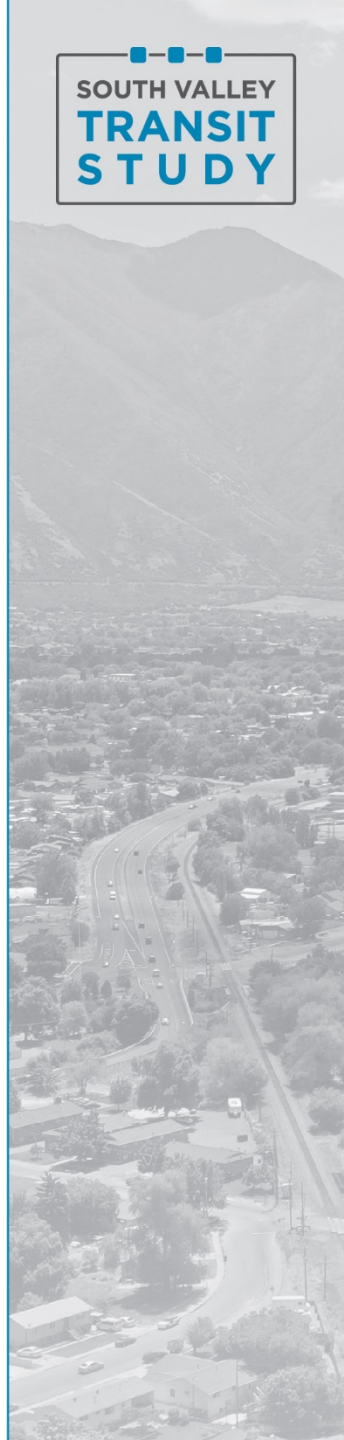


# South Valley Transit Study

Executive/TAC Workshop #4

September 14, 2021 | 12-1:30 p.m.



