Spokane International Airport

Airport Drive and Spotted Road Realignment and Interchange Project

Spokane International Airport

FY21

USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program

July 12th, 2021

Contents

I. CEO Cover Letter To USDOT

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July 9, 2021

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

Dear Secretary Buttigieg:

I am pleased to submit the attached RAISE discretionary grant application in the amount of $14,300,000 for the Airport Drive and Spotted Road Realignment and Interchange Project at Spokane International Airport.

The $14.3 Million RAISE grant request is being matched by $9,267,324 in funding from the Airport's annual allocation of Airport Improvement Program funds and the remaining in general airport revenues from the Spokane Airport Board.

Spotted Road Interchange and Realignment Project Costs						
Project Effort	Agencies				Cost	RAISE % of Total Cost
	WSDOT	FAA	Airport Local Match	USDOT RAISE		
Planning Studies/Mitigation	$150,000		$2,870,000		$3,020,000	0%
Enviro/Prelim Design			$397,324		$397,324	0%
Design			$2,000,000		$2,000,000	0%
Construction		$5,000,000	$4,000,000	$14,300,000	$23,300,000	61%
Total	**$150,000**	**$5,000,000**	**$9,267,324**	**$14,300,000**	**$28,717,324**	**50%**

Spotted Road is part of the Critical Urban Freight Corridor connecting Spokane International Airport's passenger and air cargo facilities with Interstate 90 and the National Highway System. By relocating Spotted Road outside of the Runway Protection Zone (RPZ) and constructing a grade-separated interchange over the inbound and outbound roadways, this project achieves important safety and efficiency objectives for both surface and air transportation modes.

Most importantly, this project supports our community vision to implement infrastructure projects that develop the Airport Area into a world-class transportation, logistics and advanced manufacturing center that will create jobs to elevate the prosperity of our region.

Best Regards,

Lawrence J. Krauter

Lawrence J. Krauter, A.A.E., AICP
Chief Executive Officer

II. Project Description

Project Overview

Airport Drive is an east-west looping 5-mile long route serving as the sole access corridor for traffic to and from the Spokane International Airport (Airport) Terminal as well as surrounding business, commercial and industrial parks and is the direct connection between the Airport and U.S. Highway 2 (US 2) for regional and multi-state traffic.

Spotted Road is a north-south collector roadway that begins at US 2, north of Airport Drive, and continues south connecting industrial and manufacturing employment centers between Airport Drive and Flightline Boulevard/Grove Road, with direct access to Interstate 90 (I-90). The existing Spotted Road alignment is within the Airport Runway Protection Zone (RPZ). The RPZ is a clear zone designated by the Federal Aviation Administration (FAA) to prevent air navigation hazards as well as to reduce hazards and increase safety to people on the ground.

Spotted Road currently intersects Airport Drive in two locations: Airport Drive Inbound and Airport Drive Outbound. These intersections are currently stop sign controlled with Spotted Road traffic stopping for Airport Drive traffic. The current traffic on Spotted Road intersects Airport passenger and delivery traffic with cargo, industrial, public transit, school buses, travelers originating west of the airport, and manufacturing freight traffic. Spotted Road accommodates approximately 2,600 vehicles per day and is identified as a Critical Urban Freight Corridor T-3 route on the Washington State Freight and Goods Transportation System (FGTS), designating that annually freight weighing between 300,000 tons to 4 million tons is transported on the road. Much of this freight traffic is generated by major employers in the region including the U.S. Postal Service's Regional Processing and Distribution Facility, FedEx, Fairchild Air Force Base, and Amazon, as well as restaurants and hotels, manufacturing, industrial, technology, and aerospace employers.

Airport Drive currently accommodates approximately 16,500 vehicles per day during the week and approximately 14,200 vehicles per day during the weekend. The majority of this traffic, about 95%, is passenger vehicle traffic going to and coming from the Airport based on arrival and departing flight schedules. Airport Drive traffic is traveling at higher posted speeds entering and leaving the Airport. The combination of high Airport Drive speeds and the Spotted Road mixed traffic with high freight percentages has led to fatalities, collisions, and safety concerns.

The areas north and south of Airport Drive are industrial and commercial developments. Planning studies completed for the project estimate that commercial and industrial development along this corridor will add an additional 1,000 vehicles per day within the next 10 years as its growth continues. The project corridor is also impacted by US 2 from the north, a principal arterial and a Primary Highway Freight Network (PHFN) with nearly 30,000 vehicles per day, including 4-10 million tons of freight annually.

The Airport's growth correlates to additional traffic including personal vehicles, school bus routes serving the growing residential developments north of US 2 and south of I-90, shuttles, ride-share, and taxis, as well as truck

and freight traffic transiting on the Airport's inbound and outbound roadways and crossing Spotted Road to access US 2 and I-90.

This project is the Airport's highest roadway safety and infrastructure improvement priority with previous and ongoing work leading to the construction of the much needed and justified safety enhancements as the focus.

The Spotted Road/Airport Drive intersections and geometry are considered dangerous from a crash rate perspective and improvements are necessary to enhance the safety of the traveling public. The combination of lower speed Spotted Road traffic trying to cross the higher speed Airport Drive Inbound and Outbound intersections has led to multiple collisions, many of which are serious injury accidents and even some fatalities. These problems, which continue despite installation of additional traffic safety measures, can best be resolved with a new grade-separated interchange that enhances both safety and mobility in the region and promotes economic growth within the S3R3 Solutions Public Development Authority, formerly known as the West Plains/Airport Public Development Authority. Employment in the West Plains area is rapidly growing creating good-paying, sustainable family-wage jobs with ample entry level positions that offer career advancement.

The RAISE grant will be utilized to fund final construction and construction management services for the proposed project improvements. Planning and formulation services have been previously completed for the project with funding provided by the Airport as well as project partners and stakeholders. The Airport will be submitting an Environmental Assessment (EA) document for the project to the FAA this summer for National Environmental Policy Act (NEPA) review and approval. The Airport is drafting the request for qualifications to engage with Preliminary Engineering design services for the project, with anticipation of releasing the design RFQ upon approval of the EA later this summer.

The project will utilize an innovative design by constructing the first grade-separated interchange at the Airport to provide separation between the multiple modes of transportation operating in and around the Airport. The project will relocate the Spotted Road and Inbound and Outbound Airport Drive intersections to the east with a new grade-separated overpass interchange above and across Airport Drive. This shift to the east will result in significant safety improvements with the realigned Spotted Road situated outside of the Airport's RPZ.

