Division Street BRT Travel Forecasts





Prepared for
Spokane Transit Authority

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ACRONYMS AND ABBREVIATIONS

BAT	Business Access and Transit
BRT	bus rapid transit
FTA	Federal Transit Administration
HPT	High-Performance Transit
MTP	Metropolitan Transportation Plan
NSC	North Spokane Corridor
RTP	Regional Transportation Plan
SRTC	Spokane Regional Transportation Council
STOPS	Simplified Trips-on-Project Software
STA	Spokane Transit Authority
TAZ	Transportation Analysis Zone
VMT	Vehicle-Miles of Travel

1. INTRODUCTION

This report describes travel forecast results for the Spokane Transit Authority (STA) Division Street Bus Rapid Transit (BRT) Project. Travel demand forecasts were generated using the Federal Transit Administration (FTA) Simplified Trips-on-Project Software (STOPS), version 2.55 (February 2025 version). The underlying population and employment forecasts are based on demographic estimates from the Spokane Regional Transportation Council (SRTC). The 2024 current year baseline uses 2022 population and employment as forecast for the SRTC Metropolitan Transportation Plan (MTP), at the Transportation Analysis Zone (TAZ) level for use in the modeling. Additionally, 2022 base year zone-to-zone travel times were taken from the modelling work supporting the RTP. The STOPS model was calibrated using transit service assumptions and actual boarding data from fall 2024 gathered from STA.

2. TRAVEL FORECASTS TEMPLATE

2.1 Trips on the Project

The Travel Forecasts Template includes information on the number of trips on the project for transit-dependent users and non-transit-dependent users. The inputs into the 2027 Fiscal Year (FY27) Template include ridership forecasts for a 2024 (post-pandemic) STOPS model. Highlights include the following:

- 4,300 daily linked trips on the project in the 2024 current year.

The annualization factor is 323.5, which is consistent with the annualization factor seen on current transit service in the project corridor. Details regarding annualization factors can be found in Attachment B in the supporting documentation folder transmittal.

Highlights for annual trips include the following:

- 890,600 annual linked trips on the project by non-transit-dependent users in the 2024 current year.
- 504,700 annual linked trips on the project by transit-dependent users in the 2024 current year (36% of all linked trips on the project).
- A total of 1,395,300 annual linked trips on the project in the 2024 current year.

2.2 New Transit Trips

The Travel Forecasts Template includes information on the number of new weekday linked transit trips with the project compared to the No-Build Alternative. The Division Street BRT Project is estimated to result in 664 new daily linked transit trips (214,800 annual) on an average weekday in the 2024 current year.

2.3 Vehicle-Miles of Travel

The Travel Forecasts Template also includes information on vehicle-miles of travel (VMT) estimates generated from the STOPS Model. An auto occupancy rate of 1.15 was used to adjust passenger miles (from STOPS) to vehicle miles for inclusion in the template. Division Street BRT is estimated to reduce automobile VMT by 3,146 average weekday (1,017,750 annual) miles in the 2024 current year.

3. TRAVEL FORECASTS TEMPLATE

3.1 Travel Markets

3.1.1 Corridor Overview

The Division Street BRT will replace STA's current Route 25 bus route with bus rapid transit–level of service.

The existing frequent-service Route 25 is STA's second highest ridership line in the system, with over 3,100 average weekday boardings in the fall of 2024. Division Street is one of the busiest streets in Spokane serving as the main north-south street connecting communities between downtown Spokane northward to where Highways 2 and 395 diverge (the "Wye") and further north to communities in Unincorporated Spokane County. Every day, more than 50,000 cars travel on Division Street along with over 3,100 people riding STA transit buses.[1]

Route 25 runs between the STA Plaza in downtown Spokane and the current Hastings Park and Ride in north Spokane at Hastings Road, just west of Division Street. Prior to the COVID-19 pandemic, Route 25 had close to 3,000 boardings on an average weekday. In 2020 the route saw an approximate 40% reduction in average weekday ridership but, as with the rest of the STA system, recovery has been strong in the subsequent years, and Route 25 is currently above pre-pandemic ridership levels.

The development of High-Performance Transit (HPT) in Spokane County is a key component of STA's Comprehensive Plan, Connect Spokane. STA defines HPT as corridors providing all-day, two-way, reliable, frequent, and easy-to-use transit, with improved amenities. Given existing ridership and forecast growth on Division Street, STA's plans have long included investing in HPT service along this important north-south roadway.

