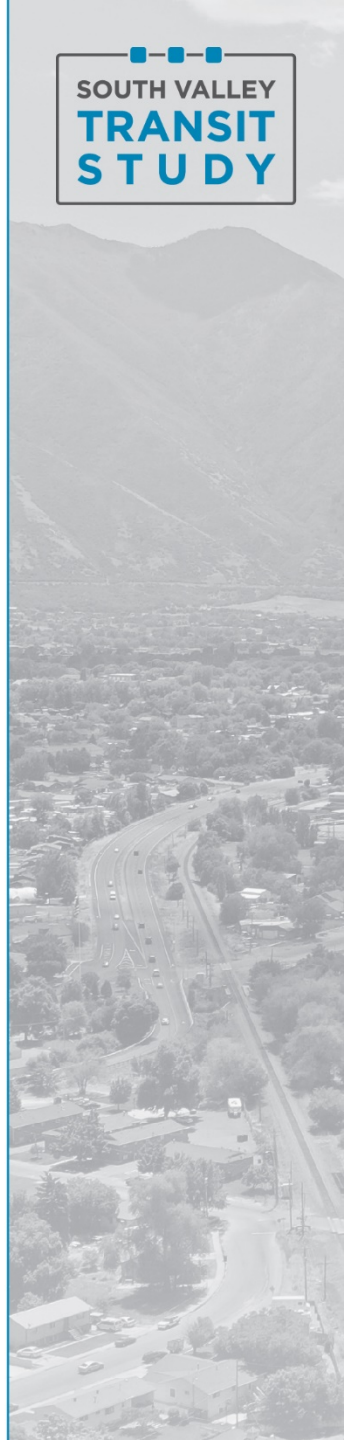


South Valley Transit Study

Executive Committee/TAC Workshop #2

January 12, 2021 | 1-3 p.m.



Welcome and Introductions

➤ Welcome

➤ Introductions

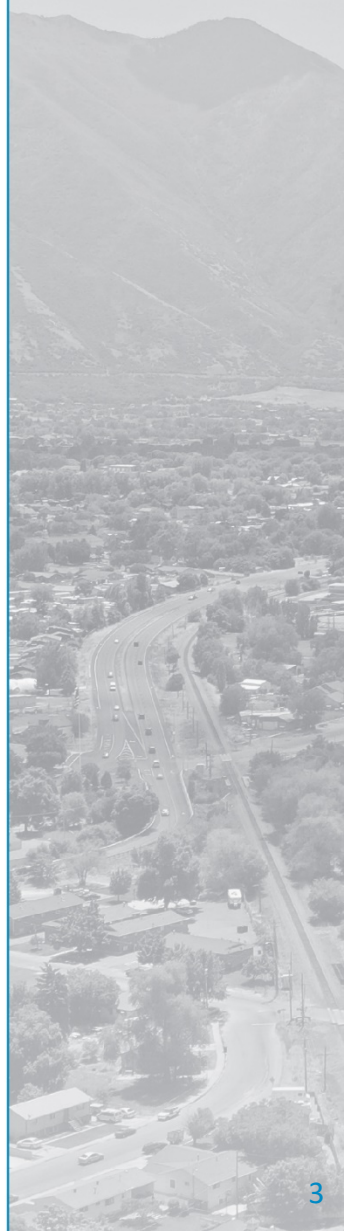
➤ Meeting Agenda

- Recap previous kickoff meeting
- Discuss project Purpose and Need
- Review evaluation process
- Discuss and confirm initial range of alternatives
- Provide stakeholder engagement update

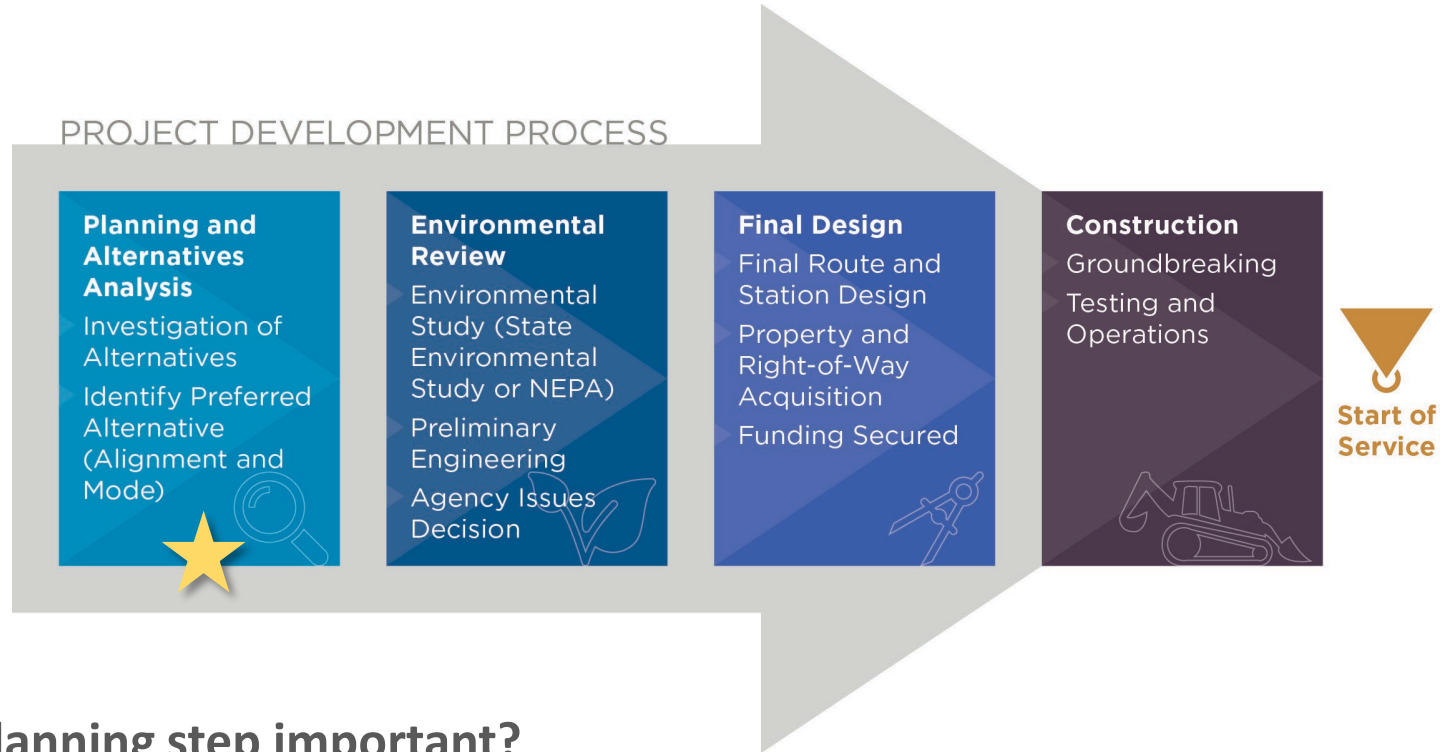


November Kickoff Recap

- Discussed study area context
- Recapped themes from one-on-ones
- Discussed transit study goals and project goals
- Transit study process/schedule



