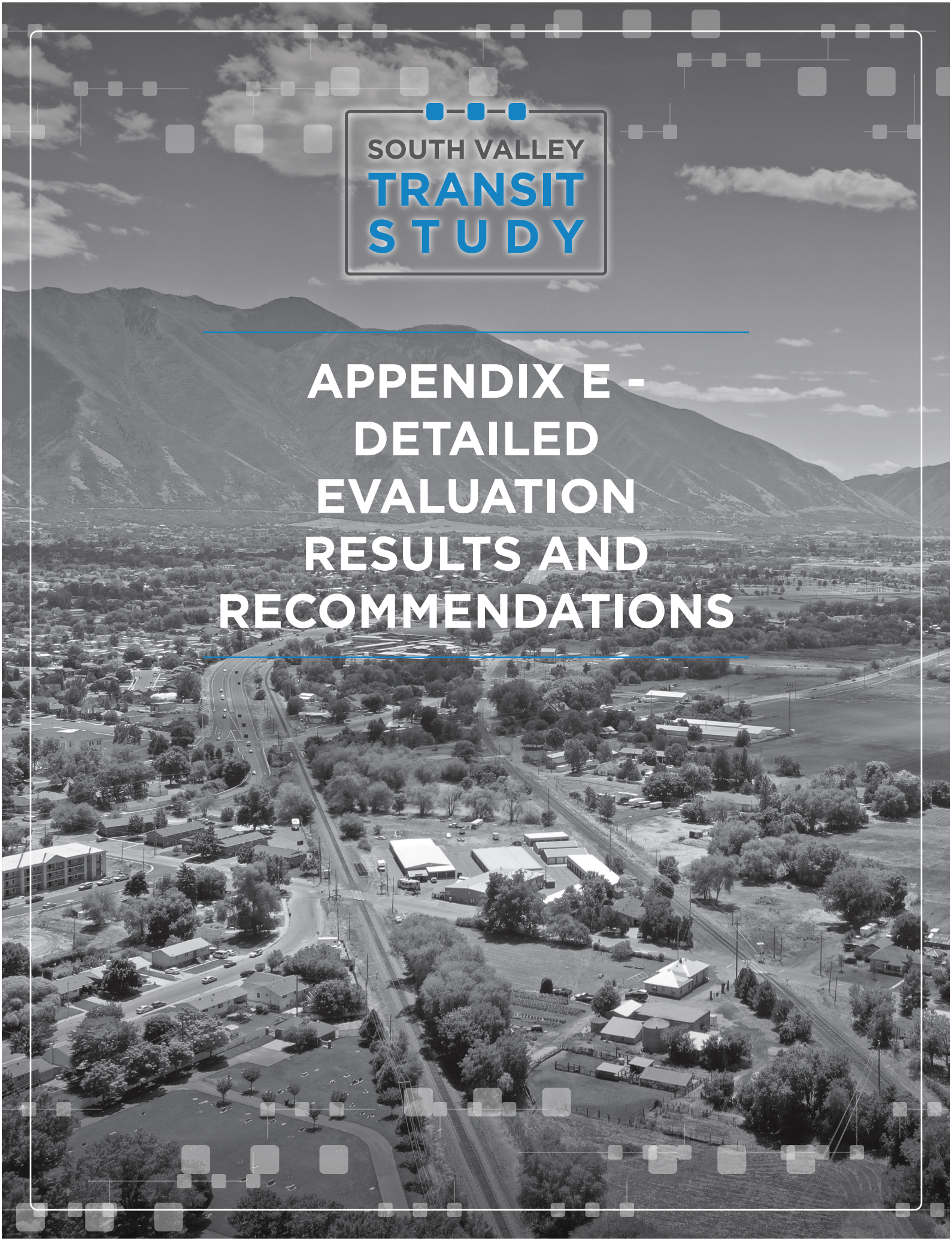
SOUTH VALLEY
TRANSIT
STUDY

APPENDIX E - DETAILED EVALUATION RESULTS AND RECOMMENDATIONS



Detailed Evaluation Results and Recommendations

Overview

The South Valley Transit Study is using a multi-step alternative evaluation process to determine the long-term preferred solution for providing expanded transit service in south Utah County, from Provo to Santaquin. This document summarizes the findings from the detailed alternative evaluation, provides detailed descriptions of the ratings, and describes the methodology for scoring.

The detailed evaluation provides greater definition of the remaining alternatives, including identifying service assumptions, stations, and alignment details. This evaluation process uses more data-driven screening measures to further narrow the range of alternatives to select a Locally Preferred Alternative.

Proposed Recommendation

Based on the Detailed Evaluation results, the Locally Preferred Alternative was developed with the TAC for approval by the Executive Committee and includes:

- Commuter Rail – Provo to Payson
  - » Explore different operational scenario(s) to reduce O&M costs while maintaining high levels of ridership (focus on commuter trips)
- Express Bus Service – Payson to Santaquin
  - » Explore corridor preservation opportunities along potential future commuter rail alignment and at future station location

