



## **Design Progress Update for the Mason Trail & Rail Crossing at the Natural Resources Research Center (NRRC)**

The purpose of this project is to design a separate pedestrian/bicycle crossing of the existing Mason Corridor trail and the active railroad. This Mason trail and rail crossing will provide more direct and safe access for pedestrians and cyclists traveling between the NRRC and the University Mall/Whole Foods shopping center, as well as to the future MAX Bus Rapid Transit station. This project is funded by a grant from the Colorado Department of Transportation and the North Front Range Metropolitan Planning Organization (NFR MPO).

Many different design alternatives have been considered and a public open house was held last spring to share the project with the community. Based on the public input received and the technical design analysis review, the project team's recommended design solution is a pedestrian/bicycle overpass over the Burlington Northern Santa Fe (BNSF) railroad tracks. We have considered various underpass designs as well; however given the topography, ground water levels, major utility corridors, and limited rights-of-way, the most cost-effective and user-friendly design solution is the proposed overpass. The following briefly describes how and why this choice was made.

### ***Process***

The design phase of the project began in January 2007 with a Project Committee meeting between CDOT representatives, City of Fort Collins staff from various departments, Colorado State University representatives, and the design consultants.

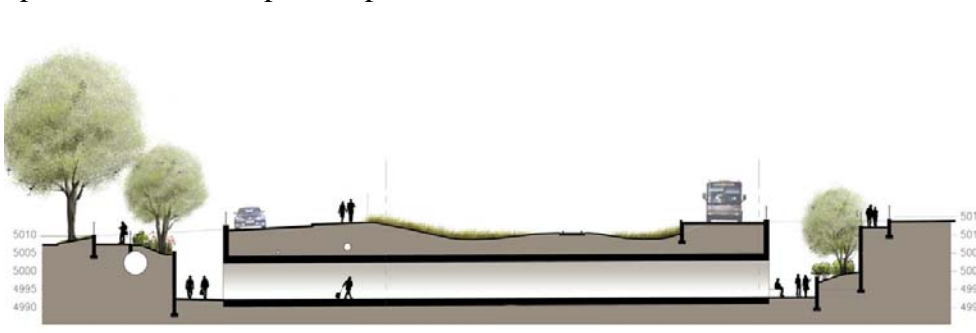
A day-long, hands-on design session was held in early March 2007 to identify and refine overpass/underpass designs, to evaluate the pros and cons of each crossing type, and to determine their costs.

A public open house was held March 26, 2007 at The Gardens at Spring Creek. Options were presented for the trail and rail crossing as well as other Mason Corridor projects. A summary of public comments is available on the website:

[www.fcgov.com/transportationplanning/mason](http://www.fcgov.com/transportationplanning/mason) .

**Alternatives**

Two trail and rail crossing alternatives were the focus of the public open house. These options and their respective pros and cons are as follows:



*Underpass section*



*Underpass plan view – NRRC at top left, Whole Foods bottom right*

**Underpass Evaluation**

PROS	CONS
<ul style="list-style-type: none"> <li>• Visual impact very low</li> </ul>	<ul style="list-style-type: none"> <li>• Security – poor visual surveillance</li> </ul>
<ul style="list-style-type: none"> <li>• Universal access</li> </ul>	<ul style="list-style-type: none"> <li>• Cost approximately 40% higher</li> </ul>
<ul style="list-style-type: none"> <li>• ADA (Americans with Disabilities Act) compliant access unhindered by mechanical failure</li> </ul>	<ul style="list-style-type: none"> <li>• Drainage – stormwater will have to be pumped out, or an 800' storm sewer system built that daylights into Spring Creek</li> </ul>
<ul style="list-style-type: none"> <li>• Less vertical change</li> </ul>	<ul style="list-style-type: none"> <li>• Topography</li> </ul>
<ul style="list-style-type: none"> <li>• Better garden-like experience</li> </ul>	<ul style="list-style-type: none"> <li>• Underground utility obstacles push tunnel lower</li> </ul>
<ul style="list-style-type: none"> <li>• Familiar option for Fort Collins users</li> </ul>	<ul style="list-style-type: none"> <li>• Higher parking impacts</li> </ul>
<ul style="list-style-type: none"> <li>• More user friendly (subjective)</li> </ul>	<ul style="list-style-type: none"> <li>• Utility impacts expensive to avoid or resolve</li> <li>• Constructability difficult under BNSF line</li> </ul>

*Overpass plan view – NRRC at top left, Whole Foods bottom right*



Note: The current overpass design has been modified to eliminate parking impacts to adjacent businesses.

*Overpass Evaluation*

PROS	CONS
<ul style="list-style-type: none"> <li>• Simpler construction</li> </ul>	<ul style="list-style-type: none"> <li>• ADA and bike access requires elevator</li> </ul>
<ul style="list-style-type: none"> <li>• Improved security – more visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Elevator maintenance and security concerns</li> </ul>
<ul style="list-style-type: none"> <li>• Lower railroad and right-of-way impacts</li> </ul>	<ul style="list-style-type: none"> <li>• BNSF permission required to clean outside of structure over railroad</li> </ul>
<ul style="list-style-type: none"> <li>• Topography</li> </ul>	<ul style="list-style-type: none"> <li>• Visual impact</li> </ul>
<ul style="list-style-type: none"> <li>• Lower costs compared with underpass</li> </ul>	<ul style="list-style-type: none"> <li>• Gives impression of greater travel distance</li> </ul>
<ul style="list-style-type: none"> <li>• Improved wayfinding for trail and MAX BRT</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Visual impact (subjective)</li> </ul>	
<ul style="list-style-type: none"> <li>• Potential iconic statement / Landmark</li> </ul>	

The overpass is the preferred alternative for the following reasons:

- Higher level of user safety
- Easier construction process
- Fewer utility impacts
- Minimal drainage issues
- Low impact to BNSF facilities
- Open air and view potential
- Fewer private property impacts
- Less construction and right-of-way (ROW) costs

### ***Recommendation***

Considering the information contained above, the overpass option provides good pedestrian access while limiting utility and drainage impacts at the project site. Therefore, the project team recommends that the overpass option be the selected crossing type as the project moves forward into the next steps of project development and formal structure type evaluation and selection.

### ***Next Steps***

Input from the October 25, 2007 open house will be considered and incorporated into the final design plan for the Overpass. Design work will be completed spring 2008 and construction will commence in 2008.

### ***Current Overpass Plan***

*Overpass concept view – looking northwest*



Given the unique nature of this project, we are interested in sharing our findings and recommendations with you and looking for your input and ideas to help shape the further design of the project.

Contact: Kathleen Bracke, City of Fort Collins, 970-224-6140 or [kbracke@fcgov.com](mailto:kbracke@fcgov.com)  
Or visit the project website: <http://fcgov.com/mason>

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