

SH 82

# GRAND AVENUE BRIDGE

## Stakeholders Working Group



February 13, 2012



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## Goals for Today

- Review the Visioning Workshop
- Confirm Community Values Incorporated into Decision Process
- Review First Level Screening
- Discuss Second Level Screening Criteria



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# Agenda

- Opening Remarks and Self Introductions
- Project Overview
- Visioning Overview
- Decision Process
- Level 1 Screening Process
- Level 2 Criteria Exercise
- Next Steps/Project Timeline



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# Project Overview

## ■ Context Statement

The Grand Avenue bridge over the Colorado River, Interstate 70 and the railroad tracks, connects north and south Glenwood Springs, I-70 and State Highway 82, and the historic districts of downtown and the Glenwood Hot Springs.

The bridge stands as a gateway to the city of Glenwood Springs, Glenwood Canyon, the Roaring Fork Valley, and Colorado's western slope communities. It serves local, regional and state travel, local commuters, emergency response, bicyclists and pedestrians.

The soaring walls of Glenwood Canyon; the rich history of Glenwood Springs, built at the confluence of the Colorado and Roaring Fork Rivers; mining; tourism and recreation define a splendid and vivid context for the Grand Avenue bridge.



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# Project Overview

## ■ Critical Success Factors

- Meet Current Design Factors
- Safety
- Pedestrian, bicycle and ADA access
- Iconic Structure
- Promote appropriate speeds
- Connection to 6<sup>th</sup> Street
- Minimize construction impacts
- Solve problems into the future
- Provide for activities and vibrant street life under the bridge
- Avoid and minimize environmental impacts
- Accommodate traffic flow and demand
- Design for sustainability



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# Project Overview

## ■ Critical Success Factors (continued)

- Looks like it grew out of the history of Glenwood Springs
- Positive economic impact, short and long-term
- Invigorates activity on Wing Street
- Accommodates traffic flow on I-70
- Maintain and enhance recreation on the river
- Affordable
- Doesn't impact aquifer and hot springs
- Source of community pride
- Engaged public and community



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## Project Overview

- Project Purpose

The purpose of the project is to provide a safe, secure, and effective connection from downtown Glenwood Springs across the Colorado River and I-70 to the historic Glenwood Hot Springs area.



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# Project Overview

## ■ Project Need

The Grand Avenue Bridge serves as a vital link of SH 82 across the Colorado River, I-70, and the Union Pacific Railroad, connecting downtown Glenwood Springs with the historic Hot Springs, Hotel Colorado, and I-70. The importance of the bridge to local and regional transportation underscores the following transportation needs:

1. Improve connectivity between downtown Glenwood Springs, and the Roaring Fork Valley, with the historic Hot Springs pool area and I-70.
2. Address the functional and structural deficiencies of the bridge to improve public safety, including emergency service response, and reliability as a critical transportation route.

# Project Overview

## ■ Project Goals

- Meet design standards as practical to improve connectivity between the south side of the Colorado River (downtown Glenwood Springs), and the north side of the river (historic Glenwood Hot Springs area and I-70).
- Maintain consistency with city planning regarding transportation and land use.
- Accommodate multimodal transportation including buses, pedestrians, and bicycles.
- Meet transportation safety needs of all users – auto, truck, bus, pedestrian, and bicycle.
- Reduce and minimize construction impacts to the businesses, transportation users, and visitors.
- Provide effective access for existing and future economic activity.
- Avoid and minimize environmental impacts to scenic, aesthetic, historic, and natural resources.

# Project Overview

## ■ Project Goals (continued)

- Provide practical and financially realistic transportation improvements for the 2035 planning horizon and a structure that will be sound for a minimum of 30 years.
- Maintain or improve transportation (traffic and ped/bike) operations in the project area.
- Incorporate sustainable elements into the design.
- Provide an aesthetically appropriate solution that is in harmony with the context of the natural and built environment.
- Avoid or minimize proximity, economic and right-of-way impacts and relocations to adjacent properties.
- Incorporate Context Sensitive Solutions (CSS) into the planning and design including community-based issues such as urban design and aesthetics.

# Visioning Overview

## Visioning Session Dec. 7<sup>th</sup> & 8<sup>th</sup>

### ■ Goals

- Clarify the context for the study
- Explore community and stakeholder values
- Define what is important about the future bridge
- Develop consensus around what should be protected and enhanced

# Visioning Overview

## ■ Outcomes

- Minimize impacts to businesses
- Balance duration and extent of closures for construction
- Gateway/view from all perspectives important
- Bridge needs to be integrated into community fabric/infrastructure
- Incorporate human element—streetscape
- Accommodate pedestrians and bikes



## Visioning Overview

- Outcomes (continued)
  - Harmonious with natural environment and local materials
  - Provide separated pedestrian experience
  - Minimize piers in river and impacts to I-70
  - Accommodate local and regional traffic
  - Create an attraction—long term and during construction
  - Provide strong information/media coverage – “open for business”