Transit Project Development Roadmap

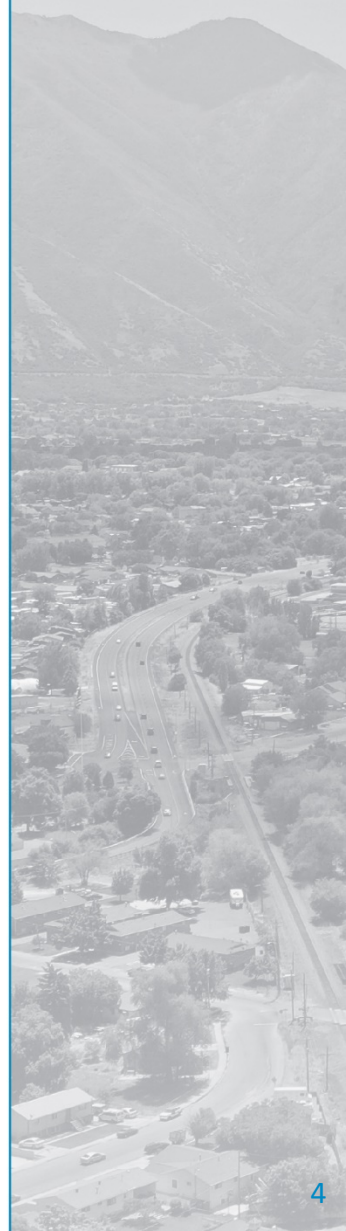


Why is this planning step important?

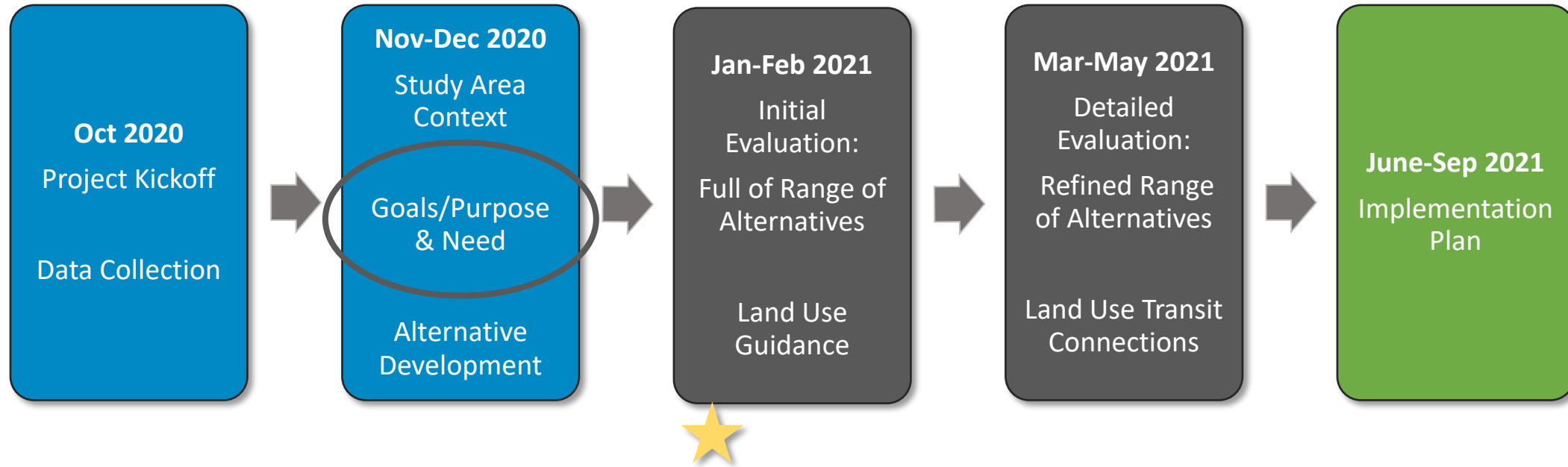
- Define the project need
- Develop alignment and transit mode decision for major capital investment
- Future phases build on this step

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



Transit Study Roadmap



Where have we been and where are we headed?



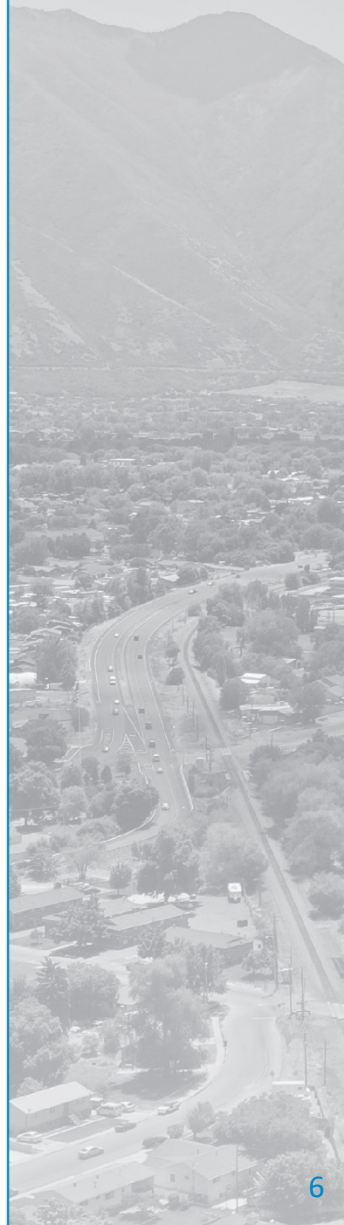
What is Purpose and Need?

➤ Project Need – The “Why”

- What are the problems the project will address?
- Why is this project needed?

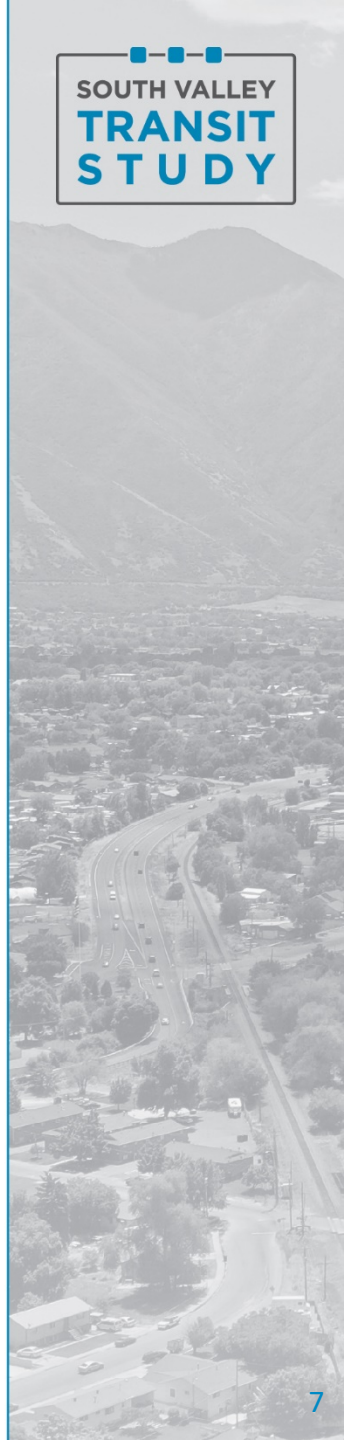
➤ Project Purpose – The “What”

- How will the project address the need? What are we trying to achieve with the project?
- Project goals



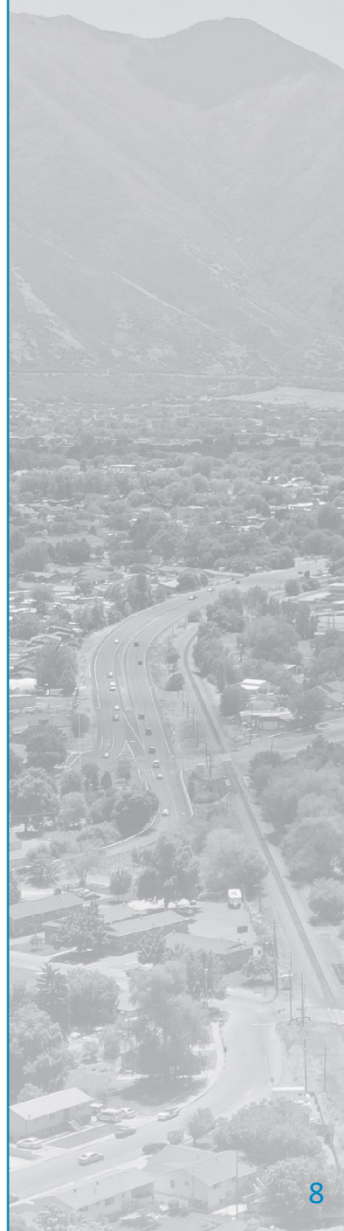
Why is Purpose and Need important?

