



City of Arts & Innovation

Transportation Committee

TO: TRANSPORTATION COMMITTEE MEMBERS DATE: FEBRUARY 9, 2017

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

SUBJECT: REVIEW AND PRIORITIZATION OF POTENTIAL RAILROAD GRADE SEPARATIONS ALONG THE BURLINGTON NORTHERN SANTA FE RAILROAD AT JACKSON STREET, MARY STREET, SPRUCE STREET, AND THIRD STREET - DIRECT SUBMITTAL

ISSUES:

Review and prioritization of the concept designs for the Jackson Street, Mary Street, Spruce Street, and Third Streets railroad grade separations along the Burlington Northern Santa Fe (BNSF) line (Attachment 1).

RECOMMENDATIONS:

That the Transportation Committee recommend that City Council:

1. Approve the Third Street/BNSF as the top priority railroad grade separation;
2. Adopt a priority order for the three remaining grade separations; and
3. Direct the Public Works Department to issue a Request for Proposals (RFP) to complete the Project Approval and Environmental Document (PA&ED) phase of the Third Street grade separation.

BACKGROUND:

Transportation Committee

On June 12, 2014, the Transportation Committee received a report on the prioritization of grade separation projects and unanimously recommended that the City Council prioritize Madison Street, Third Street, Spruce Street, and Jackson Street rail crossings for conceptual grade separation design and future funding opportunities including providing alternative options for Madison Street and noting the importance of gathering input from all Councilmembers.

City Council

On March 17, 2015, the City Council received a report on the prioritization of grade separation projects and continued discussion of the Madison Street, Third Street, Spruce Street and Jackson Street rail crossings and requested staff return with data on all locations including

pedestrian, bicycle, and commercial traffic counts.

On May 5, 2015, the City Council received an updated report including the results of the vehicle classification, pedestrian, and bicycle counts and approved the Jackson Street, Mary Street, Spruce Street and Third Street rail crossings for conceptual grade separation design and future funding opportunities.

DISCUSSION:

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 Documents (PA & ED). The estimated cost for a railroad grade separation at Jackson Street is \$35 million.

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 whereas 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 \$35 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 Ave. (west) will be maintained under the proposed overpass, however access to Spruce Street will be eliminated. 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 \$50 million.

Third Street/BNSF

In 2006, the Public Works Department began the preliminary engineering for the Third Street grade separation project. In 2007, the State allocated \$17.5 million in Proposition 1B funding under the Trade Corridor Improvement Fund (TCIF) for the project. Also, in the same year, the City through Riverside County Transportation Commission (RCTC) secured \$7 million in federal funds for the project.

By February of 2011, the design of the project had been narrowed to one alternative (Attachment 8). However, the project had become increasingly costly due to the railroad's need to maintain full track capacity during construction, impacts on adjacent properties and proximity to the Riverside Canal and 91 Freeway. Additionally, due to poor economic conditions, the

likelihood of securing the \$15.7 million in unsecured funds to complete construction and meet the TCIF deadline of December 2013 had become extremely unlikely. Therefore, on February 15, 2011, the City Council approved placing the project on-hold and redirecting financial and personnel resources allocated to the Third Street grade separation to the BNSF quiet zone project.

Subsequently, RCTC reprogrammed the \$7 million in federal funds for the Third Street grade separation project to the BNSF quiet zone. Additionally, RCTC reprogrammed \$7.7 million in unused 1988 Measure A Highway and Commuter Rail funds from the La Sierra Avenue/SR 91 and Van Buren Boulevard/SR 91 Interchange projects to the BNSF quiet zone project, making the latter project fully funded.

The estimated cost for a railroad grade separation at Third Street is \$45 million.

Crossing Data

Table 1 provides vehicular, pedestrian, and school and transit bus data as well as estimated cost for each project. Table 2 provides the current train data at each crossing, accident history, the RCTC priority ranking for each crossing and whether the crossing is in an active Quiet Zone.

