

**Priority Corridor AA – Phase 1  
RTAC Subgroup  
Meeting #4  
August 25, 2009  
8:00 – 10:00 AM  
Community Planning Association  
800 S. Industry Way, Suite 100  
Meridian, ID**

**Agenda**

1. Capital Cost Methodology \* p. 2
2. Travel Demand Evaluation Status
3. Goals, Objectives and Criteria – Weighting Approach \* p. 10
4. Future Meetings – Schedule and Activities

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\* Attachments

**Boise Treasure Valley Phase 1 Alternatives Analysis  
Order of Magnitude Capital Cost Methodology  
August 14, 2009**

## **Introduction**

The Treasure Valley High Capacity Transit Priority Corridor Phase 1 Alternatives Analysis is being prepared in order to identify a set of promising high capacity transit (HCT) alternatives to be studied in more detail in the Phase 2 Alternatives Analysis (AA). During the Phase 1 AA, a wide range of HCT alternatives has been identified and are being evaluated at a general planning level of analysis. This planning level analysis will be used to narrow the wide range of alternatives down to the set of most promising HCT alternatives for further study.

This paper describes the planning level methodology being used to develop order of magnitude capital cost estimates that can be used to compare among the range of HCT alternatives being considered during Phase 1. At this early planning stage, the HCT concepts are not being developed in any significant detail and as such *the order of magnitude costs should be used only for comparison among the alternatives and to provide a very general sense of the magnitude of the potential costs associated with each alignment and mode alternative being considered.*

## **Methodology Overview**

The order of magnitude capital cost methodology uses a general project description and data on average cost per mile from a range of comparable HCT systems to estimate a range of capital cost that would be representative of the various HCT modes.

### *Description of the Alternatives*

The range of alternatives has been reviewed with the RTAC Subgroup and the preliminary analysis is proceeding on the following HCT alternatives:

#### Fairview/Cherry

- Bus Rapid Transit – Exclusive
- Bus Rapid Transit – Mixed Traffic
- Light Rail

#### Boise Cutoff Railroad

- Commuter Rail
- Bus Rapid Transit – Exclusive
- Light Rail

#### Franklin

- Bus Rapid Transit – Exclusive

- Bus Rapid Transit – Mixed Traffic
- Light Rail

#### I-84

- Bus Rapid Transit – Express Bus in Mixed Traffic

#### Overland

- Bus Rapid Transit – Exclusive
- Bus Rapid Transit – Mixed Traffic
- Light Rail

The Phase 1 study of these options includes aerial maps of the alignments, right-of-way delineation, representative cross-sections, representative crossing treatments, major traffic signal modifications and identification of the need for structures, tunnels, etc. The description of the alternatives does not include any conceptual engineering beyond a generic description of a few key capital elements.

#### *HCT Cross-Sections*

The roadway cross-sections included on the aerial maps help to define the potential cost and the range of potential impacts with adding HCT on the arterial roadways and along the Boise Cutoff rail alignment. The I-84 transit treatments are location-specific and will be presented as sketch designs rather than as alignment maps.

The arterial roadways will include all widening projects included in the COMPASS 2035 financially constrained model. For the three major east/west arterials this means the following:

- Fairview/Cherry – 7-lanes Cole to Locust Grove, 5-lanes all other sections.
- Franklin – 5-lanes all sections
- Overland/Airport – 5-lanes east of Black Cat, 3-lanes Black Cat to Southside

All of the other arterial routes maintain the existing number of lanes.

The following assumptions will be used to identify the cross-sections associated with each arterial. These assumptions are key to estimating whether and how much additional right of way would be required in order to accommodate exclusive HCT.

- Ada County roads - we assume that we will be adding HCT elements into the cross-sections that are defined in the Draft Livable Street Design Guide.
- Canyon County roads - we will assume that the 2035 cross-sections on Franklin, Overland/Airport and Fairview/Cherry between the county line and Idaho Center Blvd./Southside will include the same elements as shown in the ACHD Design Guide.

From Idaho Center/Southside through Nampa and Caldwell there are no major widening projects identified and as such all roads will assume the existing cross-sections - meaning that they will include sidewalks, bike lanes, etc. only where they exist today.