# Visioning Overview

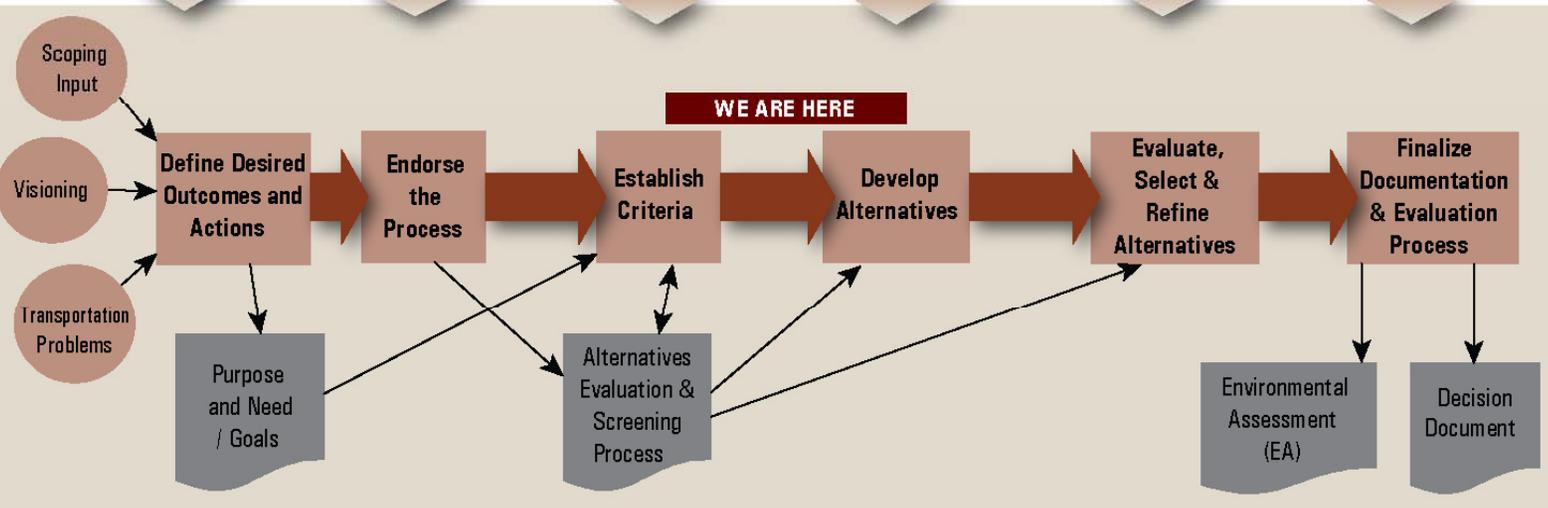
- Outcomes (continued)
  - Design to manage speed and livability and minimize noise
  - Consistency with local transportation and land use plans
  - Partner with CDOT, City and Stakeholders to address impacts and explore opportunities
  - Look for opportunities to enhance areas at ends of bridge
  - Consider staging and construction traffic
  - Strive for the best design and value

# Stakeholder Input and Decision Process

STAKEHOLDER INPUT



DECISION PROCESS

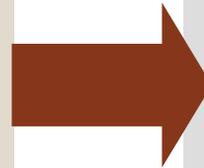


# Project Decision Process

- PLT, Public and Agency Scoping, and Visioning Input to the Decision Process

## Inputs:

- PLT
  - Context Statement
  - Key Project Objectives
- Public and Agency Scoping
- Visioning Workshop
  - Critical Success Factors



## Project Tools:

- Project Purpose & Need
- Project Goals
- Project Criteria

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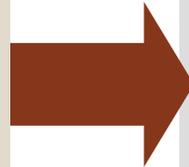
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# Project Decision Process

## ■ Sample Linkages

### **Context Statement:**

The Grand Avenue Bridge over the Colorado River, Interstate 70 and the railroad tracks, connects north and south Glenwood Springs, I-70 and State Highway 82, and the historic districts of downtown and the Glenwood Hot Springs.



### **Draft Project Needs:**

The Grand Avenue Bridge serves as a vital link across the Colorado River, I-70, and the Union Pacific Railroad, connecting downtown Glenwood Springs with the historic Hot Springs, Hotel Colorado, and I-70.

# Project Decision Process

## ■ Sample Linkages

### Public & Agency Scoping Elements:

- Bridge
  - Fix bridge problems
  - Iconic
  - Aesthetics are important
- Bike/pedestrian
  - Improve pedestrian/ bike access
  - Create a vibrant space
  - Separation from travel lanes
- Safety
  - Emergency access
  - Sight distance for fire trucks

### Draft Project Purpose

The purpose of the project is to address functional and structural issues and enhance the transportation functions provided by the Grand Avenue Bridge.

### Draft Project Needs

2. Address the functional and structural deficiencies of the bridge to improve emergency service response and dependability.

