

City of Spokane Valley

# Rebuilding American Infrastructure with Sustainability and Equity (RAISE) 2023 Grant Application



February 2023

# Section 1

*SF-424*

**Application for Federal Assistance SF-424**

\* 1. Type of Submission:

- Preapplication  
 Application  
 Changed/Corrected Application

\* 2. Type of Application:

- New  
 Continuation  
 Revision

\* If Revision, select appropriate letter(s):

\* Other (Specify):

\* 3. Date Received:

Completed by Grants.gov upon submission.

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

**State Use Only:**

6. Date Received by State:

7. State Application Identifier:

WA

**8. APPLICANT INFORMATION:**

\* a. Legal Name:

City of Spokane Valley

\* b. Employer/Taxpayer Identification Number (EIN/TIN):

71-0914170

\* c. UEI:

NSU3DBMM7JN9

**d. Address:**

\* Street1:

10210 E Sprague Ave

Street2:

\* City:

Spokane Valley

County/Parish:

Spokane

\* State:

WA: Washington

Province:

\* Country:

USA: UNITED STATES

\* Zip / Postal Code:

99206-6110

**e. Organizational Unit:**

Department Name:

Community & Public Works

Division Name:

Engineering

**f. Name and contact information of person to be contacted on matters involving this application:**

Prefix:

Mr.

\* First Name:

Adam

Middle Name:

\* Last Name:

Jackson

Suffix:

Title:

Engineering Manager

Organizational Affiliation:

City of Spokane Valley

\* Telephone Number:

5097205024

Fax Number:

\* Email:

ajackson@spokanevalley.org

**Application for Federal Assistance SF-424**

**\* 9. Type of Applicant 1: Select Applicant Type:**

C: City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

**\* 10. Name of Federal Agency:**

69A345 Office of the Under Secretary for Policy

**11. Catalog of Federal Domestic Assistance Number:**

20.933

CFDA Title:

National Infrastructure Investments

**\* 12. Funding Opportunity Number:**

DTOS59-23-RA-RAISE

\* Title:

FY 2023 National Infrastructure Investments

**13. Competition Identification Number:**

RAISE-FY23

Title:

FY23 RAISE Grants

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

1.1. SF-424 #14 Attachment.docx

Add Attachment

Delete Attachment

View Attachment

**\* 15. Descriptive Title of Applicant's Project:**

Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments



**Application for Federal Assistance SF-424**

**16. Congressional Districts Of:**

\* a. Applicant

\* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

**17. Proposed Project:**

\* a. Start Date:

\* b. End Date:

**18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="33,782,669.00"/>
* b. Applicant	<input type="text" value="1,025,298.00"/>
* c. State	<input type="text" value="7,420,694.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="42,228,661.00"/>

**\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

**\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes  No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

**21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

\*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title:

\* Telephone Number:  Fax Number:

\* Email:

\* Signature of Authorized Representative:

\* Date Signed:

City of Spokane Valley Project: Bigelow-Sullivan Corridor Freight Mobility & Safety:  
Sullivan & Trent Interchange Project

Standard Form 424 Attachment for Box #14:

Areas Affected by Project (Cities, Counties, States, etc.)

- City of Spokane Valley
- Spokane County
- State of Washington
- State of Idaho
- State of Montana
- Country of the United States
- Country of Canada

## Section 2

### *Project Information Form*

**FY 2023 RAISE Project Information Form - All Fields Required**

**\*\*DO NOT CHANGE FILE NAME, COPY/PASTE, OR PDF THIS DOCUMENT WHEN SUBMITTING TO AVOID PROCESSING ERRORS\*\***

Field Name	Response	Instructions
Project Name	Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project	Enter a <b>concise</b> , descriptive <b>title</b> for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative.
Project Description	The project will fund the construction activities for the reconstruction of the Sullivan Road and Trent Avenue (State Route 290) interchange. Work includes replacing the existing signalized intersections with a peanut-style roundabout, replacing the structurally deficient Sullivan Road bridge over Trent Avenue that is regularly struck by trucks traveling on Trent Avenue, extending the Sullivan Road bridge over BNSF Railway's existing tracks, allowing for two additional tracks to be added in the future, and adding a new shared use pathway, and improving ADA accessible sidewalks.	Describe the project in plain English terms, using <b>no more than 100 words</b> . For example, "The project will fund construction activities for streetcar service from location X to location Y" or "The RAISE grant will redevelop Main street with Complete Streets enhancements, ADA accessible sidewalks, and dedicated bicycle paths from 10th street to 25th street."  <b>Do not</b> describe the project's benefits, background, or alignment with the selection criteria in this description field.
RAISE Amount Requested	\$ 17,213,169	Enter the <b>total amount of RAISE funds requested</b> for this project in this application.  <i>[See NOFO Section B.2 for minimum and maximum award size]</i>
Total Project Cost	\$ 42,228,660	Enter the <b>total cost of the project</b> . This should equal the sum of Total Federal Funding and Total Non-Federal Funding. <i>This value may not be less than the amount requested.</i>  <i>Total Project cost means future eligible costs. This cannot include any previously incurred costs.</i>
Total Federal Funding	\$ 23,782,669.0	Enter the <b>amount of funds committed to the project from ALL Federal sources including the proposed RAISE amount</b> . <i>This value may not be less than the amount requested.</i>  For applications designated as <b>urban</b> , Federal funding cannot exceed 80% of total project cost unless the project is located in a Historically Disadvantaged Community or an Area of Persistent Poverty as defined in the RAISE NOFO. For applications designated as <b>rural</b> , there is no limit to the share of Federal funding.
Total Non-Federal Funding	\$ 1,025,298	Enter the <b>amount of funds committed to the project from non-Federal sources</b> .  For applications designated as <b>urban</b> , the total non-Federal funding amount must be greater than or equal to 20% of the total project cost, unless the project is located in a Historically Disadvantaged Community or an Area of Persistent Poverty as defined in the RAISE NOFO. For applications designated as <b>rural</b> , there is no minimum non-Federal share requirement.
Capital or Planning	Capital	Identify the project as <b>capital</b> or <b>planning</b> .  The " <b>capital</b> " designation is for projects that requesting funding for the construction of surface transportation capital infrastructure. ( <i>Right-of-way acquisition is capital. Projects that include pre-construction AND right-of-way acquisition, but do not include construction activities will be classified as capital.</i> )  The " <b>planning</b> " designation is for projects that are requesting funding for planning, preparation, or design of eligible surface transportation capital projects.
Urbanized Area	Spokane, WA	Select the <b>Urbanized Area</b> of the project from the drop down, or if the project is located outside an urbanized area, please select "Not located in an Urbanized Area". Reference the "Urban or Rural Designation" tab in this file for assistance. For more information, see <a href="https://www.transportation.gov/RAISEgrants/urbanized-areas">https://www.transportation.gov/RAISEgrants/urbanized-areas</a> .  <i>Note: The RAISE 2023 urban/rural designation applies 2010 Census Urbanized Areas since 2020 Census Urbanized Areas have not been published at time of NOFO publication.</i>
Urban/Rural	Urban	Identify whether the project is <b>located in a rural or urban area</b> , using the drop-down menu. For RAISE 2023, a project is designated as urban if it is located within (or on the boundary of) a Census-designated urbanized area that had a population greater than 200,000 in the 2010 Census. If a project is located outside a Census-designated urbanized area with a population greater than 200,000, it is designated as a rural project. Reference the "Urban or Rural Designation" tab in this file for assistance. For more information, see <a href="https://www.transportation.gov/RAISEgrants/urbanized-areas">https://www.transportation.gov/RAISEgrants/urbanized-areas</a> .  <i>Note 1: The RAISE 2023 urban/rural designation applies 2010 Census Urbanized Areas since 2020 Census Urbanized Areas have not been published at time of NOFO publication.</i> <i>Note 2: This designation is based on the <b>Urbanized Area</b>. It is <b>NOT</b> based on the city or county population count.</i>
Project Location Zip Code	99216	<b>Identify the 5-digit zip code of the project location</b> . If the project is located in more than one zip codes, please identify the zip code in which the majority of the project is located. If the project is in a territory that does not have zip codes, leave this field blank.  <i>Project location zip code is <b>NOT</b> the applicant organization zip code.</i>
Project Location County	WA - Spokane County	<b>Identify the county</b> where the project is located in using the drop-down. If the project is located in more than one county, please identify the county in which the majority of the project is located. If the project is in a territory that does not have county designations, leave this field blank.
Additional Project Counties		<b>Identify additional counties separated by a comma</b> . For instance, if the project additionally runs through Polk County and Butler County, please enter 'Polk County, Butler County' in the cell. If the project is in a territory that does not have county designations, leave this field blank.
Project Location Census Tract	114.00	<b>Identify the census tract number of the project</b> .  For example, if the most central tract is Census Tract 93.30, please enter '93.30' into the cell. The last zero may be missing from your response (e.g., 93.30 may display as 93.3). If the project is located in more than one census tract please identify the census tract in which the majority of the project is located. If the project is in a territory that does not have census tract designations, leave this field blank.  Please visit USDOT's RAISE webpage ( <a href="https://www.transportation.gov/RAISEgrants/raise-app-hdc">https://www.transportation.gov/RAISEgrants/raise-app-hdc</a> ) to review a full list of census tracts by state and county to identify.
Other Project Census Tracts		<b>Identify other census tracts in which the project is located, separated by a comma</b> . For example, if the project is located in Census Tract 93.31, Census Tract 93.32, and Census Tract 94.03, please enter '93.31, 93.32, 94.03' into the cell. If the project is in a territory that does not have census tract designations, leave this field blank.
Project Located in an Area of Persistent Poverty?	No- Project is not located in an Area of Persistent Poverty	<b>Identify if the project is located in an Area of Persistent Poverty</b> based on the definition in the NOFO. The list of counties and census tracts and areas that meet this definition can be found on USDOT's RAISE webpage ( <a href="https://www.transportation.gov/RAISEgrants/raise-app-hdc">https://www.transportation.gov/RAISEgrants/raise-app-hdc</a> ).
Project Located in a Historically Disadvantaged Community?	No- Project is not located in a Historically Disadvantaged Community	<b>Identify if the project is located in a Historically Disadvantage Community</b> based on the definition in the NOFO. The list of census tracts and areas that meet this definition can be found on USDOT's RAISE website. ( <a href="https://www.transportation.gov/RAISEgrants/raise-app-hdc">https://www.transportation.gov/RAISEgrants/raise-app-hdc</a> ).
Project Location Latitude	47.70000	<b>Provide the project's latitude coordinates</b> . For projects that are not located at a single set of coordinates, please provide a centralized set of coordinates. Tools such as Google Maps, Google Earth ( <a href="https://earth.google.com/web">https://earth.google.com/web</a> ) or GEOJSON ( <a href="https://geojson.io/#map=2/0/20">https://geojson.io/#map=2/0/20</a> ) are recommended to identify the project's coordinates.

Project Location Longitude	117.20000	<b>Please provide the project's longitude coordinates.</b> For projects that are not located at a single set of coordinates, please provide a centralized set of coordinates. Tools such as Google Maps, Google Earth ( <a href="https://earth.google.com/web">https://earth.google.com/web</a> ) or GEOJSON ( <a href="https://geojson.io/#map=2/0/20">https://geojson.io/#map=2/0/20</a> ) are recommended to identify the project's coordinates.
Project Type	Road - New Capacity	Identify the <b>Primary and Secondary project type</b> combination that most closely aligns with your project from the choices in the drop-down menu. See the "Project Types" tab in this file for further information and project type definitions.
US DOT FY23 Discretionary Application?		If the applicant has or will submit this <b>exact project to another FY 2023 USDOT discretionary grant program</b> , please list the name of the program(s).
US DOT FY22 Reconnecting Communities Program Identical Application Submission?	No	If this exact project was submitted in the <b>FY 2022 Reconnecting Communities Program</b> , select "Yes" from the drop-down menu.
US DOT FY22 Reconnecting Communities Program "Reconnecting Extra Designation"?		If your RAISE 2023 application was submitted in the <b>FY2022 Reconnecting Communities Program AND you were notified you received the designation of "Reconnecting Extra"</b> , select "Yes" from the drop-down menu. If you are not sure, or this does not apply to you, please leave blank.
Previous Submission to TIGER/BUILD/RAISE		If this exact project was submitted in a <b>previous TIGER, BUILD, or RAISE</b> round, please list the name(s) of the round(s) (e.g TIGER 2015, BUILD 2019, RAISE 2022).
Other Federal Agency Assistance?		If this project has applied for <b>another Federal (non-USDOT) financial assistance or capacity-building program</b> , please list the name of the program(s).
Tribal Government?	No	Select "Yes" from the drop-down menu if the applicant is a <b>Federally recognized tribal government</b> .
Tribal Benefits?	Not Applicable	<b>If the applicant is not a Federally recognized tribal government</b> , is the project located on tribal land? And if not, does it have direct tribal benefits? Answer using the drop-down menu.
Private Corporation Involvement	No	Does this project <b>involve (a) private entity(ies) that will receive a direct and predictable financial benefit</b> if the project is selected for award? This includes, but is not limited to, private owners of infrastructure facilities being improved and private freight shippers or carriers directly benefitting from completion of the proposed project.
Private Corporation Name(s)		<b>If this project directly involves or benefits a specific private corporation</b> , please list the corporation(s) separated by a comma.
TIFIA/RRIF?	No	Is the project currently, or does this project anticipate applying for Transportation Infrastructure Finance and Innovation Act ( <b>TIFIA</b> ) or Railroad Rehabilitation & Improvement Financing ( <b>RRIF</b> ) <b>loans</b> ? See [ <a href="https://www.transportation.gov/buildamerica/">https://www.transportation.gov/buildamerica/</a> ] for more details.
Department Financing Program?	Yes	If your application is unsuccessful, would you like to be contacted about the <b>Department's financing program</b> ?



## Section 3

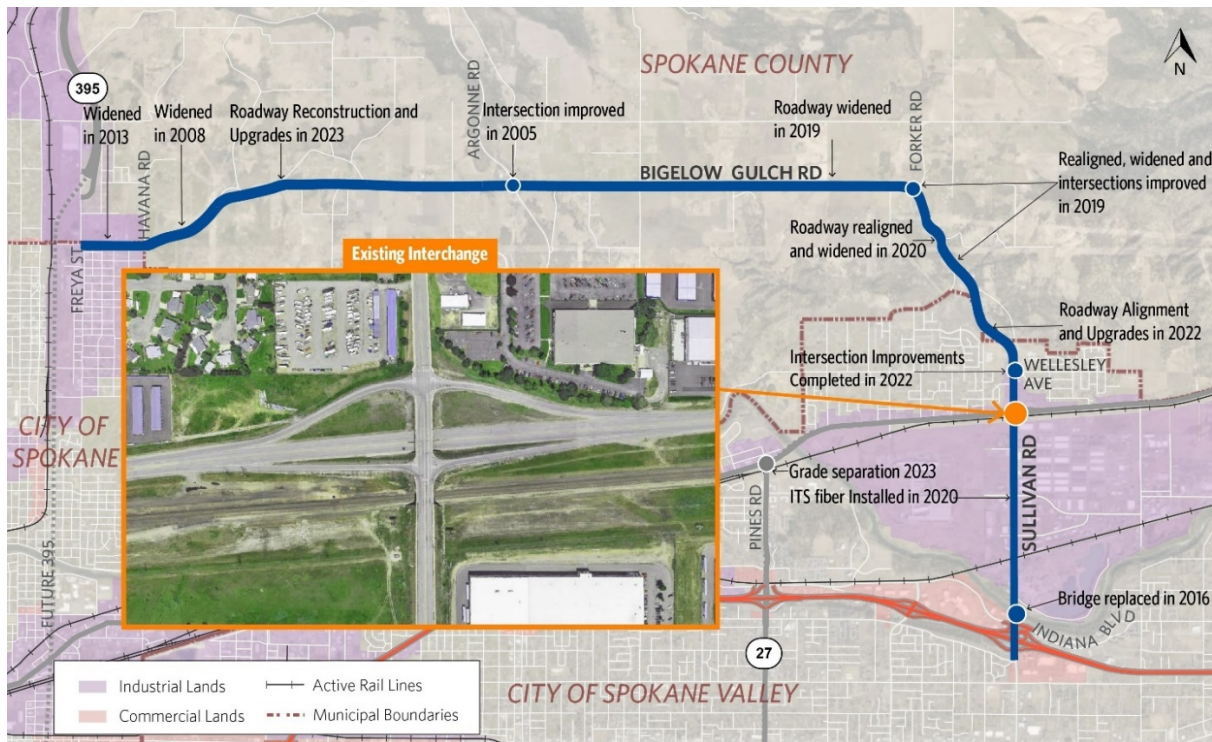
### *Project Description*

## Project Description

The Sullivan Road and Trent Avenue (State Route (SR) 290) interchange in Spokane, WA, sees an average of 30,000 vehicles each day, approximately 13,000 of which occur during the PM peak-hour. Between 2020 and 2022, the Sullivan Road and Trent Avenue interchange resulted in approximately 111,000 vehicle hours of delay and experienced 36 recorded collisions<sup>1</sup>. The City of Spokane Valley (the City) seeks a RAISE Grant of \$17,213,169 to support funding for the \$42.6 million Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project to create a safer and more efficient transportation network that reduces its environmental impacts and equitably improves access and mobility for all users.

## Project Overview/Introduction

The Sullivan & Trent interchange connects rural freight traffic with one of the region’s busiest urban corridors (Figure 1). Sullivan Road between Interstate (I-90) and Trent Avenue is home to 9,000 jobs, 85% of which are directly related to freight<sup>2</sup>. Large industry employers, including Mercer Mass Timber, Kaiser Aluminum, and Amazon, move their goods and employees via Sullivan Road and the Bigelow-Sullivan corridor. The Washington State Department of Transportation (WSDOT) Freight and Goods Transportation System (FGTS) rated Sullivan Road south of Trent Avenue as a Tier 2 freight corridor that turns into a Tier 1 freight corridor south of Euclid Road and continues to its I-90 connection. Tier 1 freight routes are the highest rated corridors, carrying over 10 million tons of freight annually<sup>3</sup>.



**Figure 1: Project Location and Related Improvements**

<sup>1</sup> Analysis of Washington Department of Transportation (WSDOT) Vehicle Crash Data, 2020-2022

<sup>2</sup> <https://onthemap.ces.census.gov/> (2017 job data, area of I-90, SR 290, Evergreen Rd., Long Rd.)

<sup>3</sup> <https://www.wsdot.wa.gov/freight/fgts>

Sullivan Road transitions into Bigelow Gulch Road north of the Trent Avenue interchange after passing through a residential zone with a middle school and high school. The Bigelow-Sullivan Corridor forms an important link in the freight and goods transportation network in the greater Spokane region. The City has been constructing incremental improvements to support increased traffic volumes (Figure 1). The proposed reconfigured interchange at Sullivan Road and Trent Avenue is required to ensure safe and efficient traffic flow for freight and commuter traffic.

This project is consistent with the USDOT’s Rural Opportunities to Use Transportation for Economic Success (ROUTES) Initiative as it will improve travel time for passenger and freight users of the corridor. As stated in the ROUTES Initiative, corridors like Bigelow-Sullivan “are critically important for domestic production and export of agriculture, mining, and energy commodities, as well as the quality of life for all Americans.”<sup>4</sup> The Bigelow-Sullivan Corridor provides a safe and less-congested alternate route for freight trucks passing through the Spokane region and provides greater efficiency over the Spokane region’s urban arterial and urban highway system.

### Statement of Work

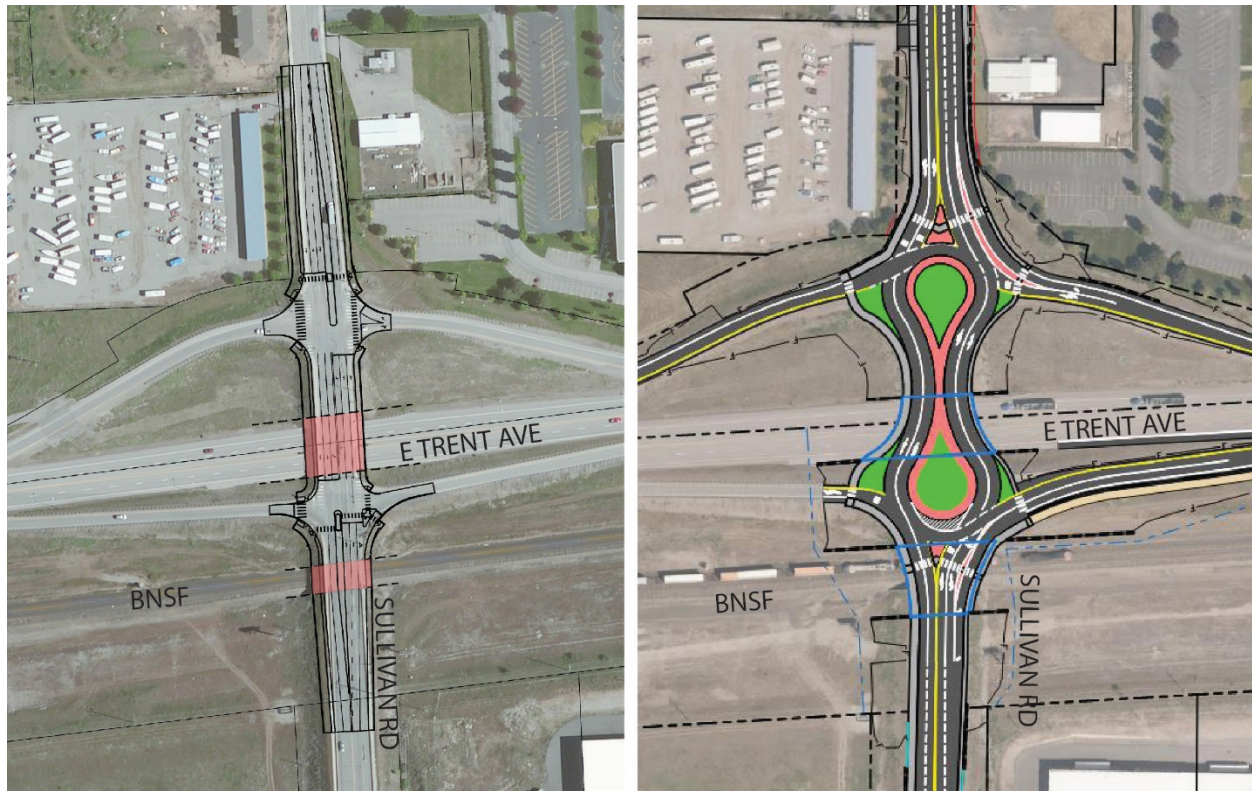
The Sullivan & Trent Interchange project replaces a failing signalized, diamond interchange with a “peanut” roundabout interchange (Figure 2). Proposed improvements include the reconstruction of the Sullivan Road bridge over Trent Avenue. The Sullivan Road bridge is 62 years old, is regularly hit by tall trucks, and is rated as “structurally deficient,” “high risk,” and in overall “poor” condition. The project lengthens the Sullivan Road bridge span over BNSF Railway’s existing double track, providing future growth capacity for four total rail lines. The project also adds a new shared use path and widened sidewalks to improve access and reduce levels of stress for non-motorized users through one of the region’s busiest freight centers. (Figure 6, in the Economic Competitiveness and Opportunity Section).