As we look at adding HCT to the cross-sections (existing or planned) we will maintain flexibility with cross-section elements in order to avoid unnecessary property impacts. We will assume that if a cross-section with HCT is less than 5 feet wider than the base (non-HCT) cross-section, we assume the ability to squeeze those 5 feet out of the elements of the base cross-section (sidewalk reductions, lane widths, etc.). If the HCT cross-section is more than 5 feet wider than the available ROW, we assume the need to acquire additional ROW. The only exception to this would be in locations that include on-street parking - listed at 7.5' on each side of the street. In these areas we will assume the ability to eliminate on-street parking on both sides which would provide 15 foot of additional available right of way.

#### *Average Cost per Mile*

URS has completed research into the average cost per mile for various commuter rail, light rail, BRT-exclusive and BRT-mixed traffic projects completed in the United States in the past 10 to 15 years. Our research focused on the western part of the country, paying particular attention to metropolitan regions located in Rocky Mountain states such as Denver, Salt Lake City and Albuquerque.

URS determined the cost per mile for various completed projects using each mode and escalated that value to 2009 dollars using the average annual CPI. In addition to the cost per mile, the context for the project was noted (i.e. urban versus suburban, arterial median versus railroad right-of-way, etc.). The findings from this research are summarized in the attached Table 1.

#### *Applying the Average Cost per Mile*

Each HCT mode (light rail, BRT, Commuter Rail) was broken out by the alignment characteristics/environment in order to reflect the unique costs associated with each style. The grouping by modal type is summarized in Table 2 which includes two styles of light rail (arterial median, separate ROW), three styles of BRT (arterial median, separate ROW and mixed traffic)

Table 2 includes projects that were selected in order to provide the most appropriate general cost per mile for each type of HCT mode. The average cost per mile is provided for each type of mode grouping (e.g. light rail in arterial median, BRT-Mixed Traffic, etc.). The most appropriate average cost per mile was identified and applied to each aerial map sheet.

### *Cost per Mile Adjustments*

Adjustments will be made to the standard cost per mile based on any unique features identified on the aerial map sheets. These adjustments will reflect significant design elements that would be expected to significantly increase or decrease the cost for each mode concept. It is important to note that the average cost per mile from recent projects is an average for the full alignment which already accounts for the full range of cost elements.

**Table 1**  
**Treasure Valley Phase 1 AA**  
**Example Capital Cost Per Mile by Mode**

**Light Rail Transit (LRT)**

| Name                      | Location       | Description                                                                                                                                                                              | Total Cost (Actual)    | Cost per mile (actual) | Cost per mile (2009 \$) |
|---------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|-------------------------|
| TRAX Sandy Line           | Salt Lake City | <ul style="list-style-type: none"> <li>• 15 miles</li> <li>• 16 stations</li> <li>• Suburban to urban</li> <li>• Arterial running downtown, then follows existing UP corridor</li> </ul> | \$312 million (1999)   | \$20.8 million         | \$26.6 million          |
| TRAX University Line      | Salt Lake City | <ul style="list-style-type: none"> <li>• 2.5 miles</li> <li>• 7 stations</li> <li>• Urban to university</li> <li>• Median arterial – 3 lane street in each direction</li> </ul>          | \$118.5 million (2001) | \$47.4 million         | \$58 million            |
| Central Corridor LRT      | Denver         | <ul style="list-style-type: none"> <li>• 5.3 miles</li> <li>• 14 stations</li> <li>• Urban</li> <li>• Partially arterial-running, partially in railroad ROW</li> </ul>                   | \$116.5 million (1994) | \$22 million           | \$31.8 million          |
| Central Platte Valley LRT | Denver         | <ul style="list-style-type: none"> <li>• 1.8 miles</li> <li>• 4 stations</li> <li>• urban</li> </ul>                                                                                     | \$47.8 million (2002)  | \$26.2 million         | \$31.3 million          |
| Southwest Corridor LRT    | Denver         | <ul style="list-style-type: none"> <li>• 8.7 miles</li> <li>• 5 stations</li> <li>• Suburban to urban</li> </ul>                                                                         | \$177.7 million (2002) | \$46.3 million         | \$55.4 million          |
| Southeast Corridor LRT    | Denver         | <ul style="list-style-type: none"> <li>• 19 miles</li> <li>• 5 stations</li> <li>• Suburban to urban</li> </ul>                                                                          | \$879 million (2006)   | \$46.3 million         | \$50 million            |
| Link Light Rail           | Seattle        | <ul style="list-style-type: none"> <li>• 15.6 miles</li> <li>• 13 stations</li> <li>• Outer urban, city center, airport</li> </ul>                                                       | \$2.339 billion (2009) | \$150 million          | \$150 million           |
| Tacoma Link               | Tacoma         | <ul style="list-style-type: none"> <li>• 1.6 miles</li> <li>• 5 stations</li> <li>• Downtown distributor</li> </ul>                                                                      | \$78.2 million (2003)  | \$48.9 million         | \$57 million            |
| Phoenix Light Rail        | Phoenix        | <ul style="list-style-type: none"> <li>• 20 miles</li> <li>• 28 stations</li> <li>• urban/suburban</li> <li>• Median arterial</li> </ul>                                                 | \$1.4 billion (2008)   | \$70 million           | \$72 million            |
| MAX Green Line            | Portland       | <ul style="list-style-type: none"> <li>• 8.3 miles</li> <li>• 24 stations</li> <li>• Suburban to urban</li> <li>• Freeway</li> </ul>                                                     | \$575.7 million (2009) | \$69.4 million         | \$69.4 million          |