# Project Decision Process

## ■ Sample Linkages

### Context Statement:

The bridge stands as a gateway to the city of Glenwood Springs, Glenwood Canyon, the Roaring Fork Valley, and Colorado's western slope communities. **It serves local, regional and state travel, local commuters, emergency response, bicyclists and pedestrians.**



### Project Goals:

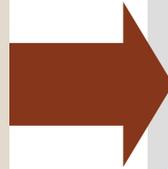
**c) Accommodate multimodal transportation including buses, pedestrians, and bicycles.**

# Project Decision Process

## ■ Sample Linkages

### Critical Success Factors:

- Meet current design standards
- Pedestrian, bicycle, and ADA access
- Safety



### Project Goals:

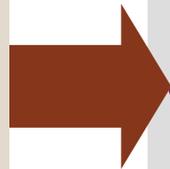
- Meet design standards as practical to improve connectivity between the south side of the Colorado River (downtown Glenwood Springs), and the north side of the river (historic Glenwood Hot Springs area and I-70).
- Accommodate multimodal transportation including buses, pedestrians, and bicycles.
- Meet transportation safety needs of all users – auto, truck, bus, pedestrian, and bicycle.

# Project Decision Process

## ■ Sample Linkages

### Key Project Objectives:

- Minimize impacts to businesses
- Harmonious with natural environmental and local materials
- Accommodate local and regional traffic



### Project Goals:

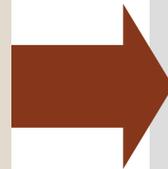
- Avoid or minimize proximity, economic and right-of-way impacts and relocations to adjacent properties.
- Provide an aesthetically appropriate solution that is in harmony with the context of the natural and built environment.
- Maintain or improve transportation (traffic and ped/bike) operations in the project area.

# Project Decision Process

## ■ Sample Linkages

### Public Scoping Elements:

- Economic
  - Concern about impacts to downtown businesses
- Environmental
  - Aquatic species
- Bridge
  - Aesthetics are important



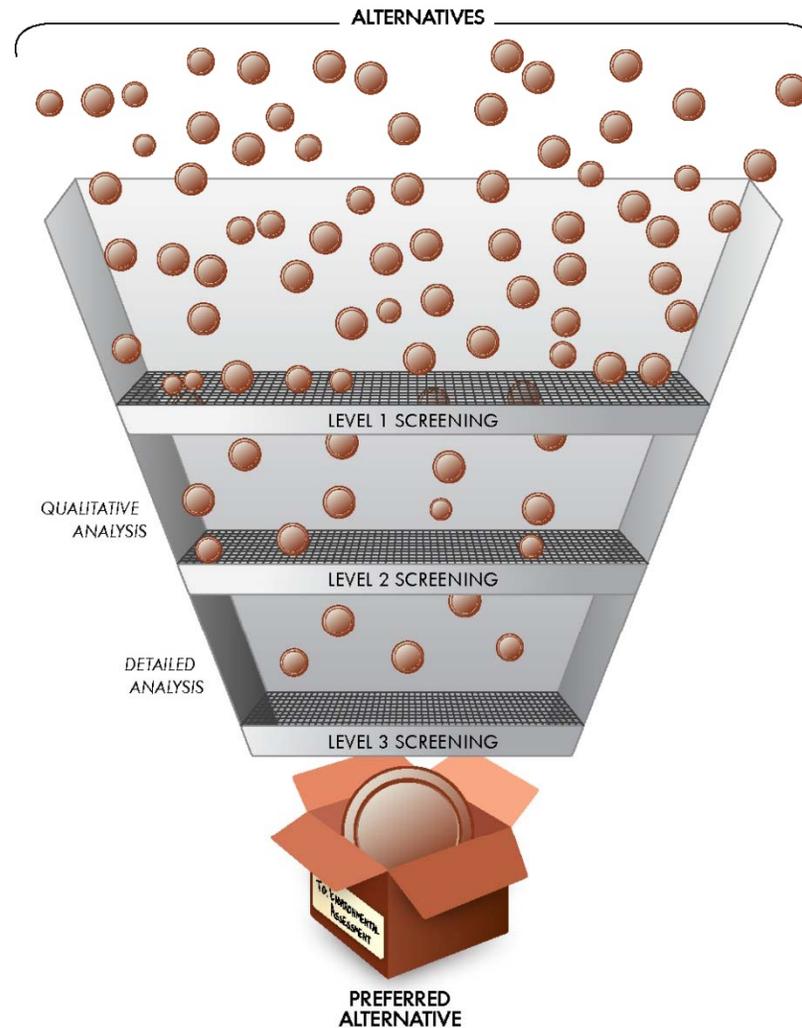
### Project Goals:

- Reduce and minimize construction impacts to the businesses, transportation users, and visitors.
- Avoid and minimize environmental impacts to scenic, aesthetic, historic, and natural resources.
- Provide an aesthetically appropriate solution that is in harmony with the context of the natural and built environment.



# Project Decision Process

- Alternatives Screening Process



## Level 1 Screening

- Does the alternative meet the Purpose and Need?
  - Connectivity between Downtown and Historic Glenwood Hot Springs Area
  - Provides safe, dependable route
  - Connection for local and regional traffic
  - Provides for efficient emergency response
- Are there environmental or technical problems that can't be overcome?