The project interchange will incorporate traditional diamond configuration on and off-ramps connecting Airport Drive to Spotted Road. The off-ramps will provide diverge movements for mainline Airport Drive traffic to exit onto Spotted Road. The on-ramps from Spotted Road to Airport Drive allow for merging traffic to enter the traffic flow at the prevailing speeds, thereby reducing emissions and significantly improving safety.

The interchange will also maintain access to the nearby Sunset Boulevard, an important regional connection into downtown Spokane. The new interchange would function as a key collector-distributor system providing access to the region's principal arterials to the north and south along US 2 and I-90.

Key Challenges Addressed

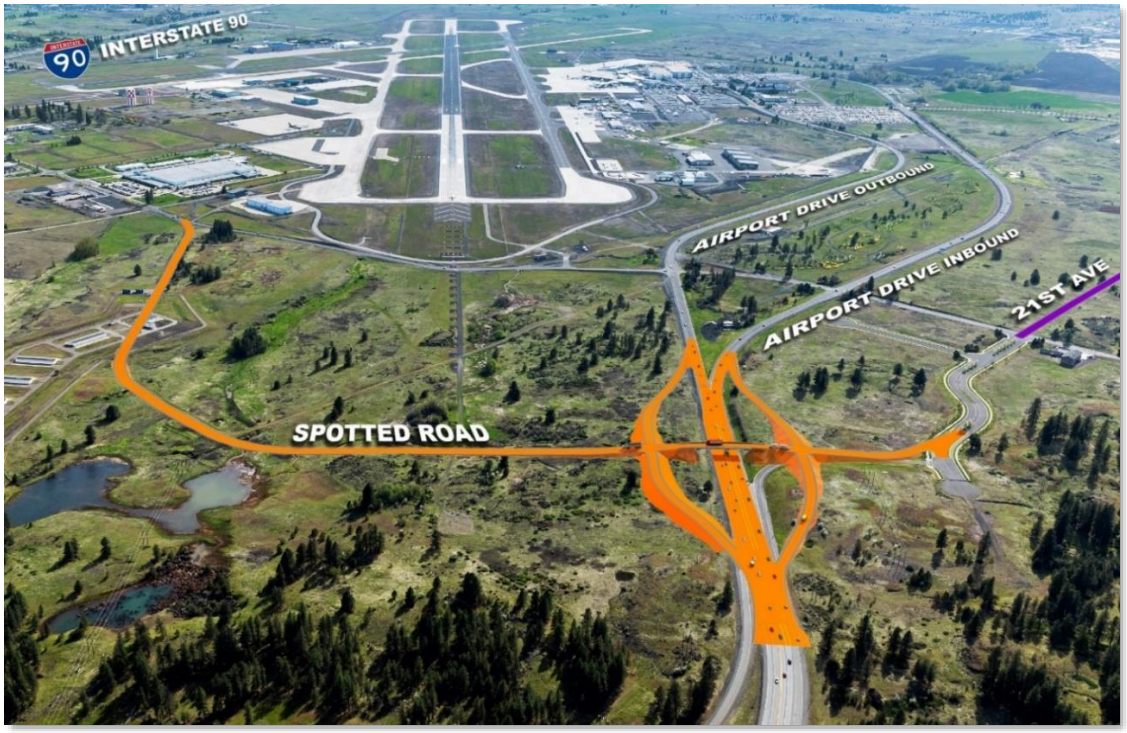
This project addresses the following key challenges to the local and regional infrastructure:

- Improve surface and aviation safety
- Accommodate traffic growth and promote economic development
- Reduce greenhouse emissions
- Improve multimodal access
- Enhance freight traffic mobility

This shift to the east will result in another significant safety improvement with the realignment of Spotted Road outside of the Airport's Runway Protection Zone (RPZ) of the Airport's primary instrument runway. The RPZ is a clear zone designated by the FAA to prevent air navigation hazards as well as to reduce hazards and increase safety to people on the ground.

The project corridor is located along both inbound and outbound sections of Airport Drive. Airport Drive is a looping 5-mile long route and is the sole access corridor for traffic to and from the Airport Terminal as well as surrounding business, commercial and industrial parks. A series of previous planning studies have identified the intersections of Inbound and Outbound Airport Drive at Spotted Road as a high accident severity location resulting in fatalities. In recent years, multiple safety improvements have been completed at the intersections to reduce crash frequencies and their severity; however, collisions continue. An overview of the project area is provided in Figure 1.

Figure 1: Project Overview Map



Improve Surface and Aviation Safety

This project's primary objective is to **improve safety**.

To address this objective the project will utilize an innovative design by constructing the first grade-separated interchange at the Airport in an effort to provide separation between the multiple modes of transportation operating in and around the Airport. The project will relocate the Airport Drive/Spotted Road intersections to the east with a new grade-separated overpass interchange above and across Airport Drive. The grade separation will reduce the conflict points that currently exist at the two at-grade intersections – Spotted Road with Inbound Airport Drive and Outbound Airport Drive – from 25 conflict points to 18 at the stop-controlled intersections.

Accommodate Traffic Growth and Promote Economic Development

The overpass will incorporate on and off-ramps for Airport Drive in the traditional diamond configuration to merge traffic at speed providing significant safety improvements. The interchange will also accommodate existing off ramps to Sunset Boulevard. The new interchange would function as a key collector-distributor system providing access to the region's principal arterials to the north and south of US 2 and I-90.

These infrastructure improvements will also address future traffic demands placed on the transportation system as a result of the continued high rate of development and growth at the Airport and surrounding areas. Prior to the COVID pandemic, the Airport was experiencing 10% annual growth in commercial air traffic and 8% annual growth in cargo air traffic, resulting in significant increases in traffic volume on Airport Drive. The airport enplanements have now returned to pre-COVID levels and the anticipated growth prior to COVID is expected to continue. More specifically, in June 2021 there were 215,014 scheduled seats on outbound flights, exceeding the pre-COVID total of 211,847 scheduled seats in June 2019 (the Airport set a record for most enplaned passengers in 2019).