| Name                     | Location | Description                                                                                                                                                   | Total Cost (Actual)  | Cost per mile (actual) | Cost per mile (2009 \$) |
|--------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|-------------------------|
| MAX Yellow Line          | Portland | <ul style="list-style-type: none"> <li>• 5.8 miles</li> <li>• 10 stations</li> <li>• Urban</li> <li>• Median arterial</li> </ul>                              | \$350 million (2004) | \$60.3 million         | \$68.6 million          |
| MAX Red Line             | Portland | <ul style="list-style-type: none"> <li>• 5.5 miles</li> <li>• 4 stations</li> <li>• Urban to airport</li> <li>• Freeway &amp; exclusive ROW</li> </ul>        | \$125 million (2001) | \$22.7 million         | \$27.8 million          |
| MAX Blue Line - Eastside | Portland | <ul style="list-style-type: none"> <li>• 15 miles</li> <li>• 30 stations</li> <li>• Suburban to urban</li> <li>• Mix - freeway and median arterial</li> </ul> | \$214 million (1986) | \$14.3 million         | \$26.8 million          |
| MAX Blue Line – Westside | Portland | <ul style="list-style-type: none"> <li>• 18 miles</li> <li>• 32 stations</li> <li>• Suburban to urban</li> <li>• Mix freeway and railroad ROW</li> </ul>      | \$963 million (1998) | \$53.5 million         | \$69.6 million          |

#### Bus Rapid Transit (BRT) in Mixed Traffic

| Name                                                | Location       | Description                                                                                                                | Total Cost (Actual)  | Cost per mile (actual) | Cost per mile (2009 \$) |
|-----------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|-------------------------|
| 3500 South Bus Rapid Transit                        | Salt Lake City | <ul style="list-style-type: none"> <li>• 10 miles</li> <li>• 23 bus stops</li> </ul>                                       | \$7 million (2008)   | \$700,000              | \$718,200               |
| Rapid Ride Blue Line                                | Albuquerque    | <ul style="list-style-type: none"> <li>• 15 miles</li> <li>• 12 stations</li> <li>• Suburban, urban, university</li> </ul> | \$6 million (2007)   | \$400,000              | \$421,000               |
| Metro Rapid; Wilshire-Whittier and Ventura Corridor | Los Angeles    | <ul style="list-style-type: none"> <li>• 42.4 miles</li> </ul>                                                             | \$8.3 million (2000) | \$195,000              | \$244,000               |

