal along Bangerter Highway.
Build Alternative B	Extension of the TRAX light-rail transit line on State Street (10000 South) running generally along State Street and crossing west of I-15 south of 12300 South.
Build Alternative B1	Extension of the TRAX light-rail transit line on State Street (10600 South).
Build Alternative B1a	Extension of the TRAX light-rail transit line State Street (intermodal terminal) route deviation to the intermodal terminal along Bangerter Highway.
Build Alternative C	Extension of the TRAX light-rail transit line along the existing UTA-owned right-of-way (former Union Pacific Provo Industrial Lead Railroad right-of-way).
Build Alternative C1	Extension of the TRAX light-rail transit line along the UTA-owned right-of-way (intermodal terminal) route deviation to the intermodal terminal along Bangerter Highway.

S.3.2 First-Tier Screening of the Initial Build Alternatives

The first-tier screening evaluated 10 alternatives including a No-Action Alternative, a Transportation Systems Management (TSM) Alternative, and eight initial build alternatives. If a build alternative did not meet all elements of the project's purpose and need, it was not carried forward for detailed analysis. The objective of the first-tier screening was to eliminate alternatives that had engineering, operational, or environmental fatal flaws and find a set of alternatives that could be evaluated further. The following criteria were used for the first-tier screening:

- Does the alternative meet the transportation needs of the corridor?
- Would the alternative have extremely high costs?
- Is the alternative consistent with local and regional policies and plans?
- Would the alternative have major adverse effects on the natural environment and community context? And, if so, could the effects be mitigated?

Based on the first tier of screening, the project team narrowed the eight initial build alternatives into a shorter list of three build alternatives for more detailed analysis and public review. The results of the first-tier screening are summarized in Table S.3-2 below along with the reasons why some alternatives were eliminated from further consideration. The remaining alternatives were carried forward for conceptual definition and further evaluation.

What was the objective of the first-tier screening?

The objective of the first-tier screening was to eliminate alternatives that had engineering, operational, or environmental fatal flaws and find a set of alternatives that could be evaluated further.

Table S.3-2. Initial Build Alternatives Considered and Eliminated

Alternative	First-Tier Screening Result and Explanation
Alternative A – West of I-15 using 10000 South	**Retained.** The vertical profile of the alignment was modified by adding flyovers of major intersections to eliminate adverse traffic impacts, and the Union Pacific Railroad (UPRR) conflicts were eliminated by adjusting the alignment to turn south on 300 West running south between the UPRR and I-15 where the alignment would cross over 10600 South on an elevated structure and continue south where it would enter South Jordan Gateway.
Alternative A1 – West of I-15 using 10600 South	Eliminated due to severe traffic impacts at 10600 South and the I-15 interchange.
Alternative A1a – West of I-15 to intermodal terminal	Route deviation to the intermodal terminal along Bangerter Highway was eliminated due to extremely high costs and little increase in ridership.
Alternative B – State Street using 10000 South	Eliminated due to severe traffic impacts at 10000 South and along State Street.
Alternative B1 – State Street using 10600 South	**Retained.** Adverse traffic impacts at intersections were mitigated by modifying the vertical profile of the alignment through the use of flyovers at major intersections. The southern terminus was modified from the *Draper Transit Alternatives Study* alignment and was shifted to the West of I-15 alignment due to new construction of condominiums and to avoid adverse impacts on commercial property access.
Alternative B1a – State Street to intermodal terminal	Route deviation to the intermodal terminal along Bangerter Highway was eliminated due to extremely high costs and little increase in ridership.
Alternative C – UTA-owned right-of-way	**Retained.**
Alternative C1– UTA-owned right-of-way (intermodal terminal)	Route deviation to the intermodal terminal along Bangerter Highway was eliminated due to extremely high costs and little increase in ridership.

S.3.2.1 Results of the First-Tier Screening

After the first-tier screening of the initial build alternatives, the remaining alternatives were combined or modified based on public and agency comments. The following three build alternatives emerged from the first-tier screening process:

- **Alternative A – West of I-15** runs generally north-south along 300 West after passing under I-15 and continues south where it enters South Jordan Gateway and Lone Peak Parkway west of I-15.
- **Alternative B – State Street** runs generally north-south along State Street and crosses west of I-15 south of 12300 South.
- **Alternative C – UTA-Owned Right-of-Way** runs north-south along the existing UTA-owned right-of-way (former Union Pacific Provo Industrial Lead Railroad right-of-way).

S.3.3 Second-Tier Screening of the Build Alternatives

The three build alternatives were subjected to second-tier screening using criteria for measuring the performance of the alternatives against the project goals and objectives that were established during the scoping phase of the project. The goals and objectives are outlined in Chapter 1, Purpose and Need, and relate to improved mobility, accessibility, community, cost-effectiveness, and support for local land-use decisions. The objective of second-tier screening was to screen the three build alternatives to one preferred alternative in order to minimize the amount of detailed technical analysis and environmental analysis that would be required for the EIS. The following criteria were used for the second-tier screening of each alternative:

- What are the traffic impacts based on an analysis of the level of service at key intersections?
- What is the ridership based on boardings and total transit trips?
- What are the operating and maintenance costs?
- What are the capital costs?
- What is the cost-effectiveness (annualized costs divided by new boardings)?

For this level of screening, the total number of transit trips and boardings was used as a measure of the alternatives' effectiveness, which is most appropriately measured by increases in transit ridership. Boardings and transit trips were estimated using WFRC's regional travel demand model. In addition, a more simplified measure of cost-effectiveness that is based on annualized costs per new transit boarding was used as a screening measure. This measure of cost-effectiveness, which is different from the generally accepted Federal Transit Administration (FTA) New Starts cost-effectiveness criterion, was used because it is a less complex and more easily understood measure for screening the cost-effectiveness of the alternatives.

What was the objective of the second-tier screening?

The objective of second-tier screening was to screen the three build alternatives to one preferred alternative in order to minimize the amount of detailed technical analysis and environmental analysis that would be required for the EIS.

What is the regional travel demand model?

