

### Has the project team considered alternatives proposed by others?

The project team determined that some alternatives proposed by individual stakeholders during the process are reasonable alternatives that should be fully evaluated as part of the EA alternatives development and screening process. The alternatives were evaluated according to the same criteria as all other alternatives have been. The results of the evaluation are below.

#### Alternative 13

This alternative was proposed by David Hauter and other downtown stakeholders. An article about this alternative ran in the *Glenwood Springs Post Independent* on June 6, 2012.

The illustration at top right displays the alternative as proposed by these stakeholders. The illustration at bottom right displays Alternative 9.

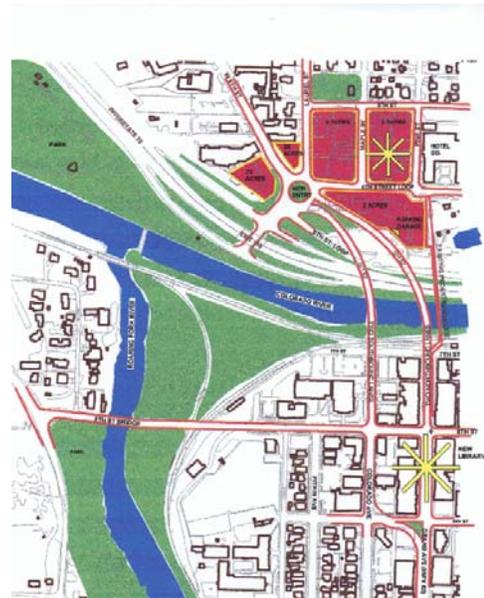
This alternative is very similar to Alternative 9 that had been previously screened. Some key differences between the two include:

- It has smoother curves from Colorado to Grand, which could improve traffic flow downtown.
- It adds an extension of 8th Street under the railroad “wye” area to connect to the existing bridge over the Roaring Fork River. This connection is part of the City’s transportation plan. It is uncertain, but unlikely, that the funding source for the Grand Avenue Bridge could also fund the 8th Street connection.

Reasons to eliminate Alternative 13 include:

- It would have significantly higher costs than Alternative 9 because of the additional property impacts .
- The extension of 8th Street would not address the Purpose of this project.
- Most of the disadvantages of Alternative 9 also apply to this alternative.

For these reasons, and the reasons Alternative 9 was screened, **Alternative 13 has been eliminated** from further consideration.



Alternative 13



Alternative 9

#### Alternative 14

Jim Denton presented this alternative at the June 6 Public Open House and June 6 Stakeholders Working Group meeting. The project team's concept design for Alternative 14 is shown at right.

This alternative would provide a direct connection to downtown to and from I-70 to the west, via one bridge or a pair of bridges connecting to either 8th Street or 9th Street near Bolitho Elementary School. It would almost certainly provide better traffic flow between 9th Street and the west side of I-70.

Because a new bridge would have to pass over the railroad "wye", the alignment could not descend in time to connect to 8th Street, requiring it to touch down closer to 9th Street. This could have significant impacts to the elementary school, and several homes would need to be acquired because the alignment curves to meet grade at 9th Street.



9th Street between Pitkin and Grand Avenues would need to be modified to carry about half of the Grand Avenue traffic volume, about 12,000 to 15,000 vehicles per day. This would require:

- Removing on-street parking along 9th Street to accommodate three to four additional travel lanes.
- Widening the intersection of 9th Street and Grand to accommodate double-left and double-right turns, which would require acquisition of the Colorado National Bank building.

This alternative does not meet the project's Purpose and Need because:

- It does not address the functional and structural deficiencies of the Grand Avenue Bridge, which would still be in use for traffic traveling to or from the east on I-70. And, past studies conducted by CDOT and the City of Glenwood Springs have determined that Grand Avenue Bridge needs four lanes to accommodate traffic demand.
- The two new bridge structures to the west by themselves do not provide connectivity between downtown to the Hot Springs area. Because this would not address the Purpose of the project, the Grand Avenue Bridge would still require replacement. Combined with a replacement of the Grand Avenue Bridge these, two new structures would be redundant.

When compared to other alternatives, Alternative 14:

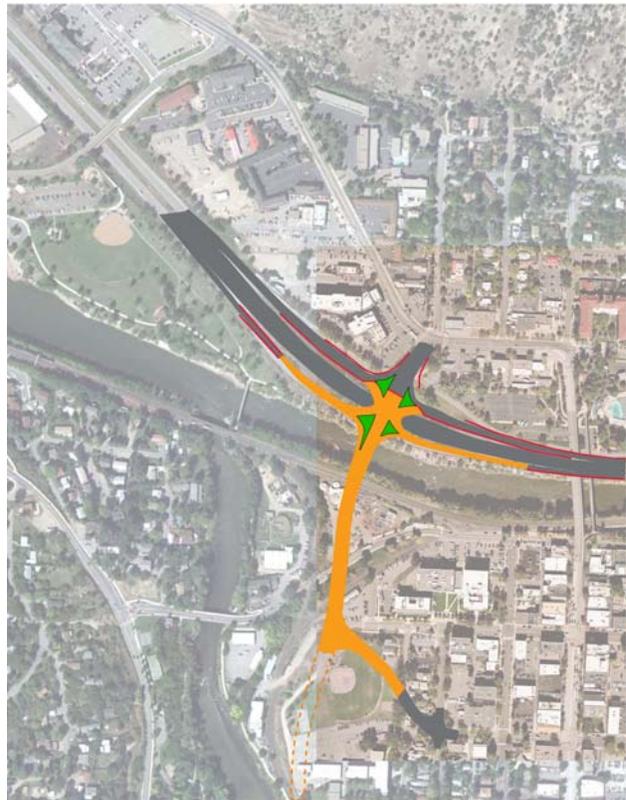
- Has higher costs and greater impacts to downtown and other properties.
- Has more noise and air quality impacts.
- Has a higher potential for Section 4(f) impacts to both historic and park resources.
- Results in circulation changes to residential areas.
- Has less potential for developing an aesthetic solution for the two new long bridges across the Colorado River.

For these reasons, **Alternative 14 has been eliminated** from further consideration.

### Alternative 15

This alternative was originally proposed by a Centennial Engineering Study in the early 1980s and suggested recently by several stakeholders. A variation of this alternative was prepared by the project team using similar design criteria as Alternatives 1 through 11. This variation connects to downtown at 9th Street, similar to Alternative 14, allowing it some potential to meet the Purpose and Need for this project. The project team's concept design for Alternative 15 is shown at right.

To connect to the existing 6th/Laurel intersection with minimal property impacts, Alternative 15 would require that the new bridge cross over the Colorado River at about the elevation of the current I-70 bridges at Exit 116. I-70 would be lowered to about the elevation of existing River Road and the ramp to go under the new bridge, and a new urban interchange configuration would be constructed. The existing bridge piers for Grand Avenue constrain the ability to make needed improvements for the current ramps at Exit 116, and would prohibit any reconstructed version of Exit 116 to be constructed properly. Connections to the south would likely be provided at 9th Street as in Alternative 14.



This alternative would still require the reconstruction of the Grand Avenue Bridge because the new ramps at the interchange would need to be extended beyond the existing piers for the bridge, and the problems with the existing bridge still need to be addressed.

This alternative may provide better access for traffic between downtown Glenwood Springs and I-70, although most Grand Avenue traffic would still need to use 9th Street to access the heart of downtown or continue to south SH 82. This may require significant improvements to these facilities and would create changes in circulation patterns downtown.

Because the alternative would still require and result in the replacement of the Grand Avenue Bridge, the additional connectivity provided by this alternative would be redundant.

This alternative:

- Has higher costs and results in greater impacts to downtown properties.
- Results in more noise and air quality impacts than other alternatives.
- Has greater potential for Section 4(f) impacts to both historic and park resources.
- Has less potential to address aesthetic concerns than other alternatives with one bridge.

In addition, the new connection with Exit 116 is not as good by itself at meeting the Purpose and Need compared to other alternatives.

For these reasons, **Alternative 15 has been eliminated** from further consideration.

### Alternative 16

This alternative was proposed at the Independent Peer Review workshop held from June 26 to 28, 2012. The alternative would utilize the Colorado alignment on the south side for two-way traffic. The concept would include a 4-lane cross-section on Colorado to 9th Street, and S-curves at 9th Street to Grand Avenue. There are two options on the north side – connecting at 6th and Laurel, or connecting at 6th and Maple. The conceptual designs for these options are shown at right.

Compared to alternatives on the Grand Avenue alignment, this alternative:

- Has higher costs and results in greater impacts to downtown properties.
- Results in more noise and air quality impacts than other alternatives.
- Has greater potential for Section 4(f) impacts to both historic and park resources.
- Could have negative effects on the Safe Routes to School route along 9th Street.
- The intersection options at 6th and Laurel are limited because of the steep grade – greater than 6 percent.

For these reasons, **Alternative 16 has been eliminated** from further consideration.