### Bus Rapid Transit (BRT) in Exclusive Lanes

| Name                             | Location    | Description                                                                                                                                           | Total Cost (Actual)  | Cost per mile (actual) | Cost per mile (2009 \$) |
|----------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|-------------------------|
| EmX Franklin Corridor/Green Line | Eugene      | <ul style="list-style-type: none"> <li>• 4 miles</li> <li>• 10 stations</li> <li>• Urban and suburban</li> <li>• 60% exclusive ROW</li> </ul>         | \$24 million (2007)  | \$6 million            | \$6.3 million           |
| Euclid Corridor                  | Cleveland   | <ul style="list-style-type: none"> <li>• 9 miles</li> <li>• 34 stations</li> <li>• Urban</li> <li>• Arterial median – total reconstruction</li> </ul> | \$240 million (2008) | \$25.5 million         | \$26.2 million          |
| Metro Orange Line                | Los Angeles | <ul style="list-style-type: none"> <li>• 14 miles</li> <li>• Connects North Hollywood to Warner Center</li> </ul>                                     | \$350 million (2005) | \$25 million           | \$27.7 million          |

### Commuter Rail

| Name                                                  | Location       | Description                                                                                                                                       | Total Cost (Actual)    | Cost per mile (actual) | Cost per mile (2009 \$) |
|-------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|-------------------------|
| FrontRunner North                                     | Salt Lake City | <ul style="list-style-type: none"> <li>• 44 miles</li> <li>• 16 stations</li> <li>• Exurban/suburban to downtown</li> </ul>                       | \$630 million (2008)   | \$14.3 million         | \$14.7 million          |
| Sounder                                               | Seattle        | <ul style="list-style-type: none"> <li>• 83 miles</li> <li>• 13 stations</li> <li>• Suburban/Urban to downtown</li> </ul>                         | \$1,429 million (2009) | \$17.2                 | \$17.2 million          |
| WES Commuter Rail                                     | Portland       | <ul style="list-style-type: none"> <li>• 14.7 miles</li> <li>• 5 stations</li> <li>• Suburban to suburban</li> </ul>                              | \$166 million (2009)   | \$11.3 million         | \$11.3 million          |
| Rail Runner Express Phase 1 (Belen to Bernalillo)     | Albuquerque    | <ul style="list-style-type: none"> <li>• 46 miles</li> <li>• Run on BNSF tracks</li> <li>• Exurban to downtown</li> </ul>                         | \$135 million (2006)   | \$3 million            | \$3.2 million           |
| Rail Runner Express Phase 2 (Santa Fe to Albuquerque) | Albuquerque    | <ul style="list-style-type: none"> <li>• 50 miles</li> <li>• Run on mix of new tracks and existing BNSF tracks</li> <li>• City to city</li> </ul> | \$255 million (2009)   | \$5.1 million          | \$5.1 million           |

