



*City of Arts & Innovation*

# Mobility & Infrastructure Committee Memorandum

**TO: MOBILITY & INFRASTRUCTURE COMMITTEE      DATE: DECEMBER 9, 2021**

**FROM: PUBLIC WORKS DEPARTMENT      WARDS: 1, 2, 3, 4, AND 5**

**SUBJECT: RECEIVE AN UPDATE ON THE THIRD STREET GRADE SEPARATION PROJECT AND REVIEW THE PRIORITIZATION OF POTENTIAL GRADE SEPARATIONS ALONG THE BURLINGTON NORTHERN SANTA FE RAILROAD AT JACKSON STREET, MARY STREET, AND SPRUCE STREET**

## **ISSUES:**

Receive an update on the Third Street Grade Separation Project and review the concept designs and prioritization of the Jackson Street, Mary Street, and Spruce Street railroad grade separations along the Burlington Northern Santa Fe railroad line.

## **RECOMMENDATIONS:**

That the Mobility & Infrastructure Committee:

1. Receive an update on the Third Street/Burlington Northern Santa Fe Project;
2. Review the concept designs and prioritization of the Jackson Street, Mary Street, and Spruce Street railroad grade separations along the Burlington Northern Santa Fe Line; and
3. Direct the Public Works Department, if necessary, to engage City Council to consider changes to the grade separation project prioritization.

## **BACKGROUND:**

The City values and has pursued the construction of railroad grade separation projects as they have a significant and direct impact to quality of life. In recent years, the City has implemented grade separation projects on Jurupa Avenue/UPRR, Magnolia Avenue/UPRR, Columbia Avenue/BNSF, Iowa Avenue/BNSF, Streeter Avenue/UPRR, and recently Riverside Avenue/UPRR. These projects have improved safety, reduced noise (eliminated train horns), decreased congestion, reduced Green House Gas emissions from idling vehicles, improved train operations, and have allowed for faster emergency response times.

## **Transportation Committee**

On February 9, 2017, the Transportation Committee received a report to review and prioritize potential railroad grade separations (Attachment 1 - Map) along the Burlington Northern Santa Fe

Railroad (BNSF) at Jackson Street, Mary Street, Spruce Street, and Third Street. The Committee voted unanimously to recommend that the City Council:

1. Approve Third Street along the BNSF line as the top priority railroad grade separation;
2. Prioritize the three remaining grade separations, Spruce Street, Mary Street, and Jackson Street; and
3. Direct the Public Works Department to issue a Request for Proposals to complete the Project Approval and Environmental Document phase of the Third Street grade separation.

*City Council:*

On April 11, 2017 City Council approved the Third Street/Burlington Northern Santa Fe line as the top priority railroad grade separation. City Council directed staff to issue a Request for Proposals to complete the Project Approval and Environmental Document phase of the Third Street grade separation project. City Council also reviewed conceptual plans for Jackson Street/BNSF, Mary Street/BNSF, and Spruce Street/BNSF, to include preliminary construction cost estimates and designated the remaining three locations as priority future grade separation projects.

**DISCUSSION:**

*Third Street Grade Separation Project Update:*

This project includes the design and construction of an underpass at the existing Third Street at-grade crossing at BNSF. Third Street will be reconstructed approximately 22 feet lower than the existing roadway to allow for the construction of a three-track railroad bridge at the BNSF crossing. The project will also require the construction of retaining walls, realignment of a flood control channel, right-of-way acquisition and utility relocations.

BNSF maintains three tracks at this location that are used for both freight and passenger rail traffic. Third Street is an east-west arterial that links retail and commercial areas near downtown and carries approximately 13,500 vehicles per day. J.W. North High School is located about one mile east of the crossing, the University of California at Riverside (UCR) is approximately 2 miles east of the crossing, and approximately 78 pedestrians, 62 cyclists, and 67 school buses traverse the rail crossing each day. In addition, 23 RTA buses utilize this section of Third Street.