GEG Outbound Flights	June									
	2021		2020(1)		2019		YOY % Change			
							2020		2019	
	Flights	Seats	Flights	Seats	Flights	Seats	Flights	Seats	Flights	Seats
Total	1,896	215,014	826	87,181	1,902	211,847	130%	147%	(0%)	1%

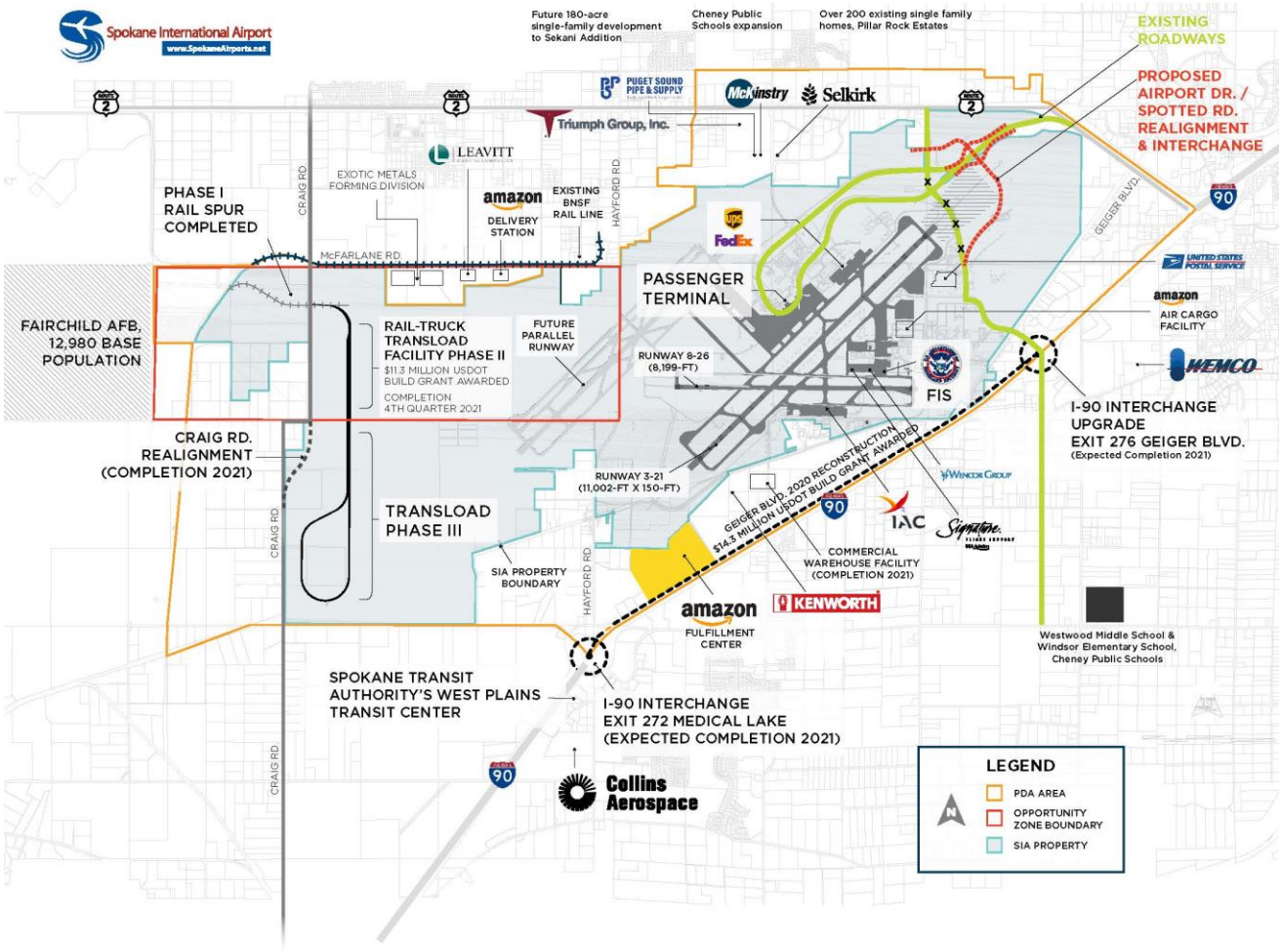
(1) Seats were less than ½ during COVID (June 2020)

Due to future development and an increase in air traffic at the Airport, which is projected to exceed 2.6 million enplanements by 2025, vehicle traffic volumes along this corridor are expected to grow by 20% over the next decade. This airside and landside growth has led the Airport to initiate terminal area roadway and building improvements valued at approximately $110 Million to accommodate the demand placed on the transportation corridor.

In addition to the Airport, this transportation system is utilized by several other major employers in the region including the Spokane Transit Authority (public transit), the U.S. Postal Service's Regional Processing and Distribution Facility, United Parcel Service, FedEx, Fairchild Air Force Base, Amazon, Cheney School District and school buses, rental car agencies, TNCs ride-share, and taxis, as well as restaurants and hotels, manufacturing, industrial, and aerospace employers. S3R3 Solutions continues to attract industrial, manufacturing, and aerospace employers to the Spokane Region by providing access to multiple forms of transportation: air, rail, and roadway. This, in addition to available lands ripe for development, are attracting key employers to the region, including Amazon, for which S3R3 Solutions has recently constructed an air cargo facility with access to Spotted Road south

of Airport Drive. Figure 2 shows a map of the existing and future development within the S3R3 Solutions boundaries.

Figure 2: S3R3 Solutions Map



This infrastructure safety project is imperative to improving access and providing safe, efficient travel to and from Spokane International Airport, one the Inland Northwest's busiest transportation hubs, as well as the surrounding industrial and business developments. This project addresses the current and future demands of a multi-modal transportation network that supports employment, freight, manufacturing industries, tourism and supports the overall economic development of the region.

Reduce Greenhouse Emissions

The Airport recognizes the importance of utilizing sustainable practices during the development of transportation infrastructure that will protect the environment and ecosystems impacted by the project. These improvements will reduce traffic congestion at the critical intersections, improve (or enhance) air quality and reduce greenhouse gas emissions at each intersection location compared to existing conditions. The improvements will also reduce travel time through the corridor. Construction of the infrastructure will utilize design standards and low impact practices that protect and enhance environmental sustainability using recycled materials and stormwater collection systems. The project will incorporate large open landscaped areas that utilize native grasses and plant species that mirrors the surrounding ecosystem.