**Table 2**  
**Treasure Valley Phase 1 AA**  
**Representative Capital Costs per Mile by Type of HCT Mode Application**

|                        | <b>Representative Projects</b>                                                                                                                                                                                 | <b>Cost Per Mile (2009\$)</b>                     | <b>Average Cost Per Mile (2009\$)</b> | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Light Rail</b>      |                                                                                                                                                                                                                |                                                   |                                       |                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Arterial Median</b> | <ul style="list-style-type: none"> <li>• Salt Lake City – University Line</li> <li>• Portland Interstate MAX</li> <li>• Phoenix Light Rail</li> </ul>                                                          | \$58.0M<br>\$68.6M<br>\$72.0M                     | \$66.2M                               | These projects may be more urban than Treasure Valley. Phoenix may be most comparable with sections through Tempe and Mesa.                                                                                                                                                                                                                                                                                 |
| <b>Separate ROW</b>    | <ul style="list-style-type: none"> <li>• Denver Central Corridor</li> <li>• Denver Southwest Corridor</li> <li>• Salt Lake Sandy Line</li> </ul>                                                               | \$31.8M<br>\$55.4M<br>\$26.6M                     | \$37.9M                               | These projects all have significant portions in railroad ROW.                                                                                                                                                                                                                                                                                                                                               |
| <b>BRT</b>             |                                                                                                                                                                                                                |                                                   |                                       |                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Arterial Median</b> | <ul style="list-style-type: none"> <li>• Eugene EMX</li> <li>• Cleveland Euclid Corridor</li> </ul>                                                                                                            | \$6.3M<br>\$26.2M                                 | \$16.3M                               | Eugene is a mix of single-lane exclusive median and in-street operation. Cleveland is exclusive 2-lane median in an urban arterial.                                                                                                                                                                                                                                                                         |
| <b>Separate ROW</b>    | <ul style="list-style-type: none"> <li>• LA Metro Orange Line</li> </ul>                                                                                                                                       | \$27.7M                                           | \$27.7M                               | Exclusive busway alignment built on old rail bed – project required preparing and paving roadbed and unique signals at street crossings.                                                                                                                                                                                                                                                                    |
| <b>Mixed Traffic</b>   | <ul style="list-style-type: none"> <li>• Salt Lake South BRT</li> <li>• Albuquerque Blue Line</li> <li>• Los Angeles Metro Rapid</li> </ul>                                                                    | \$0.7M<br>\$0.4M<br>\$0.2M                        | \$0.4M                                | SLC – mix of signal priority, bypass lanes. Albuquerque has wider station spacing and signal priority. LA has wider station spacing and signal priority.                                                                                                                                                                                                                                                    |
| <b>Commuter Rail</b>   |                                                                                                                                                                                                                |                                                   |                                       |                                                                                                                                                                                                                                                                                                                                                                                                             |
|                        | <ul style="list-style-type: none"> <li>• Salt Lake FrontRunner</li> <li>• Portland WES</li> <li>• Seattle Sounder</li> <li>• Albuquerque RailRunner (Ph 1)</li> <li>• Albuquerque RailRunner (Ph 2)</li> </ul> | \$14.7M<br>\$11.3M<br>\$17.2M<br>\$3.2M<br>\$5.5M | \$10.4M                               | SLC – New rail in existing UP ROW. Portland – New rail on existing short line. Seattle – upgraded BN main line – some new double-tracking – high payment to BN for operating rights. Albuquerque – cost doesn't include state purchase of ROW for Phase 1. Mostly uses existing track – some sections of new track in Phase 2. URS's 2003 study estimated a range of \$4 to \$8 million per mile in 2003\$. |

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Treasure Valley Priority Corridor AA Phase 1  
Goals, Objectives and Criteria – Weighting Approach  
August 17, 2009

1. Evaluation Approach – Overview
2. Objective by Objective Review of Comments & Weighting  
For each objective we will do the following:
  - a. Overview of objective and measures
  - b. Summary of comments and ranking
  - c. Overall weighting by objective – based on input provided
  - d. Discuss and modify as needed
  - e. Consensus on weighting for each objective
3. Compare weightings among all objectives – final adjustments
4. Review all weightings and get final consensus

*Attachments to this item include the proposed weighting as revised by URS using the respondents scores and comments and the scoring by the respondents. Also included in the email transmitting the packet is the Excel spreadsheet showing the scores and comments.*

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Evaluation Approach  
Treasure Valley Priority Corridor Phase 1 AA  
August 18, 2009

- Rankings on a 1 thru 5 scale (1 being lowest or worst and 5 being highest or best) will be developed for each objective.
- Rankings will be based on the average rank for the measures identified for each objective.
- A technical matrix will be prepared which describes the basis for the assigned rank.
- Weighting will be applied based on direction from the RTAC Subgroup.
- Weighting will be either 1, 2 or 3 based upon the consensus agreement of the group.
- Two summary ranking matrices will be prepared; one summarizing at the Objective level and one summarizing at the Goal level.
- Summary matrices will use 5 symbols to display the relative weighted ranking.