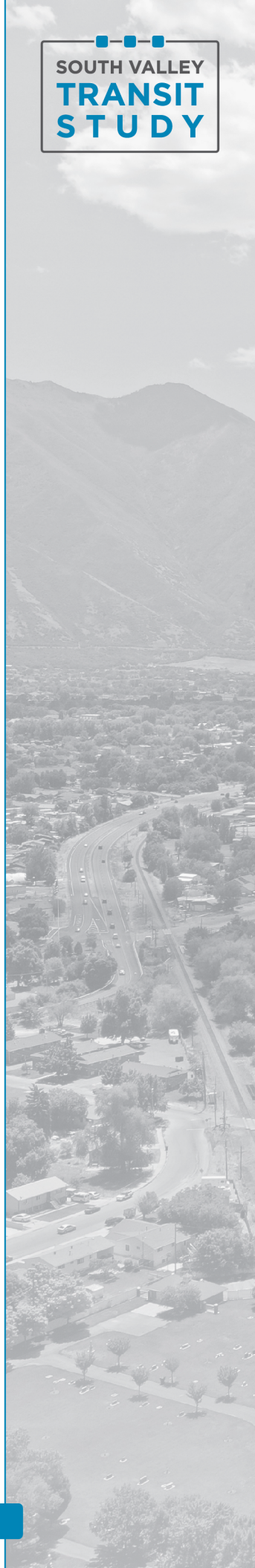
Detailed Evaluation

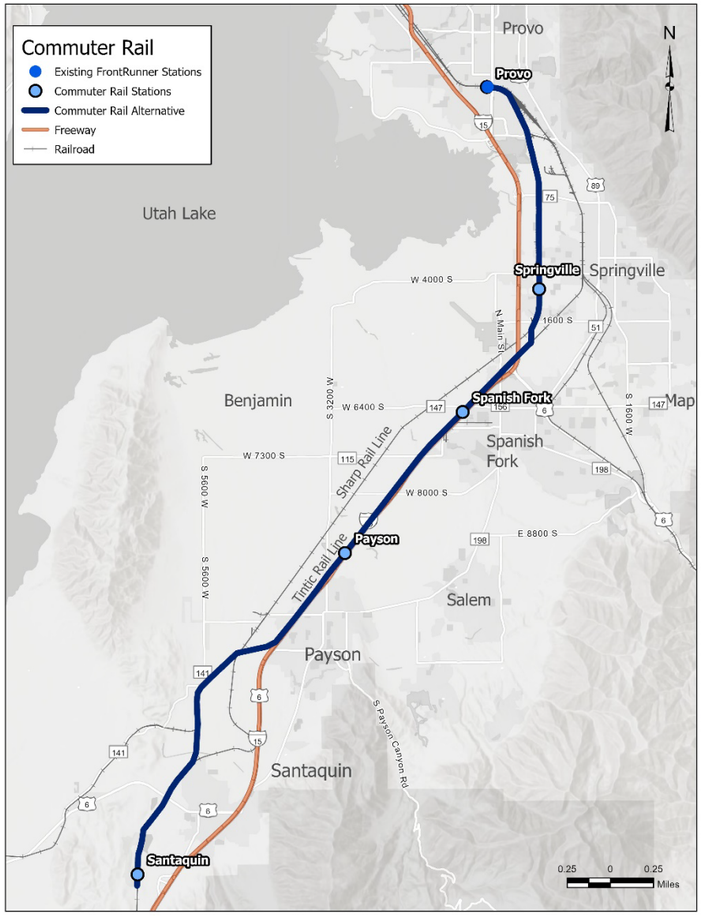
Alternatives Considered

Three primary corridor alignments and mode pairings were considered in the detailed evaluation, as illustrated in Figure 1. This includes:

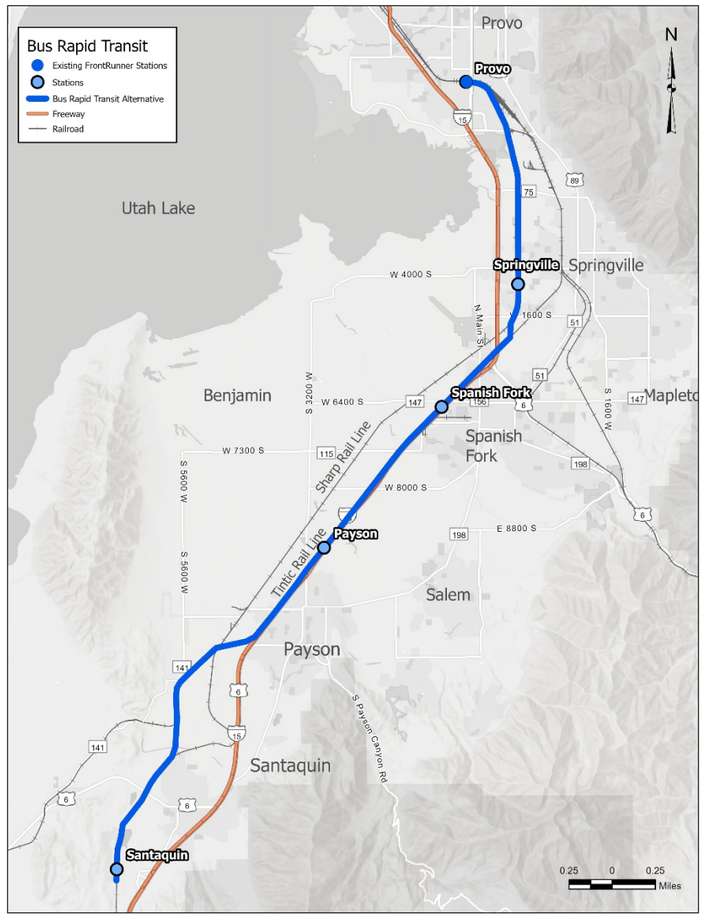
- **Commuter Rail:** Starting at the FrontRunner Provo Station, the commuter rail alternative runs along UTA's right-of-way which follows the Sharp Industrial Lead south to Springville, and then deviates onto the Tintic Industrial Lead and continues to Payson where UTA's right-of-way ends just south of the 800 South interchange. From Payson to Santaquin, the alignment continues on the Tintic Industrial Lead before deviating and rejoining the Sharp Industrial lead until the terminus near Summit Ridge Parkway. Stations are located in Provo (existing), Springville, Spanish Fork, Payson, and Santaquin. In general, the alternative utilizes a single track, with portions of double track at stations and passing sidings.

- **Bus Rapid Transit:** The Bus Rapid Transit Alternative shares the same alignment and station locations as the Commuter Rail Alternative and operates in exclusive right-of-way. Similar to Commuter Rail, the Bus Rapid Transit Alternative utilizes a single bus lane, with portions of two-lane sections at stations and passing sidings. Separation between freight and BRT would be required in select locations.
- **Bus Rapid Transit Design Option**: From the FrontRunner Provo station, the Bus Rapid Transit Design Option utilizes existing streets in mixed flow to access I-15. Following I-15 to 400 S in Springville, the bus will continue to operate in mixed flow. After the Springville station, the bus will continue south on 1200 West before accessing the rail corridor, where the bus will operate in an exclusive transit corridor. The bus will continue along the rail corridor until 800 South (Payson) where the bus will continue in mixed-use flow on I-15 until accessing the Santaquin station via Summit Ridge Parkway.