Improve Multimodal Access

This project addresses a well-documented necessity for improvements to a multimodal transportation system consisting of pedestrian, bicycle, motorist, shuttle, ride-share, taxi, regional transit, school bus, and freight traffic accessing the Airport and the surrounding region. Over the past 14 years, multiple planning formulation and preliminary design studies have been conducted to address the development of the transportation corridor in and around the Airport. All recommended improvements to enhance safety with the current alignment and intersections have been fully implemented and constructed yet have resulted in little to no change in collisions. Each of these studies has concluded that providing safer and more efficient access on this corridor is vital to the region's economic success and development. Key bicycle and pedestrian facilities will enhance local and regional connectivity and provide crucial access for non-motorized traffic and last mile connections to transit.

Enhance Freight Traffic Mobility

Currently, traffic on Spotted Road intersects Airport passenger traffic with cargo/industrial traffic. This combination has led to fatalities, collisions, and safety concerns. Adding an overpass interchange on Spotted Road will separate the critical urban freight corridor route from commuter and passenger traffic traveling to the Airport, reducing conflicts, improving the level of service, and creating a safer connectivity between different modes of traffic. Additionally, the Spotted Road realignment will continue to connect with the Primary Highway Freight Network, which is important to maintain and is valuable to our freight modes. The project will also enhance freight and cargo traffic in and around the Airport by improving connectivity. North of Airport Drive, Spotted Road is also identified as a Critical Urban Freight Corridor T-3 facility on the Washington State Freight and Goods Transportation System (FGTS) designating that annually freight weighing between 300,000 tons to 4 million tons is transported.

Given the increasing commercial and freight traffic associated with the Airport's growth, the most prudent safety and efficiency solution available is to grade-separate Spotted Road from Inbound and Outbound Airport Drive. This grade-separation project will separate the Critical Urban Freight Corridor route from traffic traveling to the Airport, improve the level of service, create a safer connectivity between different modes, and reduce freight mode conflicts.

The areas north and south of Airport Drive are industrial and commercial developments that generate freight traffic throughout the area. The project corridor is also impacted by US 2 from the north, a principal arterial and a Primary Highway Freight Network with nearly 30,000 vehicles per day including 4-10 million tons of freight annually. This project provides the necessary separation of high-speed traffic and low speed connecting traffic, which will increase the safety and enhance the movement of freight and goods throughout the region.

Project History

The Airport Drive and Spotted Road Realignment and Interchange project has already been developed and refined through multiple planning studies over the past 13 years. Additionally, this project has been studied regionally since 2004, and incremental improvements to enhance the traffic operations and safety of the existing intersections have been ongoing. These studies and projects included detailed public and stakeholder involvement.

The improvements described below had incremental, yet minimal success in reducing collision occurrences at the intersections. All of the studies show a grade-separated interchange at the site would reduce overall collisions at the by 80%, resulting in a reduction in fatalities, injuries, and property damage. The history of the project leading to the current proposed improvement is below, and each individual study or project plan-set can be located here.

2004 – Transportation Impact Analysis

A Transportation Impact Analysis to evaluate three intersections of Spotted Road at Inbound Airport Drive, Outbound Airport Drive and US 2 upon build-out of a Technology Park situated between US 2 and Airport Drive east of Spotted Road was completed in 2004. This analysis reported that the level-of-service (LOS) at the Spotted Road at Airport Drive intersections were LOS "B" for both the AM and the PM peak hours while the Spotted Road at US 2 intersection functioned at LOS "D" and "F" during the AM and PM peak hours.

This study evaluated available collision histories from 1998 – 2002 and identified 12 collisions at the intersection of US 2/Spotted Road, with 3 of those being fatalities. The study revealed that the Airport Drive/Spotted Road intersections had 35 collisions over the same period, 10 collisions at the Inbound intersection and 25 collisions at the Outbound Intersection. Accident Severity Rate calculations were performed that considered fatalities and injury collisions along with the traffic volumes and rates for the three intersections were 0.59 at US 2, 1.91 at Inbound Airport Drive and 4.4 at Outbound Airport Drive, well above local intersection crash rates.

Based on the results of this study, the Outbound Airport Drive intersection was identified as a "High Accident Location" because the rate was above the Washington Department of Transportation's 1.0 critical limit for intersections in the same category.

2005 – Spotted Road Safety Improvement Construction Project

Following the 2004 analysis of Spotted Road and Airport Drive, design documents were prepared to address immediate safety issues with the intersections. Construction of safety improvements occurred in 2005 and included wide solid stop bars, painted islands to designate turn lanes, yield signage, through and turn lane arrows, wrong way and one-way signage, and rumble strips.

2006 – Spotted Road and Airport Drive Safety Improvements Study

This study was a result of the findings from the 2004 TIA Study and mitigation efforts implemented in 2005. This study relied heavily on the traffic analysis and collision summary from the previous study and focused on Short and Long-range improvements to address safety issues. An initial list of 26 infrastructure improvement alternatives was developed. This list was refined and sorted into five categories for a pre-screening analysis where design and construction feasibility considerations were included.

A selection matrix was prepared that ranked the alternatives for safety, mobility, development benefits, and cost. As a result of this study, several short-term improvements were recommended to address sight distance and other safety issues.

Several long-range options were also considered and evaluated leading to the development of a preferred alternative: relocating Spotted Road outside the RPZ and constructing grade-separated intersections with Airport Drive.

Design feasibility and considerations were also discussed in the report:

- Intersection Safety Considerations: A brief discussion of the conflicting crossing and turning movements that occur within a limited area of at-grade intersections, and that by separating the grades of intersecting roadways crashes caused by these conflicting movements can be reduced.
- Airport Access Road Considerations: The Federal Aviation Administration's Ground Access Planning Guide was consulted for geometric design alternatives, which states that "…burgeoning traffic demands through a critical at-grade intersection may warrant consideration of a grade-separated interchange". The Guide also states that "Access highways to large airports should have full control of access with no crossings at grade", and that "most airports that serve more than 2.5 million annual originating passengers are served by fully controlled access facilities." According to the then most recent Spokane International Airport Master Plan Update, it was projected that there would be more than 2.5 million enplanements in the year 2010, increasing to 3.3 million by 2020.
- Right-of-Way Considerations: Spotted Road currently has 80-foot right-of-way except at the intersections with Airport Drive where it becomes 100 foot wide. Right-of-way was not considered a factor as all land is owned by the Airport.
- Posted Speed Limit Considerations: A reduction in the current speed limit on Airport Drive was considered, but it was felt that because of roadway geometrics drivers would often exceed the speed limit and the desired safety level would not be achieved.
- Sight Distance Analysis: Analyses at the intersections occurred to determine if adjacent foliage or other items impeded drivers view of oncoming traffic. It was determined that multiple evergreen trees obstructed views at the stop bar locations at Inbound Airport Drive and northbound and southbound Spotted Road. Other minor sight triangle obstructions exist for trucks at all intersection locations.