In total, 66 freight and 24 passenger trains go through this rail crossing daily contributing to approximately 225 minutes of traffic delay. The delay has a significant impact on emergency vehicles using the crossing. Between January 2007 and June 2020, Riverside Police Department units were delayed 401 times with an average delay of 3.5 minutes by trains blocking traffic at the crossing. Between July 2010 and June 2020, Riverside Fire Department emergency response vehicles and American Medical Response ambulances were delayed 68 times with an average delay of 2.43 minutes by trains blocking the street.

Tables 1-3 below show the respective project cost, funding sources, and tentative project timeline associated with the Third Street Grade Separation project.

Table 1 - Preliminary Project Cost

Task	Amount (\$M)
Preliminary (PA&ED) and Final (PS&E) Engineering	\$4.0
Right-of-Way Acquisitions, Relocations and Building Demolitions	23.0
Construction, Utility Relocations, and Construction Engineering	28.5
Total	\$55.5

Table 2 - Project Funding

Source	Amount (\$M)	Status
Utilities Relocation Costs (City Funds)	\$3.25	Anticipated
Measure A (City Funds)	0.75	Secured
State Section 190 Grade Separation	5.00	Anticipated
WRCOG TUMF (City Funds)	8.25	Secured
Burlington Northern Santa Fe Railroad (Matching Funds)	2.00	Anticipated
Federal CMAQ	18.00	Secured
Trade Corridor Enhancement Program (TCEP) Grant	18.25	Future Submittal
Total	\$55.5	

Table 3 - Preliminary Construction Timeline

Phase	Start	End
Environmental	January 2019	January 2022
Design (PS&E)	February 2022	December 2023
Right of Way	March 2022	December 2023
Construction	July 2024	December 2025

The City plans to submit a Trade Corridor Enhancement Program grant application in the next grant cycle, likely in the Fall 2022, to fully fund the project.

### Jackson Street/BNSF

Two alternatives are presented for a grade separation at Jackson Street (Attachments 2 and 3). Both alternatives are for an underpass and propose to lower Jackson Street below the railroad tracks.

Alternative 1 maintains a straight alignment on Jackson Street (similar to the Streeter Avenue underpass); and

Alternative 2 realigns Jackson Street to the south (similar to the Magnolia Avenue underpass).

Both alternatives will be evaluated in detail during the next phase of engineering design, Project Approval and Environmental Document Phase (PA&ED). The estimated cost for a railroad grade separation at Jackson Street is \$45 million.

To support the City's Housing goals, a developer had considered constructing 75 residential condominium units on the westerly side of Jackson Street south of the BNSF railroad tracks per attachment 9. The developer had concerns with how a grade separation would impact future

access to the development and decided to withdraw from the project. Since then, a second developer has expressed interest in constructing a similar residential project and has requested detailed information as to the Jackson Street Grade Separation Project to include:

1. Its priority in relation to the Mary Street and Spruce Street projects
2. Potential alternate project access along Nopal Place or Jackson Street if the grade separation moves forward. Access on Nopal Place would require the acquisition of one to two residential properties and access further south on Jackson Street would require the acquisition of one residential property to construct the access road.
3. Extent of the City's partial or full right-of-way take to construct the project
4. City's input on removing Jackson Street from the grade separation priority list to accommodate housing. This site was rezoned as part of the Housing Element Update to allow for additional density to meet the City's Regional Housing Needs Assessment (RHNA) numbers.
5. Alternate private development design to minimize future impacts by the grade separation project

### Mary Street/BNSF

Two alternatives are presented for a grade separation at Mary Street (Attachments 4 and 5). Both alternatives are for an underpass and propose to lower Mary Street below the railroad tracks.

Alternative 1 maintains a straight alignment; and

Alternative 2 will realign Mary Street to the north.

Both alternatives will be evaluated in detail during a subsequent PA&ED phase. The estimated cost for a railroad grade separation at Mary Street is \$45 million.