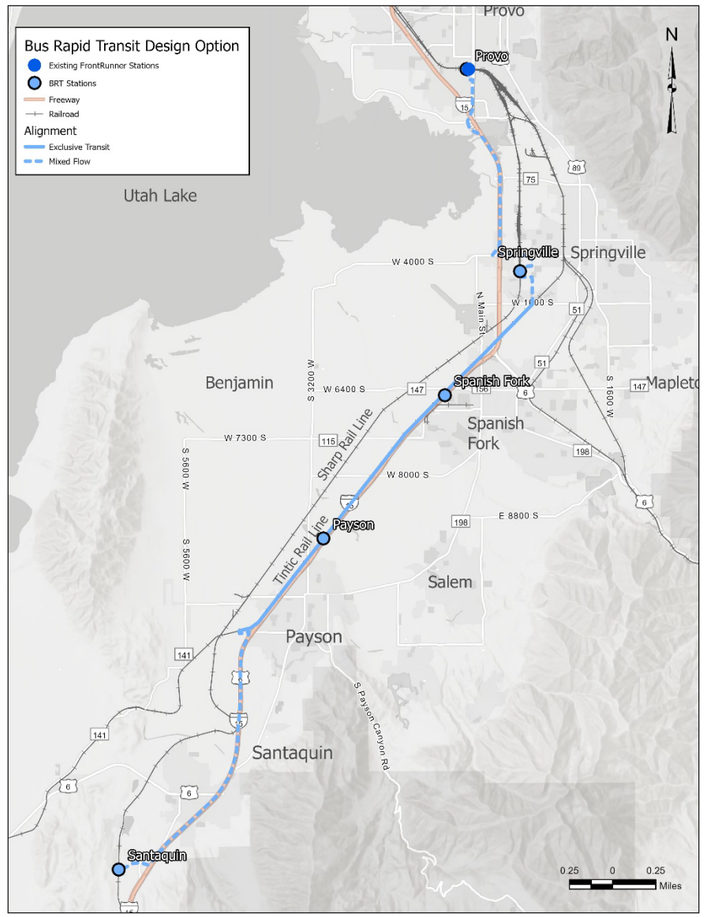




Commuter Rail Alternative



Bus Rapid Transit Alternative



Bus Rapid Transit Design Option Alternative

Each of the three alternatives was paired with two operating scenarios to better understand the influence of service frequency on ridership and cost effectiveness. These service options include:

- **Operational Scenario A: High Frequency –** All day service, with frequencies ranging between 30 and 60 minutes to match current FrontRunner operations. Commuter rail would not transfer in Provo, but BRT would include a transfer because of the mode change.
- **Operational Scenario B: AM/PM Peak Hour Only** – Four hours of service in the morning, four hours of service in the afternoon; all operating at 60 minute frequencies and requiring a transfer in Provo.

Screening Results

Table 1 provides a summary of the detailed evaluation quantitative results. Tables with the detailed accompanying data are located at the end of this document.

Detailed Evaluation Findings

The detailed evaluation revealed several findings related to the different modes, operating scenarios, and phasing considerations.

Modal Findings

From a modal perspective, the commuter rail alternative and BRT alternative both performed well with regards to:

- Transit reliability
- Transportation system impacts
- Land use compatibility
- TOD potential
- Natural/built environmental impacts

BRT did not perform as well as commuter rail in categories such as travel times, ridership, cost (note that higher BRT costs are attributed to physical barriers required along alignment where BRT operates adjacent to freight which increases costs), return on investment, and construction complexity.

The BRT Design Option scored well from a cost perspective, but the degree of mixed flow operations reduced travel times, reliability, ridership, and return on investment.

Operational Scenario Findings

Operational Scenario A, mirroring current all-day FrontRunner service, has better ridership estimates, travel times, and overall return on investment than Operational Scenario B; however, this scenario typically has higher annual operating and maintenance costs.

Phasing Considerations

The detailed evaluation illustrated several key findings related to phasing and implementation as well, which will help inform the Locally Preferred Alternative and implementation plan.