### Current Design Status

Through 2022, the City conducted a preliminary alternatives analysis with WSDOT that evaluated six potential interchange configurations prioritizing safety, operability, environmental impacts, constructability, public opinion, and cost. Two of the six options were removed from consideration based on WSDOT input and the City conducted an in-depth review of the remaining four alternatives. This review included coordination with BNSF Railway, WSDOT, the community, and other regional stakeholders. Almost 300 public survey responses were received and considered in the evaluation. In December 2022, Spokane Valley City Council selected its preferred design alternative (Figure 2) with coordinated support from all stakeholders (see Partnership & Collaboration Section for more details).

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<sup>4</sup> <https://www.transportation.gov/rural>



**Figure 2: Current Diamond Interchange and Proposed Peanut Roundabout**

The design of the preferred alternative incorporates elements to:

- Improve mobility of vehicle traffic by eliminating signaled intersections,
- Improve safety of vehicle traffic by eliminating left turns across on-coming traffic,
- Improve mobility of non-motorized users by providing safe passage through the interchange,
- Reduce maintenance needs by reconstructing infrastructure and eliminating signaled intersections,
- Improve freight movement through improved traffic flow, and
- Provide sufficient drainage in the interchange design.

As of February 2023, the City went through a request for qualifications / statement of qualification process to identify and select a design consultant to develop 100% project plans, specifications, and estimates for the preferred alternative. The selected consultant is anticipated to be under contract by March 2023 and its work is scheduled to last through 2024 per the project schedule (see Project Readiness Section for more details).

### Transportation Challenges the Project Aims to Address

The Bigelow-Sullivan corridor has become a preferred alternate route to US 395 and I-90, thereby increasing traffic volumes significantly beyond what was originally designed for 60 years ago. Today, the interchange operations are failing, the Sullivan Road bridge girders



spanning Trent Avenue experience regular truck collisions, and pedestrian and bicycle levels of traffic stress are rated the highest possible score of 4<sup>5</sup>.



**Figure 3: Sullivan Road Bridges Over Trent Avenue & BNSF Tracks**

Two baseline needs were prioritized in the development of this project: maintaining mobility for all users passing through the interchange; and improving safety for all modes of travel through the interchange. The chosen design will improve traffic mobility by encouraging more uniform flow, thereby improving quality of life for users and supporting economic growth in the region, and will provide safer passage for non-motorized traffic, as discussed in later sections.

Sullivan Road currently crosses over Trent Avenue and the BNSF Railway Northern Transcon corridor on bridges constructed in 1960 (Figure 3). The clearance on Trent Avenue as it passes under Sullivan Road is 15 feet, 4 inches, which is less than the current WSDOT standard clearance of 16 feet, 6 inches. The reconstructed interchange will improve the quality of the infrastructure at the interchange to meet current design standards.

Reconstruction of the project interchange is a critical element to both Trent Avenue and the Bigelow-Sullivan corridor. The connection of Bigelow Gulch Road into Sullivan Road has dramatically impacted the operations of the existing interchange. Peak hour traffic volumes have been increasing dramatically since the winter 2022 connection was completed. Without reconstruction of the Trent Avenue interchange, it is expected that both westbound and eastbound ramp intersections will continue to operate at a Level of Service (LOS) of F, with conditions worsening over time. This increase in traffic and decrease in LOS will increase greenhouse gas emissions, degrade the safety of the existing interchange, increase level of traffic stress, slow the movement of rural freight through the urban area, and ultimately restrict economic prosperity in the region.

### Project History and Relationship to Other Plans

Bigelow Gulch Road improvements were the fourth highest priority on the Congressional Regional Transportation Priority Project list. The project was selected via a lengthy public process, beginning in 1998 with the state-funded “Connecting our Community - a Regional Study of Urban Connectors”. The various elements of the Bigelow-Sullivan Corridor have been

<sup>5</sup> WSDOT’s Design Bulletin #2022-01



regularly identified as high priorities in the Washington State Freight Mobility Strategic Investment Board (FMSIB) annual reports<sup>6</sup>, and the Washington State Freight System Plan<sup>7</sup>.

Since 2010, the City spent over \$5 million to reconstruct intersections of Sullivan Road at Sprague Avenue, Broadway Avenue, Indiana Avenue, and Euclid Avenue. In 2016, Spokane Valley completed the \$16 million replacement of the 60-year old structurally deficient Sullivan Bridge that crosses the Spokane River. In 2020, the City installed ITS infrastructure along Sullivan Road to assist in traffic efficiency along the corridor. In 2022, the City and Spokane County completed the Bigelow Gulch Road connection and Wellesley intersection upgrade immediately north of the project. This FY23 RAISE funding request would allow the City to reconstruct the Sullivan Road and Trent Avenue interchange to complete the regional freight corridor connection. These improvements are shown on Figure 6 in the Economic Competitiveness and Opportunity Section.

The Sullivan Road Corridor Study, completed in 2015 and updated in 2020, recommends several short-term and long-term improvements. Recognizing the increases in volumes from the 2022 Bigelow Gulch Road connection, the City of Spokane Valley must reconstruct the interchange to accommodate freight mobility and improve safety along the corridor. Traffic volumes already exceed the anticipated 2028 traffic volumes through the interchange.

Improving traffic flow at the interchange of Sullivan Road and Trent Avenue will substantially benefit the freight network by improving truck mobility. The Bigelow-Sullivan Corridor is part of the National Highway Freight Network, the Critical Rural Freight Corridor, the Critical Urban Freight Corridor, and the National Highway System Map-21 Principal Arterial.

The intersection of the BNSF Railway with Sullivan Road is grade-separated, but the existing bridge only allows for two tracks to pass under it. Improving the interchange will include a reconstructed, lengthened bridge span to accommodate future growth for rail freight.

## Project Location

The project is located in Spokane Valley, WA, in the northeast corner of the state, nearly nine miles from the Idaho border and 90 miles south of the Canadian border. It is one-quarter mile within the urbanized area (UA) of Spokane Valley (67167) and is located at the intersection of North Sullivan Road and East Trent Avenue (SR 290), which straddles the north limits of the greater Spokane urban area boundary. The project is in census tract 114 and has a geographic location of 47°41'45" N, 117°11'49" W.

Immediately south of the project is the Spokane Business and Industrial Park. "The Park" is home to over 4,500 employees, 615 acres of industrial space including 70 buildings and over 5 million square feet of building space with access to rail service to both Union Pacific (UP) Railway and BNSF Railway. It is one of the largest industrial parks in the nation<sup>8</sup>. North of the project is a mix of residential, schools, and businesses. The project is not located in an Area of Persistent Poverty or a Historically Disadvantaged Community.

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<sup>6</sup> <https://fmsib.wa.gov/agency/fmsib-annual-report>

<sup>7</sup> [https://wsdot.wa.gov/sites/default/files/2022-11/Appendix-G-FSP-Freight-Investment-Plan\\_0.pdf](https://wsdot.wa.gov/sites/default/files/2022-11/Appendix-G-FSP-Freight-Investment-Plan_0.pdf)

<sup>8</sup> <https://www.spokanevalleyed.org/properties-2/industrial-business-parks>

# Section 4

## *Project Location File*

(this is a digital file submitted electronically)



# Section 5

## *Project Budget*



## Project Budget

The City of Spokane Valley (the City) is requesting \$17,213,169 million in FY 2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program funding for the \$42.6 million Sullivan and Trent Interchange project.

The \$42.6 million total project cost is based on a preliminary design estimate prepared and includes \$396,331 in previously incurred expenses. This budget includes costs associated with construction, construction engineering, contingencies, and internal administration costs. An 18% percent contingency (\$4.5 million) has been included in the total project cost estimate, in addition to \$3.8 million for inflationary costs projected into the years of expenditure. A summary of project funding by activity is shown in Table 1 below.

**Table 1: Project Cost Summary by Activity**

Activity	Cost (\$)
Engineering	\$3,985,853
Right of Way	\$1,457,306
Construction Phase	\$36,785,501
<b>Total Eligible Project Costs</b>	<b>\$42,228,660</b>
Previously Incurred Expenses	\$396,331
<b>Total Project Costs</b>	<b>\$42,624,991</b>

Other federal and non-federal funds will share in each major project phase. RAISE federal funds will be used in the construction phase in conjunction with other federal and non-federal funds. The detailed breakdown by activity and funding source is provided in Table 2. Spokane Valley understands that expenses incurred between time of award and obligation are not eligible for reimbursement and therefore the City anticipates the Scope of Work proposed for funding in this request to commence only once the federal RAISE funds are obligated. The funding sources described in Table 2 include several discretionary grants and programmatic funding programs, and do not include loans or other funding types.

**Table 2: Proposed Project Funding Sources, Commitment Status, and Amounts**

Future Eligible Project Costs		Total (\$)	Total (%)
<b>Federal Funding</b>			
Requested	RAISE Program	\$17,213,169	40.8%
Potential	WSDOT’s Local Bridge Program (NHPP + STBG)	\$10,000,000	23.7%
Secured	National Highway Freight Program	\$2,552,000	6.0%
Secured	Highway Improvement Program	\$1,367,500	3.2%
Secured	2023 Congressionally Directed Spending (Earmark)	\$2,650,000	6.2%
<b>Subtotal – Federal</b>		<b>\$33,782,669</b>	<b>80.0%</b>
<b>Non-Federal Funding</b>			
Committed	City of Spokane Valley (13.5% Match for Secured Funds)	\$1,025,298	2.4%
Required (Not Secured)	Potential Sources: City of Spokane Valley, Transportation Improvement Board (TIB), Legislative Direct Allocation, Freight Mobility & Strategic Investment Board (FMSIB)	\$7,420,694	17.6%
<b>Subtotal – Non-Federal</b>		<b>\$8,445,991</b>	<b>20.0%</b>
<b>Total Future Eligible Project Costs</b>		<b>\$42,228,660</b>	<b>100%</b>

The City is pursuing federal funds concurrently from the RAISE program and also the Washington Department of Transportation’s Federal Local Bridge Program. Secured funds are from the National Highway Freight Program, the Highway Improvement Program, and 2023 Congressionally Directed Spending. The total amount of secured, requested, and potential federal funding is equal to 80 percent of the total future eligible project costs. The remaining matching funds have been identified from several state and local sources, meeting the statutory cost-sharing requirement for RAISE. Spokane Valley is committed to providing the required non-federal match using internal funds and other potential sources of funding including future City contributions, Transportation Improvement Board (TIB), Legislative Direct Allocation, and the Freight Mobility & Strategic Investment Board (FMSIB).

The project has no dependencies, conditions, or relationships with other federal or non-federal funding sources, related projects, laws, or other factors that would adversely impact the ability to use RAISE funds. No specific project components are proposed for partial funding. The project has no federal or non-federal funding sources committed that require an obligation or expenditure of funds by a specific date that could limit the City’s ability to obligate RAISE funds. The secured federal funds for the engineering and right-of-way phases have obligation dates in 2025 or 2026, which will not be at risk. The project will be constructed entirely within Washington State, Spokane County, Census Tract 114, (full code: 53063011400).

Table 3 presents a summary of project funding by the activity and funding source. The table indicates that RAISE funding accounts for 46.8 percent of project construction costs (\$17.2 million). This amount is below the \$25 million threshold of project costs to only compete for funding in the FY2023 Appropriations Act. The requested RAISE funding represents





40.8 percent of the total future eligible project costs. The City intends to proceed with engineering and right-of-way phases before RAISE awards are announced and before awarded RAISE contracts are executed. The application’s eligible project costs include engineering and right-of-way phases. However, by the time a potential RAISE FY23 contract may be executed, those phases may already have obligated and no longer be eligible for consideration by RAISE. RAISE funds are intended for the construction phase only and the City’s remaining eligible project costs will continue to satisfy the non-Federal funding requirements established by the RAISE program.

**Table 3: Project Funding Amounts by Activity**

Project Phase	Previously Incurred Costs	Future Eligible Costs				Total Project Costs
		Raise	Other Federal	Non Federal	Subtotal	
Engineering	\$396,331	0	\$3,447,763	\$538,090	\$3,985,853	\$4,382,184
<i>(% by Phase)</i>		0.00%	86.50%	13.50%	100.00%	
Right-of-Way Acquisition	\$ -	0	\$1,260,570	\$196,736	\$1,457,306	\$1,457,306
<i>(% by Phase)</i>		0.00%	86.50%	13.50%	100.00%	
Construction	\$ -	\$17,213,169	\$11,861,167	\$7,711,165	\$36,785,501	\$36,785,501
<i>(% by Phase)</i>		46.79%	32.24%	20.96%	100.00%	
<b>TOTAL</b>	<b>\$396,331</b>	<b>\$17,213,169</b>	<b>\$16,569,500</b>	<b>\$8,445,991</b>	<b>\$42,228,660</b>	<b>\$42,624,991</b>
<i>(% by Funding Type)</i>		<b>40.76%</b>	<b>39.24%</b>	<b>20.00%</b>	<b>100.00%</b>	

The project cost estimate is provided on the following page and includes right-of-way acquisition, design and permitting, preparation of the site, earthwork, surfacing, bridge reconstruction, construction administration, utility relocates, drainage, traffic control, painting, lights, and signage.



**Conceptual Cost Estimate  
Alternative 2  
"Peanut" Roundabout**

Item	Unit	Quantity	Unit Cost	Cost
<b>Preparation</b>				
Clearing & Grubbing	AC	4.00	\$ 20,000.00	\$ 80,000
Sawcut	LF	2570	\$ 15.00	\$ 38,550
Traffic Signal Removal	LS	2	\$ 40,000.00	\$ 80,000
Light Pole Removal	EA	4	\$ 5,000.00	\$ 20,000
Concrete Bridge Removal (SR290)	SF	4999	\$ 100.00	\$ 499,900
Concrete Bridge Removal (BNSF)	SF	2891	\$ 150.00	\$ 433,650
<b>Earthwork</b>				
Roadway Excavation Incl. Haul	CY	10140	\$ 30.00	\$ 304,200
Gravel Borrow	TON	13590	\$ 40.00	\$ 543,600
<b>Surfacing</b>				
CSBC	TON	6700	\$ 40.00	\$ 268,000
Roadway HMA	TON	13710	\$ 130.00	\$ 1,782,300
Commercial HMA (Trail)	TON	290	\$ 100.00	\$ 29,000
Cement Conc. Truck Apron	SY	13630	\$ 100.00	\$ 1,363,000
<b>Rein. Conc. &amp; PT Box Girder/Span 50-200/Dry Crossing w/ Spread Footings (SR 290)</b>				
Rein. Conc. & PT Box Girder/Span 50-200/Dry Crossing w/ Spread Footings (SR 290)	SF	11000	\$ 600.00	\$ 6,600,000
Rein. Conc. & PT Box Girder/Span 50-200/Dry Crossing w/ Spread Footings (BNSF)	SF	10390	\$ 650.00	\$ 6,753,500
<b>Walls</b>				
Abutment Walls	SF	5050	\$ 150.00	\$ 757,500
Struct. Earth Wall (>10')	SF	1520	\$ 60.00	\$ 91,200
Conc Moment Slab for SEW (See above)	LF	180	\$ 500.00	\$ 90,000
Reinf. CIP Conc Wall w/ Integral Barrier (<10')	SF	1430	\$ 100.00	\$ 143,000
Gravel Backfill for Walls	CY	360	\$ 60.00	\$ 21,600
<b>Other</b>				
ADA Ramps	EA	18	\$ 3,000.00	\$ 54,000
Conc. Sidewalk	SY	3140	\$ 100.00	\$ 314,000
Curb & Gutter	LF	5070	\$ 50.00	\$ 253,500
Traffic Barrier (for trail)	LF	1400	\$ 200.00	\$ 280,000
Thickened Edge	LF	160	\$ 100.00	\$ 16,000
Traffic Signal System	EA	0	\$ 350,000.00	\$ -
Illumination System	LS	1	\$ 500,000.00	\$ 500,000
Plastic Lines	LF	12950	\$ 5.00	\$ 64,750
Plastic Traffic Arrow	EA	19	\$ 350.00	\$ 6,650
Plastic Stop Line	LF	0	\$ 15.00	\$ -
Plastic Crosswalk Line	SF	760	\$ 15.00	\$ 11,400
Permanent Signing	LS	1	\$ 150,000.00	\$ 150,000
<b>Item Sub-Total</b>				<b>\$ 21,549,300</b>
<b>Lump Sum Percentages</b>				
Mobilization (7%)	LS	1	\$ 1,644,211.59	\$ 1,644,212
Maintenance of Traffic (5%)	LS	1	\$ 1,077,465.00	\$ 1,077,465
Drainage (1%)	LS	1	\$ 215,493.00	\$ 215,493
Utility Relocations (3%)	LS	1	\$ 646,479.00	\$ 646,479
<b>Lump Sum Sub-Total</b>				<b>\$ 3,583,649</b>
<b>Item + Lump Sum Total</b>				<b>\$ 25,132,949</b>
Contingency	17.87%			\$ 4,490,636
<b>Sub-Total</b>				<b>\$ 29,623,584</b>
Design & Permitting	13%			\$ 3,851,066
Construction Admin	12%			\$ 3,554,830
<b>Sub-Total</b>				<b>\$ 37,029,480</b>
Right of Way	LS	1	\$ 221,776.67	\$ 221,777
BNSF TCE	LS	1	\$ 1,138,634.02	\$ 1,138,634
<b>Total ROW Costs</b>				<b>\$ 1,360,411</b>
<b>Grand Total</b>				<b>\$ 38,389,891</b>
<b>Inflated Cost (@3.5%/Yr)</b>				
Construction (2025-2026)	\$	29,623,584	2025	\$ 32,844,197
Design Engineering (2023-2024)	\$	3,851,066	2023	\$ 3,985,853
Right of Way (2024)	\$	1,360,411	2024	\$ 1,457,306
Construction Engineering (2025-2026)	\$	3,554,830	2025	\$ 3,941,304
TOTAL	\$	38,389,891		\$ 42,228,660

## Section 6

### *Funding Commitment Documentation*



10210 E Sprague Avenue ♦ Spokane Valley WA 99206  
Phone: (509) 720-5000 ♦ Fax: (509) 720-5075 ♦ www.spokanevalley.org

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## U.S. Department of Transportation

# Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Transportation Discretionary Grants Program

## Call for Projects

### Local Agency Project Endorsement

#### **Project: Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project**


The attached project application reflects established local funding priorities consistent with the adopted local plans and programs.

The project described is financially feasible; local match revenue identified in the project application is available and committed to the project. If awarded Federal funds, the City is committed to securing all remaining unsecured funds to satisfy RAISE program requirements. Costs identified in the application represent accurate planning level estimates needed to accomplish the work described herein.

This project has the full endorsement of the governing body/leadership of this agency or organization. This document must be signed by a person in a position or a representative of a governing body that has the authority to make decisions for the entire organization.

John Hohman, City Manager

Name and Title of Designated Representative

  
\_\_\_\_\_  
Signature of Designated Representative

2-23-2023  
\_\_\_\_\_  
Date

July 20, 2022

The Honorable Pam Haley  
City of Spokane Valley  
10210 E Sprague Ave  
Spokane Valley WA 99206

**Project: Bigelow-Sullivan Corridor: Sullivan Trent Interchange**  
**Award Amount: \$1,367,500**  
**Program: Highway Improvement Program-Coronavirus Response and Relief Supplemental Appropriation Act (HIP-CRRSSA)**

Dear Mayor Haley;

Congratulations! On 7/14/2022 the Spokane Regional Transportation Council (SRTC) Board of Directors approved Resolution 22-09, which included funding for the **City of Spokane Valley's Bigelow-Sullivan Corridor: Sullivan Trent Interchange** project as part of the SRTC 2024-2026 Call for Projects in the amount of **\$1,367,500**.

This project funding will be included in a 2023-2026 SRTC Transportation Improvement Program (TIP) amendment for Board consideration. Please submit your project records into Secure Access Washington (SAW) by July 30, 2022. Once the TIP Amendment is approved, it will be included in the State Transportation Improvement Program (STIP.) After the funding is programmed into the STIP, you may seek obligation of the federal funds through WSDOT Local Programs consistent with the funding policies outlined in the most current SRTC TIP Guidebook.

Attached is an Acceptance of Funding Agreement outlining conditions of the award which must be signed by an official having authority to do so. Please sign and return the agreement no later than July 30, 2022. Again, congratulations and we look forward to working with the City of Spokane Valley. If you have any questions, please do not hesitate to contact me at 509.435.3823 or [lbollenback@srctc.org](mailto:lbollenback@srctc.org).

Sincerely,



Lois Bollenback, Executive Director

Enclosure: 1

cc: Council Member Rod Higgins, City Manager John Hohman, Adam Jackson, Jeremy Clark

SRTC MEMBER AGENCIES

- City of Airway Heights • City of Cheney • City of Deer Park • City of Medical Lake • City of Millwood • City of Spokane
- City of Spokane Valley • Kalispel Tribe of Indians • Spokane County • Spokane Transit Authority • Spokane Tribe of Indians
- Town of Fairfield • Town of Latah • Town of Rockford • Town of Spangle • Town of Waverly
- Washington State Dept of Transportation ○ Washington State Transportation Commission

**Agency:** City of Spokane Valley  
**Address:** 10210 E Sprague Ave, Spokane Valley WA 99206  
**Project:** Bigelow-Sullivan Corridor: Sullivan Trent Interchange  
**Award Amount:** \$1,367,500  
**Program:** HIP-CRRSSA  
**Elected Official:** Mayor Pam Haley  
**SRTC Board Members:** Mayor Pam Haley and Council Member Rod Higgins  
**Staff Members:** Adam Jackson, Jerremy Clark

**Conditions of Award:**

- All programming is subject to the SRTC TIP Guidebook. The TIP Guidebook is updated yearly.
- Eligible activities and conditions are subject to all federal and state laws and regulations, and SRTC Board guidance.
- The project must be delivered in its entirety per the description in the original application unless scope or other changes are approved in writing by SRTC.
- If a partial award, the applicant is responsible for securing all additional funds on the project in addition to local match. If the award is a full award, the applicant is responsible for securing all required match.
- Availability of local funds must be demonstrated for the year the project is programmed.
- If a project receives a partial funding award, and is unable to secure additional, non-local funds for the project prior to delivery, programming may be delayed upon request with approval of the SRTC Board, and agencies can re-submit under a subsequent call for projects; additional funding is not guaranteed.
- Any change of use of SRTC funds for phases (PE, ROW, CN), or geographical segments of a project must be approved in writing and in advance of changes so administrative modifications or amendments can be made. This applies to changes necessitated by reasons such as, but not limited to, the securing of additional fund sources, costs savings or increases, or design modifications.

Agreed to and Approved:

\_\_\_\_\_  
John Hohman, City Manager

\_\_\_\_\_  
Lois Bollenback, Executive Director  
Spokane Regional Transportation Council

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

SRTC MEMBER AGENCIES

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- Town of Fairfield • Town of Latah • Town of Rockford • Town of Spangle • Town of Waverly
- Washington State Dept of Transportation ○ Washington State Transportation Commission

June 8, 2022

Ms. Gloria Mantz, PE  
City Engineer  
City of Spokane Valley  
10210 East Sprague Avenue  
Spokane Valley, Washington 99206

**City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290  
Interchange (PE)  
FFY 2023 National Highway Freight Program (NHFP)  
Federal Funding**

Dear Ms. Mantz:

WSDOT is pleased to advise you that the above-mentioned project was selected to receive funding through the National Highway Freight Program (NHFP). NHFP funds are only eligible for work on the National Highway Freight Network (NHFN). The federal funding is limited as shown below:

**Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange (PE)            \$2,552,000**  
***FFY 2023 Available NHFP Funding: \$1,185,000***

**Scope:** Project reconstructs the Sullivan Rd. interchange at SR 290, including its on/off ramps, to restore the long-term capacity of the interchange.