### Spruce Street/BNSF

Two alternatives are presented for a grade separation at Spruce Street (Attachments 6 and 7).

Alternative 1 is for a railroad overpass with Spruce Street being raised to go over the railroad tracks. Frontage roads (similar to Columbia Avenue overpass) will be required to maintain access to Kansas Avenue (east). Through traffic on E. La Cadena Drive and Kansas Avenue (west) will be maintained under the proposed overpass, however access to Spruce Street will be eliminated; and

Alternative 2 is for a railroad underpass with Spruce Street being lowered to go under the railroad tracks.

Both alternatives will be evaluated in detail during a subsequent PA&ED phase. The estimated cost for a railroad grade separation at Spruce Street is \$55 million.

### **STRATEGIC PLAN ALIGNMENT:**

This item contributes to Strategic Priority No. 6 Infrastructure, Mobility and Connectivity and Goal No. 6.2 – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

It also supports Strategic Priority No. 4, Environmental Stewardship and Goal 4.3 – Implement local and support regional proactive policies and inclusive decision-making processes to deliver environmental justice and ensure that all residents breathe healthy and clean air with the goal of having zero days of unhealthy air quality per the South Coast Air Quality District's Air Quality Index (AQI).

This item aligns with EACH of the five Cross-Cutting Threads as follows:

1. **Community Trust** – The proposed improvements are part of a more significant endeavor to improve the City's roadway network and quality of life for residents and visitors. The Public Works Department (Public Works) has provided numerous presentations to the City Council, Transportation Committee, and Transportation Board to discuss the needs, project challenges, and community benefits with such projects. The City has pursued projects across the City and along both UPRR and BNSF railroad lines to benefit traffic flow, eliminate train noise, and make vehicular and rail transportation more reliable.
2. **Equity** – Public Works strives to improve the City's roadway network to provide safe and reliable transportation to all areas of the City. Staff meet with the respective Councilmembers, community stakeholders, rail agencies, community groups, and conducts extensive outreach to seek broad input and incorporate project features that benefit the entire community. The prioritized grade separation projects have been generated by seeking and considering stakeholder, elected official, and public input.
3. **Fiscal Responsibility** – Public Works responsibly manages a variety of funding sources to complete projects included in the City's Capital Improvement Program. Public Works is a prudent steward of public funds and construction projects are always awarded to the lowest responsive bidders. Table 2 highlights the various funding sources typically used to fund grade separation projects.
4. **Innovation** – The Third Street Grade Separation will utilize the most up to date construction materials, construction methods, and traffic control devices to streamline its construction and ensure it includes amenities to best serve the community. The City is working with BNSF and RCTC to ensure rail service is fully maintained during the construction period and detours and signal timing changes will be implemented to minimize impacts to the public during the construction phase.
5. **Sustainability & Resiliency** – The design guidelines and construction materials specified for these projects are considered best practices in the industry. Eliminating 225 minutes (average) of traffic delay each day from the Third St/BNSF crossing will improve air quality, improve emergency response times, improve travel, and make our roadway network more reliable and resilient.

### **FISCAL IMPACT:**

There is no fiscal impact associated with this update.

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Certified as to  
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Approved by: Kris Martinez, Interim Assistant City Manager

Approved as to form: Phaedra A. Norton, City Attorney

Attachment: Presentation

Attachment 1 – Proposed Grade Separation Locations

Attachment 2 – Jackson St Grade Separation – Alternative 1

Attachment 3 – Jackson St Grade Separation – Alternative 2

Attachment 4 – Mary St Grade Separation – Alternative 1

Attachment 5 – Mary St Grade Separation – Alternative 2

Attachment 6 – Spruce St Grade Separation – Alternative 1

Attachment 7 – Spruce St Grade Separation – Alternative 2

Attachment 8 – Third St Grade Separation Exhibits (3 Sheets)

Attachment 9 – Jackson Street Proposed Development (7 Sheets)