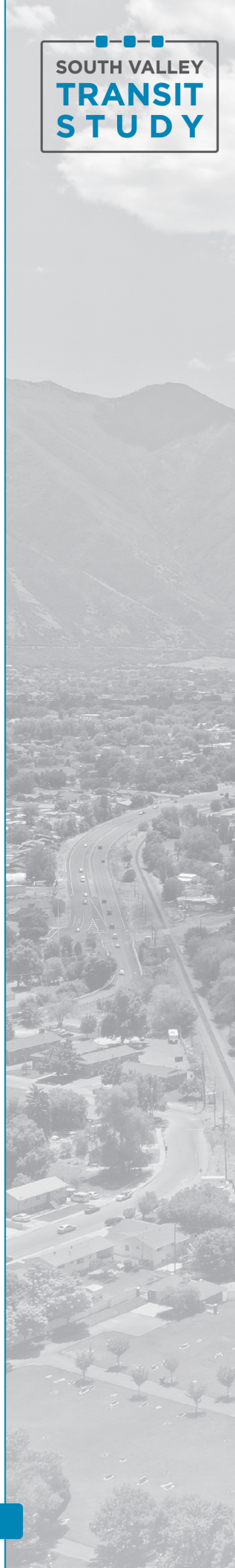


Table 1. Detailed Evaluation – Summary Results

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only
Regional transit travel times	Santaquin to FR Provo: 30 minutes Santaquin to FR Lehi: 58 minutes	Santaquin to FR Provo: 30 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 29 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 29 minutes Santaquin to FR Lehi: 73 minutes	Santaquin to FR Provo: 35 minutes Santaquin to FR Lehi: 78 minutes	Santaquin to FR Provo: 35 minutes Santaquin to FR Lehi: 78 minutes
Transit reliability	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	100% of transit operates in exclusive guideway	58% of transit operates in exclusive guideway	58% of transit operates in exclusive guideway
Transit ridership	Daily boardings (2050) » Provo - 6,039 » Springville - 1,969 » Spanish Fork - 1,394 » Payson - 723 » Santaquin - 658 » **Total w/o Provo – 4,744** » **Total with Provo – 10,783**	Daily boardings (2050) » Provo – 6,691 » Springville - 633 » Spanish Fork - 387 » Payson - 166 » Santaquin - 300 » **Total w/o Provo – 1,486** » **Total with Provo – 8,177**	Daily boardings (2050) » Provo – 6,428 » Springville – 420 » Spanish Fork – 293 » Payson - 143 » Santaquin - 233 » **Total w/o Provo – 1,089** » **Total with Provo – 7,517**	Daily boardings (2050) » Provo – 6,051 » Springville - 271 » Spanish Fork - 200 » Payson - 108 » Santaquin - 159 » **Total w/o Provo – 738** » **Total with Provo – 6,789**	Daily boardings (2050) » Provo – 5,750 » Springville - 124 » Spanish Fork - 187 » Payson - 100 » Santaquin - 132 » **Total w/o Provo – 543** » **Total with Provo – 6,292**	Daily boardings (2050) » Provo – 5,591 » Springville - 80 » Spanish Fork - 129 » Payson - 75 » Santaquin - 90 » **Total w/o Provo – 375** » **Total with Provo – 5,966**
Capital cost (2026 dollars) (Rough order of magnitude cost includes estimated construction, right-of-way, program, and vehicle fleet costs)	» $800 M – 1.1 B (Provo to Santaquin) » $550 – 750 M (Provo to Payson)	» $800 M – 1.1 B (Provo to Santaquin) » $500 – 750 M (Provo to Payson)	» $1.1 – 1.5 B (Provo to Santaquin)[1] » $650 – 900 M (Provo to Payson)[1]	» $1.1 – 1.5 B (Provo to Santaquin)[1] » $650 – 900 M (Provo to Payson)[1]	» $400 – 550 M (Provo to Santaquin) » $300 – 400 M (Provo to Payson)	» $350 – 500 M (Provo to Santaquin) » $250 – 300 M (Provo to Payson)
Annual O&M cost estimate (2026 dollars/year)	» $13.5 M/yr (Provo to Santaquin) » $8.1 M/yr (Provo to Payson)	» $3.5 M/yr (Provo to Santaquin) » $2.1 M/yr (Provo to Payson)	» $3.7 M/yr (Provo to Santaquin) » $2.2 M/yr (Provo to Payson)	» $1.2 M/yr (Provo to Santaquin) » $0.7 M/yr (Provo to Payson)	» $3.9 M/yr (Provo to Santaquin) » $2.4 M/yr (Provo to Payson)	» $1.2 M/yr (Provo to Santaquin) » $0.7 M/yr (Provo to Payson)
Return on investment (cost/rider)	» Lowest cost per rider of all alternatives (Provo to Santaquin) » Improves ROI performance by ~30% (Provo to Payson)	» 2x higher CRT Scenario A (Provo to Santaquin) » Improves ROI performance by ~35% (Provo to Payson)	» 4x higher CRT Scenario A (Provo to Santaquin) » Improves ROI performance by ~40% (Provo to Payson)	» 5x higher CRT Scenario A (Provo to Santaquin) » Improves ROI performance by ~40% (Provo to Payson	» 4x higher CRT Scenario A (Provo to Santaquin) » Improves ROI performance by ~20% (Provo to Payson)	» 3.5x higher CRT Scenario A (Provo to Santaquin) » Improves ROI performance by ~20% (Provo to Payson)

[1] Note that higher BRT costs are attributed to physical barriers required along alignment where BRT operates adjacent to freight.

Alignment

Provo to Payson is a key segment of the alignment. This segment, without the extension to Santaquin, reduces both capital and operating and maintenance costs, improves the return on investment, and reduces impacts to the natural and built environments. This segment from Provo to Payson has the potential to be a starter segment that can be extended as ridership warrants.

The Payson to Santaquin segment includes many implementation and construction complexities and will require more advance work. For example, an evaluation should occur on the degree and impact on prime agricultural lands. A focus should be made on identifying the route in this segment and preserving right-of-way since UTA does not own right-of-way south of approximately 800 South in Payson. Lastly, express bus service could be considered as an interim improvement to lay the foundation for ridership and connectivity to the larger project.

Modes

Table 2 presents the implementation trade-offs between commuter rail and bus rapid transit.

Table 2. Modal Phasing and Implementation Considerations

Commuter Rail	Bus Rapid Transit
• Less flexibility for phased implementation » Must be implemented from north to south » Requires fully exclusive operations	• Greatest flexibility for phased implementation » BRT can operate in various environments, fully exclusive to mixed flow if right-of-way and/or funding is limited, or if other constraints are present
• Start with regional express bus, phase to commuter rail as funding becomes available and ridership is established » BRT not recommended as a phasing step	• Start with regional express bus, phase to BRT as funding is available and ridership is established
• Less flexibility to add stations	• Greater flexibility to add stations, though may reduce efficiency
• Limitations to serving desired stations until supporting infrastructure and land use is in place (highway and roadway connections)	• Greater flexibility to serve desired stations while supporting investments are implemented (highway and roadway connections)
• Could operate as a shuttle and phased into interlined FrontRunner service as demand warrants	

Proposed Recommendation – Preferred Alternative

Based on the Detailed Evaluation results, the Locally Preferred Alternative was developed and approved by the Executive Committee. The Locally Preferred Alternative includes:

- Commuter Rail – Provo to Payson
  - » Explore different operational scenario(s) to reduce O&M costs while maintaining high levels of ridership (focus on commuter trips)
- Express Bus Service – Payson to Santaquin
  - » Explore corridor preservation opportunities along potential future commuter rail alignment and at future station location

Stakeholder Outreach and Coordination

As part of the alternatives evaluation process, a series of one-on-one meetings were held with each city in the study area to present the findings of the evaluation and discuss preferences for the Locally Preferred Alternative. In addition, a series of pop-up meetings were held at community events through the study area, resulting in over 800 public comments and more than 2,500 website views. Common input themes we received include:

- Support for frequent, reliable (transit priority and exclusivity where possible), and affordable service.
- Desire to see high quality development at station areas, including business and commercial opportunities, in addition to housing.
- Strong support for FrontRunner to serve the coming growth and commuting needs; support for all stations (Springville, Payson, Spanish Fork, and Santaquin).
- Need more localized service (providing more frequent service to existing development on the east side of I-15) via local bus, express bus, or BRT to serve additional destinations and connect to future FrontRunner service.
- Support for BRT/express bus/local use to complement FrontRunner.
- A small percentage of opposition for transit in south Utah County was expressed, that it isn't needed and no one will use it.