TREASURE VALLEY HIGH CAPACITY TRANSIT SYSTEM STUDY

Priority Corridor Alternatives Analysis Phase 1

18-Aug-09

**AVERAGE WEIGHTING BY OBJECTIVE**

| Weight                                                                                          |                                                                                           |                                      |                            |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------|----------------------------|
| Goals / Design Concepts                                                                         | Measure                                                                                   | Average Based on Respondents Scoring | Rounded to Nearest Integer |
| <b>GOAL 1: IMPROVE TRANSIT CONNECTIVITY</b>                                                     |                                                                                           |                                      |                            |
| <b>Objective 1.1</b> Connect major city central business districts (CBDs)                       | Number of major city CBDs with direct HCT connection                                      | 2.0                                  | 2.0                        |
| <b>Objective 1.2</b> Connect residential areas with major employment centers                    | Number of major employment centers served with HCT                                        | 2.6                                  | 3.0                        |
| <b>Objective 1.3</b> Connect residential areas with major activity centers                      | Number of major activity centers served with alignment                                    | 2.4                                  | 2.0                        |
| <b>GOAL 2: IMPROVE TRANSIT MOBILITY</b>                                                         |                                                                                           |                                      |                            |
| <b>Objective 2.1</b> Provide dedicated transit right-of-way where possible                      | Width and use of existing right-of-way                                                    | 2.4                                  | 2.0                        |
| <b>Objective 2.2</b> Provide good transit transfer opportunities with planned future bus system | Number of locations where the HCT alignment would connect with one bus route              | 1.3                                  | 1.0                        |
|                                                                                                 | Number of locations where the HCT alignment would connect with two or more bus routes     |                                      |                            |
| <b>Objective 2.3</b> Minimize transit travel time between major origins/destinations            | 2035 transit travel times along HCT alignments                                            | 2.8                                  | 3.0                        |
| <b>GOAL 3: MANAGE TRAVEL DEMAND</b>                                                             |                                                                                           |                                      |                            |
| <b>Objective 3.1</b> Improve transit mode share                                                 | Number of daily 2035 transit trips in the study corridor                                  | 2.2                                  | 2.0                        |
|                                                                                                 | Daily boarding rides on HCT mode                                                          |                                      |                            |
| <b>Objective 3.2</b> Provide service with good access for walk and bike                         | Existing and forecast year population and population density within 1/2 mile of alignment | 2.1                                  | 2.0                        |
|                                                                                                 | Existing and forecast year employment and employment density within 1/2 mile of alignment |                                      |                            |
|                                                                                                 | Qualitative Assessment of opportunities for and quality of - walk and bike access         |                                      |                            |
|                                                                                                 | Number of existing connecting bus routes and number of daily connecting buses             |                                      |                            |
| <b>Objective 3.3</b> Provide potential park-and-ride sites with good auto access                | Ability to site major park-and-ride facilities                                            | 2.2                                  | 2.0                        |
| <b>Objective 3.5</b> Minimize impacts to traffic operations                                     | Potential impact of HCT concept on major signalized intersections                         | 1.9                                  | 2.0                        |
|                                                                                                 | 2030 V/C ratios along the potential alignment                                             |                                      |                            |

TREASURE VALLEY HIGH CAPACITY TRANSIT SYSTEM STUDY

Priority Corridor Alternatives Analysis Phase 1

18-Aug-09

**AVERAGE WEIGHTING BY OBJECTIVE**

| Weight                                                                                                                                          |                                                                 |                                      |                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------|----------------------------|
| Goals / Design Concepts                                                                                                                         | Measure                                                         | Average Based on Respondents Scoring | Rounded to Nearest Integer |
| <b>GOAL 4: SUPPORT TRANSPORTATION AND LAND USE PLANS</b>                                                                                        |                                                                 |                                      |                            |
| <b>Objective 4.1</b> Provide transit improvements that are consistent with adopted local, state, and regional plans                             | HCT improvements identified in local, state, and regional plans | 2.0                                  | 2.0                        |
| <b>Objective 4.3</b> Provide opportunities for transit-oriented development                                                                     | Transit-supportive policies and zoning are in place             | 1.6                                  | 2.0                        |
| <b>GOAL 5: FINANCIAL FEASIBILITY</b>                                                                                                            |                                                                 |                                      |                            |
| <b>Objective 5.1</b> Develop high-capacity transit concepts that have the potential to be funded using a mix of federal, state, and local funds | Order-of-magnitude capital cost                                 | 2.1                                  | 2.0                        |
|                                                                                                                                                 | Estimated operations and maintenance cost                       |                                      |                            |
| <b>Objective 5.2</b> Develop cost-effective high-capacity transit concepts                                                                      | Annualized capital cost per HCT rider                           | 1.6                                  | 2.0                        |
|                                                                                                                                                 | Operating cost per HCT rider                                    |                                      |                            |