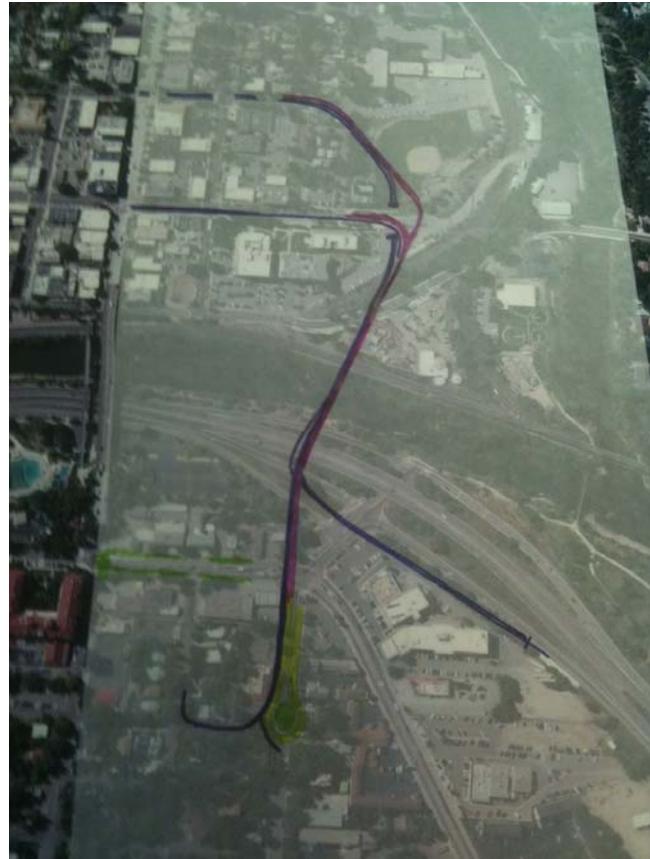


### Alternative 17

This alternative was proposed to CDOT by Jim Denton in late June.

The alternative would remove the need for the Grand Avenue Bridge to accommodate SH 82 traffic. This alternative has four movements:

- 1) **From SH 82 to eastbound I-70.** Through traffic would be directed from Grand Avenue to 9<sup>th</sup> Street westbound 2 blocks to Pitkin Street. At this point traffic would go onto a new bridge elevated to travel over School Street, 8<sup>th</sup> Street, 7<sup>th</sup> Street, the existing railroad corridor, the Colorado River and I-70 just east of the existing Exit 116 interchange. The bridge would then cross 6<sup>th</sup> Street above grade and go down a ramp built on the Laurel Street right-of-way and 1 block of the 5<sup>th</sup> Street right-of-way between Laurel and Maple Street. Traffic would then be at grade and would travel south to the 6<sup>th</sup> Street intersection. Traffic would then turn right (westbound) onto 6<sup>th</sup> Street, turn left onto Laurel Street and access I-70 eastbound via the existing Exit 116 interchange.
- 2) **From SH 82 to westbound I-70.** Through traffic would be directed from Grand Avenue to 9<sup>th</sup> Street westbound 2 blocks to Pitkin Street. At this point traffic would go onto a new bridge elevated to travel over School Street, 8<sup>th</sup> Street, the existing railroad corridor, the Colorado River and I-70 just east of the existing Exit 116 interchange. An entrance ramp would then fly over the bridge just described turning west. This ramp would then bridge over Laurel Street and begin a downgrade towards westbound I-70, merging into I-70 west of the existing Exit 116 on-ramp.
- 3) **From eastbound I-70 to SH 82.** Traffic would exit the existing Exit 116 interchange and turn left. At 6<sup>th</sup> Street traffic would be gaining elevation on a new ramp going northbound located on the Laurel Street right-of-way. At 5<sup>th</sup> Street, the ramp would U-turn 180 degrees and continue going up the ramp, but now southbound on the Laurel Street right-of-way. At 6<sup>th</sup> Street the ramp would connect to a bridge that crosses 6<sup>th</sup> Street, I-70, the Colorado River, the railroad, 7<sup>th</sup> Street and 8<sup>th</sup> Street before coming down to grade at about 9<sup>th</sup> and Pitkin Street. At this point traffic would go east along 9<sup>th</sup> before turning right onto Grand Avenue.



- 4) **From westbound I-70 to SH 82.** Traffic would exit the existing Exit 116 interchange and turn right. At 6<sup>th</sup> Street traffic would be gaining elevation on a new ramp going northbound located on the Laurel Street right-of-way. At 5<sup>th</sup> Street, the ramp would U-turn 180 degrees and continue going up the ramp but now southbound on the Laurel Street right-of-way. At 6<sup>th</sup> Street the ramp would connect to a bridge that crosses 6<sup>th</sup> Street, I-70, the Colorado River, the railroad, 7<sup>th</sup> Street and 8<sup>th</sup> Street before coming down to grade at about 9<sup>th</sup> and Pitkin Street. At this point traffic would go east along 9<sup>th</sup> before turning right onto Grand Avenue.

In addition to the movements described above. There would be an option to enter or exit this system at 8<sup>th</sup> Street. Local traffic could either enter or leave the bridge via ramps at 8<sup>th</sup> Street and touching down to grade somewhere around 8<sup>th</sup> and Pitkin Streets.

This concept in its original form is shown in the figure looking southbound. Compared to alternatives on the Grand Avenue alignment, this alternative:

- Has higher costs and results in greater impacts to downtown properties.
- Results in more noise and air quality impacts than other alternatives.
- Has greater potential for Section 4(f) impacts to both historic and park resources.
- Could have negative effects on the Safe Routes to School route along 9<sup>th</sup> Street.
- Has much more elevated structure through residential areas degrading the community in these areas.
- Due to the total bridge area, is not considered to be as aesthetically contextual appropriate.
- Has very circuitous traffic routes.
- Would require more right-of-way.
- Does not meet Purpose and Need as well because of more out-of-direction travel.
- Removes access from several properties along Laurel Street.

For these reasons, **Alternative 17 has been eliminated** from further consideration.