The *regional travel demand model* is a tool for projecting future traffic and transit use. The model is maintained by WFRC.

S.3.3.1 Results of the Second-Tier Screening

Table S.3-3 below shows the results of the second-tier screening of the three build alternatives.

Table S.3-3. Second-Tier Screening Measures and Results

Screening Criteria Performance Measure	Alternative A – West of I-15	Alternative B – State Street	Alternative C – UTA-Owned Right-of-Way
Alignment distance (miles)	7.8	6.7	8.6
Failing intersections[a]	2	2	0
Average system-wide daily transit trips[b]	259,300	259,800	262,200
Average North-South TRAX Line daily boardings[c]	36,000	35,800	39,100
Average weekday ridership[d]	4,600	4,400	7,700
Annual ridership[d]	1,343,200	1,284,800	2,248,400
Preliminary capital costs[e]	$578.7 million	$481.7 million	$530.4 million
Cost per mile	$74.2 million	$71.9 million	$61.7 million
Annualized capital costs	$38.0 million	$33.7 million	$36.2 million
Annual operating and maintenance (O&M) costs	$8.2 million	$8.0 million	$7.1 million
Total annualized costs	$46.2 million	$41.7 million	$43.3 million
Cost per annual rider	$34.40	$32.46	$19.26

Source: UTA 2009

[a] With at-grade light rail through intersections, the level of service was failing at two intersections for Alternatives A and B. Grade separation of the light-rail transit was added to prevent these severe traffic impacts. Preliminary cost estimates were used for screening purposes.

[b] Total transit trips in the UTA service area.

[c] Total boardings for the entire North-South TRAX line between Draper and Salt Lake City.

[d] Annual new ridership on the proposed Draper extension only.

[e] Cost shown in year-of-expenditure dollars.

What is level of service?

Level of service is a measure of the traffic congestion on a road or at an intersection.

These measures show that Alternative C would cost the least to construct, operate, and maintain and would have more average daily boardings, total transit trips, and annual boardings than would either Alternative A or Alternative B. Alternative C also would have the lowest cost per annual boarding, which was used as a measure of cost-effectiveness. Consequently, Alternative C is better than Alternatives A and B in terms of minimizing traffic impacts and maximizing ridership and has the best overall cost-effectiveness. As a result of the second-tier screening, Alternatives A and B were eliminated from further consideration.

WFRC adopted the UTA-Owned Right-of-Way Alternative (Alternative C) as the Locally Preferred Alternative at its public meeting in August 2008. After the Locally Preferred Alternative (known as the preferred build alternative in this EIS) was adopted, project phasing was examined because UTA does not have the financial capacity to build the full alignment. Based on analysis conducted as part of the alternatives analysis, a minimum operable segment (MOS) alignment was developed that terminated the

extension at Draper Town Center. This alternative was later renamed Alternative C – MOS. This Alternative C – MOS is the Preferred Alternative carried forward.

S.3.4 Alternatives Considered in Detail

The EIS evaluates four alternatives in detail: the No-Action Alternative, the TSM Alternative, Alternative C – MOS, and Alternative C – Full Build.

S.3.4.1 No-Action Alternative

NEPA requires an analysis of the No-Action Alternative. The No-Action Alternative represents the future conditions in the study area without the Draper Transit Corridor Project. This alternative serves as a baseline so that decision-makers can compare the environmental effects of the action alternatives. The No-Action Alternative consists of existing and committed future roadway and transit improvements to the regional transportation system contained in WFRC's Long-Range Transportation Plan for 2030 except that no high-capacity transit improvement is included in the Draper Transit Corridor study area.

S.3.4.2 TSM Alternative

For the purpose of the FTA's Section 5309 New Starts evaluation process, the TSM Alternative serves as the baseline for quantifying the transportation benefits of the build alternatives. The TSM Alternative includes the No-Action Alternative plus low-cost transit upgrades from 10000 South to 12300 South including increased express bus service, new local feeder bus service, new bus rapid transit service, and two new park-and-ride lots (Draper Town Center and 14600 South).

What is the New Starts program?

FTA's *New Starts program* is the federal government's primary financial resource for supporting capital investment in locally planned, implemented, and operated fixed-guideway transit systems. The program is found at Title 49, Section 5309, of the United States Code (49 U.S.C. 5309).

S.3.4.3 Alternative C – MOS (Preferred Alternative)

Alternative C – Minimum Operable Segment (MOS) extends the existing TRAX light-rail transit line from the Sandy Civic Center 10000 South Station (the northern logical terminus) along the right-of-way of the former Union Pacific Provo Industrial Lead Railroad, which crosses 10600 South, 11000 South, and 11400 South at grade. Immediately south of 11400 South, the alternative curves slightly to the east, then runs diagonally, crossing 700 East, 12000 South, and Draper Parkway at grade. A southern logical terminus for the MOS was determined to be Draper Town Center near 12400 South

What is a minimum operable segment (MOS)?

FTA allows *minimum operable segments (MOS)* to be considered as interim termini for a project. The MOS includes logical termini and satisfies the project's purpose and need. *Logical termini* are rational endpoints for a transportation improvement.

(Pioneer Road). This Alternative C – MOS is the Preferred Alternative as shown in Figure S-3, Alternative C – MOS: The Preferred Alternative, at the end of this chapter.

Continuing within the UTA-owned right-of-way, the alternative curves east to cross Pioneer Road at grade on a skew and terminates near the planned Draper Town Center at Pioneer Drive. At this point, the alternative ends at a tail track to be constructed south of the Pioneer Road (12400 South) crossing. The alternative includes four options for new stations with park-and-ride lots (10600 South, 11400 South, 11800 South, and Draper Town Center), although only three stations would likely be implemented. Currently, the 11400 South Station is preferred over the 10600 South Station.

Would the 11400 South Station or the 10600 South Station be built?

Currently, the 11400 South Station is preferred over the 10600 South Station. However, FTA and UTA are still presenting these options to the public.