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# Alternative Families

## Alignments

### Future Considerations

- Bridge Landing Points
- Bridge Pier Locations
- Bridge Types
- Constructability/Phasing

## Cross-Sections

- Urban Design
- Transit Facilities
- Transportation Demand Management
- Other Details

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## Alignments

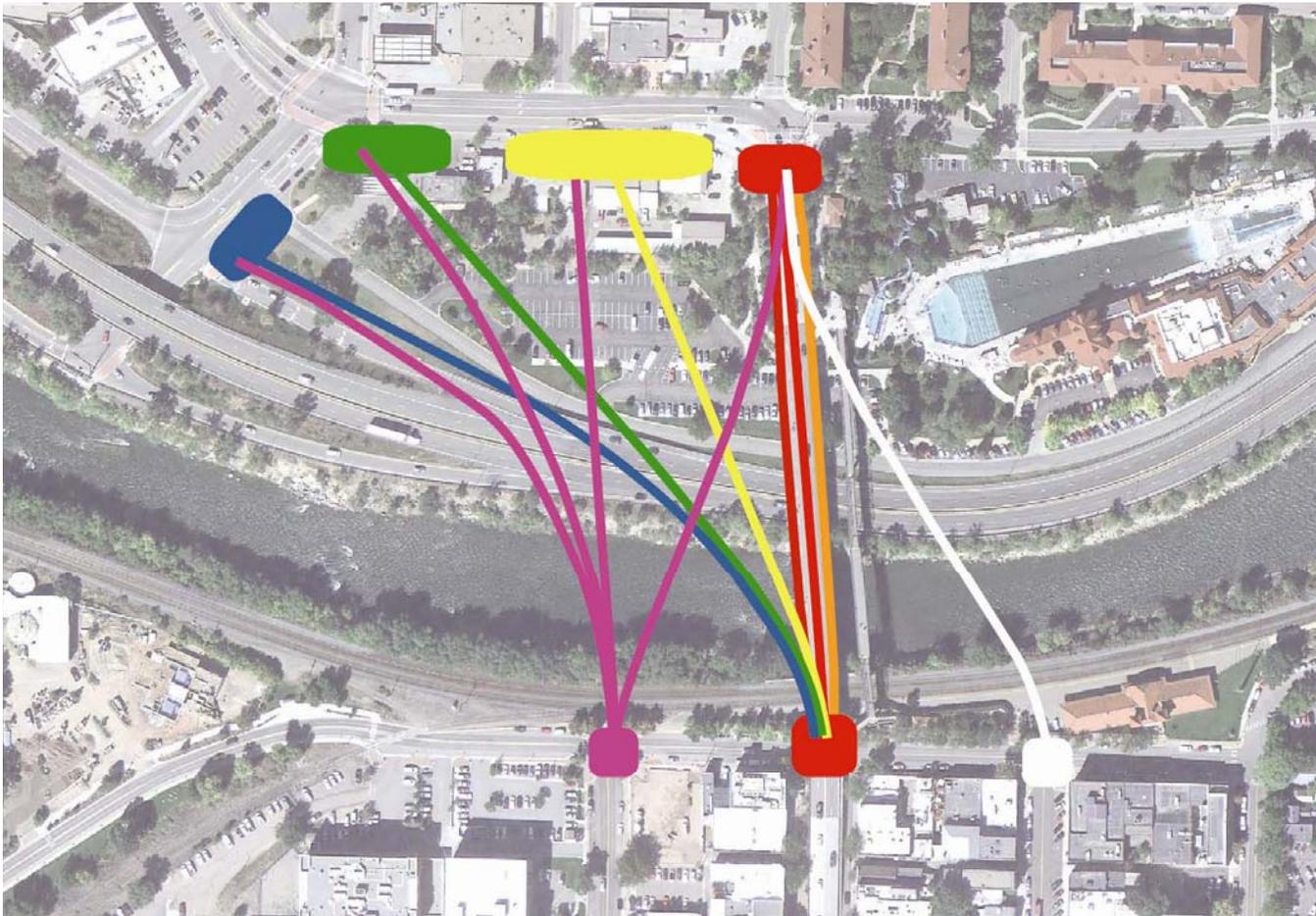
- 7<sup>th</sup> Street to 6<sup>th</sup> Street
- Single Bridge
- Couplet Options