**Note:** *Projects require 13.5% local match for all eligible federal expenditures. Federal funds cannot be used as match.*

In order to meet federal and state requirements, the following are required:


- Project expenditures incurred before receiving notice from Local Programs of federal fund authorization are not eligible for reimbursement.
- Please refer to the Local Programs webpage for detailed authorization information including: (<https://wsdot.wa.gov/business-wsdot/support-local-programs>)
  - ✓ Local Agency Guidelines (LAG) manual for detailed requirements.
  - ✓ Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) amendments, as applicable.
  - ✓ Funding and billing forms.
  - ✓ Local Project Report is required to be completed by the end of June and December each year. To access the database, you will need an account name and password. Your account name is **Spokane Valley** and your password is **SpoVa759**. The password is case sensitive.
- *FFY 2023 funds are provided for preliminary engineering, and are available October 1, 2022, and must be obligated by September 20, 2023.*

Gloria Mantz  
City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange  
FFY 2023 National Highway Freight Program (NHFP)  
June 8, 2022

As a reminder, Local Programs encourages all agencies to submit monthly progress billings to ensure timely reimbursement of eligible expenditures.

For assistance please contact Mark Allen, your Region Local Programs Engineer, at 509.324.6080.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jay Drye", with a long horizontal flourish extending to the right.

Jay Drye, PE  
Director  
Local Programs

JD:st:ml

cc: Lois Bollenback, Executive Director, SRTC  
Adam Jackson, Planning and Grants Engineer, Spokane Valley  
Mark Allen, Eastern Region Local Programs Engineer  
Ron Pate, Rail, Freight & Ports Division Director, MS 47407



January 9, 2023

Ms. Gloria Mantz, PE  
City Engineer  
City of Spokane Valley  
10210 East Sprague Avenue  
Spokane Valley, Washington 99206

**RE: City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange  
FFY 2022-25 National Highway Freight Program (NHFP)  
Federal Funding – Update**

Dear Ms. Mantz:

WSDOT recently received FHWA approval on the WSDOT Freight System Plan, which includes the five-year investment plan. WSDOT is pleased to advise you that the above-mentioned project was selected to receive additional funding through the National Highway Freight Program (NHFP). NHFP funds are only eligible for work on the National Highway Freight Network (NHFN). The federal funding is limited as shown below:

<b>Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange</b>	<b>\$2,552,000</b>
<b>FFY 2023 Available NHFP Funding: \$1,185,000</b>	
FFY 2024 NHFP Funding: \$1,367,000	

**Scope:** Project reconstructs the Sullivan Rd. interchange at SR 290, including its on/off ramps, to restore the long-term capacity of the interchange

**Note:** *Projects require 13.5% local match for all eligible federal expenditures. Federal funds cannot be used as match.*

In order to meet federal and state requirements, the following are required:

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  - ✓ Funding and billing forms.

Ms. Gloria Mantz, PE

January 9, 2023

Page 2

- ✓ Local Project Report is required to be completed by the end of June and December each year. To access the database, you will need an account name and password. Your account name is **Spokane Valley** and your password is **Spova759**. The password is case sensitive.
- *FFY 2022-25 funds are provided for the preliminary engineering phase of the project and must be obligated by September 20, 2026.*

As a reminder, Local Programs encourages agencies to submit monthly progress billings to ensure timely reimbursement of eligible expenditures.

If you have any questions, please contact your Region Local Programs Engineer, Mark Allen at [Mark.Allen@wsdot.wa.gov](mailto:Mark.Allen@wsdot.wa.gov) or 509.324.6080.

Sincerely,



Jay Drye, PE  
Director  
Local Programs

JD:st:cdm

cc: Lois Bollenback, Executive Director, SRTC  
Adam Jackson, Planning and Grants Engineer, Spokane Valley  
Mark Allen, Eastern Region Local Programs Engineer  
Ron Pate, Rail, Freight & Ports Division Director

Page 150 of 349 of "Division L - Transportation, Housing and urban Development, and Related Agencies Appropriations Act, 2023  
<https://www.appropriations.senate.gov/imo/media/doc/Division%20L%20-%20THUD%20Statement%20FY23.pdf>

Department of Transportation	Highway Infrastructure Programs	148th Street Non-Motorized Bridge Project, Shoreline, WA	WA	4,000,000	Jayapal		H
Department of Transportation	Highway Infrastructure Programs	State Route 166/Bay Street Reconstruction	WA	1,000,000	Kilmer		H
Department of Transportation	Highway Infrastructure Programs	169th St Connecting Segment, Arlington, Washington	WA	3,654,893	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	44th Avenue West Underpass Pedestrian and Bicycle Improvement Project, Lynnwood, Washington	WA	1,744,328	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Port of Friday Harbor Barge and Access Road, Friday Harbor, WA	WA	650,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Town to Zylstra Lake Multi-Modal Trail, Friday Harbor, WA	WA	5,280,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Snohomish County Culverts, Bothell and Stanwood, Washington	WA	3,000,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Grove Street Overcrossing, Marysville, Washington	WA	3,000,000	Larsen (WA)	Murray	H
Department of Transportation	Highway Infrastructure Programs	Port of Warden Road Infrastructure Improvement & Expansion Project	WA	2,500,000	Newhouse		H
Department of Transportation	Highway Infrastructure Programs	Yakima County East-West Corridor	WA	2,500,000	Newhouse	Cantwell, Murray	H/S
Department of Transportation	Highway Infrastructure Programs	Adams County Bridge 411-3 Sackman Road Bridge Replacement Project	WA	3,878,000	Newhouse, Rodgers (WA)	Murray	H/S
Department of Transportation	Highway Infrastructure Programs	City of Spokane Valley Bigelow Sullivan Corridor	WA	2,650,000	Rodgers (WA)	Cantwell	H
Department of Transportation	Highway Infrastructure Programs	Spokane County Craig Road	WA	3,000,000	Rodgers (WA)	Murray	H
Department of Transportation	Highway Infrastructure Programs	Sheffield Trail Widening & Restoration	WA	800,000	Strickland		H
Department of Transportation	Highway Infrastructure Programs	Pacific Avenue SR-7, Pedestrian and Transit Access Improvements (168 Street East)	WA	3,000,000	Strickland		H
Department of Transportation	Highway Infrastructure Programs	The City of Lakewood South Tacoma Way Project	WA	2,500,000	Strickland		H

July 20, 2022

The Honorable Pam Haley  
City of Spokane Valley  
10210 E Sprague Ave  
Spokane Valley WA 99206

**Project: Bigelow-Sullivan Corridor: Sullivan Trent Interchange**  
**Award Amount: \$1,367,500**  
**Program: Highway Improvement Program-Coronavirus Response and Relief Supplemental Appropriation Act (HIP-CRRSSA)**

Dear Mayor Haley;

Congratulations! On 7/14/2022 the Spokane Regional Transportation Council (SRTC) Board of Directors approved Resolution 22-09, which included funding for the **City of Spokane Valley's Bigelow-Sullivan Corridor: Sullivan Trent Interchange** project as part of the SRTC 2024-2026 Call for Projects in the amount of **\$1,367,500**.

This project funding will be included in a 2023-2026 SRTC Transportation Improvement Program (TIP) amendment for Board consideration. Please submit your project records into Secure Access Washington (SAW) by July 30, 2022. Once the TIP Amendment is approved, it will be included in the State Transportation Improvement Program (STIP.) After the funding is programmed into the STIP, you may seek obligation of the federal funds through WSDOT Local Programs consistent with the funding policies outlined in the most current SRTC TIP Guidebook.

Attached is an Acceptance of Funding Agreement outlining conditions of the award which must be signed by an official having authority to do so. Please sign and return the agreement no later than July 30, 2022. Again, congratulations and we look forward to working with the City of Spokane Valley. If you have any questions, please do not hesitate to contact me at 509.435.3823 or [lbollenback@srctc.org](mailto:lbollenback@srctc.org).

Sincerely,



Lois Bollenback, Executive Director

Enclosure: 1

cc: Council Member Rod Higgins, City Manager John Hohman, Adam Jackson, Jeremy Clark

SRTC MEMBER AGENCIES

- City of Airway Heights • City of Cheney • City of Deer Park • City of Medical Lake • City of Millwood • City of Spokane
- City of Spokane Valley • Kalispel Tribe of Indians • Spokane County • Spokane Transit Authority • Spokane Tribe of Indians
- Town of Fairfield • Town of Latah • Town of Rockford • Town of Spangle • Town of Waverly
- Washington State Dept of Transportation ○ Washington State Transportation Commission

**Agency:** City of Spokane Valley  
**Address:** 10210 E Sprague Ave, Spokane Valley WA 99206  
**Project:** Bigelow-Sullivan Corridor: Sullivan Trent Interchange  
**Award Amount:** \$1,367,500  
**Program:** HIP-CRRSSA  
**Elected Official:** Mayor Pam Haley  
**SRTC Board Members:** Mayor Pam Haley and Council Member Rod Higgins  
**Staff Members:** Adam Jackson, Jerremy Clark

**Conditions of Award:**

- All programming is subject to the SRTC TIP Guidebook. The TIP Guidebook is updated yearly.
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- The project must be delivered in its entirety per the description in the original application unless scope or other changes are approved in writing by SRTC.
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Agreed to and Approved:

\_\_\_\_\_  
John Hohman, City Manager

\_\_\_\_\_  
Lois Bollenback, Executive Director  
Spokane Regional Transportation Council

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

SRTC MEMBER AGENCIES

- City of Airway Heights • City of Cheney • City of Deer Park • City of Medical Lake • City of Millwood • City of Spokane
- City of Spokane Valley • Kalispel Tribe of Indians • Spokane County • Spokane Transit Authority • Spokane Tribe of Indians
- Town of Fairfield • Town of Latah • Town of Rockford • Town of Spangle • Town of Waverly
- Washington State Dept of Transportation ○ Washington State Transportation Commission

June 8, 2022

Ms. Gloria Mantz, PE  
City Engineer  
City of Spokane Valley  
10210 East Sprague Avenue  
Spokane Valley, Washington 99206

**City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290  
Interchange (PE)  
FFY 2023 National Highway Freight Program (NHFP)  
Federal Funding**

Dear Ms. Mantz:

WSDOT is pleased to advise you that the above-mentioned project was selected to receive funding through the National Highway Freight Program (NHFP). NHFP funds are only eligible for work on the National Highway Freight Network (NHFN). The federal funding is limited as shown below:

**Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange (PE)                      \$2,552,000**  
***FFY 2023 Available NHFP Funding: \$1,185,000***

**Scope:** Project reconstructs the Sullivan Rd. interchange at SR 290, including its on/off ramps, to restore the long-term capacity of the interchange.

**Note:** *Projects require 13.5% local match for all eligible federal expenditures. Federal funds cannot be used as match.*

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  - ✓ Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) amendments, as applicable.
  - ✓ Funding and billing forms.
  - ✓ Local Project Report is required to be completed by the end of June and December each year. To access the database, you will need an account name and password. Your account name is **Spokane Valley** and your password is **SpoVa759**. The password is case sensitive.
- *FFY 2023 funds are provided for preliminary engineering, and are available October 1, 2022, and must be obligated by September 20, 2023.*

Gloria Mantz  
City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange  
FFY 2023 National Highway Freight Program (NHFP)  
June 8, 2022

As a reminder, Local Programs encourages all agencies to submit monthly progress billings to ensure timely reimbursement of eligible expenditures.

For assistance please contact Mark Allen, your Region Local Programs Engineer, at 509.324.6080.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jay Drye", with a long horizontal flourish extending to the right.

Jay Drye, PE  
Director  
Local Programs

JD:st:ml

cc: Lois Bollenback, Executive Director, SRTC  
Adam Jackson, Planning and Grants Engineer, Spokane Valley  
Mark Allen, Eastern Region Local Programs Engineer  
Ron Pate, Rail, Freight & Ports Division Director, MS 47407

January 9, 2023

Ms. Gloria Mantz, PE  
City Engineer  
City of Spokane Valley  
10210 East Sprague Avenue  
Spokane Valley, Washington 99206

**RE: City of Spokane Valley  
Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange  
FFY 2022-25 National Highway Freight Program (NHFP)  
Federal Funding – Update**

Dear Ms. Mantz:

WSDOT recently received FHWA approval on the WSDOT Freight System Plan, which includes the five-year investment plan. WSDOT is pleased to advise you that the above-mentioned project was selected to receive additional funding through the National Highway Freight Program (NHFP). NHFP funds are only eligible for work on the National Highway Freight Network (NHFN). The federal funding is limited as shown below:

<b>Bigelow-Sullivan Corridor: Sullivan/SR 290 Interchange</b>	<b>\$2,552,000</b>
<b>FFY 2023 Available NHFP Funding: \$1,185,000</b>	
FFY 2024 NHFP Funding: \$1,367,000	

**Scope:** Project reconstructs the Sullivan Rd. interchange at SR 290, including its on/off ramps, to restore the long-term capacity of the interchange

**Note:** *Projects require 13.5% local match for all eligible federal expenditures. Federal funds cannot be used as match.*

In order to meet federal and state requirements, the following are required:

- Project expenditures incurred before receiving notice from Local Programs of federal fund authorization are not eligible for reimbursement.
- Please refer to the Local Programs webpage for detailed authorization information including: (<https://wsdot.wa.gov/business-wsdot/support-local-programs>)
  - ✓ Local Agency Guidelines (LAG) manual for detailed requirements.
  - ✓ Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) amendments, as applicable.
  - ✓ Funding and billing forms.



Ms. Gloria Mantz, PE

January 9, 2023

Page 2

- ✓ Local Project Report is required to be completed by the end of June and December each year. To access the database, you will need an account name and password. Your account name is **Spokane Valley** and your password is **Spova759**. The password is case sensitive.
- *FFY 2022-25 funds are provided for the preliminary engineering phase of the project and must be obligated by September 20, 2026.*

As a reminder, Local Programs encourages agencies to submit monthly progress billings to ensure timely reimbursement of eligible expenditures.

If you have any questions, please contact your Region Local Programs Engineer, Mark Allen at [Mark.Allen@wsdot.wa.gov](mailto:Mark.Allen@wsdot.wa.gov) or 509.324.6080.

Sincerely,



Jay Drye, PE  
Director  
Local Programs

JD:st:cdm

cc: Lois Bollenback, Executive Director, SRTC  
Adam Jackson, Planning and Grants Engineer, Spokane Valley  
Mark Allen, Eastern Region Local Programs Engineer  
Ron Pate, Rail, Freight & Ports Division Director

Page 150 of 349 of "Division L - Transportation, Housing and urban Development, and Related Agencies Appropriations Act, 2023  
<https://www.appropriations.senate.gov/imo/media/doc/Division%20L%20-%20THUD%20Statement%20FY23.pdf>

Department of Transportation	Highway Infrastructure Programs	148th Street Non-Motorized Bridge Project, Shoreline, WA	WA	4,000,000	Jayapal		H
Department of Transportation	Highway Infrastructure Programs	State Route 166/Bay Street Reconstruction	WA	1,000,000	Kilmer		H
Department of Transportation	Highway Infrastructure Programs	169th St Connecting Segment, Arlington, Washington	WA	3,654,893	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	44th Avenue West Underpass Pedestrian and Bicycle Improvement Project, Lynnwood, Washington	WA	1,744,328	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Port of Friday Harbor Barge and Access Road, Friday Harbor, WA	WA	650,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Town to Zylstra Lake Multi-Modal Trail, Friday Harbor, WA	WA	5,280,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Snohomish County Culverts, Bothell and Stanwood, Washington	WA	3,000,000	Larsen (WA)		H
Department of Transportation	Highway Infrastructure Programs	Grove Street Overcrossing, Marysville, Washington	WA	3,000,000	Larsen (WA)	Murray	H
Department of Transportation	Highway Infrastructure Programs	Port of Warden Road Infrastructure Improvement & Expansion Project	WA	2,500,000	Newhouse		H
Department of Transportation	Highway Infrastructure Programs	Yakima County East-West Corridor	WA	2,500,000	Newhouse	Cantwell, Murray	H/S
Department of Transportation	Highway Infrastructure Programs	Adams County Bridge 411-3 Sackman Road Bridge Replacement Project	WA	3,878,000	Newhouse, Rodgers (WA)	Murray	H/S
Department of Transportation	Highway Infrastructure Programs	City of Spokane Valley Bigelow Sullivan Corridor	WA	2,650,000	Rodgers (WA)	Cantwell	H
Department of Transportation	Highway Infrastructure Programs	Spokane County Craig Road	WA	3,000,000	Rodgers (WA)	Murray	H
Department of Transportation	Highway Infrastructure Programs	Sheffield Trail Widening & Restoration	WA	800,000	Strickland		H
Department of Transportation	Highway Infrastructure Programs	Pacific Avenue SR-7, Pedestrian and Transit Access Improvements (168 Street East)	WA	3,000,000	Strickland		H
Department of Transportation	Highway Infrastructure Programs	The City of Lakewood South Tacoma Way Project	WA	2,500,000	Strickland		H

# Section 7

## *Merit Criteria*

## Merit Criteria

The benefits and costs associated with the project are summarized in the Benefit Cost Analysis Narrative Section. The benefits and costs are calculated over the life-cycle of the project, following the latest U.S. Department of Transportation (USDOT) guidance. It is anticipated that the project will be substantially complete by fall of 2026. The BCA captures benefits and costs over a 20-year period. All benefits are monetized using USDOT guidance or industry best practices to present a rigorous and conservative analysis. The project is predicted to generate \$90.3 million in benefits from a \$39.9 million investment, resulting in a net present value of \$50.4 million and a benefit-cost ratio of 1.1 at a 7% discount rate. The quantifiable benefits of the project include:

- *Travel Time Savings*: Improved travel time for travelers (automobile and passengers) and movement of goods (trucking and freight haulers) by saving 292 person hours of travel time a day, equaling \$46.9 million.
- *Vehicle Operating Cost Savings*: Reduced vehicle operating costs for travelers and movements of goods by avoiding idle time, equaling \$2.2 million.
- *Safety Benefit*: Reduction in anticipated collisions for the traveling public equaling \$28.5 million. This an expected reduction of 1.5 fewer fatal accidents, 90 injury accidents, and 160 property damage only (PDO) crashes between 2027 and 2046.
- *Environmental Improvements*: Reduction of emissions by over 8,000 tons, resulting in \$1.1 million in avoided emission costs.
- *Incremental Operations and Maintenance Savings*: Reduction in operations and maintenance costs from bringing infrastructure to a state of good repair, resulting in a value of \$1.5 million.
- *Residual Value*: Remaining value of infrastructure in a state of good repair at the end of the study period, equaling \$10.1 million.

## Safety

### Challenges at the Existing Interchange

Safety is a priority factor in the development of the proposed project improvements. Proposed improvements create a safer, more user-friendly multi-modal transportation environment for all users. The project is located in the center of residences, schools, transit, commercial and industrial employment centers, and state highway and interstate facilities. The existing signalized interchange produces high levels of traffic stress for all users. Bicyclists have zero dedicated facilities. Pedestrians have narrow adjacent sidewalks with near-zero separation from heavy truck traffic and congested vehicle turning movements. The level of traffic stress, as rated by WSDOT's Design Bulletin #2022-01, is the highest possible stress rating of 4 (on a scale from 1 to 4).

The current lane configuration through the two signalized intersections consists of four total lanes - two in each direction. Each inside lane is a through-left lane with permitted left turns. This type of traffic phasing requires vehicles turning left to make two critical, time-sensitive decisions: first, yield to oncoming traffic before turning left, and second, avoid being rear-ended by oncoming through traffic using the inside lane and not expecting drivers ahead yielding to make a left turn. This situation forces drivers to make a decision under duress and may lead to an increase potential for collisions. The scenarios described explain why the majority of crashes at

the intersection are rear-end, left-turn and angle collisions. In addition, the signalized intersection may tempt drivers to try to “beat the light”, which further jeopardizes safety.

Between 2020 and 2022, the existing interchange experienced 36 recorded collisions, including one serious injury crash. Thirteen collisions were related to left turn or angle collisions directly associated with signalized intersections. Another 14 collisions were rear-end collisions, half of which were directly related to left turning vehicles waiting to turn left from Sullivan Road onto the Trent Avenue on-ramps.

Since 2010, there have been 198 collisions, 66 of which caused injury, two of which included bicyclists and one of which included a pedestrian. Table 4 provides a breakdown of annual collisions over the past 10 years, averaging over 15 collisions per year. Historically, the most prominent crash types are consistent with the shortcomings of the signalized interchange: 54 angle collisions, 51 left-turn collisions, and 38 rear-end collisions. Commercial vehicles involved in collisions at this intersection since 2010 include two school buses and 25 commercial vans or semi-trailers.

**Table 4 – Annual Collision Data By Severity**

Year	All Collisions	Injury Collisions
2010	12	6
2011	18	5
2012	12	7
2013	7	3
2014	8	4
2015	17	6
2016	29	8
2017	21	6
2018	21	6
2019	17	3
2020*	9	3
2021	16	5
2022	11	4
<b>Average Per Year</b>	<b>15.2</b>	<b>5.1</b>

\*COVID-19 Lockdown Year

**Safety Improvements with Proposed “Peanut” Roundabout Interchange**

Since 2018, WSDOT’s City Safety Program, funded by the Highway Safety Improvement Program, has required applicants to develop a *Local Road Safety Plan* that objectively reviews its most prominent fatal and serious injury crash types. This review must then evaluate the various attributes associated with those crashes and identify how to mitigate those factors that promote a higher risk for collisions. As a result, the evaluation identified high risk areas that may be the location of a future fatal or serious injury crash. Spokane Valley’s evaluation has consistently identified two crash types that contribute to fatal or serious injury crashes: hit pedestrians or bicyclists and angle collisions at high volume, signalized intersections. Replacing the existing signalized interchange with the proposed improvements are critical for reaching local, state, and national transportation safety goals for a safe system that strives for zero deaths.



This project's key improvements help mitigate the City's most prominent fatal and serious injury crash types.

The project's proposed sidewalk and shared use path provide a vast improvement to safety and comfort for non-motorized users. Improvements will provide increased space and separation from vehicles while increasing visibility and reducing the user's perceived level of stress while navigating the interchange. When crossing travel lanes, non-motorized users will only need to focus on one direction of vehicle travel thanks to the roundabout's one-way travel pattern. Vehicle speeds are also expected to be more reliable and steady while traveling through the roundabouts.

Overall, vehicle safety and crash risk is anticipated to improve because the "peanut" roundabout configuration eliminates dangerous angle and left-turn movements associated with the existing signalized intersections that increase the risk for collisions. The project also contributes to USDOT's long-term safety outcome by reducing vehicle crash potential through a reduction of travel speeds, simplified turning movements, and eliminating the temptation of motorists to try to "beat the light".

With the interchange's increased capacity to handle the projected traffic growth, more vehicles will be able to move through the project limits safely and efficiently. This is important because local traffic, such as those students, parents, and staff at the nearby Trent Elementary, East Valley Middle School, and East Valley High School, can now prioritize their routes through the interchange. Reconstructing this interchange will improve safety in general for local travelers in the region.