S.3.4.4 Alternative C – Full Build

Alternative C – Full Build is identical to Alternative C – MOS from the Sandy Civic Center 10000 South Station to the planned Draper Town Center at Pioneer Drive (12400 South). From the Draper Town Center, Alternative C – Full Build continues south of Pioneer Road and makes a sweeping curve south, then southwest, crossing 1300 East, Boulter Street, and 13200 South (pedestrian-only crossing) at grade. The alternative then crosses 1300 East, Bangerter Highway, and Highland Drive on grade separations at existing railroad bridges, terminating immediately south of Highland Drive at 14600 South. The alternative includes six options for new stations with park-and-ride lots (10600 South, 11400 South, 11800 South, Draper Town Center, Highland, and 14600 South), although only five stations would likely be implemented. Currently, the 11400 South Station is preferred over the 10600 South Station. The impacts of this alternative are being evaluated in this Draft EIS to clear it environmentally for future implementation. However, this is not the Preferred Alternative, which is instead Alternative C – MOS.

S.4 Summary of Environmental Impacts

Table S.4-1 below lists the major advantages and disadvantages of each alternative that was evaluated in detail. Table S.4-2 on page S-15 summarizes the specific environmental impacts for each alternative. For detailed information about the environmental impacts of the alternatives, see Chapter 4, Transportation, and Chapter 5, Environmental Consequences.

Table S.4-1. Primary Advantages and Disadvantages of the Alternatives

Alternative	Primary Advantages	Primary Disadvantages
No-Action Alternative	• Few environmental impacts because no major transit improvements would be made in the Draper Transit Corridor study area. • No residential or business relocations.	• Would not provide any improvements to the existing transit system beyond currently planned bus service expansions. • Would not be consistent with the land-use and transportation plans of the Cities along the UTA-owned right-of-way. • Would not provide more travel choices, reduce automobile emissions, or encourage and support the land-use pattern that the Cities' policies seek to achieve. • Could contribute to further highway and roadway congestion in the cities and in the region.
TSM Alternative	• Few environmental impacts because no major transit improvements would be made in the Draper Transit Corridor study area, other than the addition of two park-and-ride lots. • By increasing the capacity of the transportation network, the TSM Alternative would increase mobility options for residents.	• Would be partly consistent with the land-use and transportation plans of the Cities along the UTA-owned right-of-way. • Would require acquiring about 21 to 23 acres of right-of-way for constructing the Draper Town Center (about 11 to 12.5 acres, depending on what park-and-ride lot location is selected) and 14600 South (about 10.5 acres) park-and-ride lots. • Potential relocation of two businesses in order to construct the Draper Town Center park-and-ride lot, **or** potential relocation of one residence in order to construct the alternate Draper Town Center park-and-ride lot. • Neighborhoods would continue to be characterized by dependence on the automobile.

Table S.4-1. Primary Advantages and Disadvantages of the Alternatives

Alternative	Primary Advantages	Primary Disadvantages
Alternative C – MOS (Preferred Alternative)	• Lowest cost of the build alternatives. • Of the build alternatives, least amount of land converted to transit use (30 to 43 acres, depending on whether the 10600 South Station or 11400 South Station is selected). • Of the build alternatives, lowest amount of impacts to wildlife habitat (53 to 62 acres, depending on whether the 10600 South Station or 11400 South Station is selected). • Of the build alternatives, lowest amount of impacts to wetlands and waters of the U.S. (0.15 acre). • Consistent with transportation and land-use plans of the Cities. • Provides travel choices. • Reduces roadway congestion and automobile emissions. • Improves economic conditions in the Draper Transit Corridor study area and increases employment opportunities.	• Would not encourage transit-oriented development at the Highland Station. • The required parking at the Draper Town Center Station might limit the amount of transit-oriented development at this station, since acreage that could be developed would instead be used for parking. UTA would work with Draper City regarding transit-oriented development and parking. • Three potential residential relocations, **or** four potential residential relocations if the Draper Town Center alternate park-and-ride lot location is selected. • Three potential business relocations, **or** one potential business relocation if the Draper Town Center alternate park-and-ride lot location is selected.
Alternative C – Full Build	• Of the build alternatives, greatest reduction in vehicle-miles traveled (17,000 miles). • Of the build alternatives, greatest transit ridership (225,590). • Of the build alternatives, greatest number of daily boardings (39,100). • Consistent with the transportation and land-use plans of the Cities. • Provides travel choices. • Reduces roadway congestion and automobile emissions. • Improves economic conditions in the Draper Transit Corridor study area and increases employment opportunities.	• Of the build alternatives, greatest amount of land converted to transit use (42 to 56 acres, depending on whether the 10600 South Station or 11400 South Station is selected). • Of the build alternatives, greatest amount of impacts to wildlife habitat (106 to 115 acres, depending on whether the 10600 South Station or 11400 South Station is selected). • Of the build alternatives, greatest amount of impacts to wetlands and waters of the U.S. (0.20 acre). • Three potential residential relocations, **or** four potential residential relocations if the Draper Town Center alternate station location is selected. • Three potential business relocations, **or** one potential business relocation if the Draper Town Center alternate station location is selected.