2008 – Spotted Road Lane Reconstruction Project

Design documents were prepared to address safety issues with the addition of turn lanes as concluded in the 2006 study. Construction occurred in 2008 and included the reconstruction of acceleration and deceleration lanes.

2013 – Spotted Road Lane Reconstruction Project

Design documents were prepared for the installation of overhead flashing red lights and illuminated "STOP" signage at the Spotted Road and Inbound and Outbound Airport Drive intersections to further enhance safety at the two high-crash intersection locations. Construction of the designed improvements occurred at both intersections in 2013.

2014 – West Plains/Spokane International Airport Transportation Study

In 2014 the Spokane Regional Transportation Council (SRTC) completed a 2-year process of preparing a multimodal transportation study of the area north and west of I-90. Partners of the transportation study included the Airport, City of Airway Heights, City of Medical Lake, City of Cheney, Spokane County, Washington State

Department of Transportation, Spokane Tribe, Kalispel Tribe, SRTC, Spokane Transit Authority (STA), Inland Power & Light, the Cheney School District, Fairchild Air Force Base and the surrounding developing areas. The study was performed to address long-term transportation needs of the "West Plains" area and to facilitate coordination and cooperation at the local, regional and statewide levels.

Forecasted development in the study area is significant and a considerable amount of effort was performed to review proposed development which combined would far exceed historic growth rates. A primary factor of the study was likelihood of development, which considered official actions taken such as platting, permitting, Transportation Impact Analyses, Environmental Impact Studies, property purchases and groundbreaking. All of these actions would increase the likelihood of actual development. This review was used to update the SRTC regional model demographics and test the benefits of several alternatives that were developed.

2014 – Spokane International Airport Master Plan

The Airport completed a Master Plan for the airport's future development and operation. The Master Plan identified that in 2010, passenger Enplanements were at nearly 1.6 million and by 2025 were expected to rise to more than 2.6 million. The forecasted growth rate for enplanements was a 3.42% compounded annual growth rate.

The Airport Master Plan recognizes the safety issues at the Spotted Road intersections at Inbound and Outbound Airport Drive. It mentions that the safety improvement being considered was constructing an overpass of Spotted Road at Airport Drive to eliminate the intersections. It was recommended that both directions of Airport Drive be co-located so that an interchange could be built with a single bridge structure instead of two. The Airport Master Plan discusses Land Use Compatibility and the RPZ and their importance for both aircraft and people and development on the ground. Areas within the RPZ are to be kept as clear as possible.

Horizon 2040 Transportation Plan – SRTC

The Spokane Metropolitan Transportation Plan (MTP), Horizon 2040, was prepared by the Spokane Regional Transportation Council (SRTC) and adopted in 2013. A Long-Range Regional Transportation Plan is required to be prepared by each Metropolitan Transportation Planning Organization in the United States and updated every five years. This process is undertaken to identify both needs based transportation improvements as well as fiscally constrained improvements or those improvements that can be reasonably expected to be afforded within the available financial resources of the planning area. This study was primarily utilized to forecast growth in the region. This project is consistent with SRTC's Regional Long Range Transportation Plan, and can be found here.

2015 – Airport Pavement Management Plan

The 2015 Airport Pavement Management Plan identified sections of Spotted Road within the project limits as having a Pavement Condition Index (PCI) ranging from 25 to 85. This PCI range indicated that the roadway is

deteriorating and may require significant construction activities to occur, which may be the wrong kind of investment as there will be no further safety improvements that can be made at the at-grade intersections.

2015 – Airport Drive Couplet Traffic Study

In 2013, the Airport, in partnership with SRTC and the Washington State Department of Transportation, secured funding to perform a current traffic study specific to the Spotted Road/Airport Drive intersections and determine appropriate improvements to provide safe and efficient access to the Airport and the surrounding area.

This study evaluated the intersection for additional safety and capacity improvements for short, intermediate and long-term needs. Other improvements in the region will influence traffic patterns in and around the area and appropriate coordination with these studies as well as the Airport Master Plan was conducted as part of this study.

2019 – West Plains Transportation Subarea Plan

The subarea plan acknowledged that safety improvements as well as transit and non-motorized improvements were needed at the Spotted Road and Airport Drive intersections. The public noted the lack of north-south and east-west arterial roadways in the study area. Nine alternatives were developed to address long-range solutions to congestion in the study area. The most effective alternative to reducing congestion and adding an additional east-west roadway to promote connectivity and redundancy of the transportation infrastructure was a new minor arterial connecting to and paralleling US 2 along the 21st Avenue alignment from west of the City of Airway Heights to the vicinity of the Airport Drive/US 2 interchange. The alignment of this roadway would cross Spotted Road between Inbound Airport Drive and US 2. Both a 3-lane roadway and a 5-lane roadway were evaluated. The study indicated that although the capacity provided by a 5-lane roadway was more than what is needed for the next twenty years, reserving right-of way for a 5 lane facility should be discussed amongst local transportation decision-makers.

The Airport Drive overpass at Spotted Road will be added to the Spokane Regional Transportation Council Transportation Improvement Plan (TIP) and the Washington State Department of Transportation Statewide Transportation Improvement Program (STIP) by September of 2021 which will ensure that project funding is obligated well ahead of September 2024 and the project receives the support necessary from local and regional government entities to be successfully completed.

2020 – Traffic Count Collection and Traffic Study

The Airport conducted a year-long traffic count data collection effort and performed a traffic study of key intersections within the Airport property between 2019 and 2020. The traffic counts were collected for 1 week in August, October, and December of 2019, prior to the COVID pandemic halting airport and employment travel in Washington, with the final analyses completed in 2020.