## Environmental Sustainability

### Climate Change

The proposed project has multiple environmental benefits across a variety of genres. Spokane Valley's [Resolution #16-010](#) is the City's Greenhouse Gas Emissions Reduction Policy and serves as a baseline for preliminary project considerations. Supportive of this policy, the project elements (multi-lane peanut roundabout, shared-use path and new sidewalks) have the following environmental benefits based on the undiscounted benefits from the BCA:

- Reduce gasoline, and diesel consumption by over 544,000 gallons (by 2045);
- Reduce over 8,000 tons of emissions (CO<sub>2</sub>, NO<sub>X</sub>, VOC, PM, SO<sub>2</sub>) (by 2045);
- Save \$46.9 million in reduced travel time costs (by 2045);
- Save \$28.5 million in safety and avoided crash costs (by 2045);
- Peak hour intersection delays reduce, saving an average of 292 person-hours a day;
- Increase reliability and resiliency, particularly for freight and commuter traffic;
- Promotes the use of recycled materials in project construction, as specified in the [WSDOT 2023 Standard Specifications Section 1-06.6 – Recycled Materials](#);
- Improve water quality by providing stormwater facilities that treat highway runoff consistent with the region's unique stormwater design manual focused on preserving the US EPA-designated sole-source aquifer: [Spokane Valley-Rathdrum Prairie Aquifer. The aquifer is the source of drinking water for over 500,000 people](#);

- Reduce Particulate Matter (PM10) and Carbon Monoxide (CO), in Spokane County, which is identified by the EPA as a “maintenance area”;
- Replacing existing high-pressure sodium (HPS) street lighting with new light-emitting diode (LED) lighting, which will reduce energy consumption. Any new streetlighting added to enhance the safety at intersections will be LED fixtures to aid in lowering the City and County climate impacts;
- Installing safer non-motorized facilities, encouraging alternate modes of travel to reduce emissions;
- Supporting increased transit services with a more reliable interchange operations; and
- Improved intermodal transportation options will support freight rail transport of goods, thereby reducing truck transport vehicle emissions.

### **Environmental Justice**

In 2007, Spokane County examined the potential environmental justice impacts along the Bigelow Gulch – Forker Road Urban Connector. The study concluded that adverse impacts from the construction and operation would not have a high and disproportionate impact on minority or low-income populations. Therefore, the project complies with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.

During the project’s 2022 alternatives analysis, the City conducted a public outreach process that included the following steps:

- Mailed approximately 2,500 notices to property owners within two miles of the project.
- Created a project webpage specific to the alternatives analysis.
- Hosted a public survey asking for input on alternatives; received 292 responses.
- Held a public open house; approximately 60 attendees and 15 additional surveys received.

Public engagement events associated with the project will continue to provide:

- Potentially affected community residents an appropriate opportunity to participate in decisions about the project that will affect their environment and/or health.
- The public the opportunity to contribute towards City and County project decisions.
- The opportunity for the concerns of all public participants involved to be considered in the decision-making process.
- The federal and state process in seeking out and facilitating involvement by those potentially affected by the project.

Based on a preliminary National Environmental Protection Act (NEPA) evaluation, it was determined the proposed design alternatives for the project will not have significant environmental impacts. A more detailed review will be performed in the 2023 engineering design phase. Sustainability was taken into consideration during selection of the preferred alternative interchange for this intersection by using available land efficiently and supporting non-motorized traffic.

As the project is located in a previously developed area, adverse environmental impacts to air and water, wetlands, and endangered species is minimal. Due to the project location and extent,

there is minimal permitting to be obtained. There are no designated critical habitats or protected resources such as water bodies within the project vicinity. The nearest body of water, the Spokane River, is approximately 1.5 miles to the south and the nearest forest/critical habitat is approximately 0.5 miles to the north and northeast. Due to the spatial variance, water-related permits and critical area permits will not be needed. US Coast Guard permitting will not be needed as there are no culverts or waterways within the project location.

Two species listed on the Endangered Species Act (ESA) list are determined to be within approximately 1.5 miles of the project area: the Yellow Billed Cuckoo (*Coccyzus americanus*) and the Bull Trout (*Salvelinus confluentus*). In addition, the City of Spokane Valley has designated an area 0.5 miles to the north and northeast of the project location as an area of critical priority habitat or sensitive area for moose, rocky mountain elk, and white-tailed deer. This habitat is within a designated conservation area known as Antoine Peak Conservation Area. Between the project location and this critical area there is a large residential development and several small businesses, so the project is not considered to be a significant additional source of stress for wildlife.

### **Project Impacts to Surface and Groundwater**

Sullivan Road currently has a crest near the bridge over Trent Avenue. Stormwater runoff between the two on/off-ramp intersections sheet flows north and south from the crest, then down the roadway embankment to ditches and natural dispersion areas on Trent Avenue. Runoff from Sullivan Road north and south of the interchange is captured in enclosed systems that flow away from the project site. The project will utilize new storm sewers to capture runoff on Sullivan Road and pipe it to the north and south of Trent Avenue. Requirements for detention and water quality treatment will be determined during the design and may include infiltration ponds, drywells, and engineered dispersion.

A geotechnical investigation revealed that groundwater is located approximately 74 feet below ground surface. Based on this information and the proposed design, the project is not anticipated to impact groundwater during construction or operation.

Construction emissions to air from dust and vehicle exhaust will be the primary adverse environmental effects. Due to the current traffic volumes moving through this area, it is not anticipated that significant environmental effects beyond the existing conditions will be experienced during construction, and the design of the future interchange incorporates elements to improve traffic flow, which will ultimately reduce vehicle emissions.

### **Quality of Life**

Spokane County's improvements to Bigelow Gulch Road have increased traffic volumes through the Sullivan & Trent interchange – it has now become the preferred commuter and freight route for travelers between east and north Spokane County. The proposed improvements restore capacity to Sullivan Road and ensure the reliable movement of people and goods through a regionally important industrial employment and freight center without negatively impacted those who live and work in the neighborhood. Proposed improvements will have the following positive impact on quality of life:

- A reduction of travel time will improve quality of life for the **average 13,000 daily PM peak-hour users** of this intersection. Traffic delays have caused back-ups that commonly stretch beyond half a mile. Reliable traffic flow through the interchange will ripple south through the Sullivan Road corridor and more efficiently move people, freight and goods between I-90 and Trent Avenue.
- Compared to the no-build scenario, the proposed improvements will reduce the afternoon rush hour delay per vehicle by one and a half minutes in year 2030 and over two minutes in year 2050. Delays drop from approximately two minutes down to five seconds.
- Reduced vehicle idle time and emissions adjacent to a residential area and near schools with kindergarten through 12<sup>th</sup> grades.
- Reduced idle time will result in less wasted fuel for each individual driver and less vehicle maintenance costs – a cost savings of \$2.2 million over the life of the project.
- The level of traffic stress will be reduced for both vehicle operators and non-motorized users. Vehicle operators will experience less stress as the flow of traffic improves through this intersection. Pedestrians and cyclists will enjoy wider, safer pathways across the intersection, with designated crossing areas to support safety.

In June 2021, the City completed its first Title VI plan in accordance with Title VI of the Civil Rights Act of 1964. This plan reaffirms the processes already performed by the City, but ensures that no person shall, on the grounds of race, color, and national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in any operation of Spokane Valley.

### Improves Mobility and Community Connectivity

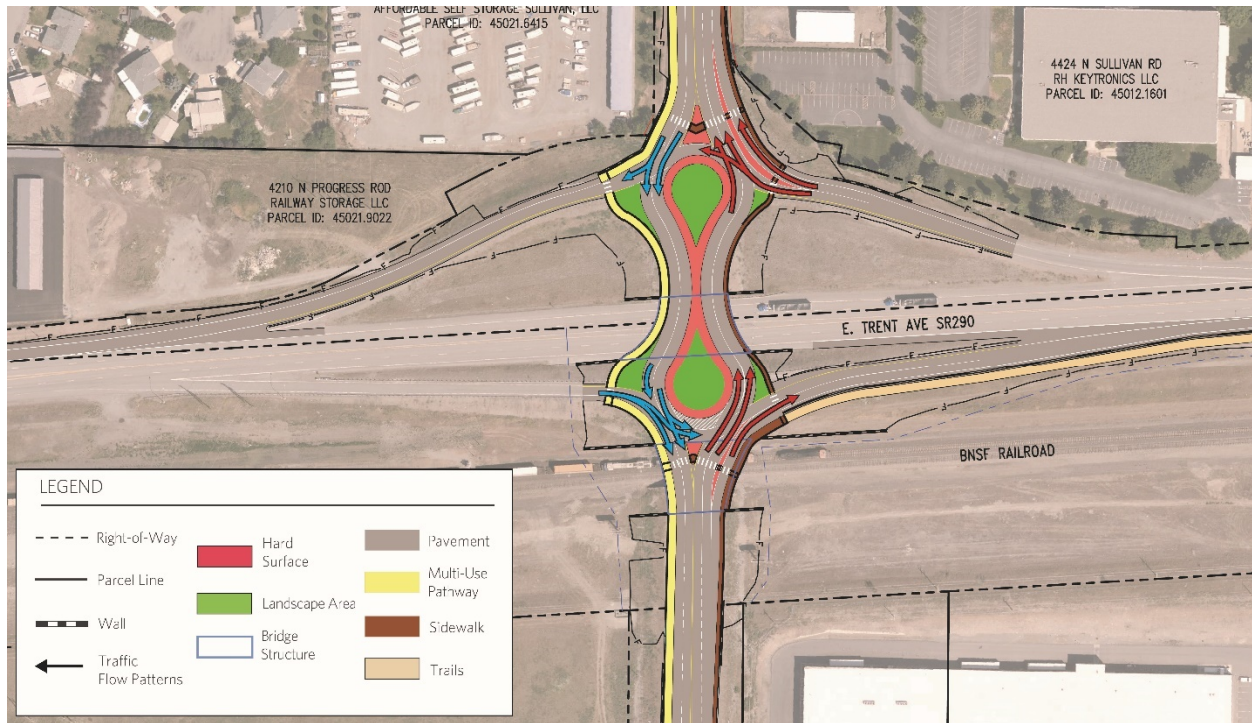
Figure 4 shows typical congestion on northbound Sullivan Road as a result of intersection delays at the interchange. Figure 5 shows the proposed interchange design at the preliminary design stage. The proposed interchange design provides free-flow lanes where traffic volumes are the heaviest and safer pedestrian/cyclist pathways through the interchange.



**Figure 4 – Typical Congestion at the Sullivan / Trent Interchange**



The primary mobility benefit of the interchange upgrade will be vehicle mobility through the intersection. The February 2022 traffic analysis conducted by Fehr & Peers indicated an existing LOS of D. This was based on traffic data obtained prior to the Bigelow Gulch Road connection to the north end of Sullivan Road. Today, current LOS is at level F, which is defined by the City’s Comprehensive Plan as “over capacity, with long delays.” The targeted LOS for this interchange is A, which is characterized as free-flowing conditions.



**Figure 5 – Proposed Interchange at Sullivan / SR 290**

### Bicycles and Pedestrians

North and south of the Sullivan Road bridge, there are 6-foot wide sidewalks. Sidewalks on the bridge narrow to 5-foot wide and have a tall bridge barrier/guardrail on the outside edge of the sidewalk. There is no barrier between vehicle traffic and the sidewalk. The heavy truck traffic and opposing sidewalk guardrail create a sense of constriction and narrowness for users, and increase the user’s level of perceived stress. Upgrades include a 12-foot shared-use path on the west side of Sullivan Road and a 6-foot sidewalk on the east side. The new roundabout interchange provides shorter crossings and will consider the addition of push-button Rectangular Rapid Flashing Beacons (RRFBs) as an added measure of visibility and awareness.

The proposed shared-use path will provide safe passage from the commercial and residential area north of Trent Avenue to the industrial park south of the interchange, thereby promoting non-motorized commuting for local residents and workers.

Spokane Transit Authority’s (STA) Route 96 serves North Sullivan Road, both north and south of Trent Avenue. The project’s design phase will coordinate with STA regarding service impacts. It is anticipated that the proposed improvements will allow for more efficient route service connecting residences to employment centers.



## Economic Competitiveness and Opportunity

The Bigelow-Sullivan Corridor forms an important link in the freight and goods transportation network, connecting intermodal and industrial activities in the greater Spokane region and enhancing inter-state freight movement between Idaho, Washington, and Canada. Sullivan Road and Bigelow Gulch Road connect the Spokane Business and Industrial Park (SBIP) and the Northeast Public Development Authority while increasing the resiliency of I-90 by creating an alternate route, relieving the urban core and I-90 of heavy freight traffic traveling between east and north Spokane County, Idaho, and Canada. Figure 6 shows the location of the Sullivan & Trent interchange relative to alternative routes and key users (such as the Spokane Business and Industrial Park).

There are over 9,000 jobs within approximately 1.5 miles of the project, 85% of which are directly related to freight. There are multiple large industries, including Kaiser Aluminum, Mercer Mass Timber, Amazon, Honeywell, and the Spokane Business and Industrial Park within close proximity of the interchange. Based on staff conversations with a few large employers in the project area, it is estimated that at least 10% of these 9,000 total jobs are labor union represented positions.

Motorists use the Bigelow-Sullivan Corridor to bypass congestion on I-90 and US 395. On Sullivan Road alone, up to 17% of the average daily traffic is heavy trucks<sup>9</sup>. These trucks serve businesses with direct access to the corridor and transport goods for a wide range of local, regional, and national businesses, including:

- Several food service distribution centers and regional grocers,
- A petroleum tank farm,
- An aluminum manufacturer with worldwide customers in the aerospace, automotive, and industrial markets,
- Aggregate mining with asphalt and concrete batching operations,
- Various industrial warehousing and distribution centers,
- A worldwide cross-laminated structural timber manufacturing facility, and
- A regional shopping center, the Spokane Valley Mall.

Several of the facilities listed rely on the corridor to complete its “first-mile, last-mile” transportation network, using trucks to transfer freight from the rail-spurs in the industrial parks to trucks for local hauling.

Improvements to the interchange will reduce commercial travel hours and encourage business development in the area. Improved safety will reduce costs associated with collisions for local businesses as well. Since 2010, 25 collisions involving commercial vehicles have occurred at this intersection.

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<sup>9</sup> City of Spokane Valley Large Vehicles: Percentage of ADT, December 17, 2019



**Figure 6 – Industrial Routes and Sullivan Road Upgrades Near the Sullivan / Trent Interchange**



Should the existing bridge fail or be required to close because of failing conditions, the impacts would be immense. Impacts would be felt to the approximately 30,000 daily drivers using the interchange. Alternate and detour routes would be impacted by increased congestion, likely on I-90 and the already congested urban principal arterials in Spokane County and the City of Spokane. The countless businesses in the SBIP would be detoured to I-90, potentially routing all traffic to I-90 and creating massive congestion that brings the region's only interstate route to a standstill. Bridge condition is discussed in depth in the State of Good Repair Section.

## State of Good Repair

The Sullivan Road bridge was built in 1960 and the clearance over Trent Avenue is 15 feet, 4 inches, which is below the WSDOT standard clearance of 16 feet, 6 inches. In 2000, prior to the City's incorporation in 2003, a truck damaged six girders of the bridge and required all six girders be replaced. Since 2009, six trucks traveling on Trent Avenue have struck the bridge girders and caused significant damage. These impacts have jeopardized the integrity of the structure and the overall safety of a bridge rated in poor condition. A raised bridge would improve mobility of freight in the region as well as safety for all users of the road.

The proposed project will construct new bridge structures over Trent Avenue and the BNSF Railway lines, install a new "peanut" roundabout interchange, add a shared use path and new sidewalk on Sullivan Road, and improve the pavement condition on a Tier 2 route, as rated by WSDOT's Freight and Goods Transportation System. The improvements increase the resilience of the National Highway System, ensure a safe and sustainable bridge inventory and provide an efficient interchange to support the region's opportunity for economic prosperity and improved quality of life. The new railway bridge allows the capacity of the BNSF Railway system to grow from two existing lines up to four total.

A December 2021 bridge inspection rated the Sullivan Road bridge (Bridge No. SPOKV-4501) crossing Trent Avenue to be "structurally deficient," under "high risk," and in poor structural condition. Operation and maintenance (O&M) costs for the existing bridge has a projected maintenance cost of nearly \$1.2 million over the next 20 years – an average cost of \$60,000 per year. Comparatively, O&M costs for the proposed project would average \$4,000 per year over the next 20 years. Photos in Figure 7, show the condition of the bridges.

The proposed interchange will improve the future state of good repair. The new interchange will operate more reliably and more safely, resulting in fewer crashes that have potential to damage guardrails, barriers, bridge girders or signal poles. Since 2010, 13 collisions involved infrastructure at the interchange, including traffic poles and signal boxes, signposts, fences, and a fire hydrant. A reduction in vehicle collisions will reduce infrastructure repair costs.

Since 2015, the City has managed over \$112 million of grant funds. These figures are tracked by the City and illustrate its ability to act as a good steward of grant funds that deliver valuable capital projects for the community.



The primary source of the City capital funding for transportation projects comes from the City’s Real Estate Excise Tax (REET) Revenue. Transportation operations funding comes from state gas tax revenue and a utility tax on telephones. The City’s Street Fund has sufficient funding to cover operations and maintenance of the project. The City has a Capital Reserve Fund as a contingency for capital projects, and the General Fund may be used as a contingency for operating costs. Independent Audit Opinions are performed annually for the City of Spokane Valley under the U.S. Office of Management and Budget (OMB) Circular A-133. The two most recent, for fiscal years 2020 and 2021, reported no Significant Deficiencies or Material Weaknesses. The City’s financial condition is reported in its comprehensive annual budget and monthly financial reports. The City employs staff with experience in grant management, project management and asset management.

The City continues to demonstrate its ability to implement comparable projects. In 2021, the City started construction on the Barker Road/BNSF Grade Separation Project, which was the recipient of a \$9 million TIGER IX award from USDOT. This project will open to traffic in March 2023. In 2022, the City was awarded \$21.7 million of RAISE funds for the construction of the Pines Road/BNSF Grade Separation Project. This project is scheduled to start construction as early as fall 2023 and is planned to be completed in 2025.

**Figure 7 – Significant Repair Work is Required on the Bridges**



## Partnership and Collaboration

The City of Spokane Valley is the project applicant and will manage all grant awards, design, and construction activities for the project. Primary partnerships exist with WSDOT and BNSF Railway. The City has an excellent working relationship with both agencies.

The City collaborates with WSDOT on multiple projects each year, including traffic impact studies, permits for private developments on state routes, capital projects, regional Intelligent Transportation Systems (ITS) network improvements, and shared traffic signal operations. Since 2021, WSDOT has provided construction administration (CA) services for the TIGER IX funded Barker Road/BNSF Grade Separation Project. In 2023, the City is actively coordinating with WSDOT for CA services for the RAISE FY22 funded Pines Road/BNSF Grade Separation project. It is anticipated that the proposed improvements will utilize a similar delivery method as before, leveraging the existing partnership with WSDOT to most efficiently deliver the project.

The City has built a strong relationship with BNSF Railway, particularly over the last five years. The successful delivery of the Barker Road/BNSF Grade Separation Project has carried its momentum into the Pines Road/BNSF Grade Separation Project into 2023. The City and BNSF are currently negotiating an agreement for BNSF to self-perform construction of the two railroad bridges and the piers and piles for a future third rail bridge. Self-performance allows the train bridges to be built with BNSF forces while the train tracks remain open, dramatically reducing permit constraints and potential construction impacts to rail freight, all while saving the project time and money.

This Bigelow-Sullivan Corridor has been a decades old, multi-agency effort to build a safer, more resilient regional arterial network that sustains and relieves I-90 while providing a safe and reliable route for freight and commuter traffic between north and east Spokane County. The Sullivan & Trent Interchange project serves as the final bookend to the corridor and has documented support for competitive federal funding grants since 2020. The project demonstrates support from numerous public and private partners across the region which actively participated in the Horizon 2045 planning document, in the previous Bridging the Valley plan, other workshops, stakeholder outreach, and funding initiatives, see Table 5 for project stakeholders.

**Table 5 – List of Key Project Stakeholders**

<b>City of Spokane Valley</b>	City Council
	Community and Public Works
	Parks and Recreation
	Police Department
	Fire Department
<b>Elected Officials &amp; Public Offices</b>	U.S. Senator Patty Murray
	U.S. Senator Maria Cantwell
	U.S. Representative Cathy McMorris Rodgers
	Washington State Senator Mike Padden





State and Local Agencies	Washington State Department of Transportation
	BNSF Railway (via Great Northern Corridor Coalition)
	Transportation Improvement Board
	Freight Mobility Strategic Investment Board
	City of Spokane
	City of Millwood
	City of Liberty Lake
	Spokane County
	Spokane Regional Transportation Council
	Spokane Northeast Public Development Authority
	Greater Spokane Valley Chamber of Commerce
	Greater Spokane Incorporated
	Spokane Transit Authority
	Spokane Area Good Roads Association
Adjacent Property Owners	Spokane Industrial Park
	Inland Empire Distribution Systems, Inc.
	Kaiser Aluminum
	Crown West Realty (Spokane Business & Industrial Park)
	Inland Empire Distribution Systems (IEDS) Logistics
Academic Organizations	West Valley School District
	Central Valley School District
	East Valley School District

Current outreach activities specific to the project include one-on-one meetings with stakeholders, an open house, and information on a City webpage.

One-on-One Stakeholder Meetings have been held with:

- East Valley School District (EVSD):** East Valley Middle School and High School are on the west and east sides of Sullivan Road north of Wellesley Avenue, respectively, and use the interchange throughout the school year. The East Valley School District also houses its district administration offices out of its main office located just south of the interchange, at the northeast corner of Sullivan and Kiernan. Safety and efficiency of construction would be of prime interest for EVSD.
- Spokane Business and Industrial Park:** The Industrial Park is south of the interchange and is home to many businesses and thousands of employees. Construction phasing is important to the business park (anything to “minimize the traffic headache”).
- Kaiser Aluminum:** Kaiser employs 1,000 people, the overwhelming majority of which are union-represented workers, and operates 24 hours per day, 7 days per week. Most truck shipments move north through the project interchange. Access and traffic flow during construction are important.

A public open house was held on Thursday, October 27, 2022, and was attended by 65 people. City staff and consultant team members were on-hand to answer questions, describe the

alternatives, and speak to concerns. Participants were encouraged to write their comments on project survey forms or to participate in the online project survey. The online survey and in-person survey form received roughly 500 submissions. The survey questionnaire focused on seeking input regarding the alternatives presented and asked participants to rank the alternatives from most to least favored. Additional questions sought input regarding the importance of this project and basic demographic information of participants. The survey revealed that the Sullivan & Trent Interchange project is seen by the public to be especially important. Most participants in the outreach programs use the interchange at least once daily. Open-ended questions regarding likes and dislikes of the design alternatives produced over 146 responses. Results from this survey showed the peanut roundabout design is favored for its continuous flow of all traffic movements. Comments received are being taken into consideration during the detailed design phase of the project.

## Innovation

During the conceptual design phase, three innovative interchange solutions were identified and presented (Figure 8), in addition to a standard signalized diamond interchange. Based on the alternatives analysis, the diamond interchange with a peanut roundabout was chosen. The innovation in this design combines standard roundabout intersections but constricts the roundabouts at the bridge's center span to reduce the needed bridge width while maintaining safe and effective travel movements.