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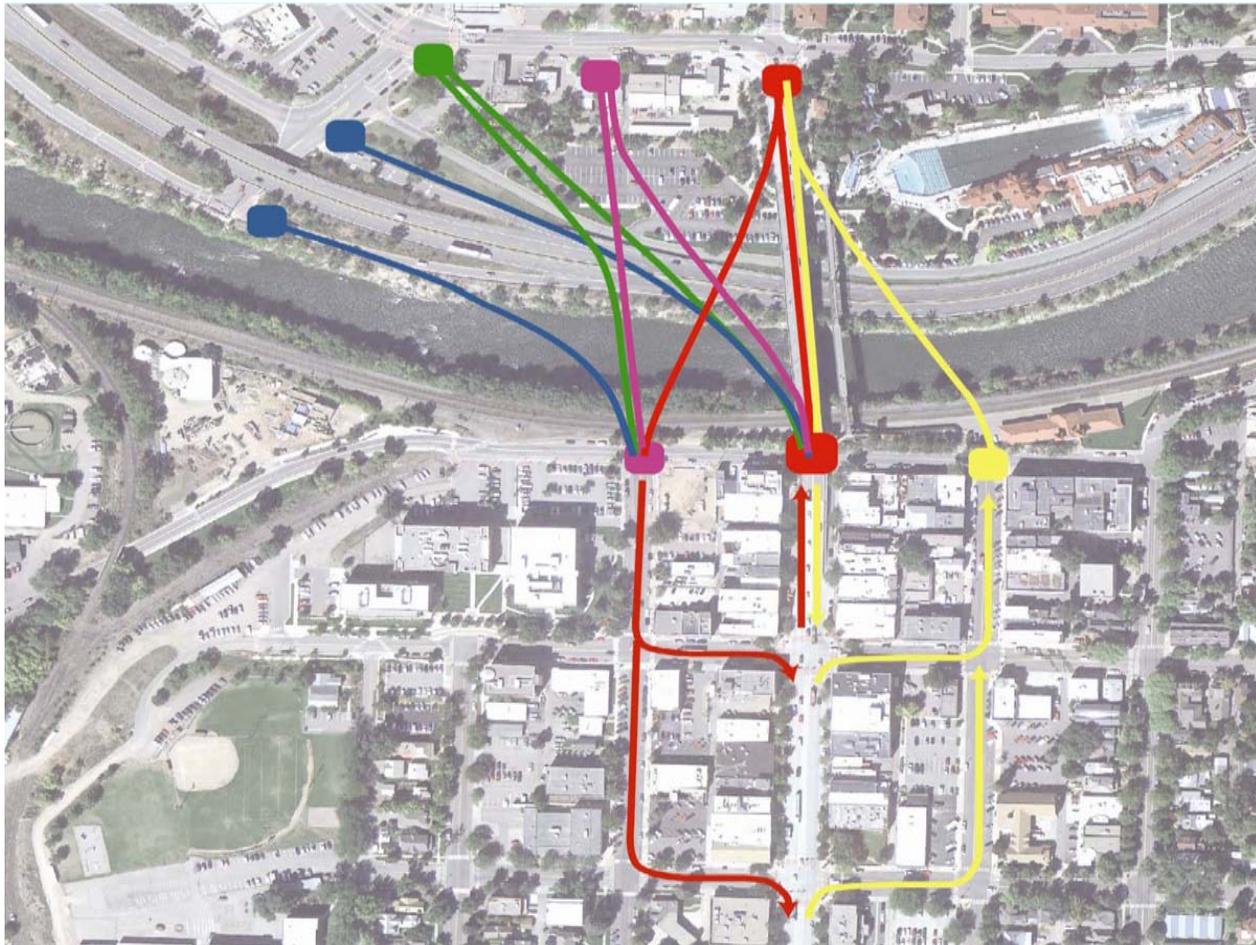
## Alignments