Table S.4-2. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	TSM Alternative	Alternative C – MOS	Alternative C – Full Build
Land Use	The alternative would not be consistent with the land-use and transportation plans of the Cities. Undeveloped parcels at and adjacent to the proposed station locations would likely develop with or without the project, given that some of these parcels are already being sold to developers and platted.	About 21 to 23 acres of land would be converted to transit use, depending on what park-and-ride lot location is selected at Draper Town Center. The alternative would partly be consistent with the Cities' plans but would not fully support the intended transit-oriented development around stations and the land-use plans of the Cities.	About 30 to 43 total acres of the land use evaluation area would be converted to a transportation use. Alternative C – MOS is consistent with the plans of Sandy, Draper, and Bluffdale Cities. Improved transit could increase development in general and increase opportunities for transit-oriented development around the proposed station locations.	About 42 to 56 total acres of the land use evaluation area would be converted to a transportation use. Alternative C – Full Build is consistent with the plans of Sandy, Draper, and Bluffdale Cities. Improved transit could increase development in general and increase opportunities for transit-oriented development around the proposed station locations.
Farmland	No direct impacts to farmland would occur as a result of the project.	About 9 to 11 acres of irrigated cropland would be converted to a transportation use.	About 15 to 17 acres of irrigated cropland would be converted to a transportation use.	Same impacts as Alternative C – MOS.
Social Environment	Residents would continue to be affected by ongoing change and growth in the study area. No other impacts to the social environment would occur.	Two businesses would potentially need to be relocated in order to construct the Draper Town Center park-and-ride lot. If the Draper Town Center alternate park-and-ride lot location is selected, no businesses would need to be relocated, and one residence would potentially need to be relocated.	Three businesses would potentially need to be relocated in order to construct the Draper Town Center station and park-and-ride lot. No businesses would need to be relocated if the Draper Town Center alternate park-and-ride lot location is selected. Three residential relocations might be required to accommodate the safety improvements needed for the grade crossing at Pioneer Road. In addition, if the alternate park-and-ride lot location is selected at Draper Town Center, an additional residence would potentially require relocation. There would be more job opportunities for those who have mobility limitations, as well as more job opportunities locally, due to increased transit-oriented development in the evaluation area. Equestrian use of the Porter Rockwell Trail would continue to be allowed if the trail can be designed to accommodate appropriate safety features required by UTA.	Same impacts as Alternative C – MOS.

Table S.4-2. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	TSM Alternative	Alternative C – MOS	Alternative C – Full Build
Economics	No new job opportunities related to the operations of an expanded light-rail system. Would not provide social and economic enhancements for travel to work or recreation or the mobility enhancements for no-vehicle households and low-income citizens.	Increased opportunities for travel to work or recreation. Would improve mobility for no-vehicle households and low-income citizens and would provide new permanent bus transit jobs within the UTA system. Beneficial commerce and employment impacts to businesses near the two proposed park-and-ride lots. Two businesses would potentially need to be relocated in order to construct the Draper Town Center park-and-ride lot. If the alternate park-and-ride lot location is selected, no businesses would require relocation.	Beneficial economic impact to the traveling public. Would create new net economic growth due to the coordination of transportation services and land use, which would lead to beneficial commerce and employment impacts to businesses near stations and park-and-ride lots. Increased opportunities for travel to work or recreation. Would improve mobility for no-vehicle households and low-income citizens. Three businesses would potentially need to be relocated in order to construct the Draper Town Center station and park-and-ride lot. If the alternate park-and-ride lot location is selected, two businesses would require relocation.	Greater impacts than Alternative C – MOS. Alternative C – Full Build would have higher capital expenditures and more opportunities for development at more stations.
Environmental Justice Populations	No disproportionately high and adverse impacts on any environmental justice populations.	No disproportionately high and adverse impacts on any environmental justice populations. The TSM Alternative would provide additional access and mobility options for these populations.	Same impacts as the TSM Alternative.	Same impacts as the TSM Alternative.
Air Quality	Would not result in an exceedance of the National Ambient Air Quality Standards, increase the frequency or severity of existing violations of the standards, or delay the attainment of the standards.	Same impacts as the No-Action Alternative.	Would not result in an exceedance of the National Ambient Air Quality Standards, increase the frequency or severity of existing violations of the standards, or delay the attainment of the standards. Would decrease regional particulate matter (PM_{10} and $PM_{2.5}$) and carbon monoxide emissions by less than 1%.	Same impacts as Alternative C – MOS.

Table S.4-2. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	TSM Alternative	Alternative C – MOS	Alternative C – Full Build
Noise and Vibration	No impacts.	No impacts.	*Noise*. Overall project noise levels are predicted to exceed the FTA *moderate* impact criteria at 114 residences and the FTA *severe* impact criteria at an additional 146 residences. No noise impacts are predicted at any schools, parks, or other FTA Category 3 receptors along Alternative C – MOS. However, with proposed noise mitigation, impacts would be reduced to 68 remaining *moderate* and six remaining *severe* impacts. During final design, the barrier heights and lengths would be adjusted to reflect actual ground conditions for both existing and modified alignment grading and actual residential receptor locations. *Vibration*. Overall project vibration levels are predicted to exceed the FTA *frequent* criterion of 72 VdB (vibration decibels) at six residences. However, with proposed mitigation measures, all the vibration impacts would be reduced to no-impact levels.	*Noise*. Overall project noise levels are predicted to exceed the FTA *moderate* impact criteria at 259 residences and the FTA *severe* impact criteria at an additional 192 residences. The future noise level of 61 dBA (decibels on the A-weighted scale) at the Draper City Park is also predicted to exceed the FTA Category 3 *moderate* impact criterion of 59 dBA (the park is an FTA Category 3 land use). No impacts are predicted at the other four parks along Alternative C – Full Build or at the Draper Library. However, with proposed noise mitigation, impacts would be reduced to 146 remaining *moderate* and 10 remaining *severe* impacts. These would be re-evaluated during the final design phase of the project. *Vibration*. Overall project vibration levels are predicted to exceed the FTA *frequent* criteria at seven residences. However, with proposed mitigation measures, all the vibration impacts would be reduced to no-impact levels.
Visual and Aesthetic Resources	No impact. Continued changes from residential and commercial development.	No impacts to visual and aesthetic resources along or adjacent to the UTA-owned right-of-way or to the adjacent trail system. Moderate changes due to the addition of pavement and lighting at the currently undeveloped park-and-ride lot locations.	Would not substantially alter the general urban visual conditions along and adjacent to the UTA-owned right-of-way and would have a low-to-moderate impact on viewers in the visual evaluation area. Fixed elements of light-rail transit along the UTA-owned right-of-way would not obstruct long-range views. The current short- and mid-range views would change due to the addition of new elements including light-rail tracks, cut-and-fill slopes, drainage structures, noise barriers, pavement, and lighting.	Similar impacts to Alternative C – MOS, but for a longer distance.