Sullivan Road is already connected with ITS infrastructure. The City's 2020 ITS Strategic Plan includes the addition of a new closed-circuit television connected to the regional communication network.

The City of Spokane Valley may consider using an innovative Design-Build procurement for the construction phase of the project. The City of Spokane Valley, Spokane County, and WSDOT utilize the WSDOT Practical Solutions Design Guide for implementation of the phases to this project. Adherence to this process ensures the specific project needs are focused to guide decision-making that results in the maximum benefit to the overall system and not just the maximum project benefit.

Innovative construction considerations include:

- Coordinate with BNSF to self-perform the bridge design and construction over the rail tracks with BNSF's own unionized forces. This would allow for a more streamlined review and approval process and a BNSF-approved method of construction not available to general contractors otherwise using the design-bid-build process.
- Interchange configuration promotes offline construction of the bridge over Trent Avenue and minimized construction impacts to the traveling public.
- Accelerated bridge construction technologies are being considered, such as:
  - Prefabricated Bridge Elements and Systems (PBES), and
  - Construction Manager at Risk (CMAR).

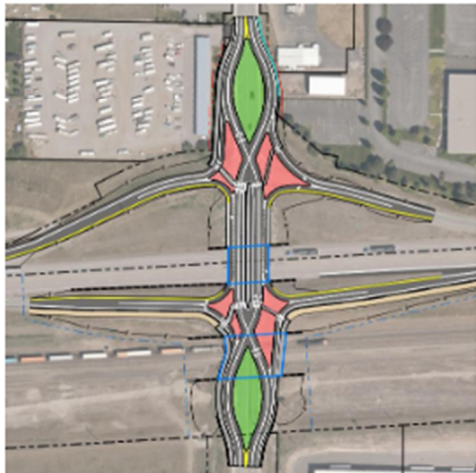




### Diamond Interchange with Peanut Roundabout

- Elongated roundabout provides all turn movements of traffic for on/off eastbound and westbound ramps
- Increased on-ramp lengths
- Likely to close Progress Road access to Trent Avenue
- Operates best for the anticipated traffic flow in 2030

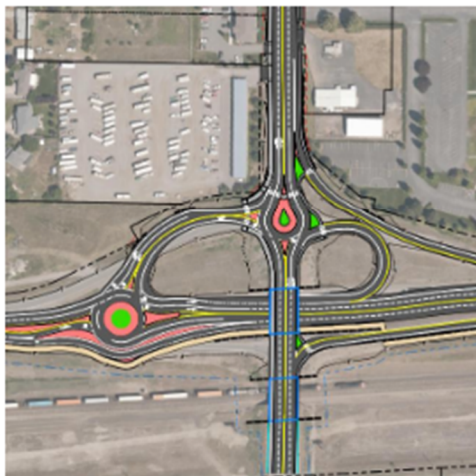
Estimated cost: \$42.2 million  
[Design exhibit board](#)



### Diverging Diamond Interchange

- The northbound and southbound traffic to opposite sides at two signalized intersections n Allows unsignalized left and right turns to and from the ramps, decreasing vehicle conflicts and increasing traffic volumes
- Increased on-ramp lengths
- Likely to close Progress Road access to Trent Avenue

Estimated cost: \$43.1 million  
[Design exhibit board](#)



### Jughandle Interchange

- Sullivan and Trent would connect using two at-grade roundabouts
- Trent Avenue's traffic speed will need to be reduced through the roundabout
- Increased east on-ramp length
- No impacts to Progress Road access to Trent Avenue  
Reduce high speed collisions on Trent
- Operates best for the anticipated traffic flow in 2030

Estimated cost: \$35.2 million  
[Design exhibit board](#)

**Figure 8: Innovative Interchange Design Options Presented for Analysis**

○

# Section 8

## *Project Readiness*

## Project Readiness

With RAISE funding, the Sullivan & Trent Interchange project is reasonably expected to authorize construction in 2025. This section provides a summary of the project’s environmental risk, schedule, required approvals, risks and mitigation strategies, and the technical capacity to deliver the project.

## Environmental Risk

The project’s schedule, required approvals, and various risks and mitigation strategies have been evaluated to ensure the project can deliver in a successful manner and in a timeframe consistent with program requirements.

## Project Schedule

The proposed project aligns well with the RAISE FY23 program schedule. As shown in the schedule below, the engineering design phase of the project is underway and will continue through 2024. Right-of-way acquisition will occur in 2024. Both engineering and right-of-way phases are fully funded. These project elements will progress concurrently during the RAISE application review period. If awarded, it is expected that a RAISE contract wouldn’t be executed until fall 2024, which aligns with the completion of the project’s engineering and right-of-way phases and the start of the project’s construction phase. Construction will begin in spring of 2025, with the project coming to completion in 2026. Table 6 summarizes the project’s milestones.

**Table 6 – Sullivan & Trent Interchange Milestones**

Phase	Begin	End
Design Engineering	03/2023	12/2024
Environmental Documents (NEPA)	08/2023	03/2024
Right-of-Way	04/2024	12/2024
CN Ad/Bid/Award	01/2025	03/2025
Construction*	04/2025	10/2026
Public Engagement	04/2019	Ongoing

\*Substantial Completion Date. Construction contract finalization by 06/2027.

During design in 2023, the City will coordinate with WSDOT for approval of major design milestones: Basis of Design (BOD), Intersection Plan for Approval (IPA), and Intersection Control Evaluation (ICE). The City and WSDOT are practiced at this exercise and the coordination efforts are anticipated to be smooth and productive.

The City’s collective experience delivering projects of this magnitude, combined with the fact that many of the same local, state, and federal participants have collaborated for years, puts the environmental and regulatory approvals into a low-risk category. The project’s preliminary NEPA evaluation determined the proposed improvements will not have significant environmental impacts and is anticipated to satisfy the Categorical Exclusion (CE) classification. The NEPA class of action will be determined in consultation with WSDOT by 2024.

Upon NEPA completion, the City will initiate the necessary acquisitions for the project. The selected interchange configuration requires partial acquisitions totaling roughly 9,200 square feet from seven separate property owners. The estimated cost for these partial acquisitions is \$220,000. An eighth parcel, the BNSF Railway property, requires a temporary construction easement for the City to construct the project. This easement is estimated to cost \$1.2 million. The required acquisitions are not anticipated to require any relocations and existing sites are not expected to be negatively impacted by the proposed improvements.

Public engagement is the cornerstone of every project for the City. Public involvement events for the Bigelow-Sullivan Corridor have been ongoing for decades. Public involvement specific to the proposed project started in 2019 when the City first identified this project as a priority in its federal agenda. Since 2019, the project has been a topic of public engagement for city council and staff on at least 14 different occasions. All engagement events have been open to the public. Key project feedback received includes maintaining reliable access for businesses and schools during construction, ensuring the final configuration is easy to maneuver, and ensuring the capacity for future growth.

## Required Approvals

This section provides a summary of all required approvals related to environmental permits and reviews, state and local approvals, and state and local planning.

### Environmental Permits and Reviews

The project has completed the environmental process as outlined in Table 7.

**Table 7: Environmental Process & Completed Efforts**

#### Environmental Process & Completed Efforts

##### **National Environmental Policy Act (NEPA) and State EPA (SEPA) Status**

The Bridging the Valley project received NEPA Class II CE and SEPA CE per WAC 197-11-800 on August 22, 2006 (<https://www.srtc.org/bridging-the-valley/>).

The project's Alternative Analysis and Evaluation Report-Appendix C found that the proposed improvements will not have significant environmental impacts and a Categorical Exemption should be expected. The City will seek CE in 2023.

##### **Reviews, Approvals, and Permits by other Agencies**

The Bridging the Valley NEPA approval documentation provides a full list of all required permits and reviews. The Bridging the Valley stakeholders participated in reviews, including reviews by the City of Spokane Valley, WSDOT, and BNSF.

##### **Environmental Studies and other Documents**

Full environmental documentation for Bridging the Valley is on file at SRTC and is available upon request. The project was found to have no effect for most environmental components. Where there are small environmental impacts, mitigation measures have been identified and include procedures for hazmat disposal, erosion control, and stormwater treatment.

##### **WDOT Discussions on NEPA Compliance**

City works with WSDOT staff, who administer FHWA projects, to ensure compliance.

## Environmental Process & Completed Efforts

### Public Engagement

Extensive public engagement has been an on-going effort as part of the SRTC’s Horizon 2045 and previous Bridging the Valley efforts. Efforts included public open houses, alternatives workshops, site visits with neighborhoods at crossing locations, mailings, and outreach. Public support has been overwhelmingly positive. Since 2019, the City has held public comment, public hearings, public meetings, and stakeholder interviews discussing the project alternatives and its selected configuration. Stakeholders included local representatives from school districts, freight/trucking industry representatives and BNSF project managers. Public engagement will continue through engineering and right-of-way phases.

### State and Local Approvals

The project is included in the City’s Six Year Transportation Improvement Plan ([Project #25](#)) and the state’s Statewide Transportation Improvement Plan (STIP). The project’s STIP ID is WA-13031. A summary of state and local planning approvals already obtained by the project is included in Table 8 below.

**Table 8: State and Local Approvals Already Obtained**

Approving Entity	Received/Status
Local Transportation Improvement Program (2021-2026)	City TIP project #33
Washington State Transportation Improvement Program (2021-2024)	Sullivan-Wellesley Intersection Improvements Sullivan/Trent Interchange
Spokane Region Transportation Council Metropolitan Transportation Plan (MTP)	Horizon 2040; Sullivan/BNSF: page 4-14; 4-30 (economic vitality)
Congestion Management Process (SRTC)	SRTC approval 12/11/14 (Tier 1 corridor)
Washington State Freight System Plan	Sullivan/BNSF project; Appendix A-Pages 10, 26, 43
Local Comprehensive Plans	City Comprehensive Plan
Washington State Rail System Plan	Sullivan/BNSF project; Page 11

The 2023 engineering design for the project will initiate the NEPA process and further develop the project’s technical design elements in close coordination with WSDOT and BNSF Railway.

### Federal Transportation Requirements Affecting State and Local Planning

Significant planning and engineering work has been completed to date and will continue to progress in 2023. The project has support of all partners, the community, the region, and beyond. Table 9 depicts the planning and design efforts for the project.

**Table 9: Planning and Design Efforts**

Planning or Design Effort with Supporting Project Elements
<p><b>Engineering Design Milestones – 2023 BOD, ICE, &amp; IPA</b></p> <ul style="list-style-type: none"> <li>• BOD, ICE, IPA WSDOT approval anticipated by 12/2023</li> </ul>
<p><b>City of Spokane Valley – Project Design Alternative Analysis</b></p> <ul style="list-style-type: none"> <li>• 11/2022: Coordinated with WSDOT, BNSF, and public input, the City selected a project alignment and a “peanut” roundabout for the intersection design.</li> </ul>
<p><b>Bridging the Valley Planning Study (2006)</b></p> <ul style="list-style-type: none"> <li>• Grade Separation Analysis: consideration of transportation needs and BNSF operations</li> <li>• Traffic Analysis: evaluation of impacts with alternatives for years 2001 and 2020</li> <li>• Economic Analysis: benefit-cost analysis of all alternatives</li> </ul>
<p><b>Bridging the Valley 30% Preliminary Engineering</b></p> <ul style="list-style-type: none"> <li>• Right-of-Way needs were determined for this project</li> <li>• Design reports, 30% plans, estimates, and environmental documentation for projects</li> </ul>
<p><b>Inland Pacific Hub Transportation Investment and Project Priority Blueprint</b></p> <ul style="list-style-type: none"> <li>• Lists Bridging the Valley projects as priorities with synergy economic benefits</li> <li>• Support from local partners and identifies a midterm construction period of 2016-2021</li> </ul>
<p><b>Washington State Freight Mobility Plan 2022</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Plan</a> identifies project for future implementation</li> </ul>
<p><b>Horizon 2045 Metropolitan Transportation Plan</b></p> <ul style="list-style-type: none"> <li>• Identifies this project and other Bridging the Valley grade separation projects</li> </ul>
<p><b>Spokane Valley Comprehensive Plan</b></p> <ul style="list-style-type: none"> <li>• Goal to support passenger and freight rail system in the region and Bridging the Valley</li> </ul>
<p><b>City of Spokane Valley TIP &amp; WA State TIP</b></p> <ul style="list-style-type: none"> <li>• Includes project funding for early pre-construction activities</li> </ul>

### Assessment of Project Risks and Mitigation Strategies

The entire Bigelow-Sullivan Corridor has a lengthy record of success as proven by the construction of previous segments. Further, the City’s recent success with the Barker Road/BNSF Grade Separation project and the Pines Road/BNSF Grade Separation project further support the project’s ability to deliver. These projects saw the successful interface between the same state and federal agencies and regulatory approvals that will be required for the Sullivan & Trent Interchange project. The timeline and requirements shown in the schedule reflect the City’s learned experiences with the delivery of projects similar in scope to the Sullivan & Trent Interchange project. The staff representing the City will be the same staff who have successfully delivered adjacent projects for the corridor, allowing for an experienced team to apply learned lessons from the past and apply them to the delivery of a successful Sullivan & Trent Interchange Project, minimizing risk to project costs, scope, and schedule. This direct experience should provide USDOT staff with confidence that the City will deliver on the grant funding commitments.

The scope, schedule, and budget risks for this project range from low to moderate; however, they have been identified and can be mitigated. The City has identified the potential project risks and the mitigation measures depicted in Table 10.



**Table 10: Project Risks and Mitigation Measures**

Potential Risks	Mitigation Measures
Design Coordination	The configuration accommodates USDOT, WSDOT and BNSF requirements and will coordinate design in 2023 and 2024.
Project Funding	The City has multiple viable options to secure the 100% funding. There are multiple non-federal and federal options for which the project is very competitive: TIB, FMSIB, or state legislative/congressional appropriations.
Environmental Approvals	2022 preliminary evaluation identified NEPA CE is highly likely. Final NEPA CE anticipated by spring 2024. See Merit Criteria and Environmental Risk Section.
Right-of-Way Acquisition	The proposed alignment minimizes the property acquisition impacts and does not require any full relocations. Construction easements with BNSF Railway will be coordinated during the design phase.
Utility Conflicts	Typical utilities exist in the project area that may be affected by construction, including electric power, gas, sanitary sewer, and a petroleum pipeline. Utilities impacts will be determined in the design phase. Potentially affected utility facilities include: Avista Utilities – power and natural gas; Spokane Country - sanitary sewer; Philips 66 –Petroleum Pipeline; and CenturyLink –Telecommunication. The City has active relationships with the involved utilities due largely in part to the recent Barker Road/BNSF Grade Separation and Pines Road/BNSF Grade Separation Projects.
Construction Impacts	The project will inherently impact the traveling public to a certain extent. The project will strive to minimize closures and maintain vehicle access through the worksite. The selected configuration has potential for bridge construction to occur partially “offline” while the existing bridge over Trent remains open. The City will diligently engage travelers, businesses, students, and residents to keep them informed on the most safe and efficient travel patterns given the project’s status.

### Technical Capacity to Deliver the Project

The City is well-versed in the delivery of federally funded projects. Since 2013, the City has been awarded nearly \$91 million of federal funds across 49 unique projects. Notable are the two large projects most similar to the Sullivan & Trent Interchange. In spring 2023, the City will complete its TIGER-funded Barker Road/BNSF Grade Separation project (\$9 million). Also in 2023, the City will start construction on its RAISE-funded Pines Road/BNSF Grade Separation project (\$22 million). These projects saw the successful interface between the same state and federal agencies and regulatory approvals that will be required for the Sullivan & Trent Interchange project. The timeline and requirements shown in the schedule reflect the City’s learned experiences with the delivery of projects similar in scope to this project. The staff representing the City will be the same staff who have successfully delivered these recent projects, allowing for an experienced team to deliver a successful Sullivan & Trent Interchange Project with minimized risk to project costs, scope, and schedule. This direct experience with the USDOT process adds to the level of confidence that the City will deliver a successful project for the RAISE program.

## Section 9

### *Benefit Cost Analysis Narrative*



**Benefit-Cost Analysis Technical  
Memorandum**  
RAISE Discretionary Grant Program

**Bigelow-Sullivan  
Corridor Freight Mobility  
& Safety: Sullivan &  
Trent Interchange  
Project**

City of Spokane Valley

February 24th, 2023



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# 1 Executive Summary

Located in the City of Spokane Valley, the Sullivan Road/Trent Avenue interchange currently consists of two signalized intersections, one for westbound ramp access and the other for eastbound ramp access. Additionally, the four-lane Sullivan Road bridge structure also extends over Trent Avenue and the adjacent BNSF railway. With the rapidly growing traffic in the area as a combined result of population growth and the connection of Bigelow Gulch Road to the Sullivan and Wellesley intersection, excess congestion at the intersection is resulting in prolonged travel times for all roadway users, consequentially resulting in excessive vehicle operating costs for motorists, as well as increased greenhouse gas (GHG) and critical air contaminant (CAC) pollution. In 2022, prior to the Bigelow Gulch connection to the north end of Sullivan Road, the intersection Level of Service (LOS) was measured at a D. In 2023, the City is currently in the process of measuring traffic queues, however, it is apparent that the interchange is operating at an LOS F. Traffic queues along Sullivan Road extend up to one half mile during the PM peak hour. Furthermore, neither the length of on-ramps at the interchange, nor the bridge clearance over Trent Avenue currently meet standards or regulations. The bridge has been repaired six times since 2009 after being struck by vehicles passing under, resulting in unnecessary O&M expenses for both the City of Spokane Valley, and truck operators.

In order to alleviate the operational stress on the existing Sullivan Road/Trent Avenue interchange, the City of Spokane Valley is planning to reconstruct the interchange (the Project). The Project would include the replacement of the Sullivan Road bridge over Trent Avenue and the adjacent bridge over the BNSF Railway Track. The Proposed reconfiguration of the interchange would be a Diamond Interchange with a Peanut Roundabout, which would increase on-ramp lengths and eliminate traffic signals by providing all turn movements of traffic for on/off eastbound and westbound ramps. In addition, both of the bridges over Trent Avenue and the BNSF Railway will be replaced to support the additional traffic demand and allow expansion of the BNSF mainline. As such, the Project is expected to result in significant travel time savings due to the elimination of traffic signals and the improved traffic fluidity associated with the roundabout configuration, resulting in reduced emissions and reduced fuel consumption from vehicle idling. The Project also contributes to U.S. DOT's long-term safety outcome through reducing accidents at the interchange by reducing travel speeds (by an estimated 15-20 mph) and eliminating the temptation of motorists to try to "beat the light" when in a rush. The Project results in a substantial number of benefits to society at large.

The proposed concept is illustrated in Figure 1.



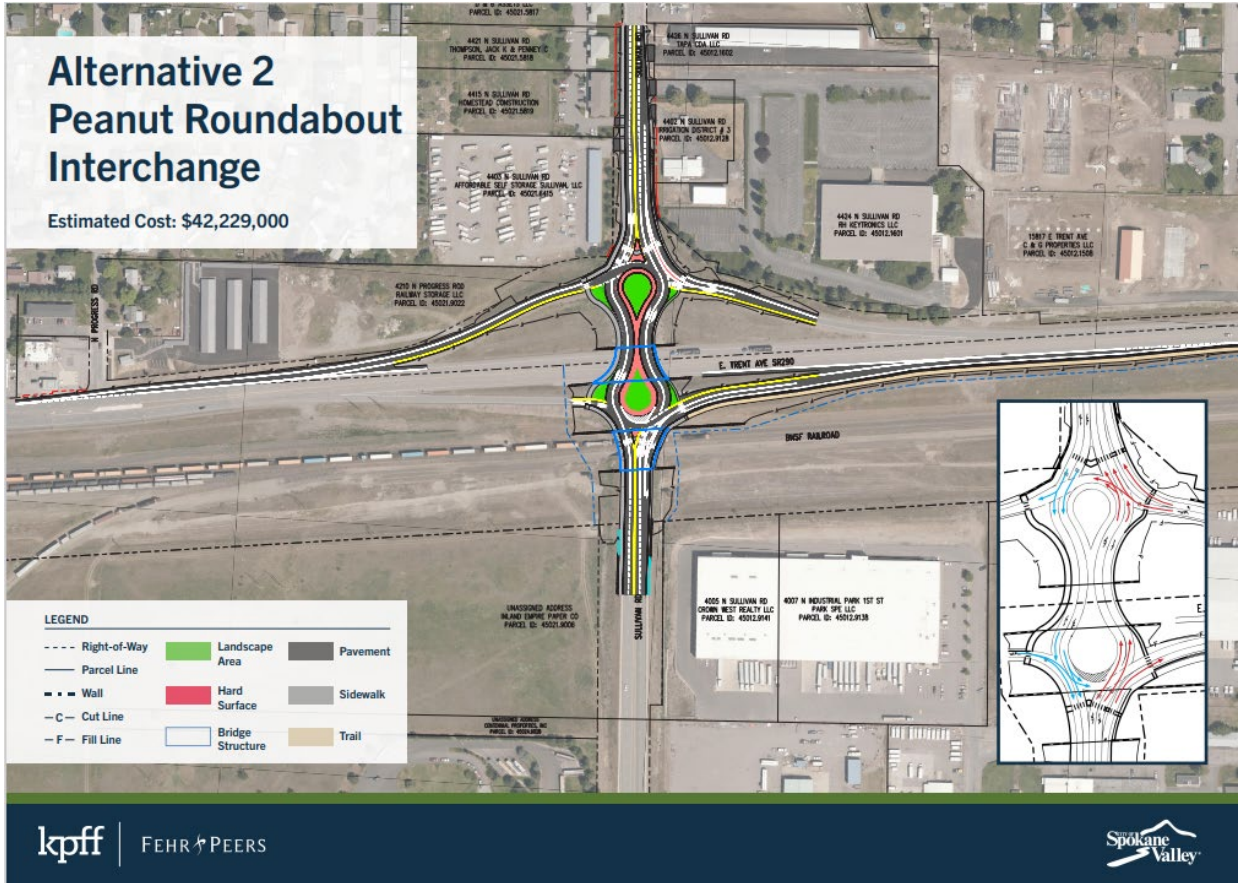


Figure 1: Sullivan Road/Trent Avenue Interchange Project



Table ES-1 summarizes the impacts and associated monetary benefits expected from the project. Section 8 summarizes the results for the entire project as well as for its individual components, including both the grade separation and roundabout.