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# Alignment - Couplets



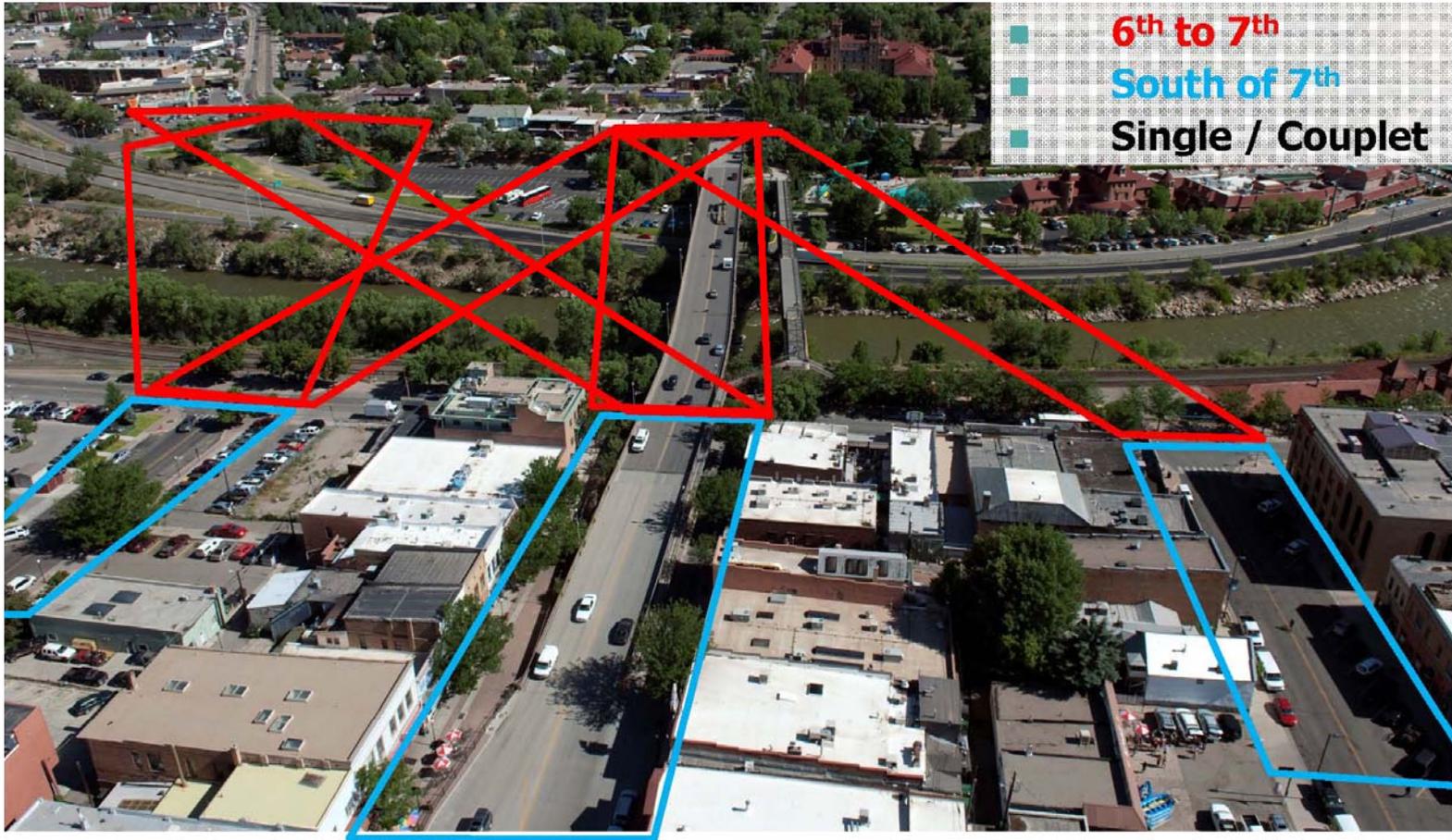
## Level 1 Screening of Alignments

- Screen out alignments that don't connect to existing streets in downtown.
  - Does not meet Purpose and Need.
- Screen out alignments west and east of Colorado/Cooper (bypasses).
  - Does not meet Purpose and Need to connect downtown to 6<sup>th</sup> St.
- Screen out alignments that start at Exit 116 and go straight south.
  - Excessive grade - cannot get from 116 over river and railroad – 15% grade.
  - Cost - would require reconstructing (lower or raising) I-70.

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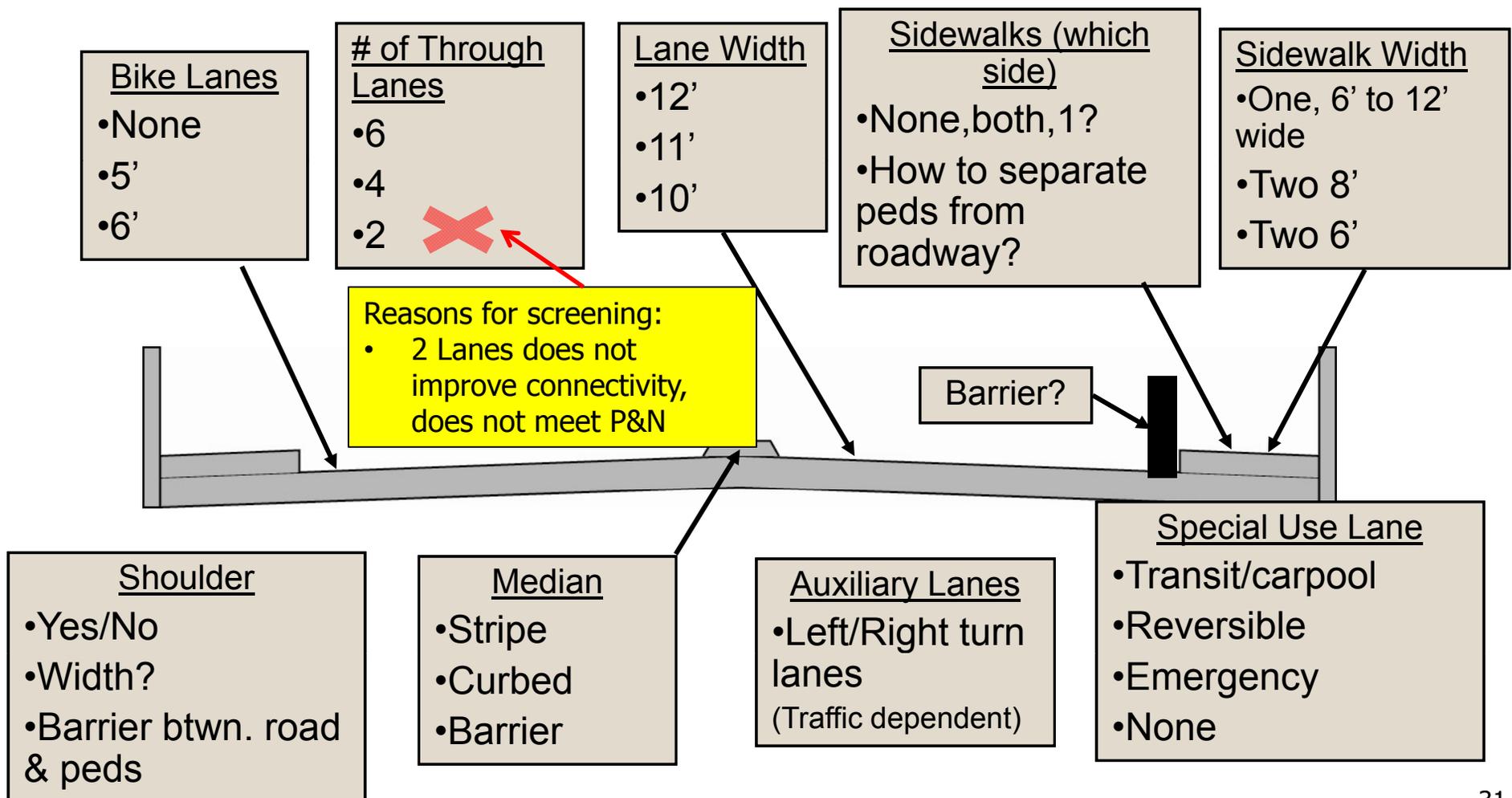
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## Cross Sections