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**COMMENTS AND WEIGHTING**

| Weight                                                                                                                                          |                                                                                                               | COMMENTS AND WEIGHTING |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------|-------------------------|--------|------------|-----------------------|--------|------------|-----------------------|----------|------------|-----------------------|--------|------------|-----------------------|--------|------------|-----------------------|
| Goals / Design Concepts                                                                                                                         |                                                                                                               | Measure                |                         | Boise  |            |                       | VRT    |            |                       | Meridian |            |                       | ACHD   |            |                       | ITD    |            |                       |
|                                                                                                                                                 |                                                                                                               | Average                | Variance (lower = less) | Weight | Fatal Flaw | Drop, Amend or Issues | Weight | Fatal Flaw | Drop, Amend or Issues | Weight   | Fatal Flaw | Drop, Amend or Issues | Weight | Fatal Flaw | Drop, Amend or Issues | Weight | Fatal Flaw | Drop, Amend or Issues |
| <b>Average of Weights (Theoretical Average = 2.0)</b>                                                                                           |                                                                                                               |                        |                         | 2.20   |            |                       | 2.14   |            |                       | 1.82     |            |                       | 2.05   |            |                       | 2.14   |            |                       |
| <b>GOAL 1: IMPROVE TRANSIT CONNECTIVITY</b>                                                                                                     |                                                                                                               |                        |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
| <b>Objective 1.1</b> Connect major city central business districts (CBDs)                                                                       | Number of major city CBDs with direct HCT connection                                                          | 2.0                    | 0.80                    | 2      |            |                       | 3      |            |                       | 1        |            | X                     | 1      |            |                       | 3      |            |                       |
| <b>Objective 1.2</b> Connect residential areas with major employment centers                                                                    | Number of major employment centers served with HCT                                                            | 2.6                    | 0.24                    | 3      |            | X                     | 2      |            | X                     | 3        |            | Amend                 | 3      |            |                       | 2      |            |                       |
| <b>Objective 1.3</b> Connect residential areas with major activity centers                                                                      | Number of major activity centers served with alignment                                                        | 2.4                    | 0.24                    | 3      |            | X                     | 2      |            | X                     | 2        |            |                       | 2      |            |                       | 3      |            |                       |
| <b>GOAL 2: IMPROVE TRANSIT MOBILITY</b>                                                                                                         |                                                                                                               |                        |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
| <b>Objective 2.1</b> Provide dedicated transit right-of-way where possible                                                                      | Width and use of existing right-of-way                                                                        | 2.4                    | 0.24                    | 3      |            |                       | 3      |            |                       | 2        |            |                       | 2      |            |                       | 2      | Yes        |                       |
| <b>Objective 2.2</b> Provide good transit transfer opportunities with planned future bus system                                                 | Number of locations where the HCT alignment would connect with one bus route                                  | 1.2                    | 0.16                    | 2      |            |                       | 1      |            | X                     | 1        |            |                       | 1      |            |                       | 1      | Yes        | X                     |
|                                                                                                                                                 | Number of locations where the HCT alignment would connect with two or more bus routes                         | 1.4                    | 0.64                    | 3      |            |                       | 1      |            | X                     | 1        |            |                       | 1      |            |                       | 1      |            | X                     |
| <b>Objective 2.3</b> Minimize transit travel time between major origins/destinations                                                            | 2035 transit travel times along HCT alignments                                                                | 2.8                    | 0.16                    | 2      |            |                       | 3      |            |                       | 3        | Yes        |                       | 3      |            |                       | 3      |            |                       |
| <b>GOAL 3: MANAGE TRAVEL DEMAND</b>                                                                                                             |                                                                                                               |                        |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
| <b>Objective 3.1</b> Improve transit mode share                                                                                                 | Number of daily 2035 transit trips in the study corridor                                                      | 2.2                    | 0.56                    | 2      |            | X                     | 2      |            |                       | 3        |            |                       | 1      |            |                       | 3      |            |                       |
| <b>Objective 3.2</b> Provide service with good access for walk, bike, and bus transfer                                                          | Existing and forecast year population and population density within 1/2 mile of alignment                     | 2.4                    | 0.24                    | 2      |            |                       | 3      |            |                       | 2        |            |                       | 3      |            |                       | 2      |            |                       |