- Foundation of study and project selection
- Basis for developing:
 - Range of alternatives – what alignments and modes help meet needs and goals?
 - Evaluation criteria – how well does the alternative perform?
- Informed decision making
- Requirement in federal and state environmental documents



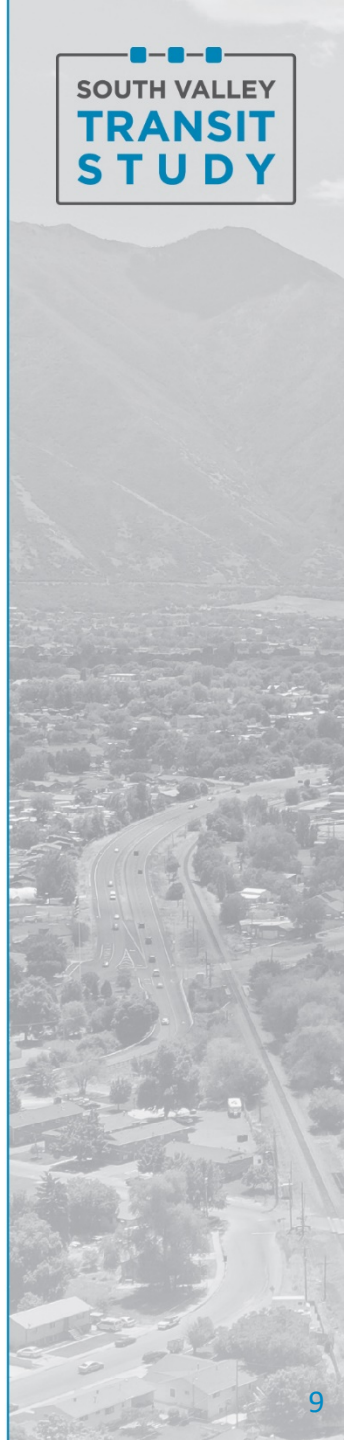
Why is this Project Needed?

- Rapid population and employment growth
- Roadway congestion
- Existing transit options are limited
- Local communities seek increased transit-supportive land uses
- Communities in the study area are experiencing substantial development pressure and have expressed a unified interest in providing alternatives to driving (particularly for commuting trips)

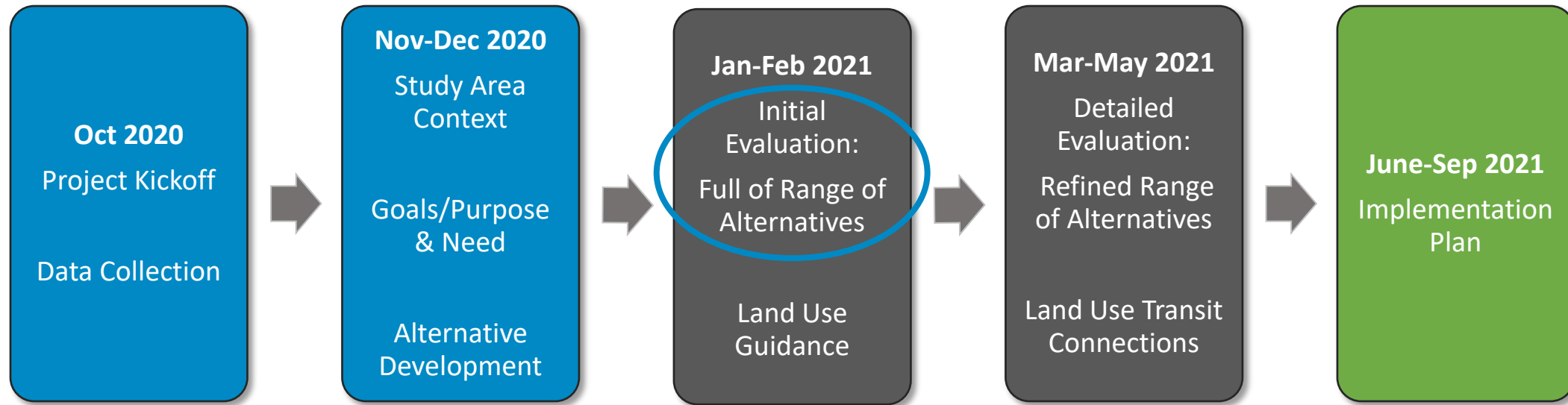


Purpose: What will this project accomplish?

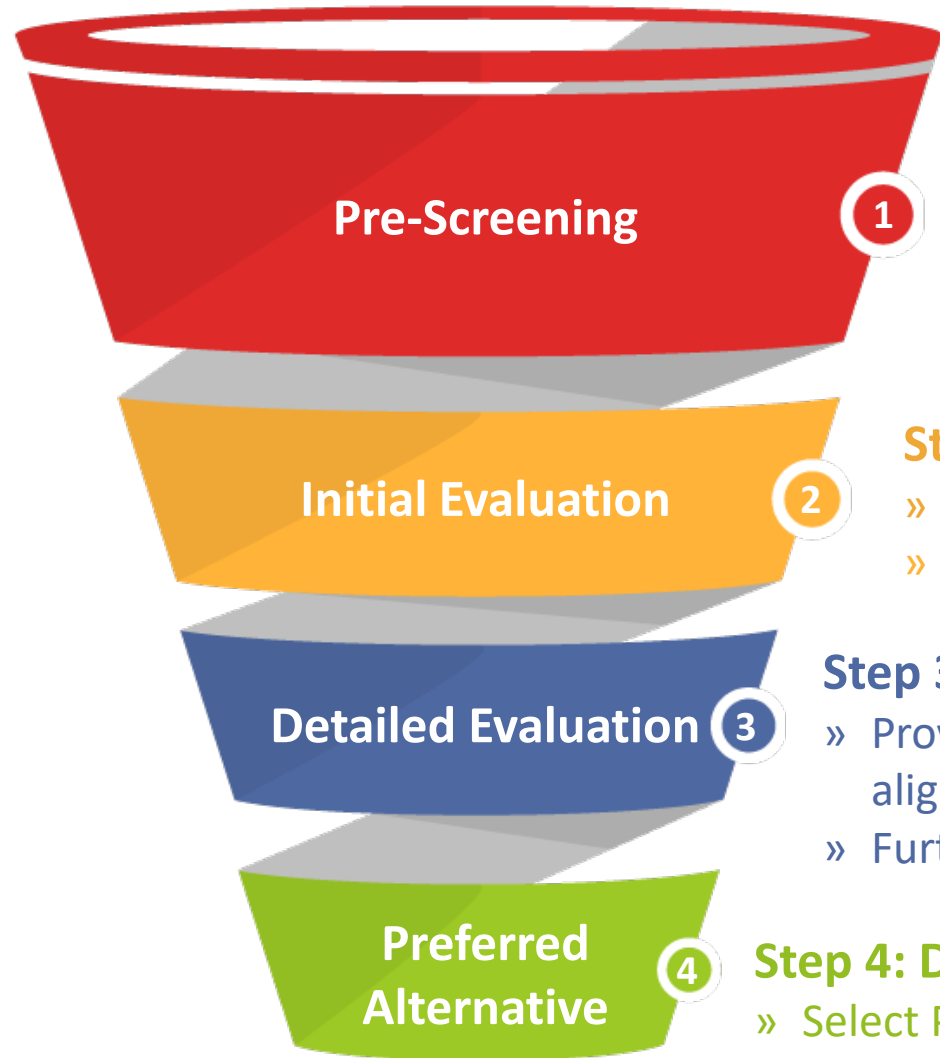
- Support the transportation demands of population and employment growth in south Utah County.
- Provide efficient regional transit service in the project corridor between Provo and Santaquin.
- Support adopted regional plans and local plans and policies.
- Enhance economic development in the corridor by improving access to and connections between existing and planned employment and key activity centers.