# Cross Sections Elements



## Level 1 Screening of Cross Sections

- North of 7<sup>th</sup> Street
  - Screen out 2 through lanes.
    - 2 lanes does not improve connectivity.
- South of 7<sup>th</sup> Street
  - Screen out 2 through lanes.
    - 2 lanes does not improve connectivity.

# Future Considerations

- Bridge Landing Points
  - Intersection modifications
  - Parking/access modifications
  - Pedestrian landing points
- Bridge Pier Locations
  - Restrictions on pier placement
- Bridge Types
  - Structure type
- Constructability/Phasing
  - Lane reductions, closures
- Environmental Considerations
  - 4(f), historic preservation
  - Water quality
- Urban Design
  - Colors, enhancements
  - Overlooks
- Transit Facilities
  - Bus stop location
  - Priority lanes
- Transportation Demand Management
- Other Design Details
  - Structure vs. fill/walls
  - Lighting
  - Signing
  - Drainage
  - Wing Street
  - ITS (web cams, traveler info.)
  - Utilities



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## Check in

- Decision Process?
- Level 1 Screening Outcomes?



## Small Group Exercise - Level 2 Screening Criteria

- Qualitative comparison within alternative families
- Level 2 has low level of design detail
- Look for discernible and relevant differences
- Tie to Purpose & Need and Project Goals

## Level 2 Screening Overview

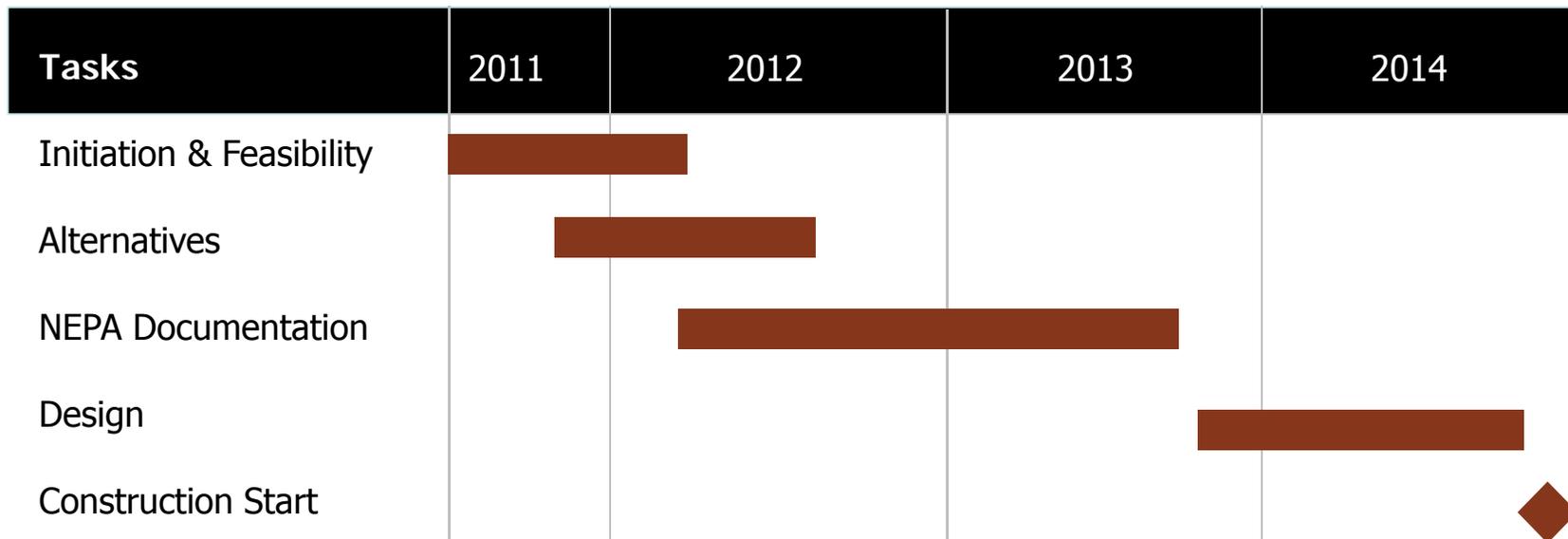
- **Community and Environmental**
  - Minimize environmental impacts to scenic, aesthetic, historic, and natural resources.
  - Is the project in harmony with the community?
  - Provide an alternative that is consistent with City planning.
  - Minimize private property impacts.
- **Constructability and Construction Impacts**
  - Provide a practical and financially realistic alternative.
  - Reduce and minimize construction impacts to the businesses, transportation users, and visitors.