Table S.4-2. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	TSM Alternative	Alternative C – MOS	Alternative C – Full Build
Historic Properties	No direct or indirect impacts to historic properties.	No impacts to architectural properties. "No adverse effect" to one historic linear resource site. If the alternate park-and-ride lot location at Draper Town Center is selected, no impacts to historic linear resource sites.	No impacts to architectural properties. "No adverse effect" to one historic linear resource site, unless the alternate park-and-ride lot location is selected at Draper Town Center, in which case the historic linear resource site would not be affected. "Adverse effect" to one historic linear resource site (the railroad corridor).	No impacts to architectural properties. "No adverse effect" to one historic linear resource site, unless the alternate park-and-ride lot location is selected at Draper Town Center, in which case the historic linear resource site would not be affected. "Adverse effect" to two historic linear resource sites (the railroad corridor and a contributing drainage feature).
Ecosystems (Wildlife, Threatened and Endangered Species, and Wetlands)	No direct or indirect impacts to any ecosystem resource.	No impact to threatened or endangered species or wetlands. Minor impact to marginal wildlife habitat in urbanized areas.	No impact to threatened or endangered species. About 0.15 acre of wetlands would be converted to transportation use. Minor impact (less than 0.01 acre) on one water of the U.S. Minor impact to marginal wildlife habitat in urbanized areas.	No impact to threatened or endangered species. About 0.18 acre of wetlands would be converted to transportation use. About 0.02 acre of impacts on waters of the U.S. Minor impact to marginal wildlife habitat in urbanized areas.
Geology and Soils	No direct impacts to soils, topography, or geologic conditions.	Would require about 21 to 23 acres of soil excavation and vegetation removal in order to construct two park-and-ride lots at Draper Town Center and 14600 South. The range of required acres includes acreage for either park-and-ride lot location at Draper Town Center. No change to existing topography along the UTA-owned right-of-way. No geologic impacts.	Would require about 58 to 71 acres of soil excavation and vegetation removal in order to construct 3.6 miles of transit right-of-way and three proposed stations and associated park-and-ride lots. Minor to moderate change to existing topography along the UTA-owned right-of-way and station locations. No geologic impacts.	Would require about 109 to 123 acres of soil excavation and vegetation removal in order to construct 8.6 miles of transit right-of-way and five proposed stations and associated park-and-ride lots. Minor to moderate change to existing topography along the UTA-owned right-of-way and station locations. No geologic impacts.
Paleontological Resources	No direct or indirect impacts to paleontological resources.	No impacts to paleontological resources.	No impacts to paleontological resources.	No impacts to paleontological resources.

Table S.4-2. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	TSM Alternative	Alternative C – MOS	Alternative C – Full Build
Water Quality	The existing stormwater runoff and drainage patterns would continue. Existing water quality and current beneficial uses would be maintained. No groundwater rights or wells would be affected.	No impacts to beneficial uses or standards related to surface or groundwater quality. Stormwater would be controlled through use of detention basins with oil/water separators to reduce pollutants.	No impacts to beneficial uses or standards related to surface or groundwater quality. Stormwater would be controlled through use of detention basins with oil/water separators to reduce pollutants. Alternative C – MOS would affect three privately owned groundwater wells and one public irrigation and municipal well owned by Sandy City Corporation.	No impacts to beneficial uses or standards related to surface or groundwater quality. Stormwater would be controlled through use of detention basins with oil/water separators to reduce pollutants. Alternative C – Full Build would affect four privately owned groundwater wells and one public irrigation and municipal well owned by Sandy City Corporation. It would also encroach on water protection Zone 2 for public drinking water sources owned by the Draper Irrigation Company and the Jordan Valley Water Conservancy District. However, this encroachment would not adversely affect water quality.
Floodplains	No direct impacts to floodplains would occur as a result of the project.	The proposed park-and-ride lots would not be constructed within or near regulatory floodplains or streams and would not affect resources within the floodplain evaluation area.	Alternative C – MOS would cross Dry Creek and would affect about 0.04 acre of regulatory floodplain. New or replacement crossing culverts constructed for the project would be designed to accommodate Federal Emergency Management Agency (FEMA) flood flow rates, would not increase the flooding risk to surrounding landowners, and would not affect transportation facilities that are vital for providing emergency services.	Alternative C – Full Build would encroach into flood zones associated with Dry Creek, Willow Creek, and Corner Canyon Creek and would affect a total of 1.58 acres of regulatory floodplain. New hydraulic structures on FEMA-designated streams would be designed to accommodate FEMA flood flow rates so that the flooding risk to adjacent landowners is not increased as a result of the project.
Hazardous Materials and Hazardous Waste Sites	No direct impacts to or from hazardous waste sites or materials would occur as a result of the project.	Same impacts as the No-Action Alternative.	Could affect two sites that might contain contaminated materials or waste. Both sites are considered permanently out of use.	Same impacts as Alternative C – MOS.
Section 4(f) and Section 6(f) Properties	Since the No-Action Alternative does not meet the project's purpose to the extent that the build alternatives do, it was not included in the Section 4(f) evaluation.	Since the TSM Alternative does not meet the project's purpose to the extent that the build alternatives do, it was not included in the Section 4(f) evaluation.	One use (not *de minimis*) of Section 4(f) resources.	Two uses (not *de minimis*) of Section 4(f) resources.

S.4.1 Transportation Impacts

The best measure of transportation impacts is to determine the change in transit ridership compared to the No-Action and TSM baseline alternatives (see Table S.4-3). Transit ridership is measured as total linked trips on an average weekday basis, which is then annualized by an annualization factor calculated by UTA and WFRC. *Total linked trips* is a measure of the number of people using transit, regardless of the number of transfers made on a trip. In contrast, a *transit boarding* is a measure that counts the number of times a person boards a transit vehicle. A person who makes one transfer while traveling from his origin to his destination makes one linked trip but boards twice.

What is the definition of total linked trips?

Total linked trips is a measure of the number of people using transit, regardless of the number of transfers made on a trip.