**Table ES-1: Summary of Infrastructure Improvements and Associated Benefits**

Current Status (Base Scenario) & Problems to be Addressed	Changes to Baseline (Alternative Scenario)	Types of Impact	Population Affected by Impacts	Benefits	Summary of Results (2021\$, Discounted)
<p>The rapidly growing traffic in the City of Spokane Valley area has caused excess congestion at the Sullivan Road/Trent Avenue interchange, resulting in prolonged travel times for all roadway users, consequentially resulting in excessive vehicle operating costs for motorists, as well as increased greenhouse gas (GHG) and critical air contaminant (CAC) pollution. The intersection Level of Service (LOS) is currently rated F.</p>	<p>The Project would include the replacement of the Sullivan Road bridge over Trent Avenue and the adjacent bridge over the BNSF Railway Track. The Proposed reconfiguration of the interchange would be a Diamond Interchange with a Peanut Roundabout, which would eliminate traffic signals by providing all turn movements of traffic for on/off eastbound and westbound ramps, increase on-ramp lengths. In addition, both of the bridges over Trent Avenue and the BNSF Railway will be replaced to support the additional traffic demand and allow expansion of the BNSF mainline.</p>	Reduced delays from the reconstructed interchange at Sullivan Road/Trent Avenue during peak hours.	Motorists, shippers, local businesses, residents	Reduced Travel Time Costs	<b>\$17.0 M</b>
		Reduced delays from the reconstructed interchange at Sullivan Road/Trent Avenue during off-peak hours.			<b>N/A</b>
		Reduced fuel and motor oil consumption from shorter delays at the interchange during peak hours.	Motorists, shippers, local businesses, residents	Vehicle Operating Cost Savings	<b>\$0.79 M</b>
		Reduced fuel and motor oil consumption from shorter delays at intersections along Sullivan Road during off-peak hours.			<b>N/A</b>
		Reduced GHG emissions from shorter delays at Sullivan Road intersections during peak hours.	Local residents and residents across the country	Avoided GHG Emissions	<b>\$0.4 M</b>
		Reduced GHG emissions from shorter delays at Sullivan Road intersections during off-peak hours.			<b>N/A</b>
		Reduced CAC emissions from shorter delays at Sullivan Road intersections during peak hours.	Local residents and residents across the country	Avoided CAC Emissions	<b>\$0.2 M</b>
		Reduced CAC emissions from shorter delays at Sullivan Road intersections during off-peak hours.			<b>N/A</b>
		Reduced crashes from reconstructed intersection, improving the safety along Sullivan Road.	Motorists	Avoided Accident Costs	<b>\$10.5 M</b>
		Residual value of infrastructure with a remaining useful life at the end of the study period.	Project sponsors	Residual Value of Assets	<b>\$1.9 M</b>
		Reduced incremental O&M from reconstructing infrastructure beyond state of good repair at Sullivan Road/Trent Avenue Interchange.	City of Spokane Valley, motorists	Incremental O&M Savings	<b>\$0.9 M</b>
		Improved connectivity to the North Spokane corridor through reduced travel times will promote economic growth and development in the area.	Residents of City of Spokane Valley, motorists	Improved Connectivity	<b>Not Monetized</b>
		Improved travel time reliability from the elimination of traffic signals will reduce delay time at the interchange.	Residents of City of Spokane Valley, motorists	Travel Time Reliability	<b>Not Monetized</b>

\*CO<sub>2</sub>-related impacts are discounted at a real discount rate of 3 percent and all other impacts are discounted at a real discount rate of 7 percent per U.S. DOT BCA Guidance.



The period of analysis used in the estimation of benefits and costs is 27 years, including 7 years of construction and planning and 20 years of operation. The total project costs amount to \$39.9 million dollars (2021\$) in capital costs as shown in Table ES-2 and Table ES-3.

**Table ES-2: Annual Capital Expenditure, 2021 Dollars**

Year	Capital Expenditure
2020	\$0.1 M
2021	\$0.2 M
2022	\$0.1 M
2023	\$1.9 M
2024	\$3.2 M
2025	\$17.2 M
2026	\$17.2 M
<b>Total</b>	<b>\$39.9 M</b>

**Table ES-3: Capital Expenditure by Project Component, 2021 Dollars**

Project Component	2021\$	Year of Expenditure
Previously Incurred Engineering	\$0.4 M	\$0.4 M
Engineering	\$3.7 M	\$4.0 M
Right-of-Way Acquisition	\$1.4 M	\$1.5 M
Construction	\$34.4 M	\$36.8 M
<b>Total</b>	<b>\$39.9 M</b>	<b>\$42.6 M</b>

Based on the analysis presented in the rest of this document, the project is expected to generate **\$31.6 million** in discounted benefits and **\$30.0 million** in discounted costs, using a 3 percent real discount rate for CO<sub>2</sub>-related impacts and a 7 percent real discount rate for all other impacts. Therefore, the project is expected to generate a Net Present Value of **\$1.6 million** and a Benefit/Cost Ratio of **1.1**.

**Table ES-4: Overall Results of the Benefit Cost Analysis, 2021 Dollars**

Evaluation Metrics	Undiscounted	Discounted
Total Benefits	\$90.3 M	\$31.6 M
Total Costs	\$39.9 M	\$30.0 M
Net Present Value (NPV)	\$50.4 M	\$1.6 M
Return on Investment (ROI)	126.5%	5.3%
Benefit-Cost Ratio (BCR)	2.3	1.1
Payback Period (years)	10.5 years	19.4 years
Internal Rate of Return (IRR)	7.5%	

Constructing the modernized diamond interchange with a peanut roundabout would create a bypass lane from northbound Sullivan Road onto eastbound Trent Avenue, a bypass lane from westbound Trent Avenue to northbound Sullivan Road, and a third southbound lane through the interchange at Sullivan Road and Trent Avenue. As a result, traffic lights would be eliminated, increasing traffic fluidity, and greatly reducing delay at traffic lights for all roadway users, yielding significant societal benefits. The table below provides a summary of the project benefits.

**Table ES-5: Summary of Benefits**

Impact Categories	NPV Over 20 Years of Operations	
	Undiscounted	Discounted
<b>Benefits</b>		
Travel Time Savings	\$46.9 M	\$17.0 M
Vehicle Operating Cost Savings	\$2.2 M	\$0.8 M
Avoided GHG Emissions	\$0.6 M	\$0.4 M
Avoided CAC Emissions	\$0.5 M	\$0.2 M
Avoided Accident Costs	\$28.5 M	\$10.5 M
Residual Value of Assets	\$10.1 M	\$1.9 M



Impact Categories	NPV Over 20 Years of Operations	
	Undiscounted	Discounted
<b>Benefits</b>		
Incremental O&M Savings	\$1.5 M	\$0.9 M
<b>Total Benefits</b>	<b>\$90.3 M</b>	<b>\$31.6 M</b>
<b>Costs</b>		
Capital Cost	\$39.9 M	\$30.0 M
<b>Total Costs</b>	<b>\$39.9 M</b>	<b>\$30.0 M</b>
<b>Net Impacts</b>	<b>\$50.4 M</b>	<b>\$1.6 M</b>
<b>BCR</b>	<b>2.3</b>	<b>1.1</b>

The benefits listed above derived from the analysis of an average weekday peak-AM and peak-PM hour of traffic. As such, the results are conservative. Even though there are no impacts quantified for 22 hours of the day, traffic volumes through the project interchange continue to increase due to growing regional population and the recently completed connection between Sullivan and the Bigelow Gulch corridor. Substantial delays also occur during off-peak hours, meaning that the Project would generate larger magnitude of travel time savings, reduced emissions and avoided motor vehicle accidents that are not captured quantitatively in the benefit-cost analysis.

In addition to the quantified benefits highlighted in Table ES-5, the project would result in many benefits that are difficult to quantify, and as thus described qualitatively.

- **Improved Travel Time Reliability**

The replacement of the two signalized intersections for westbound ramp access and eastbound ramp access at the Sullivan/Trent interchange with the peanut roundabout would greatly improve traffic fluidity and alleviate uncertainty regarding traffic delays and wait times, thereby improving travel time reliability for all roadway users.

- **Off-Peak Travel Time Savings**

The reconstruction of the Sullivan/Trent interchange will reduce delays during off-peak hours. Traffic microsimulations were only available for peak hours. Only a minority of traffic is captured in the peak hours.

- **Off-Peak Vehicle Operating Cost Savings**

Reduced delays during off-peak hours will reduce the amount of fuel burned while vehicles are idling. Given the uncertainty around the avoided off-peak delays, the fuel savings were unable to be monetized.

- **Off-Peak Emissions Cost Savings**

Reduced delays during off-peak hours will reduce the number of emissions released while vehicles are idling. Given the uncertainty around the avoided off-peak delays, the emissions savings were unable to be monetized.

- **Improved Mobility and Supply Chain Resiliency**

Improved connectivity to the North Spokane corridor through reduced travel delays will promote economic growth and development in the area. Furthermore, the Project will facilitate improved movement of freight by reduced travel times for truckers, and also reconfiguring the bridge over BNSF Railway to expand their mainline in the future. Both of these factors will foster supply chain resiliency in the region.

- **Reduced Level of Traffic Stress for Users**

Improved traffic fluidity and safety in this interchange will reduce the level of traffic stress experienced by motorists and pedestrian users of this interchange.

## 2 Introduction

This document provides detailed technical information on the economic analyses conducted in support of the RAISE Grant Application for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project.

- **Section 1 – Executive Summary**
- **Section 2 – Introduction:** Outlines the BCA document layout and structure to assist USDOT reviewers.
- **Section 3 - Methodological Framework:** Introduces the conceptual framework used in the Benefit-Cost Analysis (BCA).
- **Section 4 - Project Overview:** Provides an overview of the project, including a brief description of existing conditions and proposed alternatives; a summary of cost estimates and schedule; and a description of the types of effects that the Sullivan & Trent Interchange Project is expected to generate.
- **Section 5 - General Assumptions:** Discusses the general assumptions used in the estimation of project costs and benefits.
- **Section 6 – Demand Projections:** Estimates of travel demand and traffic volumes.
- **Section 7 – Benefits Measurement, Data and Assumptions:** Details the specific data elements and assumptions used to address the goals of the project and to comply with program requirements.
- **Section 8 – Summary of Findings and Benefit-Cost Outcomes:** Estimates the project's Net Present Value (NPV), its Benefit/Cost Ratio (BCR), and other project evaluation metrics.
- **Section 9 – Benefit Cost Sensitivity Analysis:** Provides the outcomes of the sensitivity analysis that evaluates the different assumptions made by the City and the impact that the variability of those assumptions may have on the overall project.

### 3 Methodological Framework

The BCA conducted for this Project includes monetized benefits and costs measured using U.S. Department of Transportation (U.S. DOT) guidance, *Benefit-Cost Analysis Guidance for Discretionary Grant Programs*, as well as the quantitative and qualitative merits of the Project. A BCA provides estimates of the benefits that are expected to accrue over a specified period and compares them to the anticipated costs. Costs include both the resources required to develop the Project and the costs of maintaining the new or improved asset over time. Estimated benefits are based on the projected impacts of the Project on both users and non-users of the facility, valued in monetary terms.<sup>1</sup>

While a BCA is just one of many tools that can be used in making decisions about infrastructure investments, U.S. DOT believes that it provides a useful benchmark from which to evaluate and compare potential transportation investments.<sup>2</sup>

The specific methodology employed for this application was developed using the BCA guidance developed by U.S. DOT and is consistent with the RAISE program guidelines. In particular, the methodology involves:

- Establishing existing and future conditions under the Base Case (No Build) and Alternative Case (Build) scenarios;
- Assessing benefits with respect to each of the merit criteria identified in the Notice of Funding Opportunity (NOFO);
- Measuring benefits in dollar terms, whenever possible, and expressing benefits and costs in a common unit of measurement;
- Using U.S. DOT guidance for the valuation of safety benefits and reductions in air emissions, while relying on industry best practice for the valuation of other effects;
- Discounting future benefits and costs with the real discount rates recommended by the U.S. DOT (7 percent); and
- Conducting a sensitivity analysis to assess the impacts of changes in key assumptions.

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<sup>1</sup> U.S. DOT, *Benefit-Cost Analysis Guidance for Discretionary Grant Programs*, January 2023.

<sup>2</sup> Ibid.



## 4 Project Overview

The Sullivan Road/Trent Avenue interchange currently consists of two signalized intersections, one for westbound ramp access and the other for eastbound ramp access. Additionally, the four-lane Sullivan Road bridge structure also extends over Trent Avenue and the adjacent BNSF railway. With the rapidly growing traffic in the area, excess congestion at the intersection is resulting in prolonged travel times for all roadway users, consequentially resulting in excessive vehicle operating costs for motorists, as well as increased greenhouse gas (GHG) and critical air contaminant (CAC) pollution. The current intersection Level of Service (LOS) is rated F, and the City anticipates that the interchange will fail to handle traffic volumes by the year 2030, or a Level of Service rating of F. Furthermore, neither the length of on-ramps at the interchange, nor the bridge clearance over Trent Avenue currently meet standards or regulations. The bridge has been repaired six times in the last 10 years after being struck by vehicles passing under, resulting in unnecessary O&M expenses for both the City of Spokane Valley, and truck operators.

The Project seeks to address these issues through the replacement of the Sullivan Road bridge over Trent Avenue and the adjacent bridge over the BNSF Railway Track. The Proposed reconfiguration of the interchange would be a Diamond Interchange with a Peanut Roundabout, which would eliminate traffic signals by providing all turn movements of traffic for on/off eastbound and westbound ramps, increase on-ramp lengths. In addition, both of the bridges over Trent Avenue and the BNSF Railway will be replaced to support the additional traffic demand and allow expansion of the BNSF mainline. As such, the Project is expected to result in significant travel time savings due to the elimination of traffic signals and the improved traffic fluidity associated with the roundabout configuration, resulting in reduced emissions, reduced fuel consumption from vehicle idling. The Project also contributes to U.S. DOT's long-term safety outcome through reducing accidents at the interchange by reducing travel speeds (by an estimated 15-20 mph) and eliminating the temptation of motorists to try to "beat the light" when in a rush. The Project results in a substantial number of benefits to society at large.

The project will improve the current conditions in the area and in nearby neighborhoods by:

- **Converting** an existing intersection into an improved roundabout allowing a greater flow of traffic.
- **Improving** public safety by reducing vehicle accidents at the existing Sullivan/Trent intersection.
- **Improving** travel time reliability through the elimination of a signalized intersection, allowing for greater predictability in travel times.
- **Eliminating** wait times and prolonged queuing at the existing interchange.
- **Reducing** motorists' carbon footprint.
- **Promoting** the reduction of Particulate Matter (PM10) and Carbon Monoxide (CO) in Spokane Valley which is identified by the EPA as a "maintenance area".
- **Expediting** access to the economic development potential of prime industrial, commercial, and mixed-use land near the Project location. The City is expected to accommodate an additional 20,000 residents and the Sullivan/Trent interchange will continue to act as a key access point to a centralized corridor for growth. This project contributes significantly to supporting and managing this economic growth by building transportation infrastructure necessary to attract, retain, and expand businesses.



## 4.1 Base Case and Alternative Case

### 4.1.1 Base Case

The Base Case for the Sullivan & Trent Interchange Project is defined as the No Build scenario. In the Base Case, the interchange at Sullivan and the SR-290/Trent Avenue is not reconstructed. The rapidly increasing traffic in the area results in excessive vehicle queuing at the interchange during both peak and off-peak hours, causing significant delays for all roadway users. The interchange’s existing Level of Service (LOS) designation is F. Furthermore, due to the current interchange not meeting standards, trucks will continue to hit the bottom of the bridge as they pass, causing significant damage to both the bridge and the vehicles.

### 4.1.2 Alternative Case

The Alternative Case is defined as the Build scenario. In the Build case, the existing diamond interchange at SR-290/Trent Avenue and Sullivan Road is replaced with the modernized diamond interchange with a peanut roundabout, creating a bypass lane from northbound Sullivan Road onto eastbound Trent Avenue, a bypass lane from westbound Trent Avenue to northbound Sullivan Road, and a third southbound lane through the interchange at Sullivan Road and Trent Avenue. As a result, traffic lights would be eliminated, increasing traffic fluidity, and greatly reducing delay at traffic lights for all roadway users, yielding significant societal benefits. The bridges will now meet all standards and regulations, eliminating excessive O&M costs for the City of Spokane Valley incurred due to trucks striking the bottom of the structure as they pass.

## 4.2 Project Cost and Schedule

Table 6 summarizes the total project cost including previously incurred costs and Table 7 shows the project schedule with substantial completion expected at the end of 2026.

**Table 6: Total Project Cost Components**

Project Component	2021\$	Year of Expenditure
Previously Incurred Engineering	\$0.4 M	\$0.4 M
Engineering	\$3.7 M	\$4.0 M
Right-of-Way Acquisition	\$1.4 M	\$1.5 M
Construction	\$34.4 M	\$36.8 M
<b>Total</b>	<b>\$39.9 M</b>	<b>\$42.6 M</b>

**Table 7: Project Schedule**

Phase	Begin	End
Develop Design	Jan-23	Dec-24
ROW Acquisition	Apr-24	Dec-24
Project Bidding	Jan-25	Mar-25
Project Construction	Apr-25	Oct-26

Table 8 summarizes the anticipated funding sources for the project.



**Table 8: Summary of Anticipated Funding Sources, Year of Expenditure Dollars**

Future Eligible Project Costs	Source	Amount (\$)	Percent of Total Cost
<b>Federal Funding</b>			
Requested	RAISE Program	\$17,213,169	40.8%
Potential	WSDOT's Local Bridge Program (NHPP + STBG)	\$10,000,000	23.7%
Committed	National Highway Freight Program, Highway Improvement Program, Earmark	\$6,569,500	15.6%
<b>Total Federal Sources</b>		<b>\$33,782,669</b>	<b>80.0%</b>
<b>Non-Federal Funding</b>			
Committed	City of Spokane Valley	\$1,025,298	2.4%
Expected or in Progress	City of Spokane Valley, Transportation Improvement Board, Legislative Direct Allocation, Freight Mobility & Strategic Investment Board	\$7,420,694	17.6%
<b>Total Non-Federal Sources</b>		<b>\$8,445,991</b>	<b>21.3%</b>
<b>Total Future Eligible Project Cost</b>		<b>\$42,228,660</b>	

### 4.3 Merit Criteria

The main benefit categories associated with the project are mapped into the merit criteria set forth by USDOT in the table below.

**Table 9: Expected Effects on Merit Criteria Outcomes and Benefit Categories**

Merit Criteria	Benefit Category	Description	Monetized	Qualitative
<b>Safety</b>	Improved Safety from Interchange Improvements	Improved safety from intersection improvements during Peak Hours.	Yes	-
		Improved safety and reduced level of traffic stress from intersection improvements during Off-Peak Hours.	-	Yes
<b>Economic Competitiveness</b>	Reduced Vehicle Idling Time	Reduced vehicle delay at the interchange during Peak Hours.	Yes	-
		Reduced vehicle delay at the interchange during Off-Peak Hours.	-	Yes
	Reduced Vehicle Operating Costs	Reduced vehicle operating costs as a result of a reduction in vehicle idling at the interchange during Peak Hours.	Yes	-
		Reduced vehicle operating costs as a result of a reduction in vehicle idling at the interchange during Off-Peak Hours.	-	Yes
	Improved Travel Time Reliability	Reduced delays at traffic lights and excess vehicle queuing at intersection will improve travel time reliability as there will be a significantly lower chance for drivers to be delayed thus reducing the unpredictability of trips in the area. This also allows both short and long-haul trucks to experience improved delivery timeliness.	-	Yes



Merit Criteria	Benefit Category	Description	Monetized	Qualitative
<b>Environmental Sustainability</b>	Reduced Air Emissions - GHG	Avoided greenhouse gas emissions (GHG) costs from vehicles idling at the interchange during Peak Hours.	Yes	-
		Avoided greenhouse gas emissions (GHG) costs from vehicles idling at the interchange during Off-Peak Hours.	-	Yes
	Reduced Air Emissions - CAC	Avoided criteria air contaminants (CAC) emissions costs from vehicles idling at the interchange during Peak Hours.	Yes	-
		Avoided criteria air contaminants (CAC) emissions costs from vehicles idling at the interchange during Off-Peak Hours.	-	Yes
<b>State of Good Repair</b>	Change in O&M	Reduction in ongoing infrastructure maintenance cost.	Yes	-
	Residual Value of Capital Assets	Residual value of capital assets.	Yes	-
<b>Quality of Life</b>	Improved Connectivity	Improved access to nearby businesses and other public facilities.	-	Yes
<b>Partnership</b>	Innovative Bridge Construction	The City of Spokane Valley will evaluate innovative bridge construction techniques to reduce the impact on the community and the existing traffic. The preferred innovative delivery option is for the City to reimburse BNSF self-perform the bridge design and construction with its own unionized labor force. If this occurs, the project will realize great time and cost savings. This allows for a streamlined review and approval process and a BNSF-approved method of construction not available to general contractors otherwise using the design-bid-build process.	-	Yes

## 5 General Assumptions

The BCA measures benefits against costs throughout a period of analysis, beginning at the start of construction and including 20 full years of operations<sup>3</sup>.

The monetized benefits and costs are estimated in 2021 dollars, with future dollars discounted in compliance with U.S. DOT RAISE requirements.

The methodology makes several important assumptions and seeks to avoid overestimation of benefits and underestimation of costs. Specifically:

- Input prices are expressed in 2021 dollars;
- The period of analysis begins in 2020 and ends in 2046; it includes project development and construction years (2020–2026) and 20 full years of operations (2027–2046); and
- A constant 3 percent real discount rate for carbon dioxide (CO<sub>2</sub>)-related benefits and 7 percent real discount rate for all other benefits are assumed throughout the period of analysis.

Additionally, the assumptions considered within the analysis incorporates the U.S. DOT feedback on previous application submittals. This was conducted to ensure the analysis accuracy and conservativeness. Specifically, the assumptions used within the analysis based on the U.S. DOT feedback includes a 20-year operational period. Additionally, a sensitivity analysis was conducted for the Project capital costs, discount rate and annualization factor of traffic inputs.

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<sup>3</sup> The use of 20 years of benefits was applied for this BCA analysis to align with the feedback the City has received from U.S. DOT regarding previous application submittals to ensure analysis accuracy and conservativeness.



## 6 Demand Projections

Accurate demand projections are important to effectively estimate the benefits in a BCA. Demand projections for this project were estimated based on traffic demand models.

### 6.1 Methodology

Traffic was estimated using the SRTC regional travel demand model. Forecast values for 2030 and 2050 were extracted from the Sullivan Road / Trent Avenue Intersection Control Evaluation Report (ICE) published in February 2022.<sup>4</sup> HDR interpolated the growth rate for the years in between to generate benefits at an annual level. The ICE forecasts focus specifically on the forecasts and operations of the Sullivan Road/Trent Avenue interchange. The model estimates peak-PM and AM volume, as well as delay at the interchange for both the build and No Build scenarios.

Delays were estimated along Sullivan Road through Highway Capacity Manual (HCM) methodology, examining the impact at the intersection.

### 6.2 Demand Projections

The resulting projections for annual average daily traffic (AADT) volumes at the Sullivan Road / Trent Avenue intersection as well as expected hours of vehicle delay (Base Case) are presented in the table below.

**Table 10: Demand Projections**

Case		First Year of Benefits (2027)	2036	2046
No Build	Peak AM AADT	5,879	6,592	7,159
	Total Hours of Daily Peak AM Delay	83.3	123.4	134.9
	Peak PM AADT	7,470	8,717	9,344
	Total Hours of Daily Peak PM Delay	106.2	165.7	180.3
Build	Peak AM AADT	5,879	6,592	7,159
	Total Hours of Daily Peak AM Delay	19.3	14.0	15.5
	Peak PM AADT	7,470	8,717	9,344
	Total Hours of Daily Peak PM Delay	24.6	18.3	19.9

<sup>4</sup> [SullivanInterICEdoc2.18.22redfile.pdf \(spokanevalley.org\)](#)





## 7 Benefits Measurement, Data and Assumptions

This section describes the measurement approach used for each benefit or impact category identified in Table ES-5 and provides an overview of the associated methodology, assumptions, and estimates. The assumptions in Table 11 were used in the estimation of all benefits.