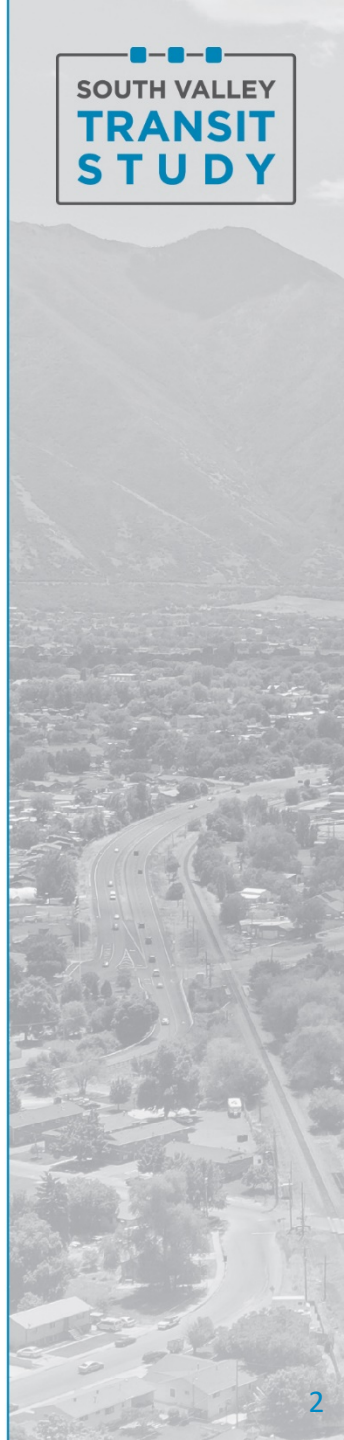
# Welcome and Introductions

## ➤ Welcome

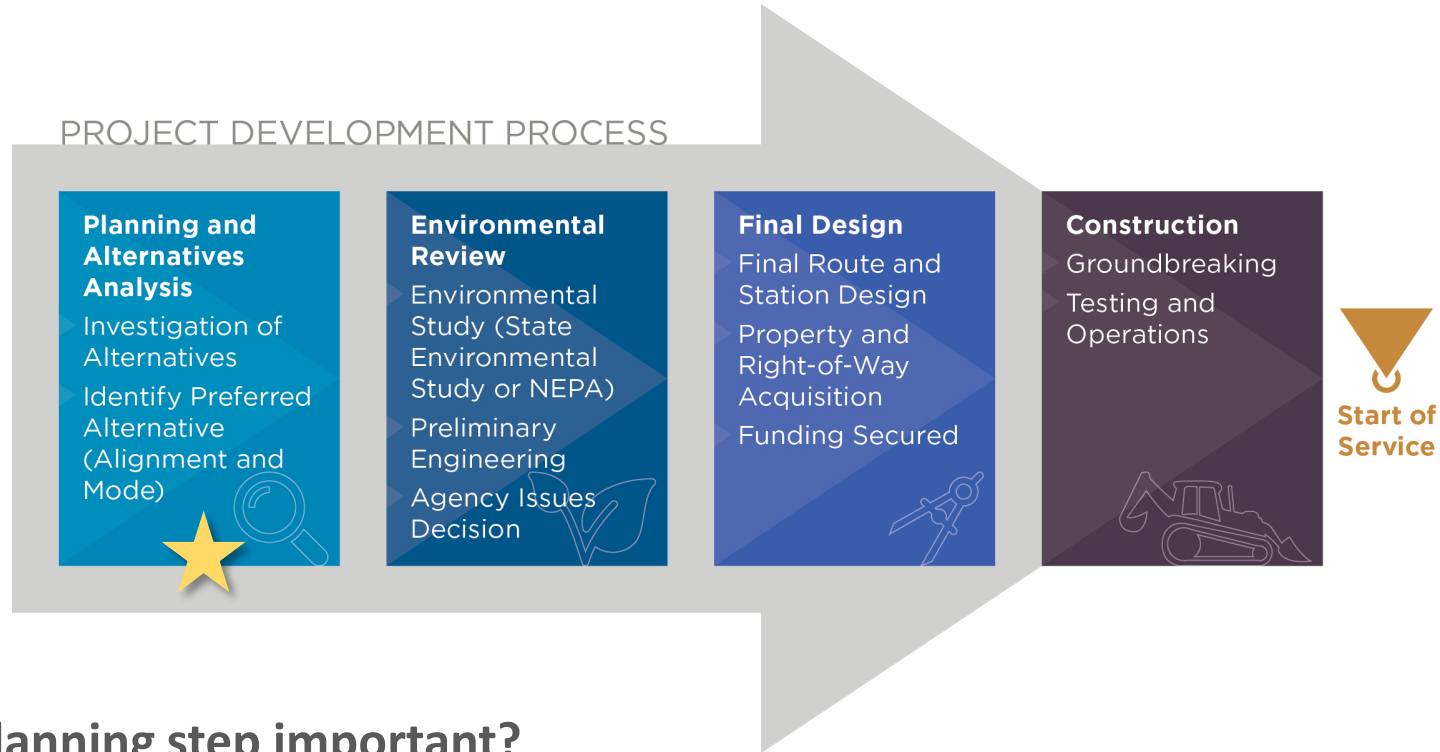
## ➤ Introductions

## ➤ Meeting Agenda

- Study recap and process overview
- Detailed evaluation review
- Next steps
- Stakeholder engagement update



# Transit Project Development Roadmap



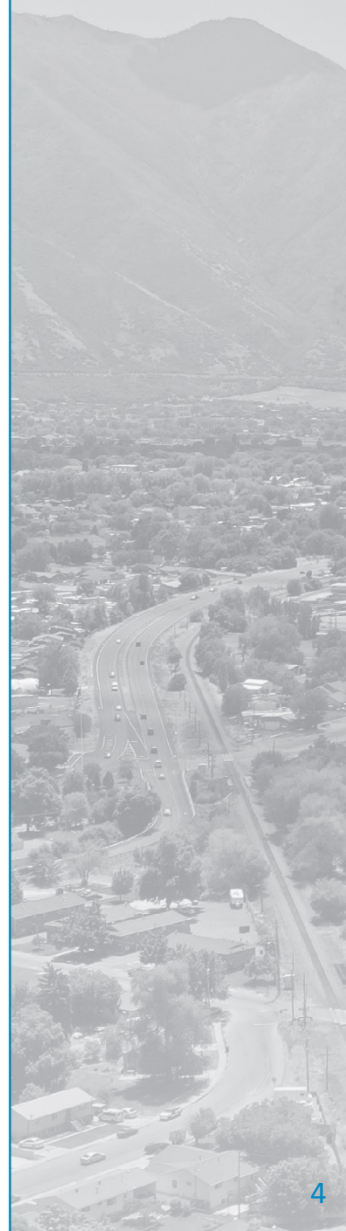
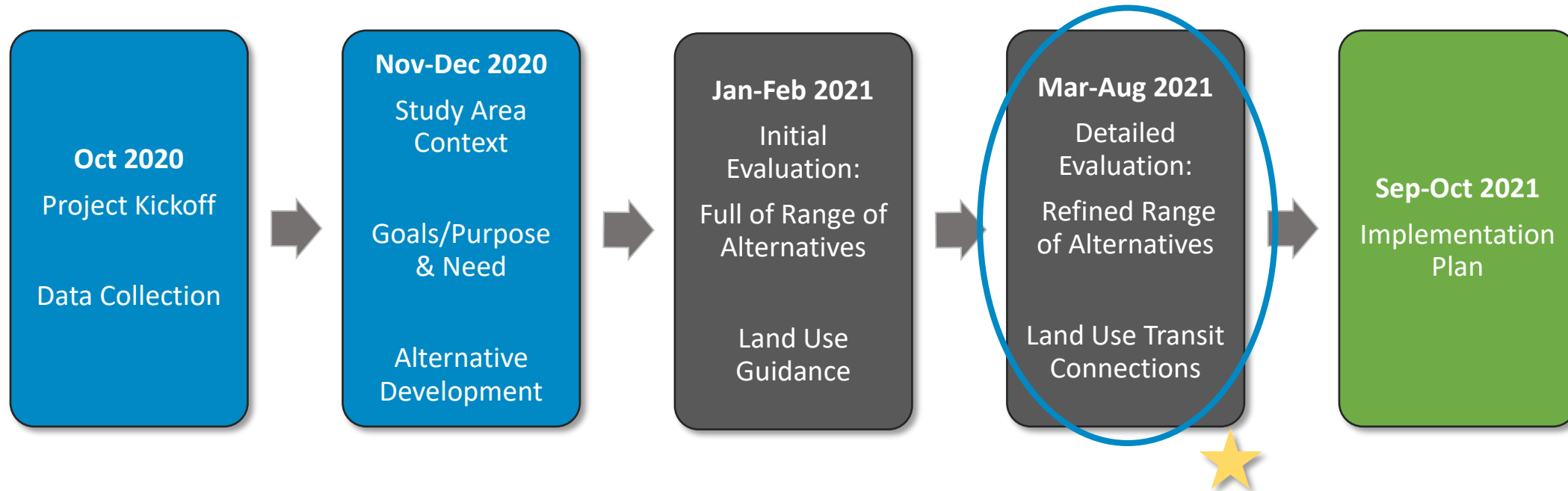
## Why is this planning step important?