Traffic counts in August were completed between Sunday, August 4th through Sunday, August 11th, 2019. These counts are estimated to reflect the high peak enplanements as documented through historical Airport data. The average weekday traffic collected on the study roadways between August 4, 2019 and August 11, 2019 is shown below.

Segment	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1: Airport Drive Inbound between Spotted Road and Flint Road	7,402	8,191	8,459	8,260	**8,704**	**8,606**	6,690	7,568
2: Airport Drive Inbound West of Flint Road	6,938	7,185	7,489	7,101	**7,597**	**7,165**	5,885	6,733
3&4: Airport Drive Outbound West of Flint Road	8,531	8,730	8,879	8,797	**9,360**	**9,112**	7,514	8,169
3: Airport Drive Outbound from Parking Garage	1,335	1,278	1,281	1,465	**1,623**	**1,588**	1,118	1,200
4: Airport Drive Outbound from Curbside Dropoff	7,196	7,452	7,598	7,332	**7,737**	**7,524**	6,396	6,969
5: Airport Drive Outbound between Flint Road and Spotted Road	7,468	8,062	8,158	8,233	**8,500**	**8,243**	6,695	7,282
6: Flightline Boulevard North of Geiger Boulevard	2,373	3,778	**4,221**	3,988	3,925	**3,973**	2,969	2,417

**Note: Segment 7 was not included in the analysis.*

The average and 85th percentile speeds on the study roadways between August 4th and August 11th are shown below.

Segment	Speed Limit (MPH)	Average Speed (MPH)	85th Percentile (MPH)	Difference (MPH)
1: Airport Drive Inbound between Spotted Road and Flint Road	50	49	54	4
2: Airport Drive Inbound West of Flint Road	35	41	47	12
3: Airport Drive Outbound from Parking Garage	20	31	37	17
4: Airport Drive Outbound from Curbside Dropoff	20	26	30	10
5: Airport Drive Outbound between Flint Road and Spotted Road	50	49	53	3
6: Flightline Boulevard North of Geiger Boulevard	30	34	38	8

The average weekday truck percentages on the study roadways between August 4th and August 11th are shown below.

Segment	Class 1: Motorcycle	Class 2: Passenger Cars	Class 3: Pickups, Panels, and Vans	Class 4: Busses	Class 5: Single-Unit 2-Axle Trucks	Class 6: Single Unit 3-Axle Trucks	Class 7+: Multi-Axle Heavy-Duty Trucks
1: Airport Drive Inbound between Spotted Road and Flint Road	<1%	76%	18%	<1%	4%	<1%	<1%
2: Airport Drive Inbound West of Flint Road	<1%	76%*	20%*	<1%	13%	<1%	<1%
3: Airport Drive Outbound from Parking Garage	<1%	76%	20%	<1%	4%	<1%	<1%
4: Airport Drive Outbound from Curbside Dropoff	<1%	77%	18%	<1%	5%	<1%	<1%
5: Airport Drive Outbound between Flint Road and Spotted Road	<1%	78%	17%	<1%	3%	<1%	<1%
6: Flightline Boulevard North of Geiger Boulevard	<1%	64%	21%	3%	6%	1%	<1%

**Note: The Class 2 and Class 3 percentages for location 2 were reported as 35% for Class 2 and 49% for Class 3. Using engineering judgement, it appears that these two values are inaccurate, and are likely due to a reporting error with the tube counter.*

The traffic counts collected in December 2019 reflect the estimated high peak vehicle cargo durations as documented through historical Airport data. The average weekday traffic collected on the study roadways between December 5, 2019 and December 12, 2019 is shown below.

Segment	Thursday*	Friday	Saturday	Sunday	Monday	Tuesday*	Wednesday*	Thursday
1: Airport Drive Inbound between Spotted Road and Flint Road	3,934	**7,271**	5,122	5,890	7,138	5,200	2,875	**8,508**
2: Airport Drive Inbound West of Flint Road	3,174	**6,082**	4,691	5,432	6,305	4,613	2,230	**7,099**
3&4: Airport Drive Outbound West of Flint Road	4,626	**7,448**	5,993	6,904	**7,668**	4,919	3,412	3,705
3: Airport Drive Outbound from Parking Garage	1,227	**1,738**	1,262	1,424	1,438	822	888	**1,784**
4: Airport Drive Outbound from Curbside Dropoff	3,399	**5,710**	4,731	5,480	**6,230**	4,097	2,524	1,921
5: Airport Drive Outbound between Flint Road and Spotted Road	4,306	**6,885**	5,308	6,194	7,165	4,730	3,200	**7,981**
6: Flightline Boulevard North of Geiger Boulevard	2,361	**3,984**	2,712	2,288	3,770	2,791	1,616	**4,241**
7: Flint Road North of Airport Drive	1,899	**3,415**	2,256	2,147	2,977	1,915	791	**2,989**

**indicates a day of partial data collection (see Traffic Count Collection)*

The average and 85th percentile speeds on the study roadways between December 5th and December 12th are shown below.

Segment	Speed Limit (MPH)	Average Speed (MPH)	85th Percentile (MPH)	Difference (MPH)
1: Airport Drive Inbound between Spotted Road and Flint Road	50	50	54	4
2: Airport Drive Inbound West of Flint Road	35	37	42	7
3: Airport Drive Outbound from Parking Garage	20	30	36	16
4: Airport Drive Outbound from Curbside Dropoff	20	26	30	10
5: Airport Drive Outbound between Flint Road and Spotted Road	50	52	57	7
6: Flightline Boulevard North of Geiger Boulevard	30	34	38	8

The average weekday truck percentages on the study roadways between December 5th and December 12th are shown below.

Segment	Class 1: Motorcycle	Class 2: Passenger Cars	Class 3: Pickups, Panels, and Vans	Class 4: Busses	Class 5: Single-Unit 2-Axle Trucks	Class 6: Single Unit 3-Axle Trucks	Class 7+: Multi-Axle Heavy-Duty Trucks
1: Airport Drive Inbound between Spotted Road and Flint Road	<1%	81%	15%	<1%	2%	<1%	<1%
2: Airport Drive Inbound West of Flint Road	<1%	71%	22%	<1%	6%	<1%	<1%
3: Airport Drive Outbound from Parking Garage	<1%	64%	26%	<1%	9%	<1%	<1%
4: Airport Drive Outbound from Curbside Dropoff	<1%	67%	24%	<1%	8%	<1%	<1%
5: Airport Drive Outbound between Flint Road and Spotted Road	<1%	76%	17%	<1%	4%	<1%	<1%
6: Flightline Boulevard North of Geiger Boulevard	<1%	62%	22%	5%	7%	1%	3%
7: Flint Road North of Airport Drive	<1%	72%	20%	2%	3%	<1%	<1%

The conclusions of this in-depth traffic study included monitoring the speeds along Airport Drive and continue to pursue safety countermeasures at Airport Drive and Spotted Road to enhance the roadway network safety.