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

Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options



1 Full Range Corridors + Modes



Corridors

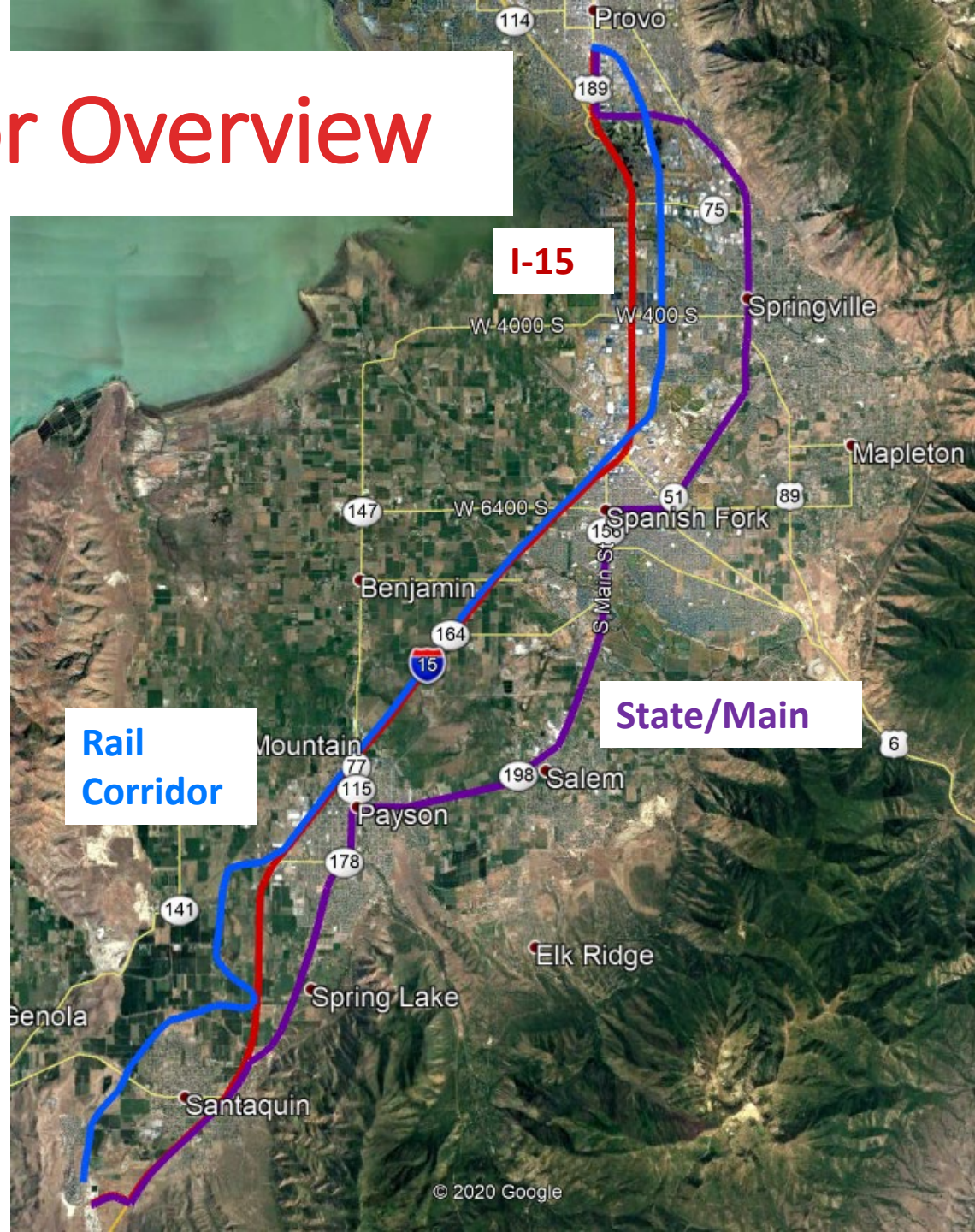
- » State/Main Street
 - Multiple options for north and south terminus, will select a representative alignment
- » Rail Corridor
- » I-15
- » Missing anything?

Modes

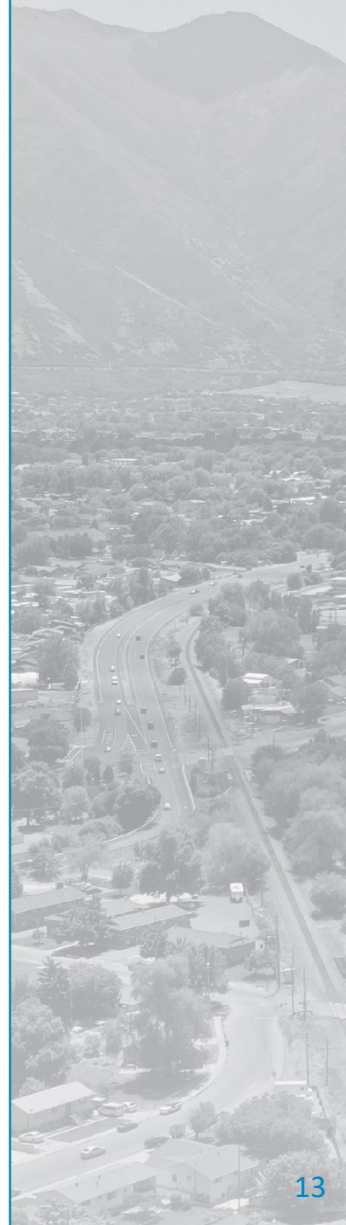
- » Commuter Rail (exclusive guideway)
- » Light Rail (exclusive guideway)
- » Bus Rapid Transit (BRT) (exclusive guideway)
- » Local bus service (mixed flow)
- » Express bus service (mixed flow)
- » Missing anything?