- Define the project need
- Develop alignment and transit mode decision for major capital investment
- Future phases build on this step

## How is this step different than environmental review and other future steps?

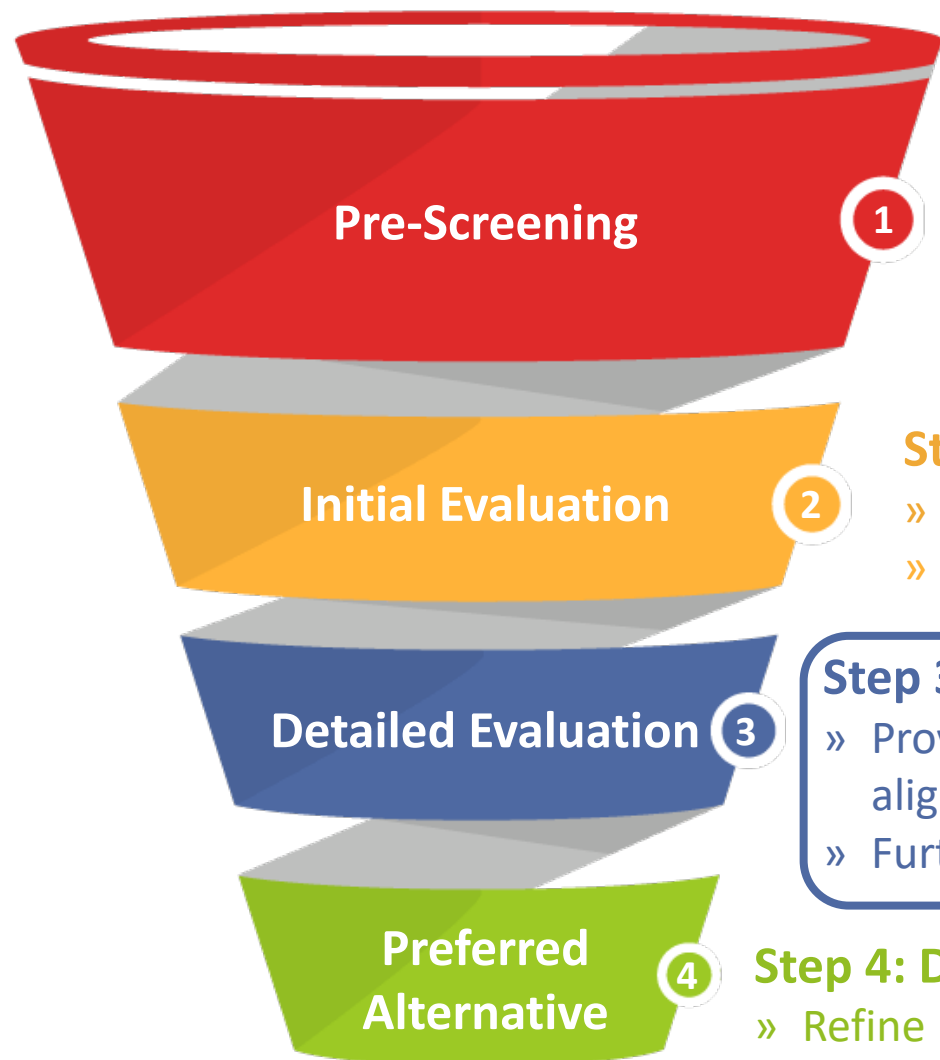
- Increasing level of detail about engineering, cost, and environmental effects with each step

# South Valley Transit Study Roadmap





# Alternatives Evaluation Roadmap



## Step 1: Fatal flaw review

- » Review full range of corridors and modes
  - Does the corridor or mode meet the Purpose & Need?
  - Is there an obvious fatal flaw?
  - Reduce corridors and modes based on pre-screening

## Step 2: Evaluate alternatives at a high-level

- » Combine remaining corridors/modes into logical alternatives
- » Reduce alternatives based on initial evaluation

## Step 3: Evaluate alternatives in more detail

- » Provide greater definition (identify service assumptions, stations, alignment details)
- » Further narrowing of alternatives – select Preferred Alternative