Statement of Work

Spotted Road will be realigned to the east and located outside the RPZ. In moving Spotted Road to the east, the existing Spotted Road intersections with Airport Drive Inbound and Outbound will be relocated to a grade-separated structure east of the current location and along the new Spotted Road alignment. Spotted Road will be elevated over Airport Drive allowing adequate height for large vehicles to pass under the bridge. The Spotted Road bridge will contain roadway, pedestrian, and landscaping lighting. The off-ramp intersections with Spotted Road will be stop controlled, with provisions for future improvements including traffic signals, which allows for forward compatibility to accommodate future growth in the area. The bridge and supporting structures, including streetlights, will remain well under the Part 77 FAA height limitations.

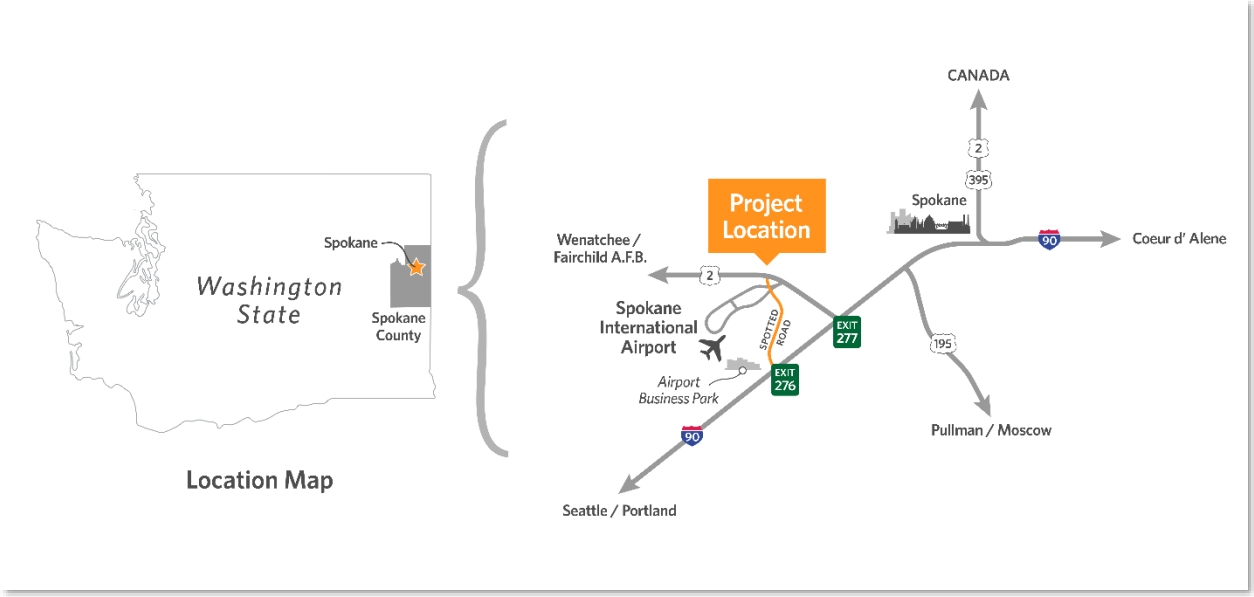
Spotted Road over Airport Drive will provide for one lane in each direction with shoulders, bicycle and pedestrian facilities. The design will include necessary turn lanes to remove traffic from the throughput and enhance the safety of the project. This allows for Spotted Road traffic to travel unimpeded, which reduces emissions from the current stop-controlled configurations.

Airport Drive will remain as two lanes in each direction with designated shared-use for bicycle and traffic lanes. Changes to Airport Drive will be minimal as the Spotted Road bridge will span Airport Drive, aiding in cost savings through innovative bridge design. Streetlighting at the on-ramp and off-ramp locations will occur to signify merge and diverge locations, adding to the safety of the project. Signage and striping changes on Airport Drive will also be implemented to better guide travelers through the interchange configuration and will provide a better traveling experience for Airport traffic.

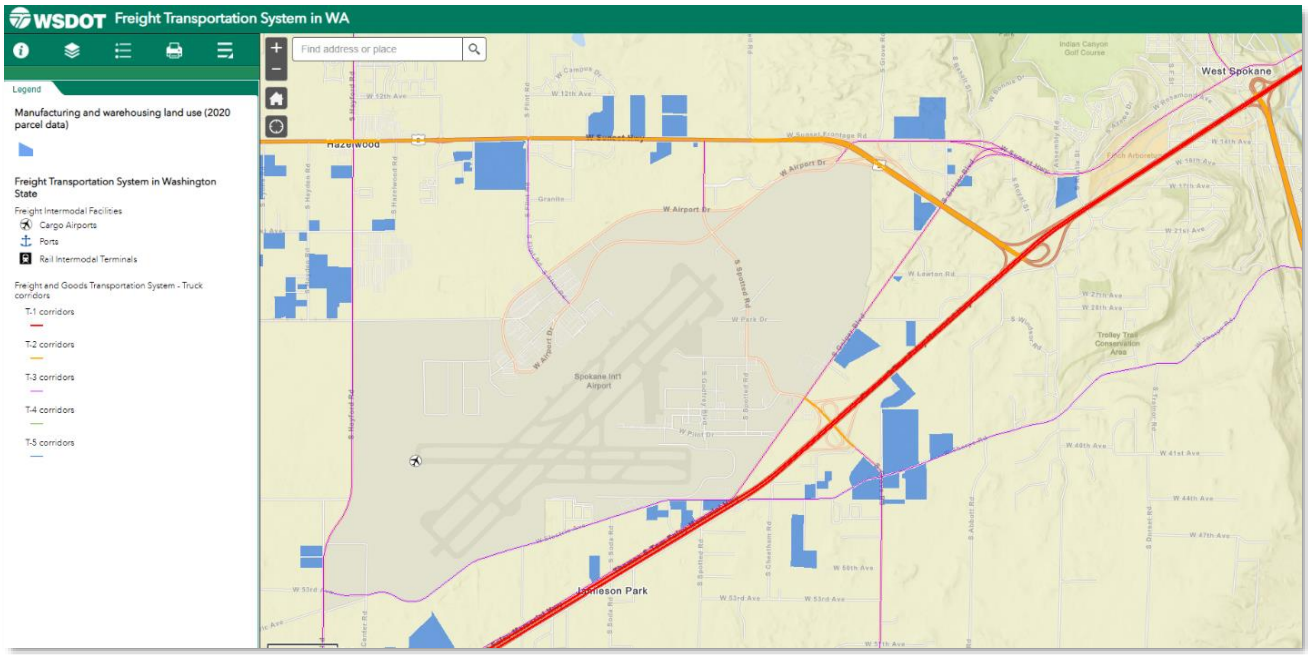
The south leg of the existing Spotted Road and Airport Drive Outbound intersection will remain but will be gated to provide access to Airport personnel only. The north leg of the existing Spotted Road and Airport Drive Inbound intersection will remain but will be converted to a right-in/right-out only intersection, allowing localized access to the north of Airport Drive. The segment of Spotted Road between Airport Drive Inbound and Outbound will be removed.