Transit Corridor Overview








SOUTH VALLEY
TRANSIT
STUDY



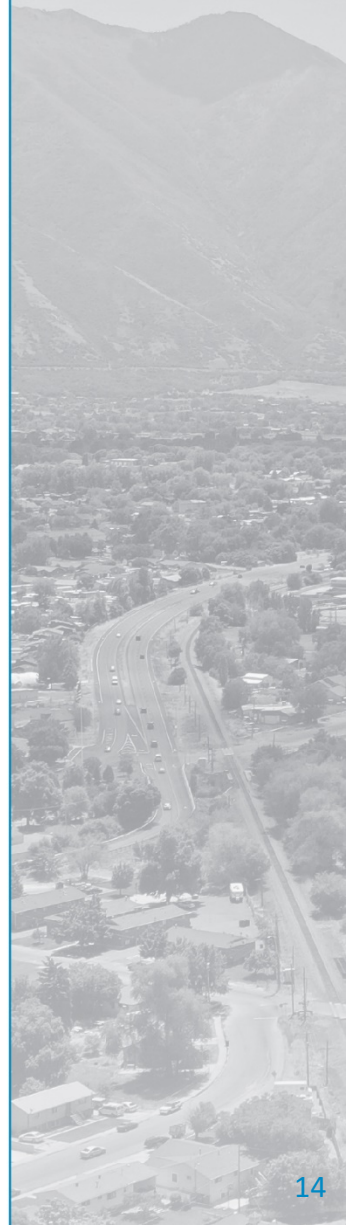
Transit Mode Overview



	BUS RAPID TRANSIT	LIGHT RAIL TRANSIT	COMMUTER RAIL TRANSIT	EXPRESS BUS	LOCAL BUS
Trip Types	Local and regional	Local and regional	Regional	Regional	Local
Operating Environment	Exclusive right-of-way or mixed traffic along arterial streets or highways ^a	Exclusive right-of-way within arterial streets or in dedicated right-of-way separate from streets	Separate right-of-way	Utilizes existing travel lanes, often on interstates mixes with general traffic	Utilizes existing local streets, mixes with general traffic
Typical Spacing of Stops	1/2 - 1 mile	1 mile	4-5 miles	Varies, but tends to have longer stop spacing (>1 mile)	1/4 mile
Typical Peak Frequencies	5-10 minutes	15 minutes	30 minutes	30 minutes during AM/PM peak, little or none outside of that	15-30 minutes
Passenger Capacity per Vehicle	60-90 per bus	180-200 per car ^b	100-200 per car ^b	60-90 per bus	40-80 per bus
UTA Example	 UVX	 TRAX	 FrontRunner	 Route 805	 Route 822

^a - BRT has the greatest flexibility in operating environment. In addition to functioning in a typical street environment, it can also operate along highways, including in high-occupancy vehicle (HOV) lanes.

^b - Multiple LRT and CRT vehicles can be linked to create a longer train, moving a higher capacity of passengers per trip.



1

Pre-Screening Step

Does it meet Purpose & Need or is there a fatal flaw?



Corridors

- » State/Main Street
 - *May not obviously meet P&N but should evaluate*
- » Rail Corridor
- » I-15

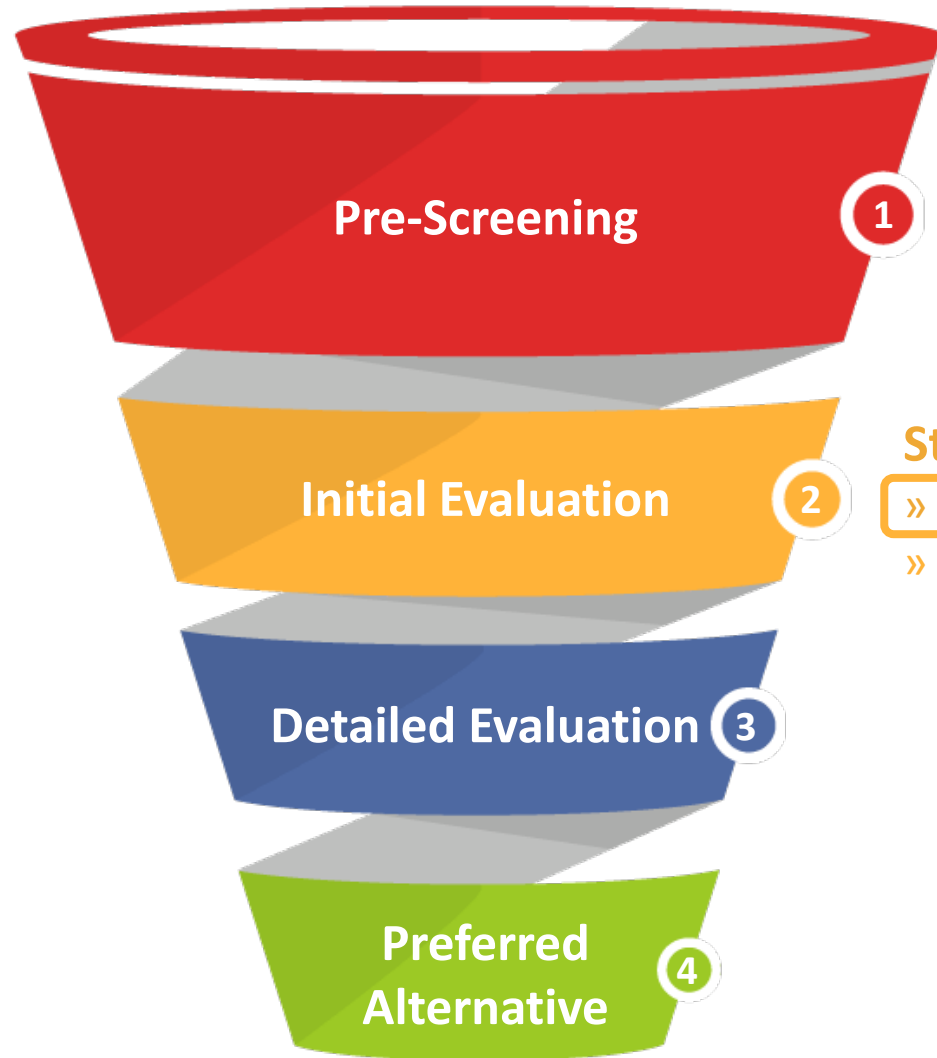
Modes

- » Commuter Rail (exclusive guideway)
- » Light Rail (exclusive guideway)
 - *Likely meets P&N but need to show tradeoffs*
- » BRT (exclusive guideway)
- ~~» Local bus service (mixed flow)~~
 - *Does NOT meet P&N**
- » Express bus service (mixed flow)

Discussion: Did we eliminate the correct corridors and modes?
Are there others to screen?