## Level 2 Screening Overview

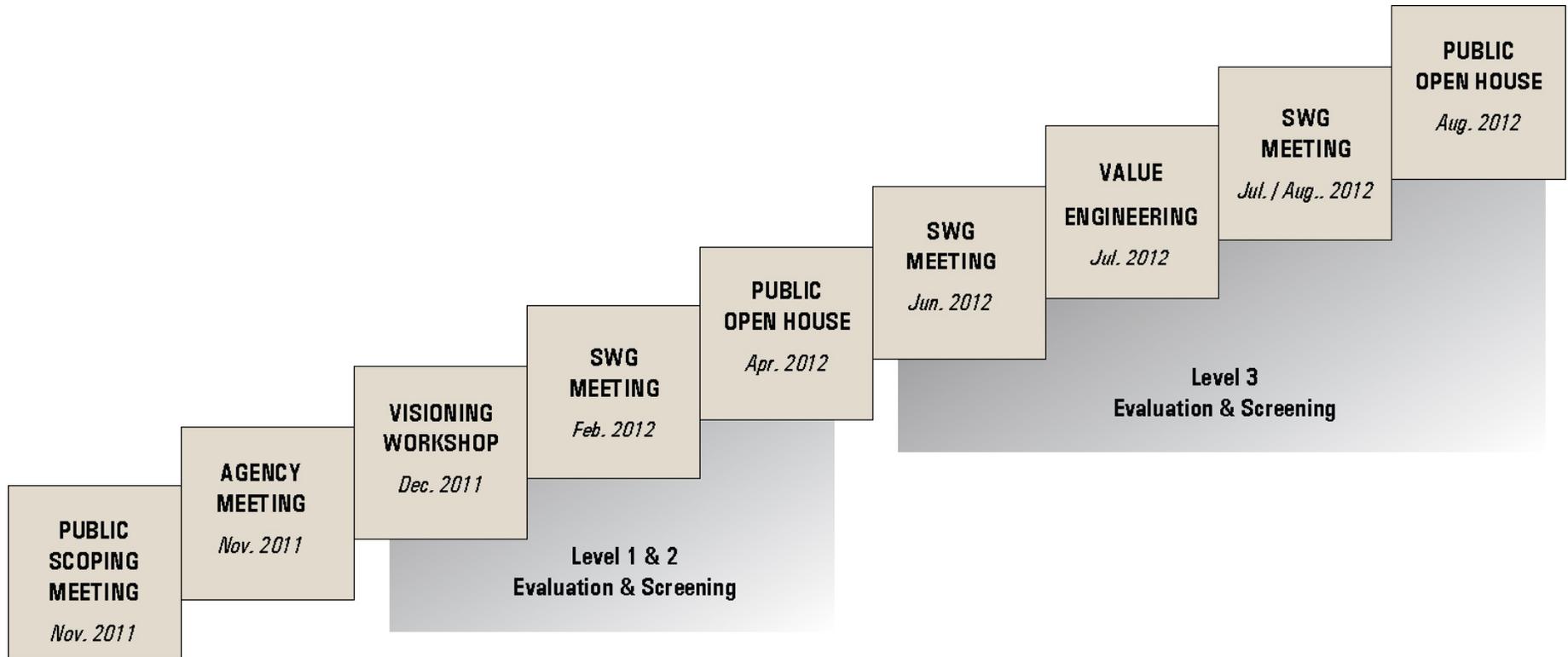
- **Multimodal Transportation Operations and Access**
  - Safely accommodate transportation users.
  - Maintain and improve multimodal connections for buses, pedestrians, and bicycles .
  - Maintain or improve transportation operations in the project area.
- **Design and Aesthetics**
  - Is the project in harmony with the community?
  - Incorporates sustainable elements into the design.

## Next Steps

If the project receives the federally required approvals, construction would begin in late 2014.



# Key Stakeholders and Project Meetings



## Next Steps

- Level 2 screening
- Public open house (**Wednesday April 4th 2012, 4:30 – 7:00 pm, Community Center**)
- Stakeholder Working Group meeting (June)
- Value Engineering (July)
- Level 3 Screening (July)
- Stakeholder Working Group meeting (July/August)
- Public open house (August)
- Recommended alternative (August)
- Ongoing outreach to civic groups and organizations



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## Project Contact and Website

- Project Website

- [www.sh82grandavenuebridge.com](http://www.sh82grandavenuebridge.com)

- Project Contact

- Josh Cullen, Project Engineer  
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202 Centennial St.

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