Division Street provides access from downtown Spokane to growing communities on the northern edge of Spokane. Forecast growth along the corridor and in areas to the north is expected to contribute to an increased demand for transit service along this already busy bus route. The completion of the North Spokane Corridor (NSC) will provide a new, parallel roadway that is expected to draw some of the traffic that currently uses Division Street, freeing up existing roadway capacity to develop infrastructure that will support fast, frequent, and reliable BRT service. STA began the

[1]https://www.spokanetransit.com/division-street-brt/

Division Street BRT project with the primary purpose of increasing overall mobility in Spokane County by delivering a high-quality, fast, and frequent transit service for the Division Street corridor. Division Street BRT will convert the existing Route 25-Division to BRT service, with new stations and roadway modifications that will provide faster and more reliable bus service to the community. Division Street BRT will be the second BRT line in the region, extending from downtown Spokane along the Division Street corridor for approximately 8.5 miles to the Hastings Park and Ride.

Currently there are 37,765 people and 57,732 jobs across all station areas on the project alignment.

3.1.2 Travel Markets

Route 25 is a frequent service line with many important corridor destinations and transit transfer locations. It serves two universities (Gonzaga University and Whitworth University) and provides connections to nine lines providing east-west transfer opportunities along the route north of downtown as well as to twenty-five routes in downtown Spokane, including the City Line BRT, STA's first BRT line in operation.

3.1.3 Key Benefits

Division Street in Spokane, Washington, is one of the city's primary north-south corridors, running from downtown Spokane through several neighborhoods and extending into the northern suburbs. It is a major commercial and transportation artery with a wide range of destinations, including providing access and connections to West Downtown, the central business district, and the University District.

As one of the busiest streets in the city, BRT on Division Street will improve overall mobility in Spokane County via high-quality, fast, and frequent transit service that is expected to serve as an attractive option for residents and visitors, facilitating economic development through increased residential and commercial development, mobility, and overall economic growth in the region. The project will improve transit speed, reliability, capacity, safety, comfort, and access on Division Street, which is one of the most important transit corridors in the region. The project will replace STA's current Route 25. The Division Street BRT will serve riders traveling to many regional destinations including:

- River Park Square
- Spokane Convention Center Campus
- Spokane Intermodal Center
- Spokane Riverfront Park
- Gonzaga University
- Spokane Arena
- Whitworth University
- B.A. Clark Park
- Franklin Park
- Centennial Trail
- MultiCare Deaconess Women's and Children's Center/Spokane Emergency Group

- St. Anne's Children and Family Center
- Northtown Mall, Wandermere Mall, and other shopping destinations
- Local businesses including restaurants, coffee shops, breweries and diners
- Several elementary schools, middle schools, one high school and a private K-12 school

The project will also serve the many riders making transfers to connecting lines, including routes the Route 25 currently connects within downtown Spokane and along the corridor north of downtown.

3.1.4 Key Challenges

Current challenges serving the anticipated transit markets include the following:

- **Traffic congestion**. Division Street carries a high volume of vehicles daily, especially during peak hours. This leads to congestion, delays and inconsistent travel times. By offering a reliable and frequent alternative to driving, BRT can reduce the number of single-occupancy vehicles and ease congestion.
- **Transit speeds**. The current Route 25 on Division Street is often slowed by mixed traffic and inconsistent stop spacing. Stop consolidation, dedicated Business Access and Transit (BAT) lanes and signal priority elements of the project will help improve transit operations along Division Street.
- **Poor pedestrian and bicycle infrastructure**. Division Street is wide and vehicle-oriented, with limited sidewalks, crosswalks, and bike lanes. Improvements along Division Street that are part of the proposed BRT project will include wider sidewalks, better crossings and other safety features that will improve multimodal travel in the corridor.

3.2 Improvements to Transit Service – Proposed Operating Plan

The proposed operating plan for Division Street BRT will increase the frequency of service compared to existing Route 25 operations in the project corridor today, as shown in Figure 1 and Figure 2 with weekday and weekend operating plans, respectively. The BRT operating plan on weekdays will provide 15-minute headways between 6 a.m. and 10 p.m. with 20- 30- minute service during other hours of the day. This is an improvement over the existing Route 25 which operates 15-minute service between 7 am – 6 pm weekdays and 30- to 60-minute service other hours of the day. Weekend service is also improved with the BRT reflecting more frequency on both Saturday and Sunday as shown in the figures below.