Both boardings and linked trips are useful indications of demand; transit boardings provide a good indication of the usage of any given transit route, while transit linked trips provide a good indication of the overall number of people on the transit system. The annualization factor accounts for the generally lower ridership on Saturdays, Sundays, and holidays.

What is a transit boarding?

A *transit boarding* is a measure that counts the number of times a person boards a transit vehicle.

Table S.4-3. Transportation Performance Measures and Comparisons in 2030

Screening Criteria Measures	No-Action Alternative	TSM Alternative (FTA Baseline)	Alternative C – MOS	Alternative C – Full Build
Average weekday transit trips	222,160	222,860	224,260	225,590
Average daily boardings North-South TRAX	28,400	28,700	31,700	35,000
Change in annual trips from No-Action Alternative	—	219,000	657,000	1,080,400
Change in annual trips from TSM Alternative	—	—	438,000	861,400

S.4.2 Measures of Cost-Effectiveness

Two measures of cost-effectiveness were used to determine which of the alternatives had the highest measure of benefit for cost expended (see Table S.4-4). These measures were cost per new rider and cost per transportation system user benefit. The latter measure is used by FTA to rate projects seeking funding under the New Starts program.

Cost-effectiveness is calculated by determining the annualized costs of the alternatives divided by either the value of new riders attracted to the system or transportation system user benefits (TSUB), which is a measure that values travel time savings.

Table S.4-4. Comparative Evaluation of Cost-Effectiveness

Screening Criteria Performance Measures	TSM Alternative (New Starts Baseline)	Alternative C – MOS	Alternative C – Full Build
Change in user benefits			
Difference from TSM	NA	436,832	851,740
Annualized transit trips[a]			
Difference from No-Action	219,000	657,000	1,080,400
Difference from TSM	0	438,000	861,400
Costs			
Capital costs[b]	$36.7 million	$212.21 million	$494.03 million
Annualized capital costs	$2.86 million	$13.64 million	$30.98 million
Annual O&M costs	$3.52 million	$3.62 million	$8.17 million
Total annualized costs	$6.38 million	$17.26 million	$39.15 million
Cost-Effectiveness Index[c]			
Cost per user benefit			
Compared to No-Action	$29.21	$26.35	$33.53
Compared to TSM	NA	$24.91	$34.52
Cost per new transit trip			
Compared to No-Action	$29.13	$26.27	$36.24
Compared to TSM	NA	$24.84	$38.04

O&M = operations and maintenance; NA = not applicable

[a] Annualized differences in transit trips are calculated by multiplying average weekday transit trips times an annualization factor (292) and subtracting the baseline alternatives.

[b] Cost estimates are derived using FTA Standardized Cost Categories and templates. Cost shown in year-of-expenditure (YOE) dollars.

[c] Incremental project cost between the TSM Alternative and build alternatives divided by the incremental user benefits or new transit trips between the TSM baseline and build alternatives.

S.5 Basis for Identifying the Preferred Alternative

Alternative C – MOS was identified as the preferred alternative based on the alternative's ability to meet the elements of the project's purpose and need and its ability to provide a high degree of mobility improvement in terms of travel time, ridership, connectivity, and access. In addition, it is affordable, cost-effective, provides positive impacts on station area land use and economic development, and has strong support from the affected cities. Its adverse environmental impacts can be mitigated.

What is UTA's preferred alternative for the Draper Transit Corridor Project?

UTA's preferred alternative is Alternative C – MOS.

During the EIS scoping process, the public and the resource agencies were asked to provide input on potential issues and alternatives to be considered in the EIS. Comments regarding alignment alternatives were most prevalent, followed by environmental issues and statements of preference. Many comments were received regarding ridership/travel demand and the NEPA process. There were also many comments concerning safety, property values, and cost. Of those comments, many were in support of extending light-rail transit on the UTA-owned right-of-way.

As part of the process for identifying the preferred alternative, UTA met with planners, managers, and engineers from Sandy, Draper, and Bluffdale Cities; presented the build alternatives to them; and explained how the alternatives would affect their cities. City officials were also invited to monthly project team meetings. City officials from all three cities said that the build alternatives on the UTA-owned right-of-way met their city's plans and objectives.

Both build alternatives meet the project's purpose and need, which is described in Section 1.2.1, Purpose of the Project, and Section 1.2.2, Need for the Project, in Chapter 1, Purpose and Need. However, the capital cost of Alternative C – Full Build exceeds the funding resources of the UTA FrontLines 2015 Program, which is the plan initiated by UTA in 2008 to extend several rail lines over the course of the next 7 years. Consequently, the project team evaluated constructing the project in phases by constructing only a minimum operable segment. The logical termini for the Draper extension of the North-South TRAX line MOS were determined to be the existing Sandy Civic Center 10000 South Station to the north and the Draper Town Center near 12400 South (Pioneer Road) to the south.

S.6 Local Financial Commitment

Chapter 6, Local Financial Commitment, describes UTA's revenues and expenditures, capital investment, and operating cost estimates for the project.

The full-build Draper Transit Corridor Project (Alternative C – Full Build) is estimated to cost $494 million. The minimum operable segment (Alternative C – MOS) is expected to cost $212.2 million. UTA has adequate local funds for local capital match and operation of all its planned expansion projects, including the minimum operable segment. Continued operation and expansion of the existing transit system is also expected.

How much would the build alternatives cost?

The full-build Draper Transit Corridor Project (Alternative C – Full Build) is estimated to cost $494 million. The minimum operable segment (Alternative C – MOS) is expected to cost $212.2 million.

On November 7, 2006, Proposition 3 in Salt Lake County, a measure to raise the local-option sales tax for regionally significant transportation projects, was passed by 64% of voters. Also passed at that time was Utah County's Opinion Question, which was designed to increase transit funding in Utah County, specifically for commuter rail. The Opinion Question was passed by 69% of Utah County voters. The specific major transit projects that will be funded in part by the new tax are Mid-Jordan Light-Rail Transit (LRT), West Valley LRT, Utah County Commuter Rail, Airport LRT, and the Draper Transit Corridor Project.

