



**MEMO TO:** Planning and Public Works Committee of the Whole

**FROM:** Peter Dane, Senior Planner

**DATE:** February 11, 2020

**SUBJECT:** Informational Update Regarding the Full Closure of 40<sup>th</sup> Street for 520 Trail Grade Separation Project Construction at 40<sup>th</sup> Street

- I. PURPOSE** ☐ For Info Only ☐ Potential Agenda Item ☒ Scheduled for Council Action

*Proposed Schedule*

February 11: Planning and Public Works Committee of the Whole Informational Update

March 3 or 18: City Council Action

**II. RECOMMENDATION**

Receive informational update regarding the full closure of 40<sup>th</sup> Street to accommodate construction of the 520 Trail Grade Separation project in preparation for Council Action in March.

**III. DEPARTMENT CONTACTS**

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**IV. DESCRIPTION/BACKGROUND**

**SR 520 Trail Grade Separation Project at 40<sup>th</sup> Street**

This project will improve safety and operations for all users at the intersection of the SR 520 Trail and 40<sup>th</sup> Street by grade separating non-motorized users from vehicle traffic, with construction of a tunnel underneath 40<sup>th</sup> Street for pedestrians and bicyclists and associated infrastructure improvements to connect the trail to the tunnel. Specific benefits of the project include:

- Improved safety for a high volume of pedestrians and bicyclist using the at-grade trail crossing, which conflicts with both through and turning traffic on NE 40<sup>th</sup> Street
- Improved operations for vehicles and buses by reducing the number of pedestrian and bicycle crossings at NE 40<sup>th</sup> Street
- Safe and efficient path for pedestrians and bicycles needing to cross 40<sup>th</sup> Street

Please see Attachment A for a vicinity map.

Construction of the tunnel component of the Trail Grade Separation project will require either a 17-day full closure of 40<sup>th</sup> Street or a 4-month half-closure of 40<sup>th</sup> Street. Tunnel construction is scheduled to be substantially complete before construction begins on the Sound Transit Light Rail Extension from Overlake to Downtown Redmond at 40<sup>th</sup> Street.

## **A. Analysis**

### **40<sup>th</sup> Street Full Closure**

A full-street closure requires approval by the City Council. Constructing the tunnel structure for the Grade Separation project includes a 17-day full closure of 40<sup>th</sup> Street. The closure would be located on 40<sup>th</sup> Street at the west side of the intersection with the westbound 520 on-/off-ramps. The 520 interchange at 40<sup>th</sup> Street would continue to function, with access to both eastbound and westbound 520, but drivers would only be able to access the interchange from the east via 156<sup>th</sup> Avenue. A diagram is available in Attachment B.

Keeping the interchange in operation and providing access from the east helps serve the most significant vehicle volumes at the interchange. Daily traffic volumes on 40<sup>th</sup> Street immediately east of the eastbound 520 on-/off-ramp are approximately 27,000 per day while volumes immediately west of the westbound 520 on-/off-ramp are approximately 18,000 per day.

Detours will be signed to both 31<sup>st</sup> Street and to 51<sup>st</sup> Street as alternate routes for travelers who are impacted. Mobility improvements on both of these routes will be completed in the Spring of 2020, prior to any street closure for the Trail Grade Separation project.

Impacts from the closure are also planned to be minimized to the extent feasible by timing the 40<sup>th</sup> Street closure in the Summer, the time of year with the lowest travel volumes.

Microsoft has concerns about a full-street closure and the City is negotiating with Microsoft to address their concerns and seek their concurrence on a full-street closure.

### **Half-Street Closure Alternative**

Alternatively, the Grade Separation tunnel structure can be built using half-street closures over the span of 4 months. This would begin with a two-month closure of the southern half of the road and end with a two-month closure of the north half of 40<sup>th</sup> Street.

This alternative can advance without Council authorization but comes with challenges. Travel impact challenges include:

- Closures start in June and continue through October, impacting schools due to increased traffic volumes in the fall.
- A partial closure would also add approximately \$2.3 million to project costs; an additional project contingency of \$3.1 million has been added to the project costs in case a full road closure does not occur.
- If tunnel construction takes longer than scheduled and there is a half-street closure, there may be impacts to Sound Transit construction of the Light Rail Extension to Downtown – discussed below.

### **Schedule and Coordination with Sound Transit Light Rail Extension**

The tunnel construction for the Grade Separation project is scheduled to be substantially complete before construction begins on the Sound Transit Light Rail Extension from Overlake to Downtown Redmond at 40<sup>th</sup> Street. Below is a table showing the construction schedules for these projects.

<b>Project Tasks</b>	<b>Schedule</b>
Advertisement for Construction Bids	January 15, 2020
Award of Construction Bid	March 3 or March 18, 2020
Construction of Trail Grade Separation Tunnel <ul style="list-style-type: none"><li>- assumes full 40<sup>th</sup> street closure (17 days)</li><li>- <i>If partial 40<sup>th</sup> Street closure (4 months)</i></li></ul>	June – July 2020 <i>June – October 2020</i>
Sound Transit Light Rail Construction at 40 <sup>th</sup> Street	Late October / Early Nov. 2020

*\*The full Trail Grade Separation project is scheduled to be completed in December 2020 if there is a full 40<sup>th</sup> Street closure and in April 2021 if there is a partial street closure.*

The tunnel construction will occur on the west side of the SR 520 interchange at 40<sup>th</sup> Street. The Downtown Redmond Light Rail Extension will require a partial closure on the east side of the SR 520 interchange at 40<sup>th</sup> Street. The City is trying to avoid overlapping lane closures between the two projects.

If the tunnel component of the Grade Separation project cannot be completed before light rail construction at 40<sup>th</sup> Street, then the project will be delayed two years to avoid these overlapping lane closures. Given rising costs in construction, a two-year delay is anticipated to add approximately \$2.4 million to the project cost (6.5% per year increase).

### **SR 520 Trail Grade Separation Project Budget**

***Estimated Project Costs***

Design	\$1.9 million
Construction	\$14.3 million
Total Cost	\$16.2 million
Contingency*	\$3.1 million
TOTAL+ Contingency	\$19.3 million

*\*Contingency needed if the construction method uses a four-month half-street closure instead of a 17-day full-street closure.*

***Estimated Project Revenue***

Connecting WA Transportation Package	\$10.7 million
Community Facilities District (CFD) 2016-1	\$6.8 million
Additional State Funding from Connecting WA *	\$1.8 million
TOTAL	\$19.3 million

*\*The \$1.8 million in additional State funding from the Connecting WA Transportation Package has not been released by the State at this time.*

**Council Actions**

Council approved two funding items for the 40<sup>th</sup> Street Trail Grade Separation project at the Council meeting on January 21, 2020. Two remaining items will be presented to Council on March 3 or March 18 for action to enable timely construction of the Grade Separation project.

Item	Council Business Meeting Date
Community Facilities District 2016-1 Agreement to advance \$6.8 M CFD Funds	January 21
\$1.8 Million State Funding	January 21
Full Closure of 40 <sup>th</sup> Street	March 3 or 18 ✓ Included in this memorandum
Award Construction Contract	March 3 or 18

**V. TIME CONSTRAINTS**

If the tunnel construction for the 40<sup>th</sup> Street Trail Grade Separation project is not substantially completed before light rail construction at 40<sup>th</sup> Street, the project will be delayed two years.

**VI. LIST OF ATTACHMENTS**

Attachment A: Vicinity Map

Attachment B: Full-Street Closure Concept