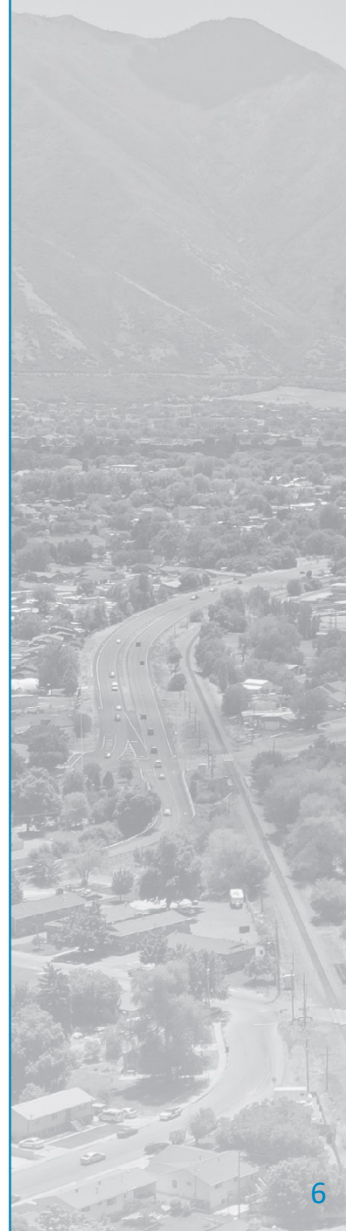
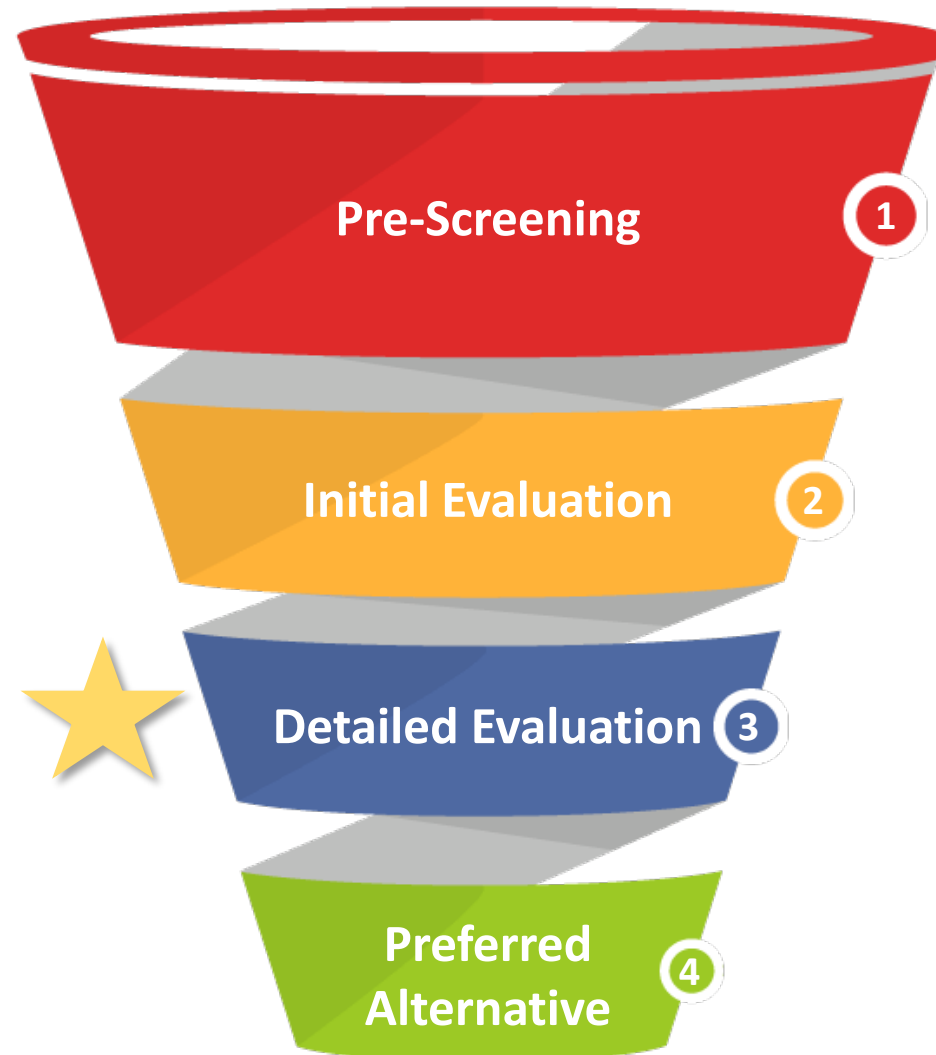
## Step 4: Develop Implementation Plan

- » Refine Preferred Alternative
- » Consider potential phasing options



# Overview - Detailed Alternative Evaluation

- Multi-step alternatives evaluation process to determine the long-term preferred solution for providing expanded transit service in south Utah County, from Provo to Santaquin
- Detailed evaluation step builds on the high-level screening and provides more quantitative information to inform selection of a Preferred Alternative