**Table 11: General Assumptions used in the Benefit-Cost Analysis**

Variable Name	Unit	Value	Source
Discount Rate	%	7%	U.S. DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs
Annualization Factor	days	290	Weekday to Weekend conversion factor provided by Fehr & Peers
Construction Start Year	year	2025	Project Schedule
Construction End Year	year	2026	Project Schedule
First Year of Benefits	year	2027	Project Schedule
Truck Share of Traffic	%	22.3%	Weighted average of current truck volumes on Trent & Sullivan.
Automobile Share of Traffic	%	77.7%	Calculated from percentage of trucks

### 7.1 Safety Outcomes

Accident costs and impacts on life, limb, and property are a significant component of road user costs. Road safety is a key economic factor in the planning of roads, as well as an important indicator of transportation efficiency, while outside the economic context, highway safety is often the subject of public concern.

The Project would help promote U.S. DOT’s long-term safety outcome through reducing potential accidents by lowering travel speeds through the intersection (by an estimated 15-20 mph) and eliminating the temptation to “beat the light”. Furthermore, the one-way travel pattern associated with the roundabout reduces the likelihood of T-bone and head-on collisions.

#### 7.1.1 Methodology

Crash predictions for the study area were completed using a combination of two methodologies. The first methodology used the Highway Safety Manual (HSM) crash prediction models to estimate the number of crashes for the No Build scenario. The HSM models considers changes to anticipated volumes to forecast the number and severity of future crashes. The HSM method was applied to Sullivan Road at the Trent Avenue interchange ramp terminal intersections.

In the Build scenario, increases or decreases in crashes due to the proposed improvements were estimated using crash modification factors (CMFs). CMFs were selected from FHWA’s CMF Clearinghouse with attributes that most closely matched the project area characteristics and the proposed improvements.

The predicted crashes were monetized by crash type using the values recommended by the United States Department of Transportation’s 2023 Benefit-Cost Analysis Guidance for Discretionary Grant Programs release.

#### 7.1.2 Assumptions

The program is expected to generate substantial benefits for the Safety merit criteria, with the specific benefits described below. The safety benefits are monetized using the assumptions presented in Table 12.



**Table 12: Assumptions used to Monetize Safety Benefits**

Variable Name	Unit	Value	Source
Conversion of Stop-Controlled Intersection to Roundabout	factor	0.26	CMF Clearinghouse. ID 4259
Convert Signalized Intersection to Modern Roundabout	factor	0.64	CMF Clearinghouse. ID 4878
Fatalities per Fatal Crash	fatalities/fatal crash	1.00	Calculated from City of Spokane Valley Accident Data at interchange (2015-2022)
Serious Injuries per Serious Injury Crash	injuries/injury crash	1.00	
Minor Injuries per Minor Injury Crash	injuries/injury crash	1.13	
Vehicles per Crash	vehicles/crash	1.96	
Cost of Fatalities	2021\$/fatality	\$11,800,000	Treatment of the Economic Value of Preventing Fatalities and Injuries in Preparing Economic Analyses (2022).
Cost of Serious Injuries	2021\$/injury	\$564,300	
Cost of Minor Injuries	2021\$/injury	\$153,700	
Cost of Unknown Injuries	2021\$/injury	\$78,500	
Cost of Property Damage	2021\$/vehicle	\$4,800	The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (revised May 2015)

### 7.1.3 Benefit Estimates

The table below highlights the benefits generated by the Project. The estimated present value of discounted benefits over a 20-year period is \$10.5 million.

**Table 13: Estimates of Safety Benefits**

Values in 2021\$	Over the Study Period	
	Undiscounted	Discounted
Avoided Accident Costs	\$28,534,510	\$10,498,870
<b>Total</b>	<b>\$28,534,510</b>	<b>\$10,498,870</b>

## 7.2 Economic Competitiveness

This project is expected to improve the economic competitiveness of the region through reducing vehicle idling time at the existing interchange, and thereby reducing vehicle operating costs and improving travel time reliability.

### 7.2.1 Travel Time Savings

#### Methodology

Travel time savings will be generated for motorists (automobiles and trucks) at the Sullivan Road/Trent Avenue interchange. Reduced wait times and vehicle queues from the conversion of the interchange to a peanut roundabout will lead to decreased vehicle travel time costs which are monetized using DOT guidance for value of time of automobile drivers and passengers, as well as heavy vehicle truck drivers. Out-of-pocket vehicle operating cost savings will accrue from decreased vehicle wait times and idle fuel consumption.

Traffic was estimated using the SRTC regional travel demand model. Forecast values for 2030 and 2050 were extracted from the Sullivan Road / Trent Avenue Intersection Control Evaluation Report (ICE) published in February 2022.<sup>5</sup> HDR interpolated the growth rate for the years in between to generate benefits at an annual level. The ICE forecasts focus specifically on the forecasts and operations of the Sullivan

<sup>5</sup> [SullivanInterICEdoc2.18.22redfile.pdf \(spokanevalley.org\)](#)



Road/Trent Avenue interchange. The model estimates peak-PM and AM volume, as well as delay at the interchange for both the build and No Build scenarios.

Traffic delay times at the interchange for both the Build and No Build scenarios were also extracted from the Sullivan Road / Trent Avenue Intersection Control Evaluation Report, which were calculated using the latest version of the Highway Capacity Manual (HCM) and Synchro 10 analysis software.

Value of time for vehicle type, as well as occupancy assumptions for both automobiles and trucks are available in the Benefit-Cost Analysis Guidance for Discretionary Grant Applications published by US DOT. The estimate for travel time savings is the product of hours of delay, vehicle occupancy, and respective value of time.

### Assumptions

The assumptions used in the estimation of travel time savings benefits are summarized in the table below.

**Table 14: Assumptions used in the Estimation of Travel Time Savings**

Variable Name	Unit	Value	Source
Auto Occupancy	persons/vehicle	1.67	US DOT, BCA Guidance January 2023; 2017 National Household Travel Survey.
Truck Occupancy	persons/vehicle	1	Assumption for commercial trucks.
Value of Time for Automobile Driver and Passenger	2021\$/hour	\$18.80	US DOT, BCA Guidance Jan 2023; Revised Departmental Guidance on Valuation of Travel Time in Economic Analysis (2016).
Value of Time for Truck Driver	2021\$/hour	\$35.00	

## 7.2.2 Reduced Vehicle Operating Costs

### Methodology

In addition to travel time impacts, out-of-pocket cost savings were monetized based on the change in delay time and associated fuel and motor oil consumed while idling.

The reduction in vehicle idling time at the Sullivan Road/Trent Avenue interchange will translate into lower vehicle operating costs from reduced fuel and motor oil consumption in the Build scenario. The change in vehicle delay time (by vehicle type and by year) is multiplied by the associated vehicle fuel consumption rate to obtain annual estimates of fuel consumption from idling. This multiplied by the cost per gallon of fuel provides an estimate of the change in fuel costs. The same methodology is applied to estimate the change in motor oil consumption and costs. The sum of the fuel and motor oil costs produces an estimate for the overall vehicle operating cost impacts due to vehicle delay time at the crossing.

### Assumptions

The assumptions used in the estimation of reduced vehicle operating costs are summarized in the tables below.

**Table 15: Assumptions used in the Estimation of Vehicle Operating Cost Savings**

Variable Name	Unit	Value	Source
Gasoline Burned at Idle - Autos	gallons/hour	0.44	US DOE: Alternative Fuels Data Center and Argonne National Laboratory, "Idle Reduction Savings Worksheet" (2018) - Average of gasoline passenger vehicles.
Diesel Fuel Burned at Idle - Trucks	gallons/hour	0.90	US DOE: Alternative Fuels Data Center and Argonne National Laboratory, "Idle Reduction Savings Worksheet" (2018) - Combination Trucks.



Variable Name	Unit	Value	Source
Motor Oil Consumption at Idle - Autos	quarts/hour	0.0345	Based on US DOT: HERS-ST Highway Economic Requirements System (2002) oil consumption of 1.38qt/1000 miles and assuming that "One hour of idle time is equal to approximately 25 miles of driving" (Ford Motor Company, 2011)
Motor Oil Consumption at Idle - Trucks	quarts/hour	0.0345	
Cost of Motor Oil - Autos	2021\$/quart	\$11.01	Average Oil Price Sourced from HERS Model (BLS CUUR0000SS47021)
Cost of Motor Oil - Trucks	2021\$/quart	\$4.41	

**Table 16: Assumptions used in the Estimation of Vehicle Operating Cost Savings – Fuel Costs**

	Unit	Year	Gasoline	Diesel	Source
Fuel Costs	\$/gallon	2023	\$1.82	\$1.97	Based on forecast of transportation fuel costs less Federal and States taxes. Data obtained from US EPA's Annual Energy Outlook 2022 Release.
		2024	\$1.81	\$2.08	
		2025	\$1.79	\$2.08	
		2026	\$1.82	\$2.08	
		2027	\$1.85	\$2.10	
		2028	\$1.88	\$2.13	
		2029	\$1.91	\$2.15	
		2030	\$1.98	\$2.15	
		2031	\$2.02	\$2.20	
		2032	\$2.05	\$2.21	
		2033	\$2.07	\$2.23	
		2034	\$2.10	\$2.24	
		2035	\$2.11	\$2.25	
		2036	\$2.14	\$2.28	
		2037	\$2.16	\$2.31	
		2038	\$2.19	\$2.34	
		2039	\$2.20	\$2.35	
		2040	\$2.22	\$2.38	
		2041	\$2.25	\$2.40	
		2042	\$2.25	\$2.41	
2043	\$2.29	\$2.45			
2044	\$2.32	\$2.49			
2045	\$2.33	\$2.51			
2046	\$2.36	\$2.54			

### 7.2.3 Benefit Estimates

The table below highlights the economic competitiveness benefits as a result of replacing the signalized intersections with a roundabout, reducing wait times and consequentially vehicle idling. The estimated present value of discounted benefits over a 20-year period is \$17.8 million.

**Table 17: Estimates of Economic Competitiveness Benefits**

Values in 2021\$	Over the Study Period	
	Undiscounted	Discounted
Travel Time Savings	\$46,873,626	\$17,010,027
Reduced Vehicle Operating Costs	\$2,225,828	\$793,044
<b>Total</b>	<b>\$49,099,454</b>	<b>\$17,803,070</b>



## 7.3 Environmental Sustainability Outcomes

Environmental costs are increasingly considered an important component in the evaluation of transportation projects. The primary environmental impact of vehicle use is exhaust emissions, which impose wide-ranging social costs on people, material, and vegetation. The negative effects of pollution depend not only on the quantity of pollution produced, but also on the types of pollutants emitted as well as the local environmental conditions into which the pollution is released.

The City’s Greenhouse Gas Emissions Reduction Policy<sup>6</sup> serves as a baseline for preliminary project considerations. Supportive of this policy, the project has the following quantified environmental benefits:

- Net reduction in emissions due to reduced vehicle delay time at the Sullivan/Trent Interchange;
- Promotes reduction of Particulate Matter (PM<sub>10</sub>) and Carbon Monoxide (CO), in Spokane County, which is identified by the EPA as a “maintenance area”; and
- Promotes the use of recycled materials in project construction, as specified in the WSDOT 2021 Standard Specifications Section 1-06.6 – Recycled Materials.<sup>7</sup>

### 7.3.1 Reduced Air Emissions

#### Methodology

The change in vehicle delay time at the Sullivan/Trent interchange is used to estimate the total fuel consumption while idling by vehicle type. The total estimated vehicle delay times are multiplied by the appropriate emission factors for tons of for CO<sub>2</sub>, NO<sub>x</sub>, VOC, PM, and SO<sub>2</sub> per hour of vehicle idling. Each pollutant is then multiplied by its monetary value to get the total emission cost impact due to vehicle delay time.

#### Assumptions

The BCA quantifies Environmental Sustainability outcomes by estimating and monetizing the net reduction in emissions due to reduced vehicle delay time at the Sullivan/Trent Interchange, where the assumptions used to monetize the reduction in emissions are summarized in Table 18 through Table 20.

**Table 18: Assumptions used in the Estimation of Environmental Benefits – Emission Values**

Year	Emissions Value (\$/metric ton)					Source
	CO <sub>2</sub>	NO <sub>x</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC	
2023	\$57	\$16,800	\$810,500	\$45,100	\$0	Technical Support Document: Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors (February 2018)  NO <sub>x</sub> , SO <sub>x</sub> , and PM2.5 values are inflated from 2015 to 2021 dollars using the GDP deflator.  Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 (February 2021)
2024	\$58	\$17,000	\$824,500	\$46,000	\$0	
2025	\$59	\$17,200	\$838,800	\$46,900	\$0	
2026	\$60	\$17,500	\$852,100	\$47,800	\$0	
2027	\$61	\$17,900	\$865,600	\$48,700	\$0	
2028	\$62	\$18,200	\$879,400	\$49,500	\$0	
2029	\$63	\$18,600	\$893,400	\$50,400	\$0	
2030	\$65	\$18,900	\$907,600	\$51,300	\$0	
2031	\$66	\$18,900	\$907,600	\$51,300	\$0	
2032	\$67	\$18,900	\$907,600	\$51,300	\$0	
2033	\$68	\$18,900	\$907,600	\$51,300	\$0	
2034	\$69	\$18,900	\$907,600	\$51,300	\$0	

<sup>6</sup> <https://aserfiche.spokanevalley.org/WebLink/DocView.aspx?id=292645&dbid=0&repo=SpokaneValley>

<sup>7</sup> <https://wsdot.wa.gov/publications/manuals/fulltext/M41-10/20218.5x5.5.pdf>



Year	Emissions Value (\$/metric ton)					Source
	CO <sub>2</sub>	NO <sub>x</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC	
2035	\$70	\$18,900	\$907,600	\$51,300	\$0	Note: CO2 emissions are discounted to present value using a 3% discount rate as recommended by USDOT.
2036	\$72	\$18,900	\$907,600	\$51,300	\$0	
2037	\$73	\$18,900	\$907,600	\$51,300	\$0	
2038	\$74	\$18,900	\$907,600	\$51,300	\$0	
2039	\$75	\$18,900	\$907,600	\$51,300	\$0	
2040	\$76	\$18,900	\$907,600	\$51,300	\$0	
2041	\$78	\$18,900	\$907,600	\$51,300	\$0	
2042	\$79	\$18,900	\$907,600	\$51,300	\$0	
2043	\$80	\$18,900	\$907,600	\$51,300	\$0	
2044	\$81	\$18,900	\$907,600	\$51,300	\$0	
2045	\$82	\$18,900	\$907,600	\$51,300	\$0	
2046	\$84	\$18,900	\$907,600	\$51,300	\$0	

**Table 19: Assumptions used in the Estimation Environmental Sustainability Benefits – Autos**

Emissions per Gallon of Fuel Burned - Passenger Vehicles (grams/veh-hour)						
Year	NO <sub>x</sub>	VOC	PM	SO <sub>2</sub>	CO <sub>2</sub>	Source/Comment
2023	0.87	0.459	0.023	0.029	4,439	Based on MOVES average annual emission factors for passenger vehicles in Spokane County in Washington. Assuming idling vehicles have emissions similar to vehicles traveling 2.5 mph. Moves model run in February 2023.
2024	0.78	0.414	0.022	0.029	4,339	
2025	0.68	0.368	0.022	0.028	4,239	
2026	0.59	0.323	0.021	0.027	4,139	
2027	0.49	0.277	0.020	0.027	4,039	
2028	0.40	0.232	0.019	0.026	3,939	
2029	0.30	0.186	0.019	0.026	3,839	
2030	0.20	0.141	0.018	0.025	3,739	
2031	0.19	0.135	0.017	0.025	3,703	
2032	0.17	0.128	0.017	0.024	3,666	
2033	0.15	0.122	0.017	0.024	3,630	
2034	0.14	0.116	0.017	0.024	3,594	
2035	0.12	0.110	0.016	0.024	3,557	
2036	0.10	0.104	0.016	0.023	3,521	
2037	0.09	0.098	0.016	0.023	3,485	
2038	0.07	0.092	0.015	0.023	3,448	
2039	0.05	0.086	0.015	0.023	3,412	
2040	0.04	0.080	0.015	0.022	3,376	
2041	0.04	0.079	0.015	0.022	3,369	
2042	0.03	0.078	0.015	0.022	3,362	
2043	0.03	0.078	0.015	0.022	3,355	
2044	0.03	0.077	0.015	0.022	3,348	
2045	0.03	0.076	0.014	0.022	3,341	
2046	0.03	0.076	0.014	0.022	3,334	





**Table 20: Assumptions used in the Estimation Environmental Sustainability Benefits – Trucks**

Emissions per Gallon of Fuel Burned - Trucks (grams/veh-hour)						
Year	NO <sub>x</sub>	VOC	PM	SO <sub>2</sub>	CO <sub>2</sub>	Source/Comment
2023	73.9	3.53	1.22	0.052	15,507	Based on MOVES average annual emission factors for combination and long-haul trucks in Spokane County in Washington. Assuming idling vehicles have emissions similar to vehicles traveling 2.5 mph. Moves model run in February 2023.
2024	72.3	3.26	1.10	0.051	15,256	
2025	70.8	2.99	0.99	0.050	15,005	
2026	69.3	2.73	0.87	0.049	14,754	
2027	67.8	2.46	0.76	0.049	14,503	
2028	66.2	2.19	0.64	0.048	14,252	
2029	64.7	1.93	0.53	0.047	14,001	
2030	63.2	1.66	0.41	0.046	13,750	
2031	62.9	1.61	0.40	0.046	13,655	
2032	62.6	1.56	0.38	0.045	13,559	
2033	62.4	1.52	0.36	0.045	13,464	
2034	62.1	1.47	0.35	0.045	13,368	
2035	61.8	1.42	0.33	0.044	13,272	
2036	61.6	1.38	0.31	0.044	13,177	
2037	61.3	1.33	0.29	0.044	13,081	
2038	61.0	1.28	0.28	0.043	12,986	
2039	60.7	1.24	0.26	0.043	12,890	
2040	60.5	1.19	0.24	0.043	12,794	
2041	60.4	1.18	0.24	0.043	12,779	
2042	60.4	1.18	0.24	0.043	12,764	
2043	60.3	1.17	0.24	0.043	12,748	
2044	60.3	1.17	0.23	0.042	12,733	
2045	60.2	1.16	0.23	0.042	12,717	
2046	60.2	1.16	0.23	0.042	12,702	

### 7.3.2 Benefit Estimates

The table below shows the benefit estimates of reducing vehicle delay times and associated emissions. The estimated present value of discounted benefits over a 20-year period is just over \$560,000.

**Table 21: Estimates of Environmental Sustainability Benefits**

Values in 2021\$	Over the Study Period	
	Undiscounted	Discounted
Reduced Air Emissions - GHG	\$601,252	\$376,254
Reduced Air Emissions - CAC	\$495,890	\$186,140
<b>Total</b>	<b>\$1,097,142</b>	<b>\$562,394</b>

## 7.4 State of Good Repair Outcomes

### 7.4.1 Change in O&M Costs

To quantify the benefits associated with maintaining the existing transportation network in a state of good repair, the incremental operations and maintenance costs are captured.

#### Methodology

The operations and maintenance cost savings are estimated based on the difference in costs between the No Build and Build cases. The estimates are subtracted to determine the incremental operations and



maintenance (O&M) costs. Positive values indicate operations and maintenance cost savings, a benefit, while negative values indicate increased operations and maintenance costs, a dis-benefit. Due to the replacement of older facilities, there are incremental O&M cost savings, despite some additional facilities being constructed.

### Assumptions

The incremental O&M costs are estimated based on itemized assumptions including pavement maintenance, roadway equipment, bridge maintenance and repair costs. Further detail beyond the table below can be found in the Excel spreadsheet model.<sup>8</sup> The annual O&M costs are shown in Table 22.

**Table 22: Assumptions used in the Estimation of State of the Change in O&M Costs**

Year	No Build O&M	Build O&M
2023	\$45,291	\$45,291
2024	\$45,291	\$45,291
2025	\$70,291	\$0
2026	\$296,666	\$0
2027	\$420,291	\$1,463
2028	\$207,791	\$1,463
2029	\$45,291	\$1,463
2030	\$45,291	\$1,463
2031	\$45,291	\$31,463
2032	\$45,291	\$1,463
2033	\$45,291	\$1,463
2034	\$45,291	\$1,463
2035	\$45,291	\$1,463
2036	\$59,166	\$151,463
2037	\$45,291	\$1,463
2038	\$45,291	\$1,463
2039	\$45,291	\$1,463
2040	\$45,291	\$1,463
2041	\$45,291	\$1,463
2042	\$45,291	\$1,463
2043	\$45,291	\$1,463
2044	\$45,291	\$1,463
2045	\$45,291	\$1,463
2046	\$59,166	\$176,463

### 7.4.2 Residual Value of Capital Assets

The residual value is estimated to quantify the benefits associated with new infrastructure with a useful life beyond the study period.

#### Methodology

The proposed project would contribute to the state of good repair by converting an existing intersection into an improved roundabout. Furthermore, the Project includes the replacement of the Sullivan bridge over Trent Avenue and the adjacent bridge over the BNSF Railway Track. The reconstructed bridges would be widened and lifted to meet current regulations and to facilitate growth in traffic and freight train traffic for years to come. Due to the time period considered for the analysis, the remaining (or residual) value of the new infrastructure asset is not fully captured. The bridge related project components are considered to have

<sup>8</sup> The O&M calculations are built up through the O&M Savings, Past O&M, 6YR Bridge Plan, and O&M Summary spreadsheet tabs.



useful life beyond the study period and their estimated lifespan was deducted from the analysis benefit period to obtain the remainder of the service life outside the study period. The remaining life as a factor of the estimated asset service life was multiplied by the project capital costs to derive the estimate. Future O&M costs for the remainder of the bridge life were subtracted from the remaining residual value to ensure that estimates are adequately conservative.

Additionally, for any right-of-way land acquisition as part of the project, the residual value of that component is expected to equal the initial value of the land.

### Assumptions

The assumptions used in the estimation of the residual value of capital assets are summarized in the table below.

**Table 23: Assumptions used in the Estimation of the Residual Value of Capital Assets**

Variable Name	Unit	Value	Source
Useful Life of Bridges	years	50	Transportation for America which indicates bridges have an "expected lifespan of 50 years".
Depreciable Project Costs	2021\$	\$15,192,054	Cost data provided by the City of Spokane Valley.
Right of Way Acquisition	2021\$	\$1,362,243	Cost data provided by the City of Spokane Valley.

### 7.4.3 Benefit Estimates

The table below shows the estimated State of Good Repair benefits generated by the Project. The estimated present value of discounted benefits over a 20-year period is \$2.7 million.

**Table 24: Estimates of State of Good Repair Benefits**

Values in 2021\$	Over the Study Period	
	Undiscounted	Discounted
Change in O&M	\$1,453,761	\$852,990
Residual Value	\$10,093,815	\$1,859,951
<b>Total</b>	<b>\$11,547,576</b>	<b>\$2,712,648</b>



## 8 Summary of Findings and Benefit-Cost Outcomes

The tables below summarize the BCA findings. Annual costs and benefits are computed over the lifecycle of the project (27 years). As stated earlier, construction is expected to be completed by 2026 with 2027 being the project opening year. Benefits accrue during the full operation of the project.