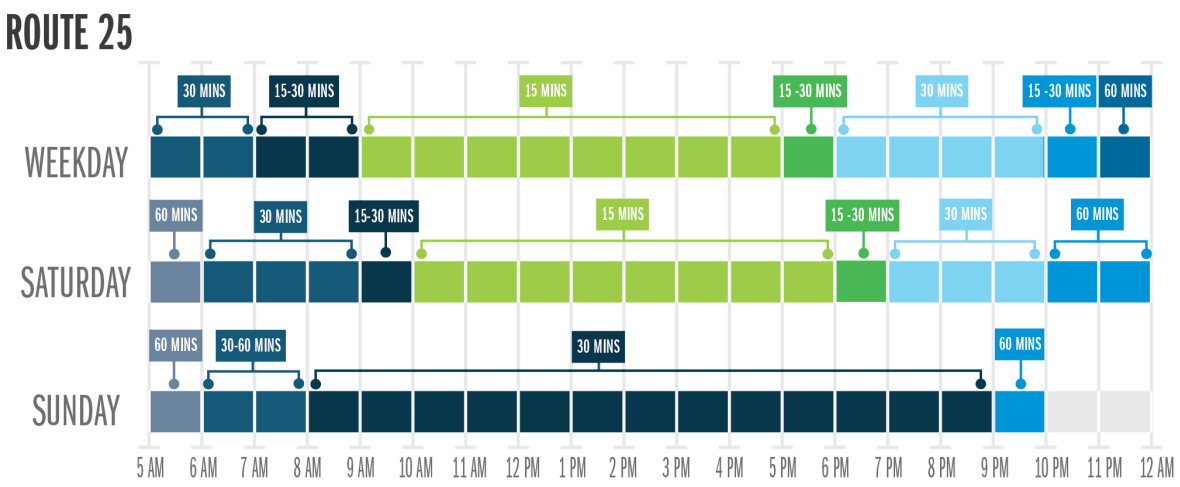

Figure 1. Existing Route 25 Operating Hours and Frequency

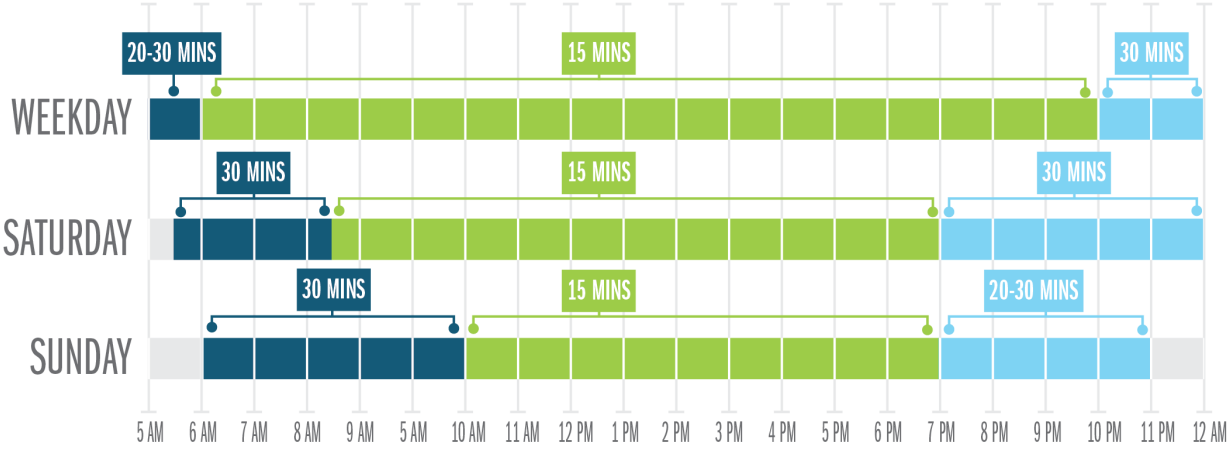

Figure 2. Planned Division Street BRT Operating Hours and Frequency

3.3 Project Ridership

Table 1 provides forecast current-year ridership (2024) for Route 25 and the Division Street BRT Line under no-build and build conditions, respectively, based on fall 2024 ridership data. Highlights include the following:

- No-Build Route 25 ridership of 3,150 riders per day based on fall 2024 ridership.
- With Division Street BRT, ridership is forecast to be 4,310 riders per day on bus rapid transit (BRT) based on fall 2024 ridership.
- The overall increase compared to the No-Build when accounting for both segments of the transit line is 37% under the Build Alternative.