# 3

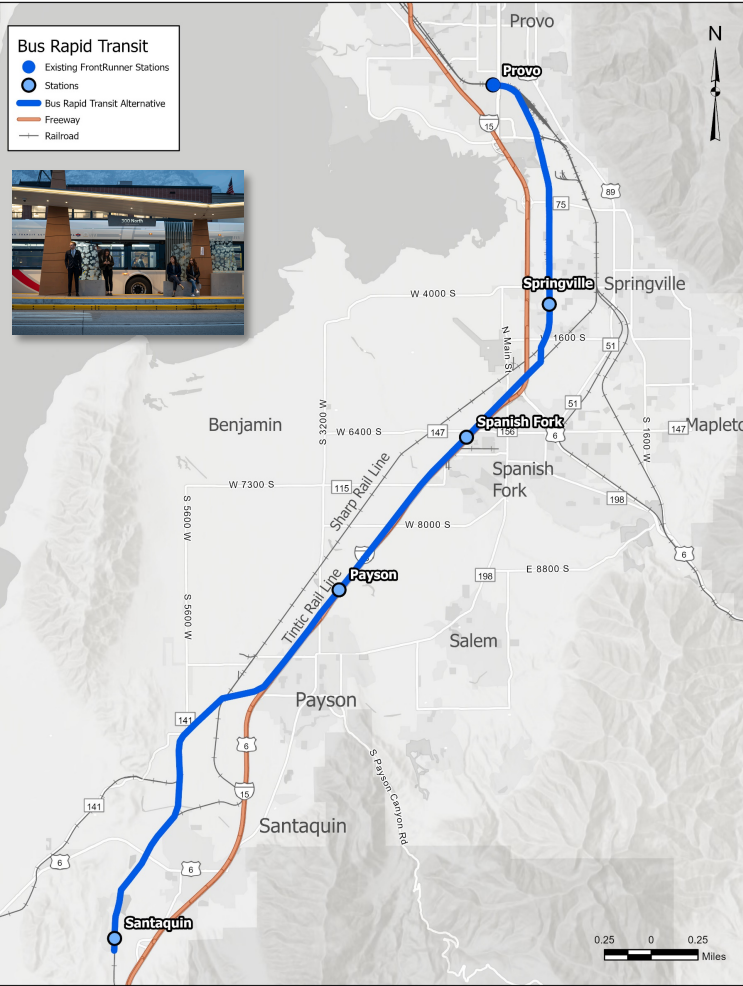
# Detailed Evaluation – Alternatives



## Commuter Rail



## Bus Rapid Transit



## Bus Rapid Transit Design Option



Commuter Rail and Bus Rapid Transit share same alignment/station locations

Bus Rapid Transit Design Option developed to reduce costs and impacts



# 3

## Detailed Evaluation – What did we learn?



### Quantitative Overview

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
<b>Regional transit travel times</b>	 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: 23 minutes Santaquin to FR Lehi: 66 minutes	 Santaquin to FR Provo: 23 minutes Santaquin to FR Lehi: 66 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
<b>Transit reliability</b>	 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
<b>Transit ridership (2050)</b> Assumes modeled land uses	 Daily boardings (2050) • Provo - 6,039 • Springville - 1,969 • Spanish Fork - 1,394 • Payson - 723 • Santaquin - 658 • <b>Total (w/o Provo) – 4,744</b>	 Daily boardings (2050) • Provo – 6,691 • Springville – 633 • Spanish Fork – 387 • Payson – 166 • Santaquin – 300 • <b>Total (w/o Provo) – 1,486</b>	 Daily boardings (2050) • Provo – 6,428 • Springville – 420 • Spanish Fork – 293 • Payson – 143 • Santaquin – 233 • <b>Total (w/o Provo) – 1,089</b>	 Daily boardings (2050) • Provo – 6,051 • Springville – 271 • Spanish Fork – 200 • Payson – 108 • Santaquin – 159 • <b>Total (w/o Provo) – 738</b>	 Daily boardings (2050) • Provo – 5,750 • Springville – 124 • Spanish Fork – 187 • Payson – 100 • Santaquin – 132 • <b>Total (w/o Provo) – 543</b>	 Daily boardings (2050) • Provo – 5,591 • Springville – 80 • Spanish Fork – 129 • Payson – 75 • Santaquin – 90 • <b>Total (w/o Provo) – 375</b>
<b>Capital cost (2026 dollars)</b> (Rough order of magnitude cost includes estimated construction, right-of-way, station 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) • \$650 – 900 M (Provo to Payson)	 • \$1.1 – 1.5 B (Provo to Santaquin) • \$650 – 900 M (Provo to Payson)	 • \$400 – 550 M (Provo to Santaquin) • \$300 – 400 M (Provo to Payson)	 • \$350 – 500 M (Provo to Santaquin) • \$250 – 300 M (Provo to Payson)
<b>Annual O&amp;M estimate (2026 dollar/year)</b>	 • \$21.5 M/yr (Provo to Santaquin) • \$12.8 M/yr (Provo to Payson)	 • \$5.8 M/yr (Provo to Santaquin) • \$3.5 M/yr (Provo to Payson)	 • \$8.2 M/yr (Provo to Santaquin) • \$4.9 M/yr (Provo to Payson)	 • \$2.6 M/yr (Provo to Santaquin) • \$1.6 M/yr (Provo to Payson)	 • \$8.7 M/yr (Provo to Santaquin) • \$5.2 M/yr (Provo to Payson)	 • \$2.8 M/yr (Provo to Santaquin) • \$1.7 M/yr (Provo to Payson)
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# 3 Detailed Evaluation – What did we learn?