UTA is seeking a combined $570 million in Section 5309 New Starts funding for the Mid-Jordan and Draper Transit Corridor Project LRT extensions. In return, UTA has made a commitment to FTA to build, by 2015, the West Valley City and Airport LRT extensions as well as the FrontRunner commuter-rail south extension without federal financial assistance as part of a package of funded projects funded primarily by the sales tax increases. The current total capital cost estimate for the five projects in the FrontLines 2015 Program is $2.85 billion.

S.7 Public Involvement

As required by federal regulations, FTA published the Notice of Intent to prepare an EIS in the *Federal Register* on November 26, 2007. FTA, in cooperation with WFRC and UTA, developed a scoping process that included one agency scoping meeting and one public scoping meeting. In addition to the general public scoping meeting, the project team conducted outreach by contacting individuals located directly adjacent to the project corridor and by creating a Community Involvement Committee that consisted of various community members.

A public meeting was held following the detailed evaluation of the No-Action, TSM, and build alternatives (October 2008). The public had access to a project Web site, and a project telephone hotline was also available to receive public comments and questions. Outreach was also conducted via notices and fliers in the neighborhoods adjacent to the UTA-owned right-of-way.

The Draft EIS will be circulated for a 45-day public review and comment period beginning December 18, 2009, and ending **February 5, 2010**. During this comment period, the Draft EIS will be made available to interested parties, including private citizens, community groups, the business community, elected officials, and public agencies. A public hearing will be held in mid-January 2010 to formally receive comments during the 45-day public review and comment period. Details on the public hearing will be posted on UTA's Web site and in local newspapers.

Public comments can be submitted in writing throughout the full comment period. UTA will prepare responses to all comments and address and will resolve outstanding issues in the Final EIS. All comments, along with responses, will be presented in an appendix in the Final EIS.

Completion of the Final EIS, followed by the signed Record of Decision (ROD) by FTA, will permit UTA to advance the project to the final design and construction phases.

What is scoping?

Scoping is the formal early coordination process required by the Council on Environmental Quality's 1979 regulations, found at Title 40, Section 1501.7, of the Code of Federal Regulations (40 CFR 1501.7). It's an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.

How can I comment on the Draft EIS?

Comments can be submitted in the following ways:

- On the project Web site at www.rideuta.com/projects/draperLightRail/submitComment.aspx
- By e-mail to amentzer@rideuta.com
- By fax to (801) 741-8892 (write "Attention Draper Transit Corridor Project" on the fax)
- By postal mail to:

  Draper Transit Corridor Project
  Aaron Mentzer
  Community Involvement Specialist
  Utah Transit Authority
  669 West 200 South
  Salt Lake City, UT 84101

Comments must be received no later than February 5, 2010.

S.8 Draper Transit Corridor Project Process

Selection of the Preferred Alternative. This Draft EIS presents an analysis of alternatives and examines four in detail: the No-Action, TSM, and two build alternatives. WFRC has adopted Alternative C – MOS as the Locally Preferred Alternative (LPA), and, after additional analysis, UTA decided that the LPA would be brought forward as the preferred alternative.

Mitigation Measures. This Draft EIS presents proposed mitigation measures or, in some cases, a range of mitigation measures.

Next Steps. Following circulation of this Draft EIS and the 45-day comment period, UTA will address comments and resolve outstanding issues as necessary in the Final EIS. After distributing the Final EIS and filing a Record of Decision, UTA will apply for New Starts funding and begin final design. Construction will take 2 to 3 years before service opens.

S.9 Areas of Controversy

No areas of controversy for implementing the Draper Transit Corridor Project have been identified.

S.10 Major Unresolved Issues

Although 11400 South is the preferred station location over 10600 South, FTA and UTA are still presenting these options to the public.

S.11 Required Federal Actions

The following additional federal actions would be required for the proposed Draper Transit Corridor Project:

- Section 106 Agreement/Concurrence (Consulting Parties and Utah State Historic Preservation Office)
- Section 4(f) Approval (FTA with Department of the Interior coordination and comment)
- Section 309 Review (U.S. Environmental Protection Agency)
- Clean Water Act Nationwide Permit 14 (U.S. Army Corps of Engineers)
- Record of Decision (FTA)