Table 1. STOPS Forecast Weekday Ridership for Route 25 and Division Street BRT

Scenario	2024 Current-Year Ridership
No Build – Line 25	3,150
Build – Division Street BRT	4,310

Sources: [1] Federal Transit Administration. 2024. Simplified Trips-on-Project Software. Version 2.55. Figures rounded to the nearest 10.

Table 2 provides the number of total daily trips and total daily new transit trips forecast by STOPS based on fall 2024 current-year ridership. Highlights include the following:

- There are over 660 forecast project trips by new transit users in the current year. New transit users make up approximately 15% of total daily trips on the project in the current year.

Table 2. Division Street BRT Average Weekday Project Trips

Ridership Measure	2024 Current Year
Total Project Trips	4,310
New Transit Users	660

Sources: [1] Federal Transit Administration. 2024. Simplified Trips-on-Project Software. Version 2.55. Figures rounded to the nearest 10

3.3.1 Local Experience with STA BRT Service

Spokane Transit Authority operates BRT that is designed to provide frequent, reliable, fast, and easy-to-use high-capacity transit service for passengers. BRT service emphasizes a higher level of transit speed and reliability, reflected in typically longer distances between stations and more preferential treatments to reduce bus travel delay. STA BRT incorporates unique branding, stations, and vehicles; all-door boarding; transit signal priority; some transit priority lanes; and other infrastructure improvements. The first BRT started service in 2023 on the City Line.

3.3.2 District-to-District Ridership Changes

Travel analysis districts were developed to help understand travel patterns served by Division Street BRT. These districts were aggregated from TAZ boundaries defined by Spokane Regional Transportation Council, including smaller analysis districts to isolate key areas with service by the new BRT Line, and larger analysis districts served by the rest of the regional transit system.

Figure 3 shows the individual analysis districts with TAZ outlines. These match the districts summarized in Table 3. Additional maps showing the analysis districts and TAZs are included in the supporting documentation for STOPS modeling (see Section 3.6 for more information on supporting documentation). Figure 4 and Figure 5 show total project trip productions and attractions by district, respectively. Both maps reflect project trips normalized by population.

The analysis indicates the following based on the current year 2024 ridership forecast:

- Trips produced in the corridor (Districts 1 – 5) make up 59% of total project trips.

- Of the trips produced in the corridor just over 63% have both trip ends in the corridor.
- The largest generators of project trip productions are the Francis and Holland Districts in the middle of the project corridor. These two districts have the highest population totals among all corridor districts. The largest attractions for the trips from these districts is downtown Spokane and the districts immediately south of downtown.
- Downtown Spokane is the largest attractor of project trips with nearly 1/3 of all project trips attracted to this district. This district has the largest total employment of all the corridor districts.
- All corridor districts (1 – 5) have new incremental linked trip productions compared to the No Build.
- All but one corridor district (5) has new incremental link trip attractions compared to the No Build. The trip losses are intra district likely the result of a change in routing in the Build that removes the eastern portion of Route 25 that runs along Newport Highway in the No Build.

Table 3. Project and New Transit Trips Produced or Attracted to Districts Along Division Street BRT

District No.	District Name	Total Trip Productions	Total Trip Attractions	New Trip Productions	New Trip Attractions
4	Holland	748	561	59	134
3	Francis	726	626	102	147
5	Hastings	513	218	82	-17
2	Euclid	403	483	35	67
1	Downtown	164	1,292	78	222