|                                                                                                                                                 | Existing and forecast year employment and employment density within 1/2 mile of alignment                     | 2.4                    | 0.24                    | 2      |            |                       | 3      |            |                       | 2        |            |                       | 2      |            |                       | 3      |            |                       |
|                                                                                                                                                 | Number of existing connecting bus routes and number of daily connecting buses                                 | 1.6                    | 0.64                    | 3      |            |                       | 1      |            | X                     | 1        |            |                       | 1      |            |                       | 2      |            |                       |
| <b>Objective 3.3</b> Provide potential park-and-ride sites with good auto access                                                                | Ability to site major park-and-ride facilities                                                                | 2.2                    | 0.16                    | 2      |            |                       | 3      |            |                       | 2        |            |                       | 2      |            |                       | 2      |            |                       |
| <b>Objective 3.4</b> Support other non-SOV travel modes                                                                                         | Compatibility of HCT concept with bicycle, pedestrian and carpool facilities                                  | 0.8                    | 1.00                    |        |            | Drop                  | 1      |            | X                     |          |            | Drop                  |        |            |                       | 3      |            |                       |
| <b>Objective 3.5</b> Minimize impacts to traffic operations                                                                                     | Potential impact of HCT concept on major signalized intersections                                             | 2.0                    | 0.80                    | 1      |            | X                     | 2      |            |                       | 1        |            | X                     | 3      | Yes        |                       | 3      |            |                       |
|                                                                                                                                                 | 2030 V/C ratios along the potential alignment                                                                 | 1.8                    | 0.56                    | 1      |            |                       | 2      |            |                       | 1        |            |                       | 3      | Yes        |                       | 2      |            |                       |
| <b>GOAL 4: SUPPORT TRANSPORTATION AND LAND USE PLANS</b>                                                                                        |                                                                                                               |                        |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
| <b>Objective 4.1</b> Provide transit improvements that are consistent with adopted local, state, and regional plans                             | HCT improvements identified in local, state, and regional plans                                               | 2.0                    | 0.80                    | 2      |            |                       | 1      |            | X                     | 3        |            |                       | 3      |            |                       | 1      |            |                       |
| <b>Objective 4.2</b> Provide transit service improvements to high-growth areas                                                                  | Actual and projected percent growth (2008-2035) in population and employment within 1/2 mile of HCT alignment | 1.2                    | 0.67                    |        |            | Drop                  | 3      |            | X                     |          |            | Drop                  | 2      |            |                       | 1      |            |                       |
| <b>Objective 4.3</b> Provide opportunities for transit-oriented development                                                                     | Transit-supportive policies and zoning are in place                                                           | 1.6                    | 0.50                    | 3      |            |                       | 1      |            | X                     |          |            | Drop                  | 2      |            |                       | 2      |            |                       |
| <b>GOAL 5: FINANCIAL FEASIBILITY</b>                                                                                                            |                                                                                                               |                        |                         |        |            |                       |        |            |                       |          |            |                       |        |            |                       |        |            |                       |
| <b>Objective 5.1</b> Develop high-capacity transit concepts that have the potential to be funded using a mix of federal, state, and local funds | Order-of-magnitude capital cost                                                                               | 2.0                    | 0.80                    | 1      |            |                       | 3      |            |                       | 1        |            |                       | 2      |            |                       | 3      |            |                       |
|                                                                                                                                                 | Estimated operations and maintenance cost                                                                     | 2.2                    | 0.56                    | 1      |            |                       | 3      |            |                       | 2        |            |                       | 2      |            |                       | 3      |            |                       |
| <b>Objective 5.2</b> Develop cost-effective high-capacity transit concepts                                                                      | Annualized capital cost per HCT rider                                                                         | 1.6                    | 0.50                    | 3      |            | X                     | 2      |            |                       |          |            | Drop                  | 2      |            |                       | 1      |            |                       |
|                                                                                                                                                 | Operating cost per HCT rider                                                                                  | 1.6                    | 0.50                    | 3      |            |                       | 2      |            |                       |          |            | Drop                  | 2      |            |                       | 1      |            |                       |

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