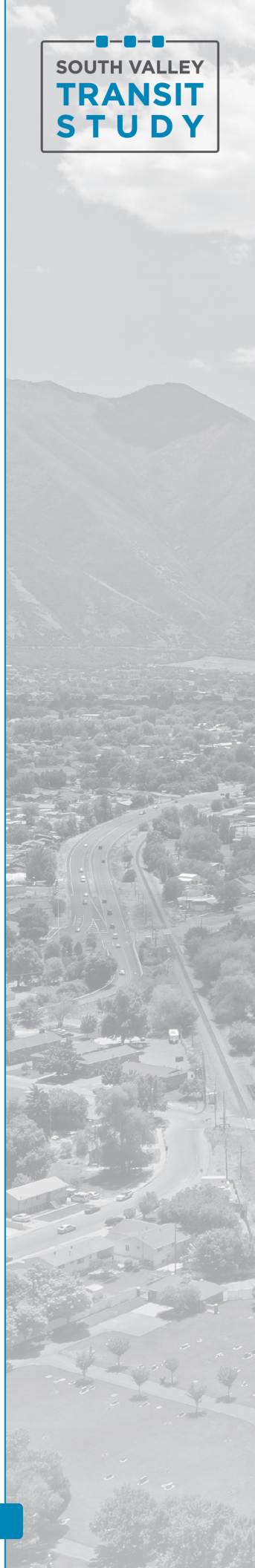
Community Events Attended

- Bike to Work Day (Provo)
- Art City Days (Springville)
- Freedom Festival (Provo)
- Fiesta Days (Spanish Fork)
- Utah County Fair (Spanish Fork)
- Orchard Days (Santaquin)
- Farmer's Market (Provo)
- Festival Latinoamericano (Provo)

Next Steps

Further detail and refinement will be made to the Locally Preferred Alternative, specifically to outline an approach to implementation. The implementation plan will include considerations on potential funding sources, potential phasing options, land use recommendations, and local transit connections.

Additional analysis on the Locally Preferred Alternative will be conducted to provide more accurate estimates on ridership, cost, readiness of development/land use and associated infrastructure projects, along with coordination with the FrontRunner Forward team.



Detailed Evaluation – Full Results

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
Description of Alternative *Rating changes from Provo to Santaquin, compared to Provo to Payson, summarized in italics in this column.*	➢ Commuter Rail Transit (CRT) with portions of single tracking and double tracking at stations and passing sidings. Fully interlined with FrontRunner. ➢ 23.6 miles, 4 new stations – Provo to Santaquin. ➢ 14.0 miles, 3 new stations – Provo to Payson.	➢ CRT with portions of single tracking, and double tracking at stations and passing sidings. Shuttle service does not interline with FrontRunner, requiring transfer. ➢ 23.6 miles, 4 new stations – Provo to Santaquin. ➢ 14.0 miles, 3 new stations – Provo to Payson.	➢ Bus Rapid Transit (BRT) with portions of single lane and portions of two-way passing locations (similar to Commuter Rail – Scenario A). Separation between freight and BRT in select locations. ➢ 23.4 miles, 4 new stations – Provo to Santaquin. ➢ 14.0 miles, 3 new stations – Provo to Payson.	➢ BRT with portions of single lane and portions of two-way passing locations (similar to CRT – Scenario B). Separation between freight and BRT in select locations. ➢ 23.4 miles, 4 new stations – Provo to Santaquin. ➢ 14.0 miles, 3 new stations – Provo to Payson.	➢ From FrontRunner Provo station, utilize existing streets in mixed flow to access I-15. Following I-15 to 400 S in Springville, the bus will operate in mixed flow. After the Springville station, the bus will continue south on 1200 W before accessing the rail corridor, where the bus will operate in an exclusive transit corridor. The bus will continue along the rail corridor until 800 S (Payson) where the bus will continue in mixed use flow on I-15 until accessing the Santaquin station via Summit Ridge Parkway. ➢ 25.2 miles, 4 new stations – Provo to Santaquin. ➢ 14.8 miles, 3 new stations – Provo to Payson.	➢ Same as BRT Design Option Scenario A. ➢ 25.2 miles, 4 new stations – Provo to Santaquin. ➢ 14.8 miles, 3 new stations – Provo to Payson.	➢ Express bus operating in mixed flow traffic on I-15 from FrontRunner Provo to Santaquin Station on Summit Ridge Parkway. ➢ 22.9 miles, 4 stops – Provo to Santaquin.
Transit travel times – within south Utah County and regional trips. *Ratings do not change for Provo to Payson.*	**High performance** ➢ Representative **south Utah County trip** travel time – Santaquin to FrontRunner Provo: 30 minutes. ➢ Representative **regional trip** travel time – Santaquin to FrontRunner Lehi: Total Time: 58 minutes (no transfer penalty).	**Low Performance** ➢ Representative **south Utah County trip** travel time – Santaquin to FrontRunner Provo: 30 minutes. ➢ Representative **regional trip** travel time – Santaquin to FrontRunner Lehi: Total Time: 73 minutes (with 15-minute transfer penalty).	**Medium Performance** ➢ Representative **south Utah County trip** travel time – Santaquin to FrontRunner Provo: 29 minutes. ➢ Representative **regional trip** travel time – Santaquin to FrontRunner Lehi: Total Time: 73 minutes (with 15-minute transfer penalty).	**Medium Performance** ➢ Same as BRT Scenario A.	**Low Performance** ➢ Representative **south Utah County trip** travel time – Santaquin to FrontRunner Provo: 35 minutes. ➢ Representative **regional trip** travel time – Santaquin to FrontRunner Lehi: Total Time: 78 minutes (with 15-minute transfer penalty). ➢ Portions operating in mixed flow traffic subject to congestion not captured here in travel times.	**Low performance** ➢ Same as BRT Design Option Scenario A.	➢ Representative **south Utah County trip** travel time – Santaquin to FrontRunner Provo: TBD. ➢ Representative **regional trip** travel time – Santaquin to FrontRunner Lehi: Total Time: TBD. ➢ Operates completely in mixed flow traffic subject to congestion and not captured here in travel times.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
Transit reliability – percentage of alignment operating in exclusive right-of-way. *Ratings do not change for Provo to Payson.*	**High Performance** ➢ CRT operates 100% exclusively on the rail corridor with high priority at gate crossings and speeds of nearly 80 mph. However, there are frequent speed restrictions along curves and station sidings, and slower acceleration and deceleration speeds that increase travel times compared to BRT.	**High performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ BRT operates 100% exclusively on the rail corridor with high priority at gate crossings and consistent speeds of 70 mph along the corridor.	**High Performance** ➢ Same as BRT Scenario A.	**Medium Performance** ➢ The BRT design option is 58% mixed use along the corridor and 42% exclusive transit operations. Speeds vary from 45 to 70 mph and yield to 9 traffic signals while operating outside the rail corridor.	**Medium Performance** ➢ Same as BRT Design Option Scenario A.	➢ 0% exclusive operations.
Transit ridership – daily forecasted transit ridership (2050), boardings by station, and by access mode (walk/drive). *Ratings do not change for Provo to Payson.*	**High Performance** Daily boardings (2050) ➢ Provo - 6,039 ➢ Springville - 1,969 ➢ Spanish Fork - 1,394 ➢ Payson - 723 ➢ Santaquin - 658 ➢ **Total with Provo – 10,783** ➢ **Total w/o Provo – 4,744**	**Medium Performance** Daily boardings (2050) ➢ Provo – 6,691 ➢ Springville - 633 ➢ Spanish Fork - 387 ➢ Payson - 166 ➢ Santaquin - 300 ➢ **Total with Provo – 8,177** ➢ **Total w/o Provo – 1,486**	**Medium Performance** Daily boardings (2050) ➢ Provo – 6,428 ➢ Springville – 420 ➢ Spanish Fork – 293 ➢ Payson - 143 ➢ Santaquin - 233 ➢ **Total with Provo – 7,517** ➢ **Total w/o Provo – 1,089**	**Low Performance** Daily boardings (2050) ➢ Provo – 6,051 ➢ Springville - 271 ➢ Spanish Fork - 200 ➢ Payson - 108 ➢ Santaquin - 159 ➢ **Total with Provo – 6,789** ➢ **Total w/o Provo – 738**	**Low Performance** Daily boardings (2050) ➢ Provo – 5,750 ➢ Springville - 124 ➢ Spanish Fork - 187 ➢ Payson - 100 ➢ Santaquin - 132 ➢ **Total with Provo – 6,292** ➢ **Total w/o Provo – 543**	**Low Performance** Daily boardings (2050) ➢ Provo – 5,591 ➢ Springville - 80 ➢ Spanish Fork - 129 ➢ Payson - 75 ➢ Santaquin - 90 ➢ **Total with Provo – 5,966** ➢ **Total w/o Provo – 375**	Daily boardings (2050) ➢ **Total with Provo – 1,296** ➢ **Total w/o Provo – 893**
Study area transit trips – effects on overall transit trips within study area compared to No Build. *Ratings not expected to change for Provo to Payson.*	**High Performance** ➢ Compared to No Build, an 80% increase in transit trips within the study area.	**Low performance** ➢ Compared to No Build, a 20% increase in transit trips within the study area.	**Medium Performance** ➢ Compared to No Build, a 65% increase in transit trips within the study area.	**Low performance** ➢ Compared to No Build, a 10% increase in transit trips within the study area.	**Low performance** ➢ Provide similar transit trips compared to No Build.	**Low Performance** ➢ Compared to No Build, an 80% increase in transit trips within the study area.	➢ Not applicable