## Similarities:

### Commuter Rail & BRT







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

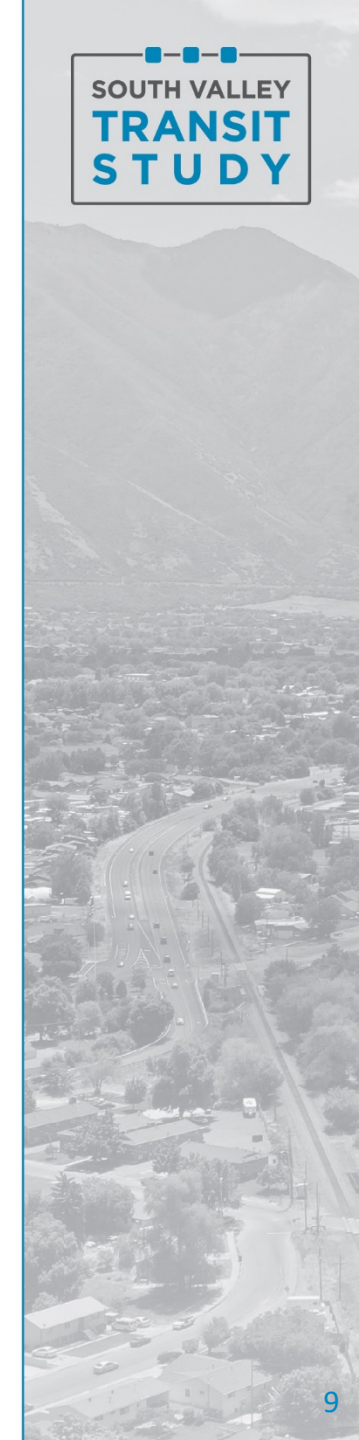
## Differences:

### Commuter Rail

-  Regional travel times
-  Ridership
-  Capital costs
-  O&M costs
-  Return on investment
-  Construction complexity

### BRT

-  Regional travel times
-  Ridership
-  Capital costs
-  O&M costs
-  Return on investment
-  Construction complexity



# 3 Detailed Evaluation – What did we learn?



## ➤ How is the BRT Design Option different?



- **Improves performance by:**

- Reducing capital costs
- Reducing O&M cost
- Reducing natural/built environment impacts
- Reducing construction complexity



- **Reduces performance by:**

- Increasing travel times
- Reducing ridership
- Less land use compatibility
- Reducing TOD potential
- Higher return on investment





# 3 Detailed Evaluation – Operational Scenarios



## ➤ Why were operations considered?

- Understand influence of service frequency on ridership
- Understand implications of annual operating costs

## ➤ Two Operational “Bookends”

- Scenario A: High Frequency
  - 30-min peak/60-min off peak to match FrontRunner frequency
  - Commuter rail would not transfer in Provo, BRT would transfer due to mode change
- Scenario B: AM/PM Peak
  - AM/PM Peak Service (4 trips/hour)

## Differences between A & B

Reducing transit frequency (Scenario A) :



### • Reduces O&M cost

- O&M Cost



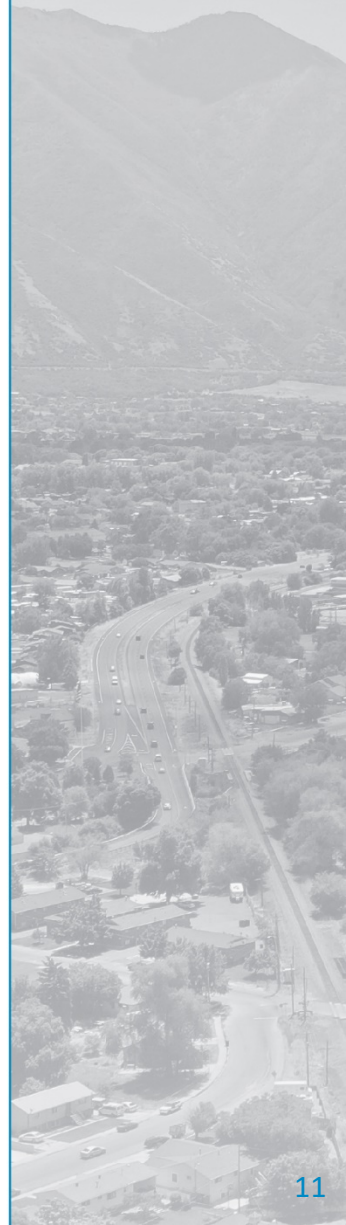
### • Reduces performance in:

- Ridership
- Return on investment



### • Similarities:

- Travel times
- Capital Costs
- Land Use Compatibility
- TOD potential
- Construction Complexity



# 3

## Detailed Evaluation – What did we learn?



### Quantitative Overview

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# 3

## Detailed Evaluation – What did we learn?



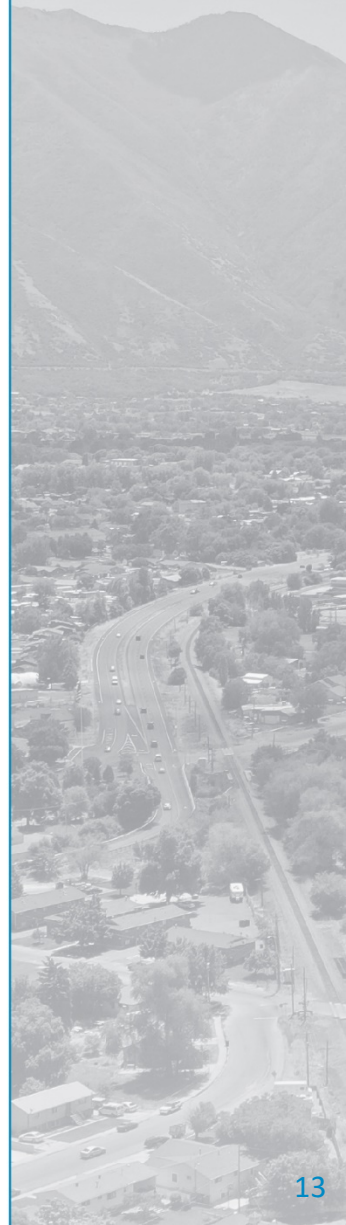
### Phasing and Implementation Considerations (1 of 2)