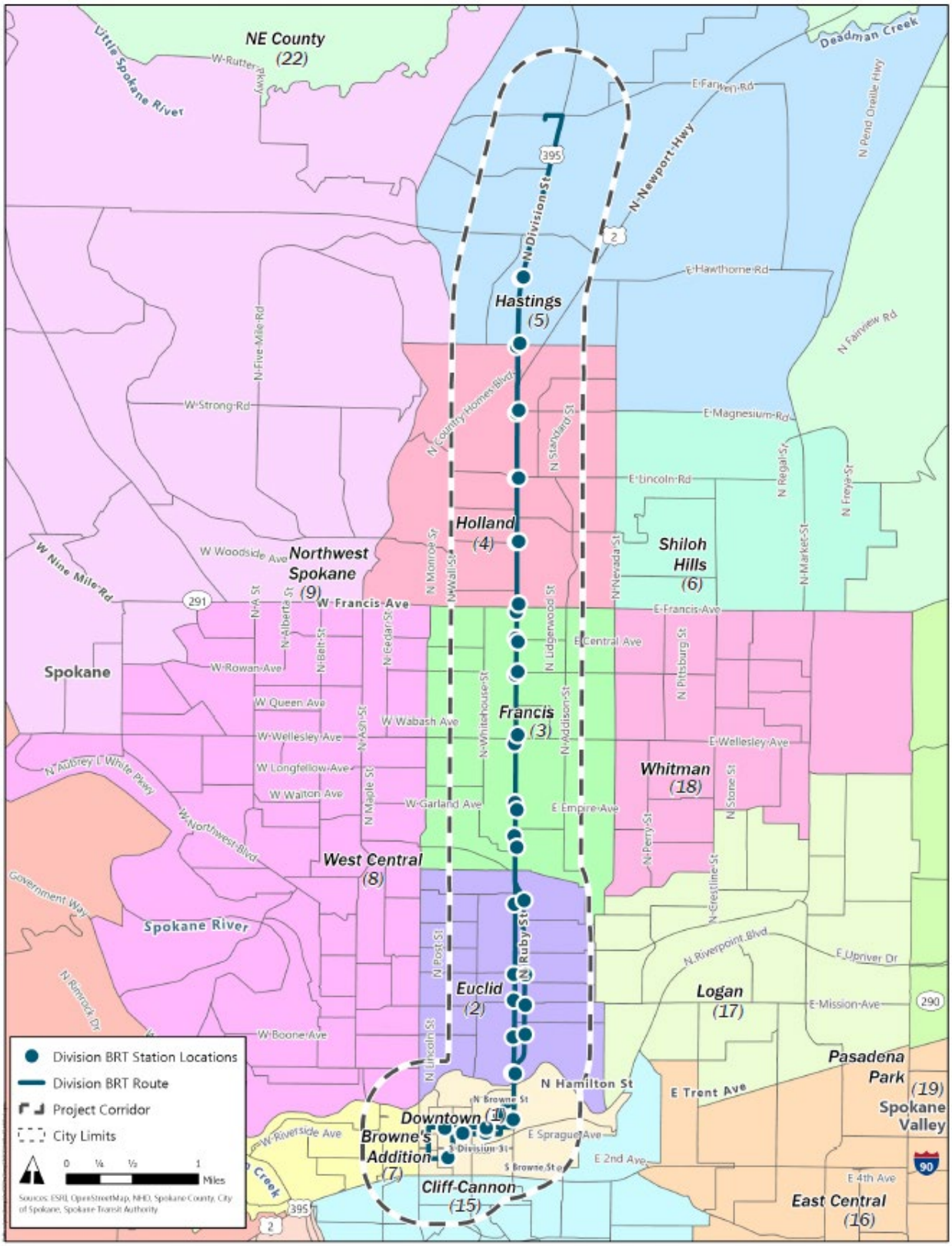

Figure 3. Analysis District Map

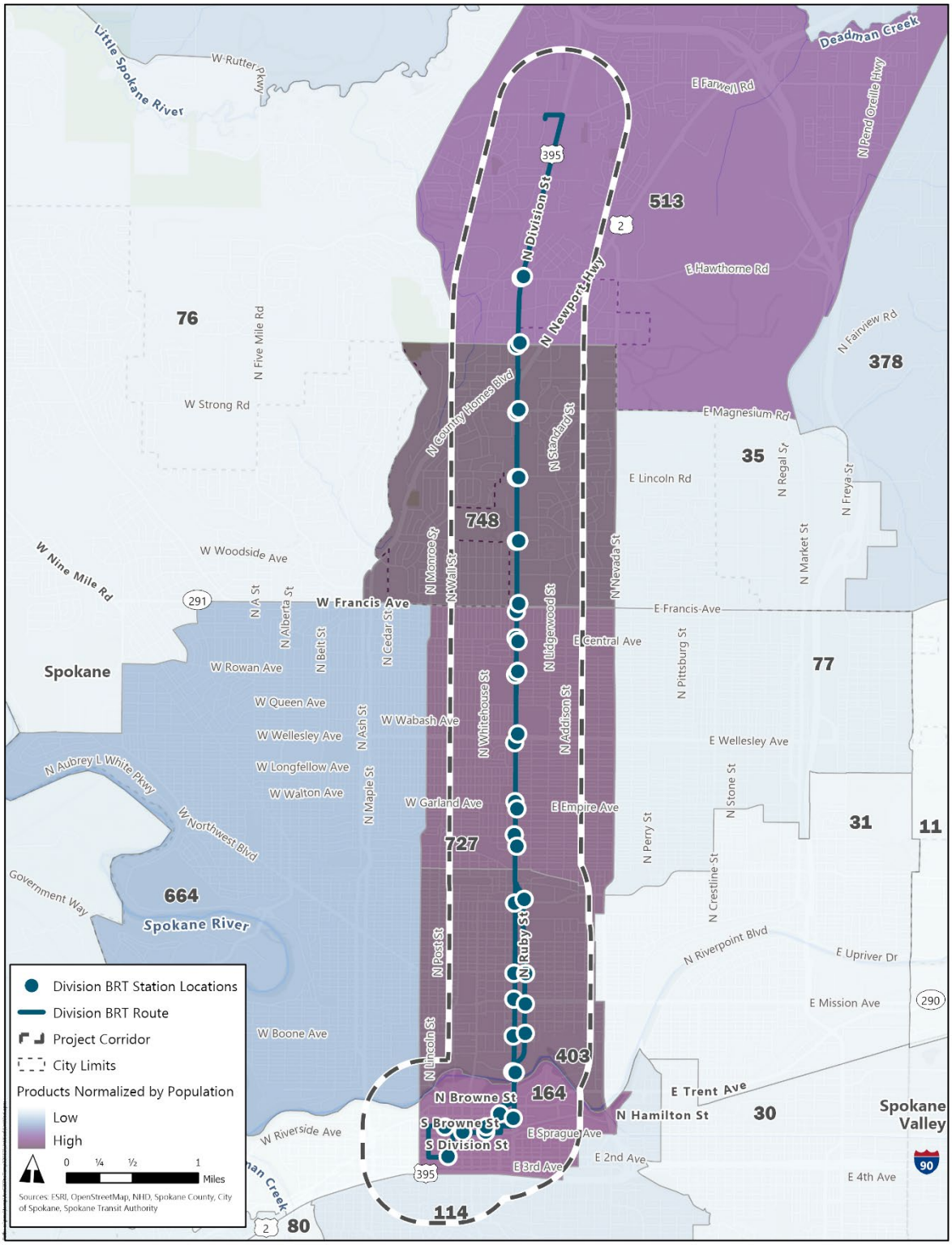

Figure 4. Division BRT Project Trip Productions by District

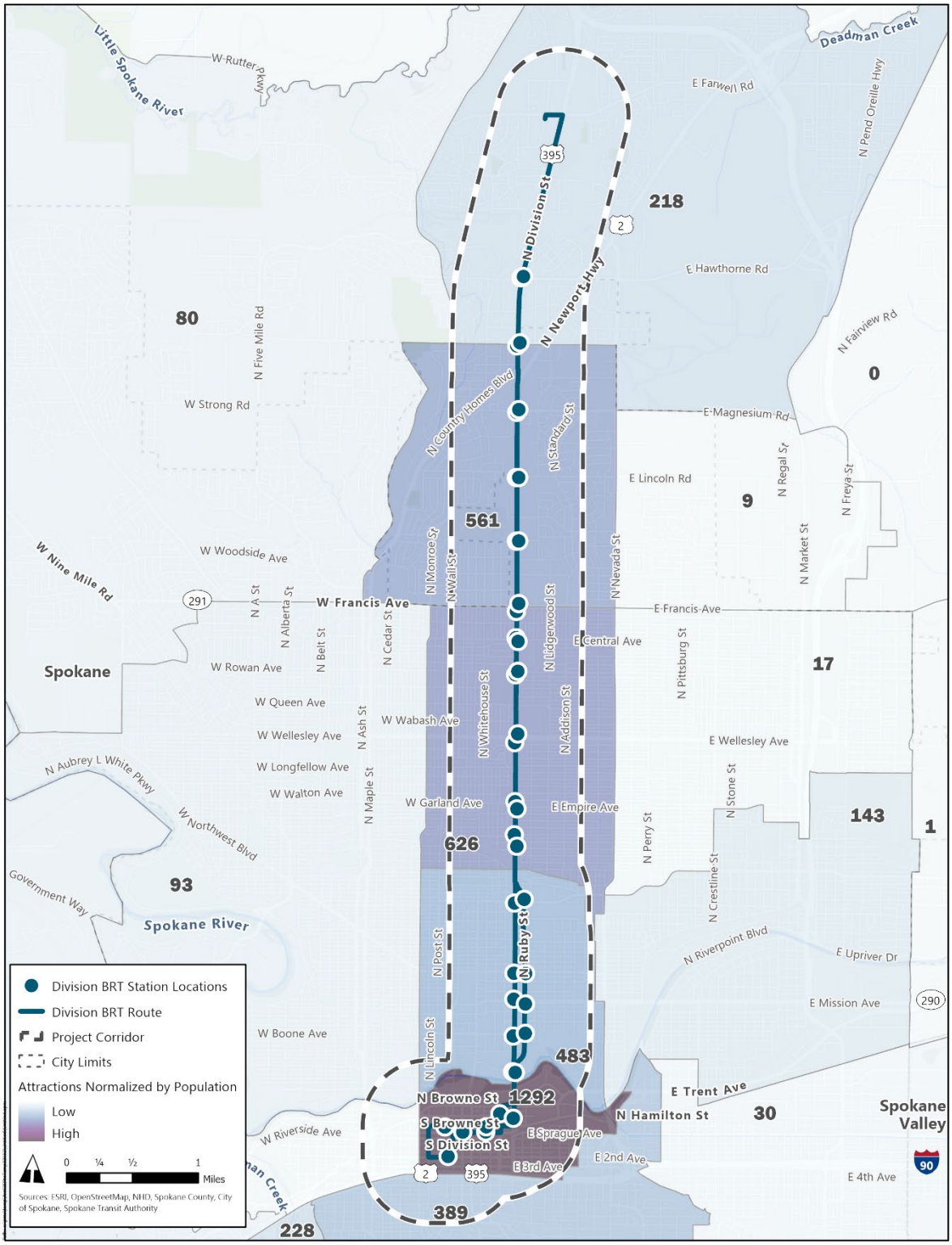

Figure 5. Division BRT Project Trip Attractions by District

3.4 Uncertainty in Forecast Results

Areas of uncertainty in the ridership forecasts for the Division Street BRT include land use assumptions, transit operations, boarding shifts from other routes, and ridership changes that continue to adjust since the COVID-19 pandemic. The following sections describe each of these areas of uncertainty in more detail.

3.4.1 Land Use

Land use assumptions for this project reflect current-year (2022) population and employment data from Spokane Regional Transportation Council. While a horizon year forecast is not being submitted, the project corridor is expected to see growth in population and employment to the year 2045 of approximately 145% and 67%, respectively, as compared to the data used in development of the current-year forecasts.

3.4.2 Transit Operations for Division Street BRT