*By eliminating this mode does not preclude provision of local bus to serve the larger capital investment or making other service improvements

Alternatives Evaluation Roadmap



Step 2: Evaluate alternatives at a high-level

- » Combine remaining corridors/modes into logical alternatives
- » Reduce alternatives based on initial evaluation – *future step*



2

Combining Corridors + Modes into Logical Alternatives

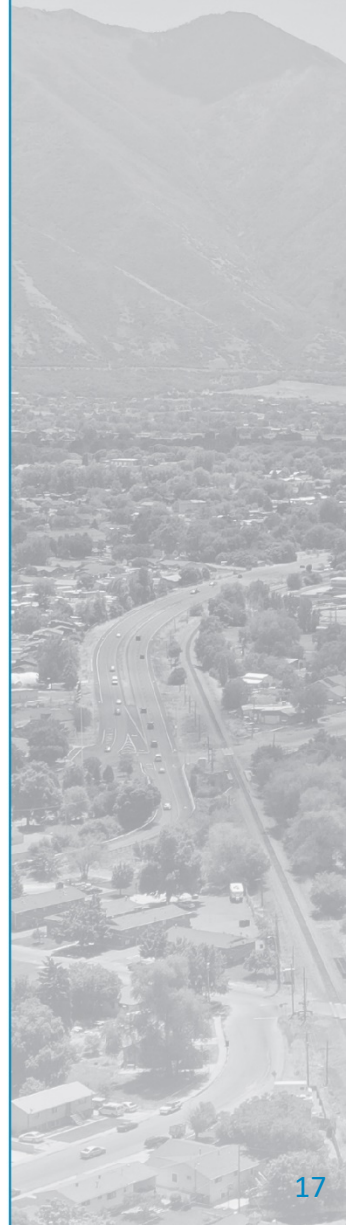


Mode	Definition	State/ Main	Rail Corridor	I-15
Commuter Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment Regional service with longer stop spacing 	No	Yes	No
Light Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment (shoulder-running/median on I-15 or State/Main; rail corridor ROW) Regional service with longer stop spacing 	Yes	Yes	Yes
Bus Rapid Transit	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment (shoulder-running/median on I-15 or State/Main; rail corridor ROW) Regional service with longer stop spacing 	Yes	Yes	Yes
Express Bus	<ul style="list-style-type: none"> Operates in mixed flow traffic Regional service with longer stop spacing 	Yes	No	Yes

Discussion: Are these YES responses the correct alternatives to evaluate in Level 1?

Notes:

- Alternatives represent full buildout (2050) and service from Provo to Santaquin
- Frequency of service would be the same for all alternatives



2 Initial Evaluation – how to decide?



➤ Potential evaluation criteria:

- Transit speed
- Transit reliability
- Transit connections
- Ridership potential
- Transportation impacts
- Community computability
- Economic development potential
- Cost
- Constructability considerations
- Operational considerations
- Environmental considerations

Initial evaluation:

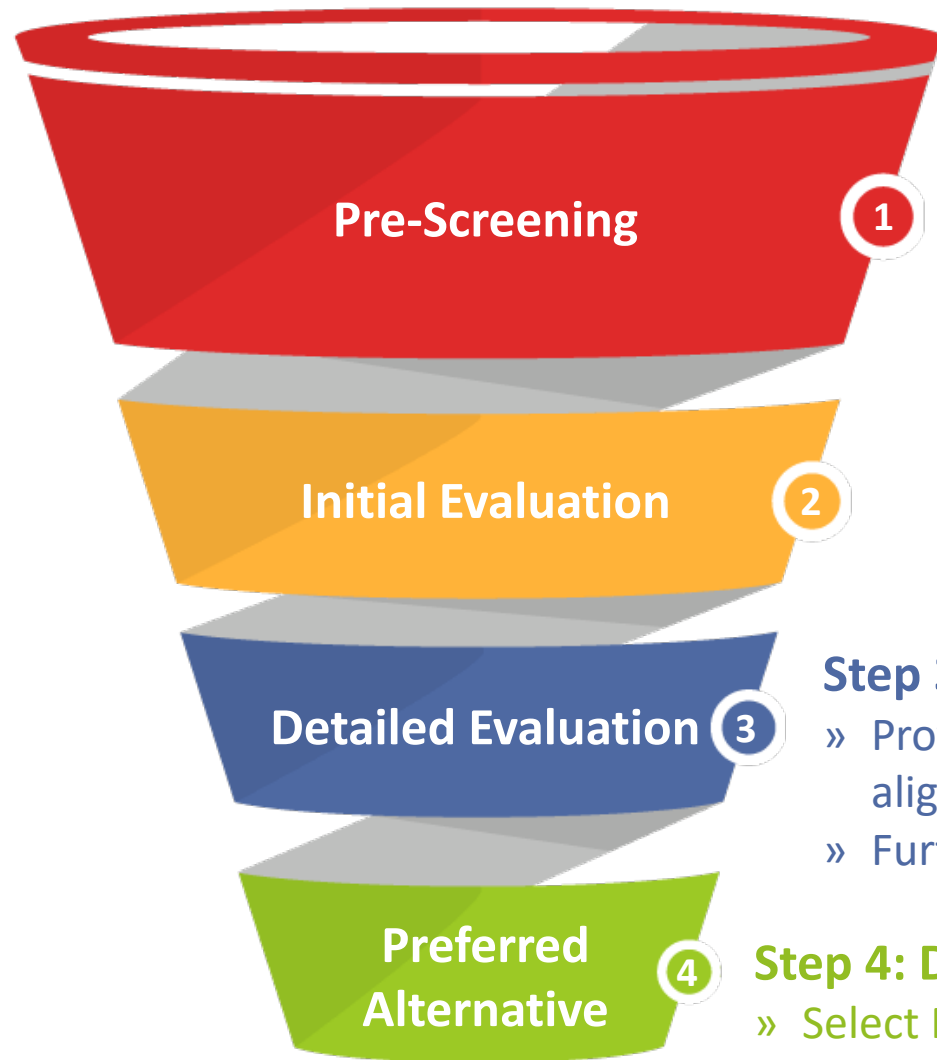
- ❖ Planning level analysis
- ❖ Minimal engineering

Initial evaluation criteria are:

- ❖ High-level
- ❖ Largely qualitative
- ❖ Help illustrate key differences



Alternatives Evaluation Roadmap – Future Steps

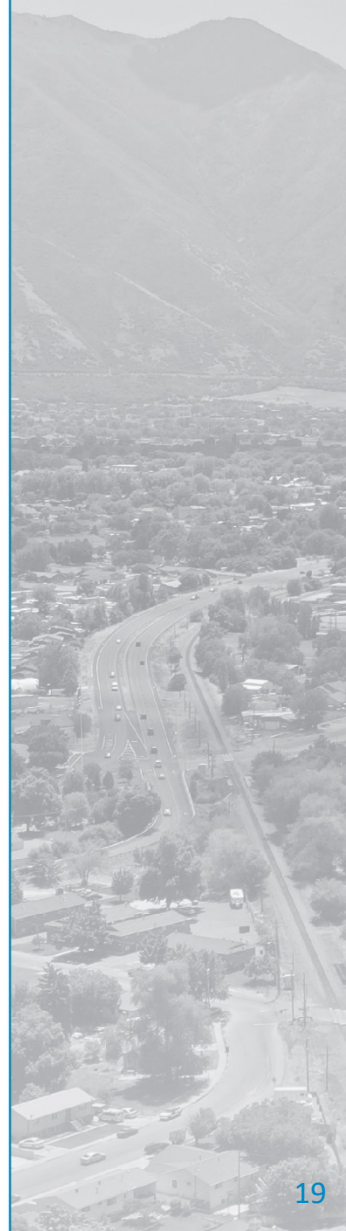


Step 3: Evaluate alternatives in more detail

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

Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options



3

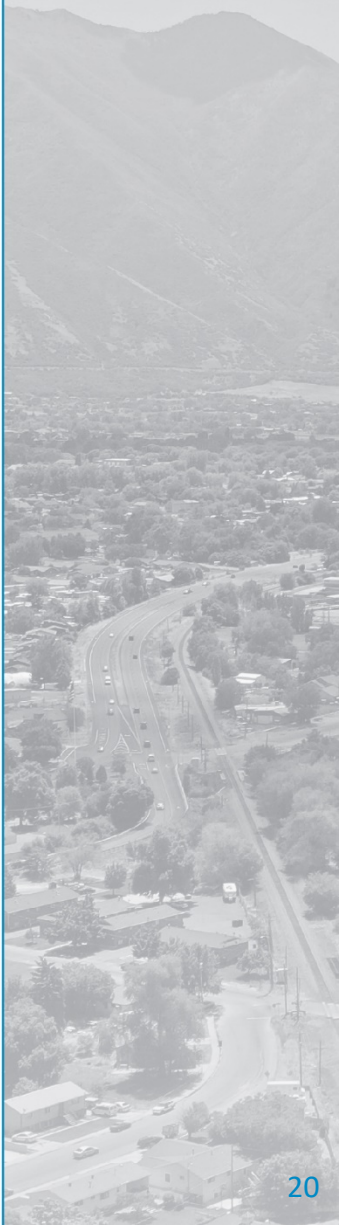
Refined Alternatives – *Example*



EXAMPLE Alternative Definition	Frequency Assumptions	Operational Assumptions	Stations
Alternative Commuter Rail 1 <ul style="list-style-type: none"> • CRT operating in exclusive facility 	All day service – 30 min peak, 60 min off peak	One-seat FR ride	1, 2, 3, 4
Alternative Commuter Rail 2 <ul style="list-style-type: none"> • CRT operating in exclusive facility 	Peak hour service only, 60 min headways (4x am + 4x pm)	Shuttle service with transfer at Provo	1, 2, 3, 4, 5
Alternative BRT 1 <ul style="list-style-type: none"> • BRT operating in exclusive facility from x to y – mixed flow from a to b, etc. 	All day service – 30 min peak, 60 min off peak	Mode transfer at Provo	6, 7, 8, 9

Notes:

- Alternatives represent full buildout (2050) and service from Provo to Santaquin
- More defined frequency and operational characteristics compared to initial screening



3

Detailed Evaluation – how to decide?



➤ Potential evaluation criteria:

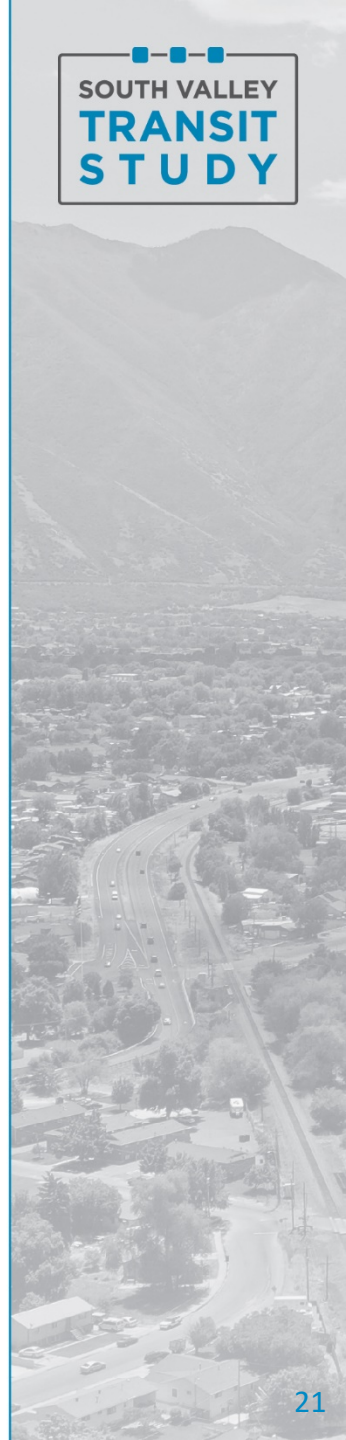
- Transit travel times
- Transit reliability
- Transit connections
- **Transit ridership and transit trips**
- **Station area accessibility**
- Transportation impacts
- **Transit-supportive zoning**
- **Development/redevelopment potential**
- **Equity and access to opportunity**
- **Capital cost estimate**
- **O&M cost estimate**
- Constructability considerations
- Operational considerations
- Environmental considerations
- **Phase and implementation considerations**

Detailed evaluation:

- ❖ Conceptual engineering and cost estimating
- ❖ Ridership forecasting using model

Detailed evaluation criteria are:

- ❖ In-depth
- ❖ More quantitative
- ❖ Diving into greater detail



4 Implementation – how do we implement the Preferred Alternative?



Based on additional analysis of ...

- » Ridership (model runs by 2030, 2040, 2050, and by 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



4

Implementation Options – *Example*



Implementation Options for **Example** Preferred Alternative:

No phasing

- Full Commuter Rail buildout by 20XX

Geographic or Timing Phasing

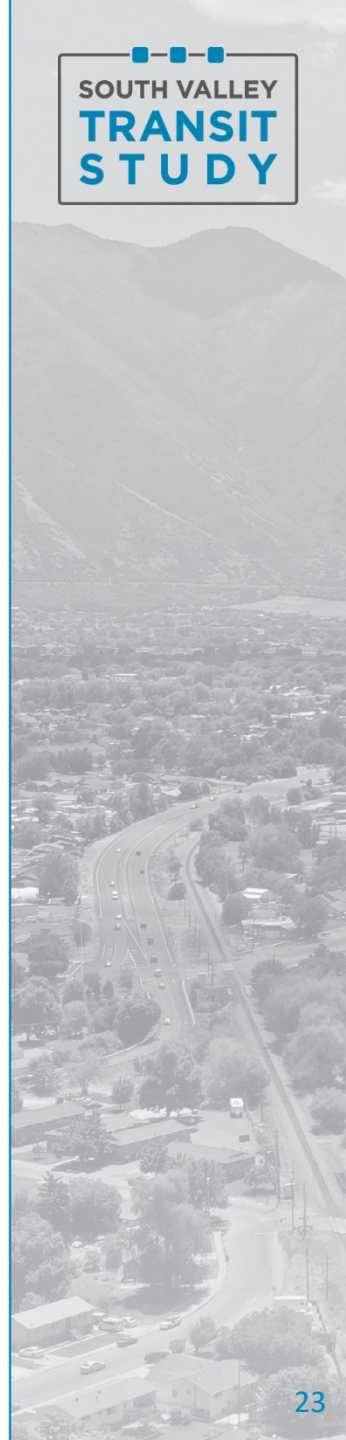
- Extend Commuter Rail to Springville in 20XX
- Extend Commuter Rail to Spanish Fork/Payson in 20YY
- Extend Commuter Rail to Santaquin by 20ZZ

Phasing of Modes

- Expand express bus service frequency + create permanence in identified station areas by 20XX
- Provide full dedicated lanes for buses by 20YY
- Full Commuter Rail buildout by 20ZZ