Figure S-1. Regional Area

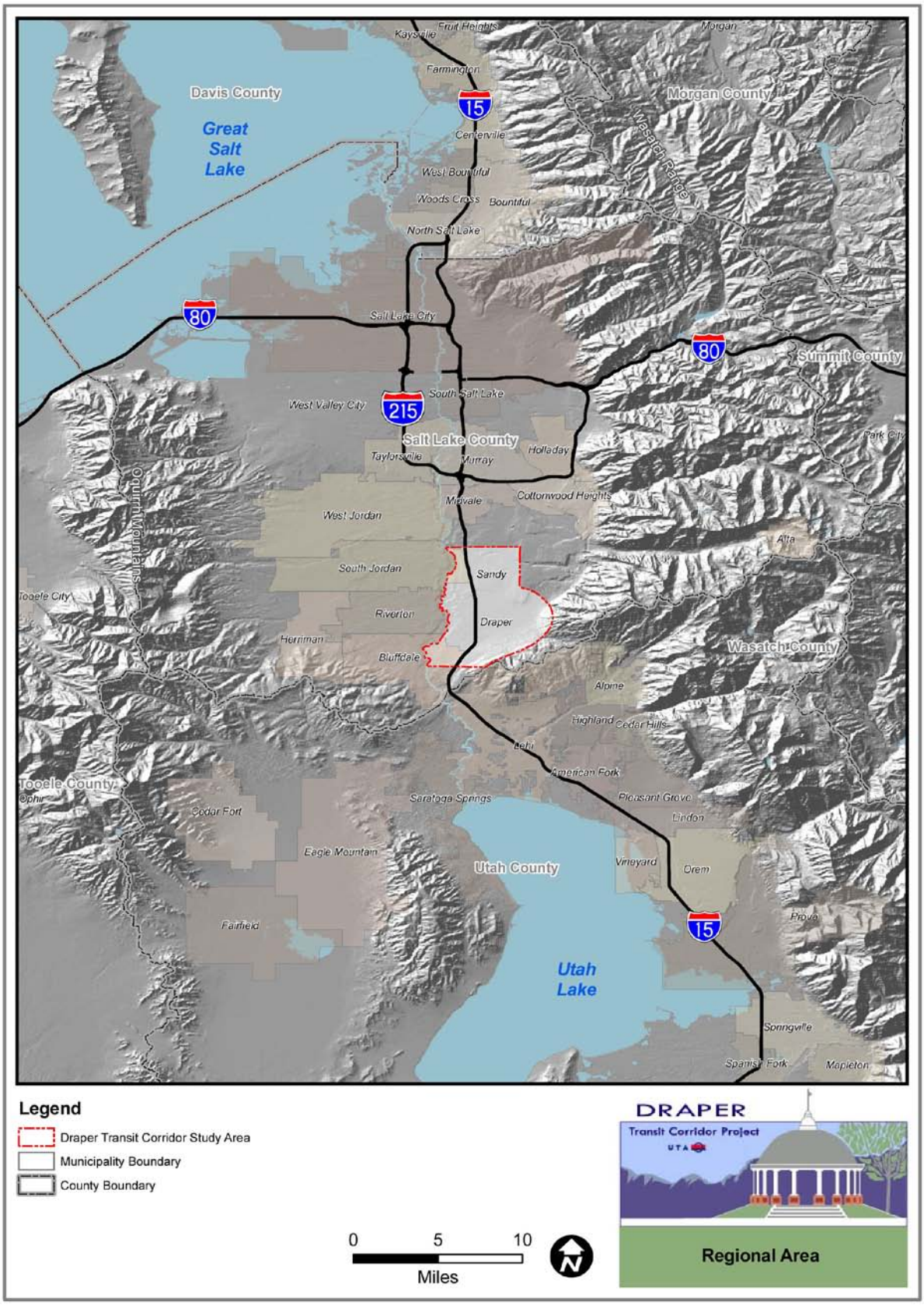

Figure S-2. Project Study Area

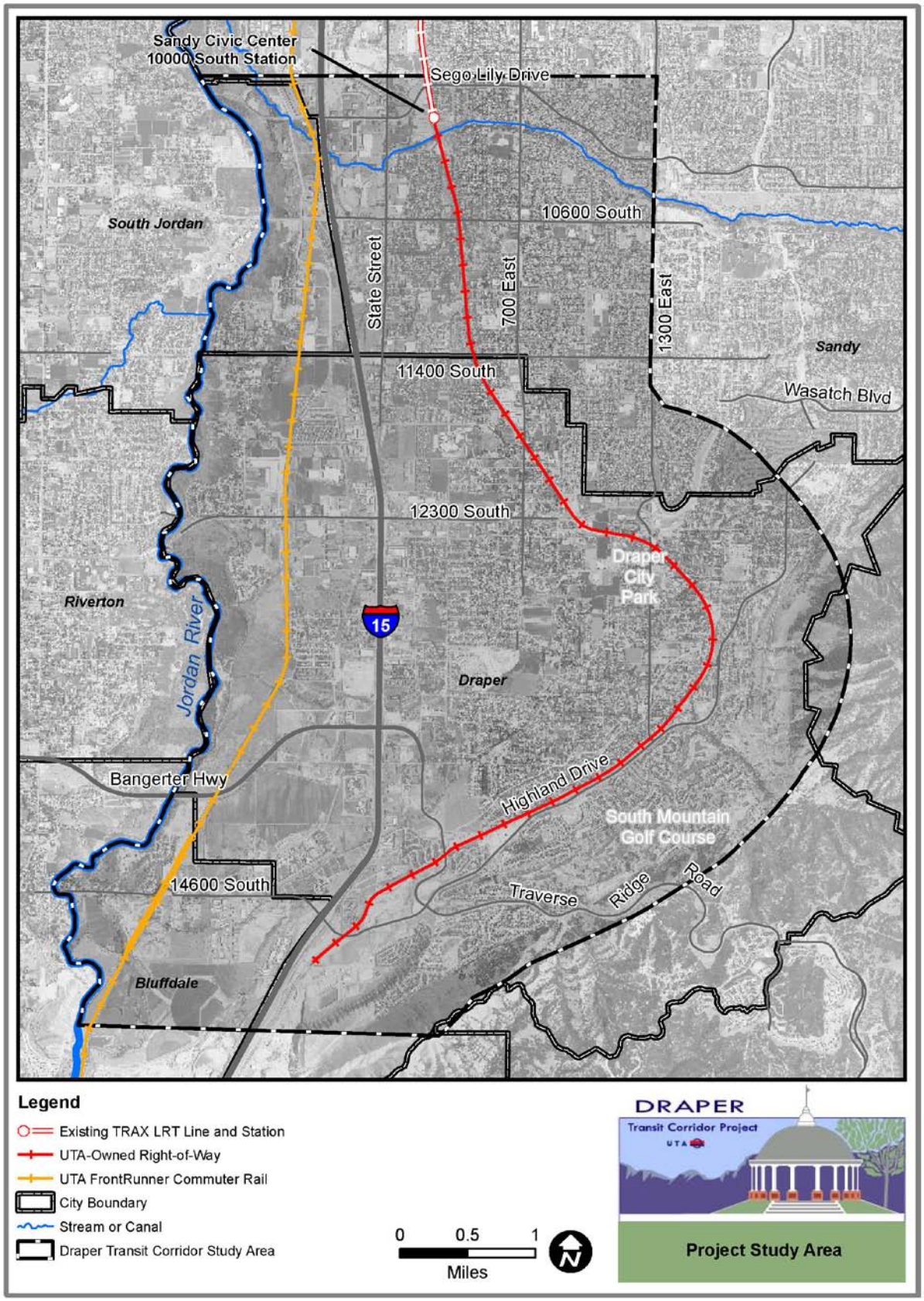

Figure S-3. Alternative C – MOS: The Preferred Alternative