#### Commuter Rail

- **Less flexibility for phased implementation**
  - Must be implemented from north to south
  - Requires fully exclusive operations
- Start with regional express bus, phase to commuter rail as funding available and ridership established
  - BRT not recommended as a phasing step
- Could operate as a shuttle and phased into interlined FrontRunner service as demand warrants
- Less flexibility to add additional stations
- Limitations to serving desired stations until supporting infrastructure and land use is in place (highway and roadway connections)

#### Bus Rapid Transit

- **Greatest flexibility for phased implementation**
  - BRT can operate in a various environments, fully exclusive to mixed flow if ROW and/or funding is limited or if other constraints are present
- Start with regional express bus, phase to BRT as funding available and ridership established
- Greater flexibility to add additional stations, though may reduce efficiency
- Greater flexibility to serve desired stations while supporting investments are implemented (highway and roadway connections)



# 3 Detailed Evaluation – What did we learn?



## Phasing and Implementation Considerations (2 of 2)

- Provo to Payson is key segment
  - Reduces cost (capital and O&M)
  - Improves return on investment
  - Reduces natural and built environment impacts
- Payson to Santaquin
  - Focus on identification and preservation of right-of-way
  - Evaluate agricultural considerations and impacts
  - Express bus service connecting Santaquin to project





# 3

## Detailed Evaluation – Public Input



To date:



- 818 comments
- 2,564 website users

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)



## 3

# Detailed Evaluation – Public Input



## What did we hear so far?

- 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.
- 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.
- Opposition for transit in south Utah County was expressed (small percentage of overall comments). Primarily that it isn't needed, no one will use it, waste of money, etc.