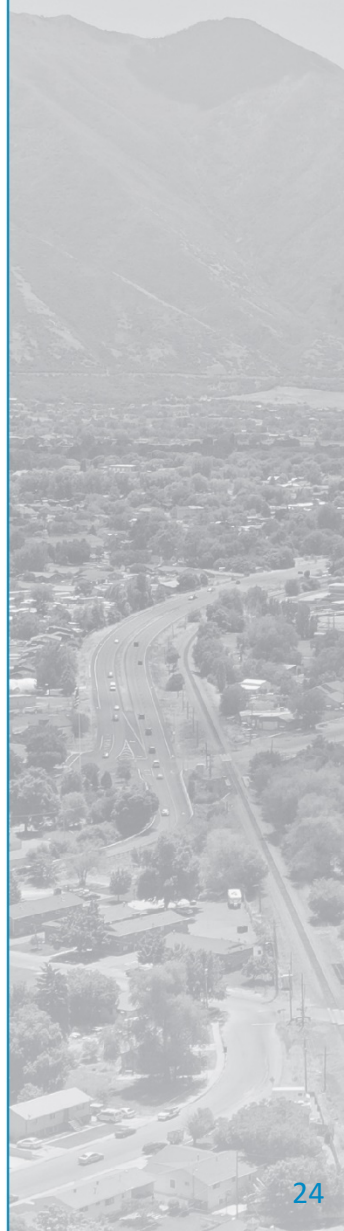
Mix and Match of Above

EXAMPLE	Frequency Assumptions	Operational Assumptions	Stations
Alternative Commuter Rail 1 <ul style="list-style-type: none"> • Commuter rail operating in exclusive facility 	All day service – 30 min peak, 60 min off peak	One-seat ride	1, 2, 3, 4



Stakeholder Engagement Update

- Broad education & engagement: web, social media, developing community partner lists
 - UTA, UDOT, MAG, City channels
- Specific engagement: developing community-specific approaches to engagement
 - Social media, newsletters, other media, outreach events (as possible), partner coordination/collaboration
 - Will follow up with each City to confirm approaches
- Project website
- Seeking public feedback on Purpose & Need and Initial Range of Alternatives through website



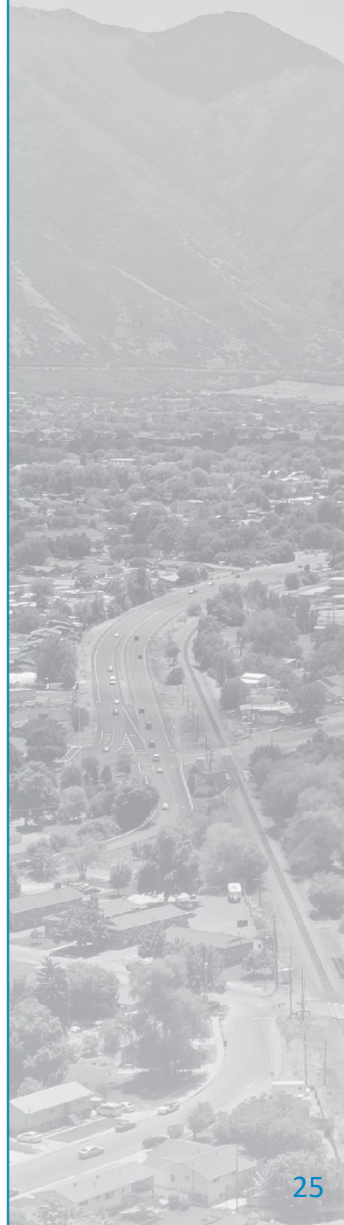
Next Steps and Workshop Wrap-up

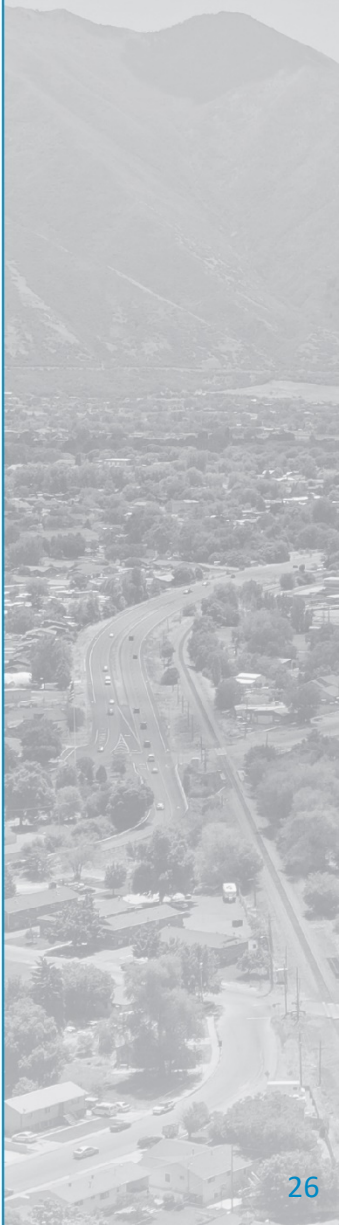
- Team will finalize Purpose and Need and supporting evaluation criteria
 - Mid-January

- Begin Initial Evaluation of Alternatives
 - Mid-January through February

- Kicking off land use planning task
 - End of January/early February

- Will regroup for next series of meetings with separate TAC and Executive Committee workshops
 - TAC and Executive Committee will meet separately from this point on
 - Early March

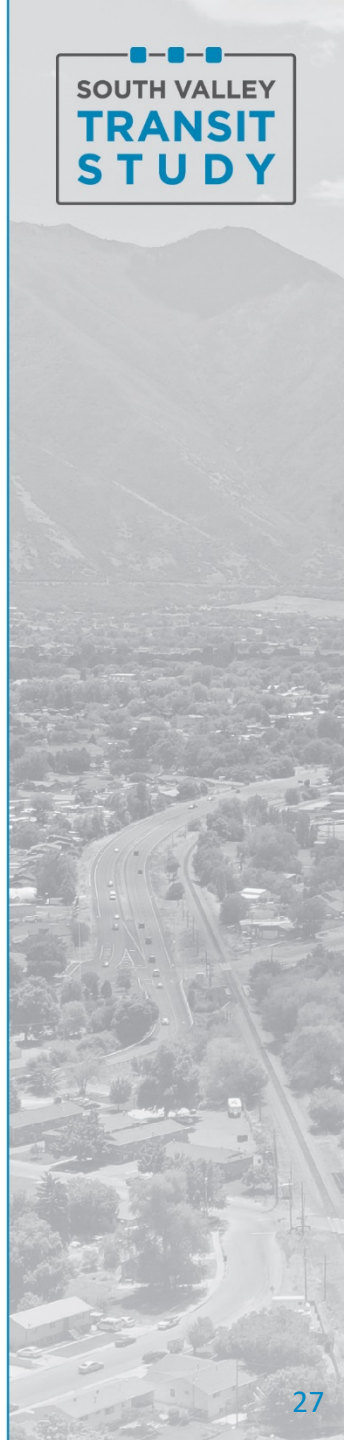




Recap of Transit Study Goals

Transit Study Goals = desired outcomes of the study

- **Define mode, alignment, and project development timeline** of a regional high-capacity transit investment that serves the Provo to Santaquin corridor and is a fiscally responsible capital and operational investment.
 - If desired, identify short and mid term transit projects/service that could be implemented in support of the long-term regional high-capacity transit investment.
- **Identify local transit needs** that provide access to the regional transit investment.
- **Facilitate planning for transit supportive land uses** at identified station locations in collaborative with cities along transit corridor.
- **Provide engagement with communities** that educates the public, key stakeholders, and elected officials and provides opportunities to hear from the public.
- **Define and take an actionable step** towards a future high-capacity transit investment.



Recap of Project Goals

Project Goals = What are we trying to achieve with the project?

- Provide efficient regional transit service in the project corridor between Provo and Santaquin.
- Support the transportation demands of population and employment growth in southern Utah County.
- Support adopted regional plans and local plans and policies.
- Enhance economic development in the corridor by improving access to and connections between existing and planned employment and key activity centers.