As can be seen in Table 1, a large number of school buses cross the Third Street and Spruce Street rail crossings, due to the proximity of these crossings to the Student Transportation-America bus depot in the corner of Massachusetts and Kansas Avenues. Per discussions with transportation staff at the Riverside Unified School District (RUSD), a grade separation at either Third or Spruce Street will result in most, if not all, of these buses being rerouted through the separation.

| Location | Average Daily Traffic (2015) | School Bus Crossings (1) | RTA Bus Count (2) | Pedestrians | Bicycles | Freeway Connectivity | Cost (\$MM) |
|-------------|------------------------------|--------------------------|-------------------|-------------|----------|----------------------|-------------|
| Jackson St. | 7,241 | 50 | - | 399 | 29 | No | 35 |
| Mary St. | 16,069 | 40 | - | 146 | 71 | No | 35 |
| Spruce St. | 14,613 | 550* | - | 36 | 61 | Yes | 50 |
| Third St. | 11,472 | 400* | 23/41 | 137 | 95 | Yes | 45 |

(1) Current school bus crossing data obtained from RUSD. Includes all large and small school buses as well as special need vehicles.

(2) RTA bus count – Lower bus count is for weekends. Higher bus count is for weekdays.

* - Approximately 180 of these school buses are empty, going to and coming from the Student Transportation-America bus depot at the north-east corner of Massachusetts and Kansas Avenues.

| Location | Average Daily Train Count | Gate Down Time - Minutes | Vehicles Queued behind Gates | Train Accidents: Fatal/Non-Fatal (Past 10 Years) | 2012 RCTC Priority Group | Quiet Zone (3) |
|-------------|---------------------------|--------------------------|------------------------------|--|--------------------------|----------------|
| Jackson St. | 107 | 166 | 625 | 1/0 | 3 | Yes |
| Mary St. | 107 | 161 | 766 | 1/0 | 2 | Yes |
| Spruce St. | 123 | 244 | 2196 | 1/2 | 1 | No |
| Third St. | 123 | 256 | 1339 | 0/1 | 1 | No |

(3) Spruce St. and Third St. rail crossings are included in a future Quiet Zone project, and are anticipated to be fully funded by FY2022/2023.

Evaluation Criteria

Each crossing was evaluated based on the following criteria (Table 3):

1. Train Count – 10 points assigned to the crossing with the highest train volume.
2. Train Noise – 10 points assigned to the crossing not in an existing Quiet Zone.
3. Average Daily Traffic (ADT) – 10 points assigned to the crossing with the highest number of vehicles.
4. Bus Count – 10 points assigned to the crossing with the highest volume of school plus transit buses.
5. Freeway Connectivity – 10 points assigned to the crossing with direct connection to the freeway.
6. Cost – 10 points assigned to the crossing with the lowest estimated cost for grade separation.
7. RCTC Priority Ranking – RCTC employs a grade separation ranking of 1 (highest priority) to 5 (lowest priority). 10 points assigned to the crossing with RCTC priority ranking 1.
8. TUMF Network – 15 points assigned to each crossing in the existing TUMF Network.
9. Accident History – 15 points assigned to the crossing with the highest number of accidents.

Table 3

| Location | (1) Train Count (10%) | (2) Train Noise (10%) | (3) ADT (10%) | (4) Bus Count (10%) | (5) Freeway Connectivity (10%) | (6) Cost (10%) | (7) RCTC Priority (10%) | (8) TUMF Network (15%) | (9) Accident History (15%) | Total (100%) |
|-------------|-----------------------|-----------------------|---------------|---------------------|--------------------------------|----------------|-------------------------|------------------------|----------------------------|--------------|
| Jackson St. | 8.7 | 0 | 4.5 | 0.9 | 0 | 10 | 6 | 0 | 5 | 35.1 |
| Mary St. | 8.7 | 0 | 10 | 0.7 | 0 | 10 | 8 | 0 | 5 | 42.4 |
| Spruce St. | 10 | 10 | 9 | 10 | 10 | 7 | 10 | 0 | 15 | 81.0 |
| Third St. | 10 | 10 | 7.1 | 8 | 10 | 7.8 | 10 | 15 | 5 | 82.9 |

All items are equally weighted except items 8 and 9, due to the significance of safety and project funding. Based on a review of past City Council actions and the scores in Table 3, the Third Street grade separation is the top ranked grade separation.