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
Transportation system impacts – potential effects on existing and planned traffic operations, including freight (rail and truck, as applicable). *Ratings do not change for Provo to Payson.*	**High Performance** ➢ CRT operates exclusive to both freight and vehicular traffic. There are 12 gated crossings and several subdivisions along the corridor that vehicular traffic could also be impacted due to the gated crossings; stops would be limited in duration.	**High Performance** ➢ Same as CRT Scenario A, but with impacts to traffic limited to peak hours only.	**High Performance** ➢ Same as CRT, BRT will operate in exclusive right-of-way (ROW) adjacent to the rail corridor with little impact on planned traffic operations. There are 12 gated crossings that vehicular traffic could be impacted due to the gate crossings; stops would be limited in duration.	**High Performance** ➢ Same as BRT Scenario A, but with impacts to traffic limited to peak hours only.	**High Performance** ➢ BRT operates 58% mixed use and 42% exclusive. In the mixed use portions, this option would have limited impacts on existing traffic operations. In exclusive portions, would have impacts similar to CRT and BRT alternatives.	**High Performance** ➢ Same as BRT Design Option Scenario A, but with impacts to traffic limited to peak hours only.	➢ Lack of an alternative transit solution will ultimately result in more vehicles on the roadway, further limiting capacity on the existing transportation system.
Access to employment – Access to employment within 30/60 minutes.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.	➢ Not able to analyze as part of the detailed evaluation. Ratings likely to resemble ridership and transit trips.
Land use compatibility – potential to complement and integrate with existing and planned land uses and densities in terms of capacity, stops and alignment. *Ratings do not change for Provo to Payson.*	**High Performance** ➢ *All alternatives serve the same station locations.* ➢ Stations are located in areas identified as higher growth areas for future population and/or employment. ➢ Surrounding land uses are or are envisioned to be transit-supportive: mixed use, TOD, commercial, and/or village core.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	➢ Without high-capacity transit service, planned land uses may not reach the same mix or densities as with implementation of fixed guideway/ permanent transit.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
TOD potential – development and/or redevelopment potential. *Ratings do not change for Provo to Payson.*	**High Performance** ➢ *All alternatives serve the same station locations.* ➢ The permanence of commuter rail stations and fixed guideway promote development certainty and encourage higher densities. ➢ Station locations are in areas that have a greater likelihood to develop/redevelop to support TOD (large vacant/underutilized parcels are present, or favorable zoning or policies are in place). ➢ TOD readiness varies by station, with several ready for TOD and others lacking major infrastructure to serve development.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Same as CRT Scenario A.	**Medium Performance** ➢ Same as CRT Scenario A; however, the presence of both exclusive and non-exclusive transit BRT guideway may reduce development certainty compared to commuter rail and BRT.	**Medium Performance** ➢ Same as CRT Scenario A; however, the presence of both exclusive and non-exclusive transit BRT guideway may reduce development certainty compared to commuter rail and BRT.	➢ No Build would serve the same station locations. The lack of permanent guideway and station areas associated with this type of transit service would not promote development certainty compared to commuter rail and BRT. TOD potential would be more limited.
Capital cost estimate (2026 dollars) – rough order of magnitude capital cost of program (construction, right-of-way vehicles, etc.). *Capital costs are substantially reduced for Provo to Payson, ratings do not change.*	**Medium Performance** ➢ $800 – 1.1 B (Provo to Santaquin) ➢ $550 – 750 M (Provo to Payson) ➢ Rough order of magnitude capital cost range based on representative alignment, including an allowance for real estate/soft costs, vehicles, maintenance facilities, and station programming elements. Operations, maintenance, and state of good repair costs are not included.	**Medium Performance** ➢ Same as CRT Scenario A. Slight variations based on different fleet assumptions for operational scenario. ➢ $800 – 1.1 B (Provo to Santaquin) ➢ $550 – 750 M (Provo to Payson) ➢ Could have minor cost differences due to different siding assumptions based on operational scenario but would be within estimated range.	**Low Performance** ➢ $1.1 – 1.5 B (Provo to Santaquin) ➢ $650 – 900 M (Provo to Payson) ➢ Note that higher BRT costs are attributed to physical barriers required along alignment where BRT operates adjacent to freight. ➢ Rough order of magnitude capital cost range based on representative alignment, including an allowance for real estate/soft costs,	**Low Performance** ➢ Same as BRT Scenario A. Slight variations based on different fleet assumptions for operational scenario. ➢ $1.1 – 1.5 B (Provo to Santaquin) ➢ $650 – 900 M (Provo to Payson) ➢ Note that higher BRT costs are attributed to physical barriers required along alignment where BRT operates adjacent to freight. ➢ Could have minor cost differences due to	**High Performance** ➢ $400 – 550 M (Provo to Santaquin) ➢ $300 – 400 M (Provo to Payson) ➢ Rough order of magnitude capital cost range based on representative alignment, including an allowance for real estate/soft costs, vehicles, maintenance facilities, and station programming elements. Operations, maintenance, and state of good repair costs are not included.	**High Performance** ➢ Same as BRT Design Option A. Slight variations based on different fleet assumptions for operational scenario. ➢ $350 – 500 M (Provo to Santaquin) ➢ $250 – 300 M (Provo to Payson)	➢ No major capital cost outside of purchase of additional vehicles and bus stop amenities.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
			vehicles, maintenance facilities, and station programming elements. Operations, maintenance, and state of good repair costs are not included.	different siding assumptions based on operational scenario but would be within estimated range.			
Annual O&M cost estimate (2026 dollars) – rough order of magnitude annual O&M cost. *O&M costs are substantially reduced for Provo to Payson, ratings do not change.*	**Low Performance** ➢ $13.5 M/yr (Provo to Santaquin) ➢ $8.1 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (commuter rail).	**Medium Performance** ➢ $3.5 M/yr (Provo to Santaquin) ➢ $2.1 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (commuter rail).	**Medium Performance** ➢ $3.7 M/yr (Provo to Santaquin) ➢ $2.2 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (fixed guideway BRT).	**High Performance** ➢ $1.2 M/yr (Provo to Santaquin) ➢ $0.7 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (fixed guideway BRT).	**Medium Performance** ➢ $3.9 M/yr (Provo to Santaquin) ➢ $2.4 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (fixed guideway BRT).	**High Performance** ➢ $1.2 M/yr (Provo to Santaquin) ➢ $0.7 M/yr (Provo to Payson) ➢ O&M costs based on UTA's cost model spreadsheet; estimates cost per corridor mile by mode/service type (fixed guideway BRT).	➢ No Build would include O&M costs for Express Bus service; similar to BRT, Scenario B.