**Table 25: Overall Results of the Benefit Cost Analysis, 2021 Dollars**

Evaluation Metrics	Undiscounted	Discounted
Total Benefits	\$90.3 M	\$31.6 M
Total Costs	\$39.9 M	\$30.0 M
Net Present Value (NPV)	\$50.4 M	\$1.6 M
Return on Investment (ROI)	126.5%	5.3%
Benefit-Cost Ratio (BCR)	2.3	1.1
Payback Period (years)	10.5 years	19.4 years
Internal Rate of Return (IRR)	7.5%	

Considering all monetized benefits and costs, the estimated internal rate of return of the project is 7.5 percent. With a 3 percent real discount rate on CO<sub>2</sub>-related impacts and a 7 percent real discount rate on all other impacts, the \$30.0 million investment would result in \$31.6 million in total benefits for a Net Present Value of \$1.6 million and a Benefit/Cost ratio of approximately 1.1.

The project yields substantial societal benefits. It is important to recognize that the full benefits of the Project are far greater than those quantified, given that the traffic simulation model only captures one hour of peak AM and one hour of peak PM traffic, which only account for a minority of total daily traffic. As such, these results are deemed to be incredibly conservative.

**Table 26: Summary of Project Benefits**

Impact Categories	NPV Over 20 Years of Operations	
	Undiscounted	Discounted
<b>Benefits</b>		
Travel Time Savings	\$46.9 M	\$17.0 M
Vehicle Operating Cost Savings	\$2.2 M	\$0.8 M
Avoided GHG Emissions	\$0.6 M	\$0.4 M
Avoided CAC Emissions	\$0.5 M	\$0.2 M
Avoided Accident Costs	\$28.5 M	\$10.5 M
Residual Value of Assets	\$10.1 M	\$1.9 M
Incremental O&M Savings	\$1.5 M	\$0.9 M
<b>Total Benefits</b>	<b>\$90.3 M</b>	<b>\$31.6 M</b>
<b>Costs</b>		
Capital Cost	\$39.9 M	\$30.0 M
<b>PV Costs</b>	<b>\$39.9 M</b>	<b>\$30.0 M</b>
<b>Total Impact</b>	<b>\$50.4 M</b>	<b>\$1.6 M</b>
<b>BCR</b>	<b>2.3</b>	<b>1.1</b>



## 9 Benefit Cost Sensitivity Analysis

### 9.1 Variation in Key Inputs and Assumptions

The BCA outcomes presented in the previous sections rely on a large number of assumptions and long-term projections; both of which are subject to considerable uncertainty.

The primary purpose of the sensitivity analysis is to help identify the variables and model parameters whose variations have the greatest impact on the BCA outcomes: the “critical variables.”

The sensitivity analysis can also be used to:

- Evaluate the impact of changes in individual critical variables – how much the final results would vary with reasonable departures from the “preferred” or most likely value for the variable; and
- Assess the robustness of the BCA and evaluate, in particular, whether the conclusions reached under the “preferred” set of input values are significantly altered by reasonable departures from those values.

The outcomes of the sensitivity analysis for the Sullivan & Trent Interchange Project are summarized in the table below. The table provides the percentage changes in project NPV associated with variations in variables or parameters, as indicated in the column headers.

**Table 27: Quantitative Assessment of Sensitivity, Summary (Discounted)**

Original NPV (Discounted at 7%)	Original BCR	Parameters	Change in Parameters	New NPV (Discounted at 7%)	Change in NPV	New BCR
<b>\$1.6 M</b>	<b>1.1</b>	Change in Capital Costs	Increase capital costs by 10%	(\$1.2 M)	-175.0%	1.0
			Decrease capital costs by 10%	\$4.4 M	+175.0%	1.2
		Change in Annualization Factor	365 Days	\$6.4 M	+298.3%	1.2
		Discount Rate	3% Discount Rate	\$20.5 M	+1182.0%	1.6

The sensitivity analysis indicates that the Sullivan & Trent Interchange Project is robust across the changes, with the benefit cost ratio exceeding the 1.0 threshold in each of the cases. Overall, the benefit-cost analysis results are extremely conservative, given that the project only considers the impacts of two peak hours of traffic. The Project will result in beneficial impacts to stakeholders and society, beyond what is able to be quantified in the BCA.

## Section 10

### *Benefit Cost Analysis Calculations*

(this is a digital file submitted electronically)



## *Letters of Support (Optional)*

Additional letters viewable online:

<https://www.spokanevalley.org/sullivaninterchange>

### NOTE:

In June 2023, Spokane Valley will be transitioning to a new website domain name to create a safer online platform. If the above link does not work, please visit the City's new website domain: [www.spokanevalley.wa.gov](http://www.spokanevalley.wa.gov) and search "Sullivan and Trent Interchange." Apologies for the inconvenience – thank you.

# United States Senate

WASHINGTON, DC 20510-4704

February 24, 2023

The Honorable Pete Buttigieg  
Secretary  
U.S. Department of Transportation  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

Dear Secretary Buttigieg:

I write in support of an application submitted by the City of Spokane Valley for the U.S. Department of Transportation's *Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grants program* for the Bigelow-Sullivan Corridor Freight Mobility & Safety Project.

Spokane Valley has been working to deliver a regionally significant project that would benefit freight movement through the Pacific Northwest. This project would complete a new bridge and make interchange improvements that promote economic prosperity in the region while creating a safer transportation network for all road users. The Sullivan Road bridge is over 60 years old and has been rated "structurally deficient", "high-risk", and in "poor" condition. Further, the bridge has a low clearance over State Route 290 and has been struck at least six times over the last decade. The bridge is too narrow, which limits Sullivan Road to four lanes, small sidewalks, and inadequate space to add necessary turn lanes to safely accommodate left-turning trucks.

Included in this project is the reconstruction and realignment of a rural freight corridor with narrow and winding two-lane roads that have a deadly crash history. This would improve driver sight distance, steepness of grade, provide additional turn lanes, truck climbing lanes, and would widen shoulders. Finally, the project would reconstruct the Sullivan Road-State Route 290 interchange which serves as a gateway for rural freight movements into the greater Spokane-Spokane Valley urban area.

At the west end of the project is Washington State Department of Transportation's North Spokane Corridor (US 395) and the City of Spokane's Northeast Public Development Authority. At the east end of the project is the Spokane Business and Industrial Park, which is one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. This corridor is a critical route carrying up to 20 percent freight and links the region while alleviating the congestion of Interstate 90 through the City of Spokane's downtown core. This project would improve mobility and reliability for all users with improved travel times for freight and commuter traffic.

Thank you for your consideration of the City of Spokane Valley and Spokane County's application. Please contact Bree Rabourn in my Seattle, WA office at 206-553-0724 with any questions.

Sincerely,



Patty Murray  
United States Senator

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MARIA CANTWELL  
WASHINGTON



United States Senate  
WASHINGTON, DC 20510-4705

February 2, 2023

The Honorable Pete Buttigieg  
Secretary  
U.S. Department of Transportation  
Washington, D.C. 20590

Dear Secretary Buttigieg,

I am writing in support of the City of Spokane Valley's application to the FY23 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project.

The City is applying for \$17.2 million to replace the Sullivan Road bridge and improve the interchange at Sullivan Road over Trent Avenue. Specifically, the project will replace the existing signalized diamond interchange with a "dog bone" or "peanut" roundabout interchange, including a new, taller Sullivan Road bridge over Trent Avenue.

The Sullivan Road bridge spanning State Route 290 (Trent Avenue) is over 60 years old, has been rated as "structurally deficient," "high risk," and in "poor" condition. The bridge has low clearance over Trent Ave. and has been struck at least six times in the last 10 years. The bridge is also too narrow, limiting Sullivan Road to four lanes, very narrow sidewalks, and inadequate space that excludes much needed turn lanes to safely accommodate left-turning trucks.

The proposed interchange project will restore the needed capacity for future growth while adding bike and pedestrian facilities to improve mobility for all users. The project location is a gateway to a regional freight corridor serving as a parallel route to Interstate 90. Spokane County's Bigelow Gulch corridor connects the project to the west with Washington State Department of Transportation's North Spokane Corridor (US 395) and the City of Spokane's Northeast Public Development Authority. On the opposite end, the project is adjacent to the Spokane Business & Industrial Park, one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. The corridor is a critical route carrying up to 20% freight and links the region while alleviating the congestion of Interstate 90 through the City of Spokane's downtown core. This corridor overwhelms the existing Sullivan Road and Trent Avenue interchange, which is experiencing signal back-ups reaching over one-half mile south of the interchange.

Thank you for your full and fair consideration of the City of Spokane Valley's application.

Sincerely,

A handwritten signature in blue ink that reads "Maria Cantwell".

Maria Cantwell  
United States Senator

CATHY McMORRIS RODGERS  
5TH DISTRICT, WASHINGTON

REPUBLICAN LEADER,  
ENERGY AND COMMERCE  
COMMITTEE

Congress of the United States  
House of Representatives

February 1, 2023

COUNTIES:  
ASOTIN  
COLUMBIA  
FERRY  
GARFIELD  
LINCOLN  
PEND OREILLE  
SPOKANE  
STEVENS  
WALLA WALLA  
WHITMAN

The Honorable Pete Buttigieg  
Secretary  
U.S. Department of Transportation  
Washington, D.C. 20590

Dear Secretary Buttigieg,

I am writing to ask for full and fair consideration of the City of Spokane Valley's application to the U.S. Department of Transportation's *Rebuilding American Infrastructure with Sustainability and Equity (RAISE)* grant program for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange project application submitted by the City of Spokane Valley.

The City is seeking RAISE funding to reconstruct one of the region's busiest urban, freight interchanges. The Sullivan Road bridge spanning State Route 290 (Trent Avenue) is over 60 years old, has been rated as "structurally deficient," "high risk," and in "poor" condition. Further, the bridge has low clearance over Trent Ave. and has been struck at least six times in the last 10 years. The bridge is also too narrow, limiting Sullivan Road to four lanes, very narrow sidewalks, and inadequate space that excludes much needed turn lanes to safely accommodate left-turning trucks.

The proposed interchange project will restore the needed capacity for future growth while adding bike and pedestrian facilities to improve mobility for all users. The project location is a gateway to a regional freight corridor serving as a parallel route to Interstate 90. Spokane County's Bigelow Gulch corridor connects the project to the west with Washington State Department of Transportation's North Spokane Corridor (US 395) and the City of Spokane's Northeast Public Development Authority. On the opposite end, the project is adjacent to the Spokane Business & Industrial Park, one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. The corridor is a critical route carrying up to 20% freight and links the region while alleviating the congestion of Interstate 90 through the City of Spokane's downtown core.

Thank you for your consideration. If you have any questions, please feel free to contact Paige Blackburn in my Spokane office at [Paige.blackburn@mail.house.gov](mailto:Paige.blackburn@mail.house.gov).

Sincerely,



Cathy McMorris Rodgers  
Member of Congress

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The Honorable Pete Buttigieg  
Secretary, U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
Washington DC 20590

February 24, 2023

**RE: Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project**

Dear Secretary Buttigieg:

The Spokane Regional Transportation Council (SRTC) serves as the Metropolitan Planning Organization for Spokane County, Washington. SRTC is pleased to express our support of the application submitted by the City of Spokane Valley to the U.S. Department of Transportation's *Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grant* program for the **Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project**. This surface transportation project is consistent with SRTC's Horizon 2045 Metropolitan Transportation Plan and is identified as part of the regional priority freight project needs adopted by SRTC.

Spokane Valley has been working diligently to deliver a regionally significant project that improves safety and mobility for all users, replaces deteriorating bridges, and benefits freight movements in the Pacific Northwest. RAISE funding is vital to completing the last segment of a regional freight corridor that promotes economic prosperity while creating a safer transportation network for all users.

The project includes the reconstruction of the Sullivan Road-State Route 290 interchange which serves as a gateway for rural freight movements into the greater Spokane-Spokane Valley urban area. At the east end of the project is the Spokane Business & Industrial Park, which is one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. The corridor is a critical freight route carrying up to 20% truck traffic. It also serves to alleviate congestion of Interstate 90 through the City of Spokane's downtown core. However, the interchange currently operates with a Level of Service (LOS) of "F" and is projected to worsen over time.

The existing sidewalk network also requires improvements to maintain a safe environment as commercial activity has increased. This project will add a new shared use pathway on the west side of Sullivan Road and new, wider sidewalks on the east side. Additionally, the roundabout configuration will make it easier for non-motorized users to cross traffic, having to manage only one direction of traffic at a time.

The Sullivan Road bridge over Trent Avenue is regularly struck by tall loads travelling on Trent Avenue. It is rated in "poor" condition, is deemed "structurally deficient" and is considered a "high risk" bridge. The project also lengthens the existing adjacent Sullivan Road bridge over the BNSF Railway track. The existing BNSF transcontinental railway will be provided with added capacity for the future construction of two new rail lines, totaling four tracks.

On behalf of SRTC, I respectfully request that you give full consideration to the merits of the **Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange Project** as reflected in the project application submitted by the City of Spokane Valley.

Sincerely,



Lois Bollenback, Executive Director  
Spokane Regional Transportation Council

SRTC MEMBER AGENCIES



February 22, 2023

The Honorable Pete Buttigieg  
Secretary, U.S. Department of Transportation  
1200 New Jersey Ave, SE  
Washington, D.C. 20590

Dear Secretary Buttigieg:

I am writing in support of the application submitted by the City of Spokane Valley to the U.S. Department of Transportation's *Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grant* program for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange project.

The City of Spokane Valley has been diligently working to deliver a regionally significant project that improves safety and mobility for all users, replaces deteriorating bridges, and benefits freight movements through the Pacific Northwest. RAISE funding is vital to finally completing the last segment of a regional freight corridor that promotes economic prosperity while creating a safer transportation network for all users.

The Greater Spokane Valley Chamber of Commerce provides business assistance to our members but more importantly we actively promote important regional transportation and economic competitiveness objectives in the greater Spokane Valley region. Spokane Valley's application will have a positive impact of every dollar of transportation funding consistent with USDOT policy and Administration goals of livable communities, community connectivity and necessary safety improvements near one of our Historically Disadvantaged Community.

The project includes the reconstruction of the Sullivan Road-State Route 290 interchange which serves as a gateway for rural freight movements into the greater Spokane-Spokane Valley urban area. The interchange is the "front door" to the region's industrial center. At the west end of the Bigelow-Sullivan corridor is Washington State Department of Transportation's North Spokane Corridor (US 395) and the City of Spokane's Northeast Public Development Authority. At the east end of the project is the Spokane Business & Industrial Park, which is one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. The corridor is a critical route carrying up to 20% freight and links the region while alleviating the congestion of Interstate 90 through the City of Spokane's downtown core.

The interchange has a Level of Service (LOS) of "F" and will only worsen over time. Existing sidewalks create a stressful and dangerous environment due to the close proximity of freight movements and adjacent sidewalks. The improvements will add a new shared use pathway on the west side of Sullivan Road and new, wider sidewalks on the east side. Further, the roundabout configuration will make it easier for non-motorized users to cross traffic, having to manage only one direction of traffic at a time.

The existing Sullivan Road bridge over Trent Avenue is regularly struck by tall loads travelling on Trent Avenue and is rated in "poor" condition, is deemed "structurally deficient" and considered a "high risk" bridge. The project also lengthens the existing adjacent Sullivan Road bridge over the BNSF Railway track. The existing BNSF intercontinental railway will be provided with added capacity for the future construction of two new rail lines, totaling four tracks. The City needs your help to improve the freight mobility and safety on our National Highway Freight Network.

I respectfully request that you give full and fair consideration to the Sullivan & Trent Interchange project application submitted by the City of Spokane Valley.

Respectfully,

A handwritten signature in black ink that reads 'Lance Beck'.

Lance Beck  
President and CEO  
Greater Spokane Valley Chamber of Commerce

10808 E. Sprague Ave. | Spokane Valley, WA 99206  
(509) 924-4994 | [info@spokanevalleychamber.org](mailto:info@spokanevalleychamber.org)  
[www.spokanevalleychamber.org](http://www.spokanevalleychamber.org)

Genuine

Inclusive

Friendly

Credible

Impactful



February 27, 2023

The Honorable Secretary Pete Buttigieg  
U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
Washington, D.C. 20590

Dear Secretary Buttigieg,

I am writing in support of the application submitted by the City of Spokane Valley to the U.S. Department of Transportation's Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grant program for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange project.

Spokane Valley has been diligently working to deliver a regionally significant project that improves safety and mobility for all users, replaces deteriorating bridges, and benefits freight movements through the Pacific Northwest. RAISE funding is vital to finally completing the last segment of a regional freight corridor that promotes economic prosperity while creating a safer transportation network for all users.

The project includes the reconstruction of the Sullivan Road-State Route 290 interchange which serves as a gateway for rural freight movements into the greater Spokane-Spokane Valley urban area. The interchange is the "front door" to the region's industrial center. At the west end of the Bigelow-Sullivan corridor is our (Washington State Department of Transportation's) North Spokane Corridor (US 395) project and the City of Spokane's Northeast Public Development Authority. At the east end of the project is the Spokane Business & Industrial Park, which is one of the largest in the country with 615 acres of property and over 5 million square feet of industrial building space. The corridor is a critical route carrying up to 20% freight and links the region while alleviating the congestion of Interstate 90 through the City of Spokane's downtown core.

The interchange has a Level of Service (LOS) of "F" and will only worsen over time. Existing sidewalks create a stressful and dangerous environment due to the close proximity of freight movements and adjacent sidewalks. The improvements will add a new shared use pathway on the west side of Sullivan Road and new, wider sidewalks on the east side. Further, the roundabout configuration will make it easier for non-motorized users to cross traffic, having to manage only one direction of traffic at a time.

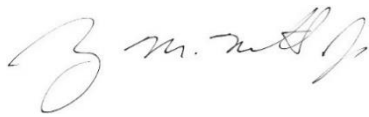
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intercontinental railway will be provided with added capacity for the future construction of two new rail lines, totaling four tracks. The city needs your help to improve the freight mobility and safety on our National Highway Freight Network.

As the responsible agency for SR 290/Trent Avenue, we agree and support the assessment that the City of Spokane Valley has provided in regard to the level of service and safety at the intersection of SR 290 with Sullivan Road.

I respectfully request that you give full and fair consideration to the Sullivan & Trent Interchange project application submitted by the City of Spokane Valley.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. Millar".

Roger Millar, PE, FASCE, FAICP

Secretary of Transportation



February 27, 2023

The Honorable Pete Buttigieg  
Secretary  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
Washington, D.C. 20590

Dear Secretary Buttigieg:

I am writing in support of the application submitted by the City of Spokane Valley to the U.S. Department of Transportation's *Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grant* program for the Bigelow-Sullivan Corridor Freight Mobility & Safety: Sullivan & Trent Interchange project.

Spokane Valley has been diligently working to deliver a regionally significant project that improves safety and mobility for all users, replaces deteriorating bridges, and benefits freight movements through the Pacific Northwest. RAISE funding is vital to completing the last segment of a regional freight corridor that promotes economic prosperity while creating a safer transportation network for all users.

As the region's transit agency, we recognize the safety and mobility benefits that this project brings to the region. Benefits such as:

- The reconstruction of the Sullivan Road-State Route 290 interchange which serves as a gateway for rural freight movements into the urban area. The corridor is a critical route carrying up to 20% freight, linking the region while alleviating congestion of Interstate 90 through the City of Spokane's downtown core.
- A new shared use pathway on the west side of Sullivan Road and new, wider sidewalks on the east side to promote active transportation.
- Lengthening the existing adjacent Sullivan Road bridge over the BNSF Railway track, providing capacity for the future construction of two new rail lines, totaling four tracks.

We believe the proposed project will increase economic competitiveness, increase mobility, upgrade safety features and improve the quality of life in the area, while supporting the long-range regional transportation strategy. I respectfully request that you give full and fair consideration to the Sullivan & Trent Interchange project application submitted by the City of Spokane Valley.

Sincerely,

A handwritten signature in blue ink that reads 'E. Susan Meyer'.

E. Susan Meyer  
Chief Executive Officer



February 27, 2023

City Councilmembers  
City of Spokane Valley  
10210 E Sprague Ave.  
Spokane Valley, WA 99206

**RE: Project Support for Bigelow-Sullivan Corridor Freight Mobility & Safety Project**

Councilmembers and Commissioners:

I am writing to express my support of the City of Spokane Valley's application for funding of the Bigelow-Sullivan Corridor Freight Mobility & Safety project: Sullivan & Trent Interchange Project.

As the Vice President and General Manager of Crown West Realty in Spokane Valley and a voice in this community, I support this application which improves freight movement through the greater Spokane region and fixes the safety hazards along a dangerous, busy, narrow, rural connector between two growing industrial, urban areas. Crown West Realty owns and operates the Spokane Business and Industrial Park (The Park), which is considered one of the largest industrial parks in the country. The Park is currently home to more than 170 businesses with nearly 4,500 employees and still growing. Whether it is to get to and from the place of work or to compete and serve their customers, a safe and effective transportation network is imperative to this community.

The Park is not only a regional center for manufacturing, it is a regional freight center and foreign trade zone to support the businesses within this region. The Park boasts direct service by both the Burlington Northern Santa Fe and Union Pacific rail networks and numerous local, regional and national freight services.

The Bigelow-Sullivan corridor is and has long been a necessary link between east Spokane Valley and north Spokane for the businesses and citizens of this region. As this region experiences substantial growth in our economy, this link has become weak and extremely inefficient in serving needs of this region. This project promotes a higher level of efficiency, safety and capacity to meet our growing needs. It is imperative that this project move forward in the best interest of this region.

This project is vital to the growth and prosperity of the Spokane region and its booming manufacturing and industrial businesses. If our transportation network cannot safely and efficiently support commerce in the region, we cannot succeed. In order to help our business and community thrive, we urge you to provide funding crucial to the construction of the Bigelow-Sullivan Corridor Freight Mobility & Safety project.

Sincerely,

**CROWN WEST REALTY, LLC**



Dean Stuart

Vice President and General Manager



February 27, 2023

City Councilmembers  
City of Spokane Valley  
10210 E Sprague Ave.  
Spokane Valley, WA 99206

**RE: Project Support for Bigelow-Sullivan Corridor Freight Mobility & Safety Project**

Councilmembers and Commissioners:

I am writing to express my support of the City of Spokane Valley's application for funding of the Bigelow-Sullivan Corridor Freight Mobility & Safety project: Sullivan & Trent Interchange Project.

As the Asset and Development Manager of Crown West Realty in Spokane Valley and a voice in this community, I support this application which improves freight movement through the greater Spokane region and fixes the safety hazards along a dangerous, busy, narrow, rural connector between two growing industrial, urban areas. Crown West Realty owns and operates the Spokane Business and Industrial Park (The Park), which is considered one of the largest industrial parks in the country. The Park is currently home to more than 170 businesses with nearly 4,500 employees and still growing. Whether it is to get to and from the place of work or to compete and serve their customers, a safe and effective transportation network is imperative to this community.

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This project is vital to the growth and prosperity of the Spokane region and its booming manufacturing and industrial businesses. If our transportation network cannot safely and efficiently support commerce in the region, we cannot succeed. In order to help our business and community thrive, we urge you to provide funding crucial to the construction of the Bigelow-Sullivan Corridor Freight Mobility & Safety project.

Sincerely,

**CROWN WEST REALTY, LLC**

A handwritten signature in blue ink, appearing to read "Oliver Lawrence", with a long horizontal line extending to the right.

Oliver Lawrence  
Asset and Development Manager