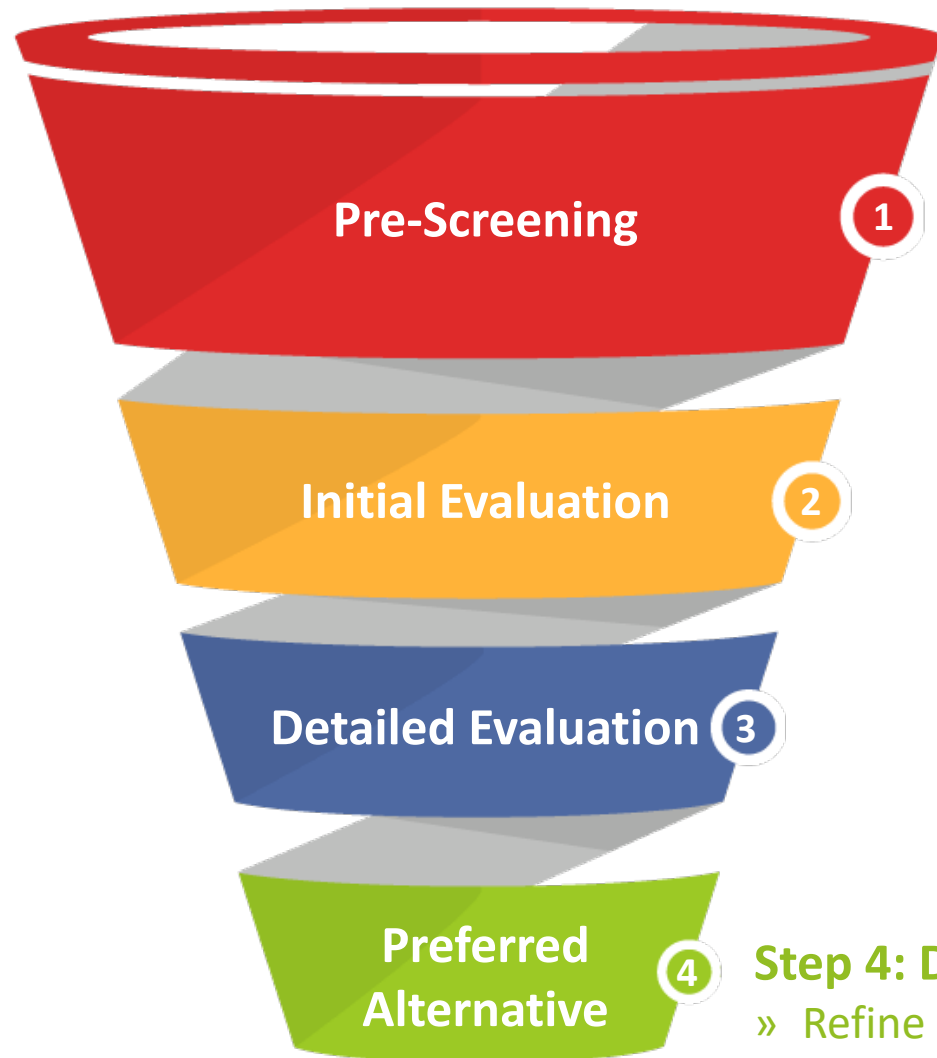


## ➤ **Proposed Preferred Alternative Recommendation (2050)**

- **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

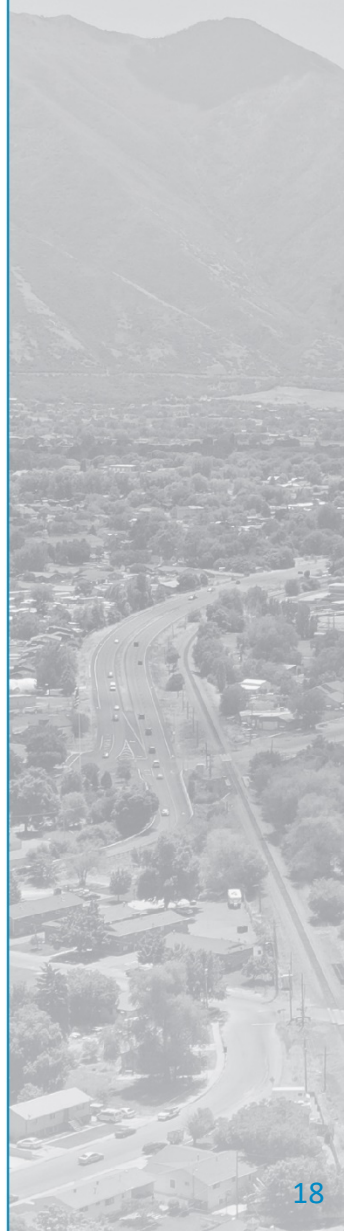


# Alternatives Evaluation Roadmap – Next Steps



## Step 4: Develop Implementation Plan

- » Refine Preferred Alternative
- » Consider potential phasing options



# 4 Preferred Alternative

## How do we implement the Preferred Alternative?

### ➤ Based on additional analysis of...

- Ridership (model runs and geographic extent of service)
- Cost (capital and O&M)
- Readiness of development/land use and associated infrastructure projects (i.e. future interchanges)
- Other key differentiating factors from detailed evaluation
- Coordination with FrontRunner Forward team

### ➤ Implementation will include considerations on:

- Potential funding sources
- Potential phasing options
- Land use recommendations
- Local transit connections





# Program Milestones & Accomplishments

- ✓ **Operations Planning is underway**
  - ❑ Identified initial projects for increased Capacity, Speed, Reliability, and Frequency
- ✓ **Dedicated Program Management Team focused on FrontRunner Forward**
  - ❑ Developing both Short and Long-term Vision
  - ❑ Developing Communication tools
  - ❑ Preparing an Initial Investment Plan for the \$300M
  - ❑ Preparing Strategic Business Plan including a Service Vision
  - ❑ Bringing Environmental and Design Services on-board





# What the Business Plan will Study

## Future Service Vision

- Faster, More Reliable Service
- Increased Frequency for Whole Corridor
- Express Trains
- Skip Stop Service
- Future Extensions

## Infrastructure to support Service Vision

- Signal System Upgrades
- Grade Crossing Improvements
- Station Improvements
- New Vehicles & Equipment
- Strategic Double Tracking
- Railway Modernization
- Corridor Preservation for Future Extensions

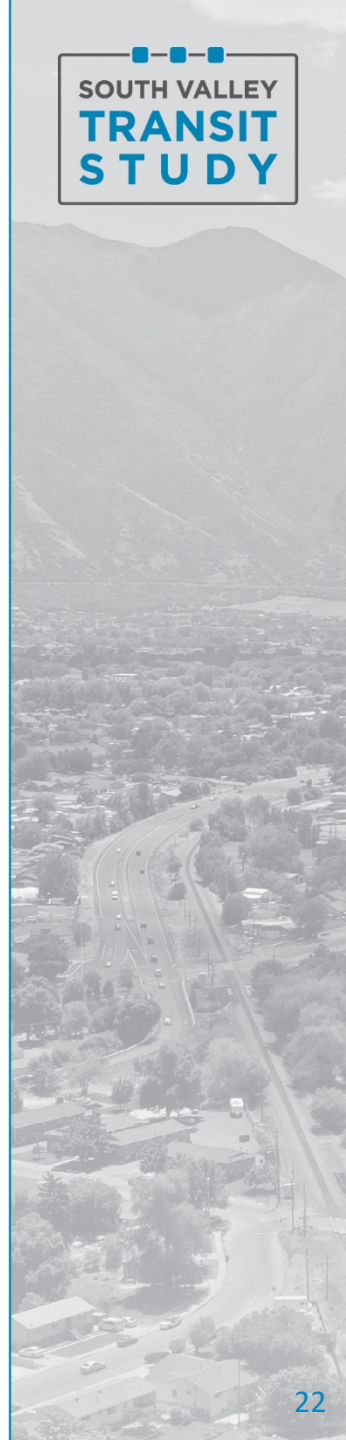


## 4 Preferred Alternative



### How does this study integrate with FrontRunner Forward?

- This study, specifically the Implementation Plan, will be developed to be complementary to the FrontRunner Forward work program
- Study findings will be integrated into FrontRunner Business Plan to continue to move the project forward





# Next Steps and Workshop Wrap-up

- Final meeting in October 2021 to review:
  - Suggested next steps
  - Funding options
  - Land use recommendations
  
- Going back out to the public in next few weeks to present detailed evaluation findings
  
- Thank you for your continued participation!