Return on Investment – annualized investment per rider. *ROI is reduced for Provo to Payson, ratings do not change except for BRT (noted)*	**High Performance** ➢ Lowest cost per rider of all alternatives (Provo to Santaquin). ➢ Improves ROI performance by ~30% (Provo to Payson).	**Moderate Performance** ➢ 2x higher than CRT Scenario A (Provo to Santaquin). ➢ Improves ROI performance by ~35% (Provo to Payson).	**Low Performance** ➢ 4x higher than CRT Scenario A (Provo to Santaquin). ➢ Improves ROI performance by ~40% (Provo to Payson) – rating would improve to medium for Provo to Payson.	**Low Performance** ➢ 5x higher than CRT Scenario A (Provo to Santaquin). ➢ Improves ROI performance by ~40% (Provo to Payson) – rating would improve to medium for Provo to Payson.	**Low Performance** ➢ 4x higher than CRT Scenario A (Provo to Santaquin). ➢ Improves ROI performance by ~20% (Provo to Payson).	**Low Performance** ➢ 3.5x higher than CRT Scenario A (Provo to Santaquin). ➢ Improves ROI performance by ~20% (Provo to Payson).	
Construction complexity – noted construction challenges and complexity.	**Medium Performance** ➢ The alignment follows existing rail for the majority of the corridor but requires several major infrastructure improvements including 9 bridges, including one major flyover crossing UP active	**Medium Performance** ➢ Same as CRT Scenario A.	**Low Performance** ➢ Same as Commuter Rail Scenario A ➢ In addition, the widening required for BRT would likely impact power lines that run parallel to a long section	**Low Performance** ➢ Same as BRT Scenario A.	**High Performance** ➢ The BRT design option utilizes existing roads and infrastructure throughout the mixed-use portion of the alignment. While along the rail corridor portion, the alignment crosses over 5	**Low Performance** ➢ Same as BRT Design Option Scenario A.	➢ No construction required.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
Construction complexity is reduced for Provo to Payson, ratings do not change.	tracks. The alignment crosses under 12 bridges which could require possible widening or other improvements.		of the corridor through Springville. Where adjacent to freight rail, a crash barrier is assumed for separation purposes.		bridges that would potentially need improvements and under 4 bridges that would also require potential widening or other improvements.		
Natural or built environment considerations – potential for adverse effects on natural environment resources. *Natural environment impacts are substantially reduced for Provo to Payson, ratings do not change.*	**Medium Performance** ➢ Portion of alignment between Payson and Santaquin (where alignment connects from Tintic to Sharp lines) transects lands with agricultural protection. ➢ Water resources and wetlands in proximity to the rail corridor from Provo to Springville. ➢ Wetlands in proximity to proposed Spanish Fork Station and wetlands and water resources to the north of the proposed Payson Station.	**Medium Performance** ➢ Same as CRT Scenario A.	**Medium Performance** ➢ Same as CRT Scenario A.	**Medium Performance** ➢ Same as CRT Scenario A.	**High Performance** ➢ Impacts to natural resources may be limited by utilizing existing roadways for sections from Provo to Springville (potential water resource impacts along rail corridor) and Payson to Santaquin (potential agricultural impacts along rail corridor).	**High Performance** ➢ Same as BRT Design Option Scenario A.	➢ No impacts to natural or built environment resources.
Estimated property impacts – Estimated square footage based on assumed project footprint. *Estimated property impacts are substantially reduced for Provo to Payson, ratings do not change.*	**Medium Performance** ➢ CRT utilizes an existing 20'-wide UTA easement from Provo to Springville. South of Springville, an existing rail corridor will be repurposed and used for transit. Available ROW terminates south of Payson and new ROW must be acquired to reestablish the corridor to Santaquin. Additional property will be required at sidings and at stations throughout the corridor. ➢ Estimated 1M sq ft (Provo to Santaquin).	**Medium Performance** ➢ Same as CRT Scenario A.	**Medium Performance** ➢ BRT utilizes an existing UTA easement from Provo to Springville, although additional room would be required to install crash/separation barrier between freight and BRT. South of Springville, an existing rail corridor will be repurposed and used for transit. Available ROW terminates south of Payson and new ROW must be acquired to	**Medium Performance** ➢ Same as BRT Scenario A.	**High performance** ➢ The BRT design option mainly utilizes existing roads from Provo to Springville. South of Springville, an existing rail corridor will be repurposed. South of Payson, the rail corridor changes ownership, and the BRT design option leaves the rail corridor and utilizes I-15 south to Santaquin. This design option limits the purchase of ROW. ➢ Estimated 50K sq ft (Provo to Santaquin). ➢ Estimated 50K sq ft (Provo to Payson).	**High Performance** ➢ Same as BRT Design Option Scenario A.	➢ No additional property impacts.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
	➢ Estimated 200K sq ft (Provo to Payson).		reestablish the corridor to Santaquin. Additional property will be required at sidings and at stations throughout the corridor; however, these features would require less property than CRT. ➢ Estimated 900K sq ft (Provo to Santaquin). ➢ Estimated 200K sq ft (Provo to Payson).				
Phasing and implementation considerations – notable factors related to phasing and implementation of full buildout over time. Includes vehicle technology considerations. *Measure not scored; narrative provided for consideration.*	➢ Rail-based technologies such as CRT are not as flexible for implementation and would have to be implemented from Provo south in geographically continuous segments. Implementation requires fully exclusive transit along the full corridor length. ➢ Likely phasing of CRT could include regional express bus serving desired commuter rail stations, provided highway access is available. As funding becomes available and ridership established, express bus could be replaced by CRT. BRT is not recommended for phasing to CRT. The large capital investment required for BRT would reduce the likelihood of future conversion to CRT. ➢ Operational scenarios can be scaled to meet demand. ➢ Vehicle technology would be consistent with FrontRunner,	➢ Similar to CRT Scenario A with additional considerations: – For the scenario that does not interline with FrontRunner, different vehicle technologies could be explored, including diesel, electro-diesel, or electric vehicles. – Service could be phased into a fully interlined FrontRunner service as demand warrants.	➢ BRT offers greater flexibility for phased implementation. Exclusive guideway for BRT can be implemented in non-contiguous areas based on demand and other factors. BRT can be operated in a variety of environments, from fully exclusive transit lanes to mixed flow if ROW and/or funding is limited or other constraints are present. ➢ Likely phasing of BRT could include regional express bus serving desired BRT stations. As funding becomes available and ridership established, express bus could transition to dedicated facilities for BRT. ➢ BRT would offer greater flexibility to add additional stations;	➢ Same as BRT Scenario A.	➢ Similar flexibility as BRT. ➢ This design option could be considered a phasing option as the corridor moves towards a fully exclusive BRT system.	➢ Same as BRT Design Option A.	➢ The No Build could be a phasing option as project development continues and funding is secured for full build out of the selected alternative.