Funding

Although funding for additional grade separations is now very limited, it remains a top legislative priority for the City and RCTC. In April 2016, RCTC submitted an application to the California State Transportation Agency (CalSTA) Transit and Intercity Rail Capital Program (TIRCP) for Cap and Trade grant funding to implement RCTC's Metrolink and Amtrak Grade Separations project, which included the Third Street grade crossing. A total of 41 applications for funding from around the State were submitted for consideration. In August 2016, CalSTA announced 14 recipients for the TIRCP grants which did not include RCTC. Currently, RCTC is working with the Southern California Association of Governments (SCAG) to prioritize critical urban freight corridors, including grade separations. Priority projects that are identified, which includes Third Street, may be submitted for future funding opportunities such as the next round of U.S. Department of Transportation Nationally Significant Freight and Highway Projects (NSFHP) program grant application, due in early 2017.

Public Works Department staff recently met with staff and the Director of Transportation from Western Riverside Council of Governments (WRCOG) to discuss potential funding opportunities. Currently, WRCOG is in the process of updating the Transportation Uniform Mitigation Fee (TUMF) Nexus Study which is expected to be completed in early 2017. The TUMF Network (which is a component of the Nexus Study) includes the Adams Street, Madison Street, and Chicago Avenue grade separations. Per discussions with WRCOG if none of the aforementioned grade separations are top City priorities, they can be removed from the existing TUMF Network and replaced with other City top priorities provided they meet the inclusion criteria outlined in the TUMF Nexus Study. Currently, the Third Street rail crossing is the only location that meets this criteria since the rail crossing is located on an arterial road that is already in the existing TUMF Network. Public Works Department has requested WRCOG to replace the Chicago Avenue grade separation with the Third Street grade separation, due to completion of Columbia and Iowa Avenue grade separations in recent years, both of which provide direct freeway access. With the actual TUMF revenues being higher than projection, the likelihood of receiving some level of future TUMF funding has improved.

Since the great recession, much emphasis has been placed on funding projects that are “shovel ready”. Although a significant investment in engineering design fees and right-of-way acquisition costs are required to make a project shovel ready, the City’s strategy of prioritizing and designing projects has in the past proven effective in securing funding for these projects.

FISCAL IMPACT:

There is no impact to the General Fund associated with this report. The cost to complete the PA&ED phase of a railroad grade separation is approximately \$750,000, depending on complexity. Sufficient funds are available in Account numbers 9586627-440223 (Miscellaneous Railroad Project Management - Gas Tax) and 9586630-440313 (Miscellaneous Railroad Project Management – 2009 Measure A) for the preliminary engineering of the top ranked grade separation.

Prepared by: Kris Martinez, Public Works Director
Certified as to
availability of funds: Scott G. Miller, PhD, Chief Financial Officer/City Treasurer
Approved by: Al Zelinka, FAICP, Assistant City Manager
Approved as to form: Gary G. Geuss, City Attorney

Attachments:

1. Grade Separation Map
2. Jackson Street/BNSF Alternative 1
3. Jackson Street/BNSF Alternative 2
4. Mary Street/BNSF Alternative 1
5. Mary Street/BNSF Alternative 2
6. Spruce Street/BNSF Alternative 1
7. Spruce Street/BNSF Alternative 2
8. Third Street/BNSF Preferred Alternative
9. Presentation