Travel times used for STOPS modeling for the Division Street BRT were based on the consolidation of existing stops into the proposed 39 stations, plus the addition of transit signal priority and BAT lanes in segments of the project corridor. An estimate of travel time reductions and speed improvements were developed by the project team using a range of 0% to 20% improvement in speeds depending on the anticipated improvements in different segments of the corridor. The estimated percentage reduction in travel times by segment were applied to the underlying General Transit Feed Specification (GTFS) travel times to arrive at travel time savings compared to current operations in the corridor for transit service.

Because of the uncertainty of the time savings assumed from stop consolidation, signal priority and BAT lanes in segments of the project corridor, an additional travel time was developed which assumed that no travel time savings would be realized (e.g. the same operating speeds as Route 25 would be realized through the project corridor). A separate GTFS file was created to use these more conservative estimates of travel time for the project. This GTFS file was used as the Build condition and run through the STOPS model to test the impact of not achieving the speeds that the project team believes may be possible with the improved operations in the corridor. The result of this run with no assumed travel speed improvement was a reduction of just over 230 daily project trips and just over 130 new incremental linked trips. The values from this sensitivity test run were added to the Small Starts templates and resulted in no change to the project justifications ratings that depend on the travel forecasting results.

Changes in travel times as the project advances through design and project elements are finalized may impact ridership results.

3.5 Summary of Project Mobility Benefits

The primary travel markets served by the project are (1) circulation trips that begin and end along the corridor (38% of total) and (2) transfer connections for trips with one end of the trip in the project corridor (58% of total).Trips produced in the corridor with attractions outside of the corridor make up 22% of total project rips and trips produced outside of the corridor with attractions in the corridor

make up 26% of total project trips. The Division Street BRT will provide broad access to jobs, services, and other attractions. The project trips projected by STOPS are fairly evenly split between home-based-work trips at 53% of the total, and non-work trips forecast to be 47% of total project trips; this project will provide connections to a diverse set of services and attractions that will generate significant all-day travel demand to, from, and through the corridor.