Detailed Screening Measure	Commuter Rail Operational Scenario A – High frequency	Commuter Rail Operational Scenario B – AM/PM peak only	BRT Operational Scenario A – High frequency	BRT Operational Scenario B – AM/PM peak only	BRT Design Option Operational Scenario A – High frequency	BRT Design Option Operational Scenario B – AM/PM peak only	No Build (Not scored – provided for comparative purposes)
	which currently use diesel trains, although the desire to electrify the FrontRunner system in the future exists.		however, adding stations may reduce the efficiency of the desired regional service. ➢ Operational scenarios can be scaled to meet demand.				
Project stakeholder input & public input *Measure not scored, narrative provided for consideration.*	➢ Support for frequent, reliable (transit priority and exclusivity where possible), and affordable service. ➢ Want to see high quality development at station areas, including business and commercial opportunities, in addition to housing. Support for all FrontRunner stations expressed (Springville, Payson, Spanish Fork, and Santaquin). ➢ Strong support for FrontRunner to serve the coming growth and commuting needs. ➢ Need more localized service (providing more frequent service to existing development on the east side of I-15) via local bus, express bus, or BRT to serve additional destinations and also connecting into future FrontRunner service. ➢ General support for BRT, including more frequent and localized stops. ➢ Support for BRT/express bus/local use to complement FrontRunner. ➢ Opposition for transit in south Utah County was expressed. Primarily that it isn't needed, no one will use it, waste of money, and don't trust UTA.						