3.6 Index of Supporting Documentation

Forecasts for Division Street BRT were conducted using STOPS version 2.55 (January 2025 version). Electronic versions of the full model runs were provided to FTA. The files are located in the Travel Forecasts Supporting Documentation folder of the electronic submission folder and include the following:

- Generalized Transit Specification Feed files for existing conditions for 2024 (full travel time savings and existing speeds files in separate folders).
- Households and employment information by TAZ for the Spokane region for 2022.
- Travel time and distance by origin, destination from the Spokane Regional Transportation Council travel demand model.
- TAZ and district definitions for use in STOPS (provided as shapefiles).
- All STOPS files related to 2024 forecasts for the Division Street BRT.

Attachments

- Attachment A: Fare Policy Methodology.
- Attachment B: Annualization Factor Documentation.

4. SUPPORTING TABULATIONS

Supporting tabulations are provided online as part of the overall project submittal. Because the STOPS model was used for this project, several of the items required as part of this set of information are included with the STOPS directories. An index of all documentation related to the STOPS model is provided in the Travel Forecasts Supporting Documentation folder.

Table 4 is a condensed version of the Supporting Tabulations requested in the Guidance, including where each is located: either in the STOPS model folder or in the Supporting Documentation folder.

Table 4. Supporting Tabulations

Supporting Tabulation	Location
Demographic and socioeconomic characteristic.	STOPS Model Folder
Highway speeds.	STOPS Model Folder
Linked transit trips (for the No-Build and Build Alternatives, including horizon year if applicable).	STOPS Model Folder
Weekday total and home-based-work person-trip tables.	STOPS Model Folder

Supporting Tabulation	Location
Weekday transit-trip tables.	STOPS Model Folder
Change in automobile VMT summarized at the district-to-district level.	STOPS Model Folder
Transit weekday ridership.	STOPS Model Folder
A map (in PDF format) showing the boundaries of TAZs and summary districts, the name and number of each district, and the alignment and station locations of the project. Generally, sponsors should include between 15 and 20 districts that are designed specifically to focus on the project, with smaller districts near the project and larger districts elsewhere in the region.	PDF in Supporting Documentation Folder
A map (in PDF format) and supporting tables of information that show changes in the coded transit route alignments, stop locations, and/or service frequencies between the No-Build and Build Alternatives.	PDF in Supporting Documentation Folder / Travel Forecasting Results Report
GIS layers (ArcGIS shape file preferred).	STOPS Model Folder

5. ATTACHMENTS

Attachment A. Fare Policy Methodology

Memo

Date: August 22, 2025
To: Federal Transit Administration
From: Spokane Transit Authority
Subject: Fare Assumptions Used in the Division BRT Small Starts Application for a Rating

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STA's current fare structure as of October 2024 is as follows:

- Adult one-way: $2.00
- Reduced Fare one-way: $1.00
- Youth (0-18): Free

These fares allow 2 hours of travel throughout the STA system. The fare structure is assumed to be the same in 2030 upon opening of the Division BRT as it is in 2025. Transit fares are assumed to keep pace with inflation.

The STOPS model was run with default assumptions rather than using a fare structure file, so these assumptions are listed for informational purposes only.

Attachment B. Annualization Factor Methodology

MEMORANDUM

Date: August 22, 2025

To: Federal Transit Administration
From: Spokane Transit Authority
Subject: Division BRT Project Annualization Factor

The annualization factor used for the Division BRT Project CIG ratings submittal is 324. The annualization factor was developed based on on-board automatic passenger counters for Line 25 buses using the annual ridership and average weekday ridership through the 2024 calendar year. The same metrics were prepared for 2023 for comparison. The Line 25 corridor has a higher annualization factor than the system, which highlights the strength of the weekend ridership in this corridor. The minor increase in the factor from 2023 to 2024 represents a long-term trend experienced throughout the system of ridership growing faster on Saturdays and Sundays than on weekdays.

Year	Total Boardings	Weekdays	Average Daily Boardings for Weekdays	Annualization Factor
2023	788,901	253	2,462	320
2024	916,504	254	2,833	324