II. Project Location

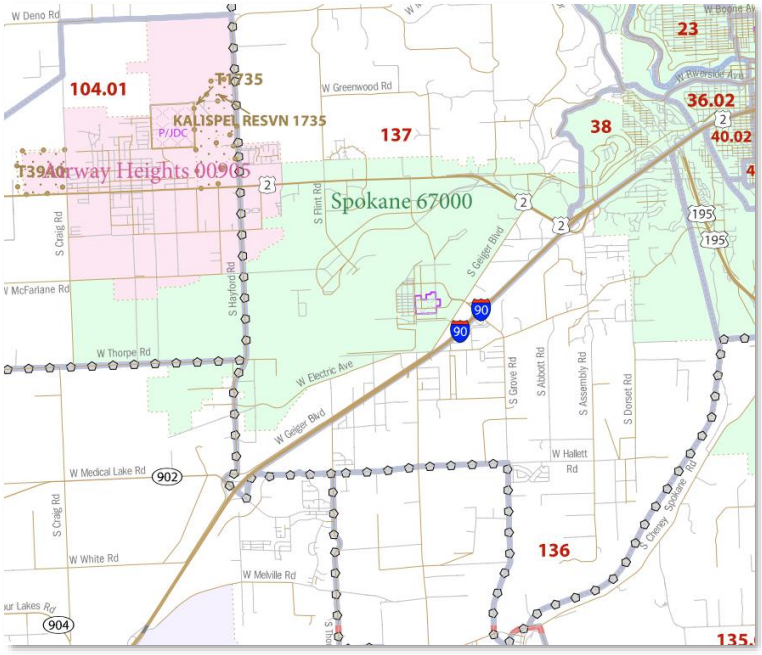
The project site is located in Spokane County, Washington within Spokane City limits and provides a vital connection to major regional employment centers in Spokane County.



Spotted Road north of Airport Drive has been designated a T-3 level Critical Urban Freight Corridor (CUFC) route, with freight weighing between 300,000 tons and 4 million tons annually transported on the road. Spotted Road and Airport Drive both connect into US 2, a T-2 level CUFC (4 million to 10 million tons of freight transported annually) and a National Highway System (NHS) route that connects into I-90, itself an NHS route and a T-1 level CUFC (over 10 million tons of freight transported annually). The project also connects to the Sunset Highway, a T-3 level CUFC that leads to downtown Spokane.



The project is situated within the S3R3 Solutions area of influence. The public development authority, S3R3 Solutions, was created in 2017 through an interlocal agreement between the City of Spokane, Spokane County, and the Airport to provide physical infrastructure and a financing model mechanism to foster this development. 75% of local government tax revenue generated within the S3R3 Solutions 9,000-acre boundary stays within the development authority for investment in infrastructure development and other related initiatives to retain and expand commerce in the immediate vicinity of the Airport. The project is entirely within the development authority boundary limits and enhances the safety for the movement of manufacturing and industrial goods throughout the area. In addition, the project is located within U.S. Census Tract 137 and is adjacent to Opportunity Zone 53063010401 immediately west of the Airport.



The Spotted Road corridor is also used by the Cheney School District as a primary bus route to nearby residential neighborhoods. The school district operates bus routes passing through the Spotted Road intersections four times a day. The project enhances the safety by reducing conflict points between school buses and vehicles entering and exiting the Airport.

III. Grants, Funds, Sources and Uses of all Project Funding

Project Costs

The estimated total project cost for construction of the Spotted Road Multimodal Transportation Infrastructure Safety Improvements is $28.7 million. The Airport has already incurred $3.4 million in costs to advance this much needed safety project over the last decade through planning studies, evaluations, and construction of mitigation measures to date, including the Environmental Assessment that will be submitted to FAA for NEPA review this summer. The previous mitigation costs already incurred are summarized below.

Previous Mitigation Costs			
Project Effort	**Agencies**		**Cost**
	WSDOT	**Local Match/Airport**	
Planning Studies/Mitigation	$150,000	$2,870,000	$3,020,000
Enviro/Prelim Design		$397,324	$397,324
Total	**$150,000**	**$3,267,324**	**$3,417,324**

In addition, the Airport will be releasing a Request for Qualifications to complete the preliminary engineering upon approval of the Environmental Assessment by the FAA. The preliminary engineering expenses are estimated to be near $2 million, which will be funded by the Airport. A summary of project costs is below.

Spotted Road Interchange and Realignment Total Project Costs						
Project Effort	**Agencies**				**Cost**	**RAISE % of Total Cost**
	WSDOT	**AIP[3]**	**Airport Local Match**	**USDOT RAISE**		
Planning Studies & Mitigation[1]	$150,000		$2,870,000		$3,020,000	0%
Enviro/Prelim Design[1]			$397,324		$397,324	0%
Design[2]			$2,000,000		$2,000,000	0%
Construction[2]		$5,000,000	$4,000,000	$14,300,000	$23,300,000	61%
Total	**$150,000**	**$5,000,000**	**$9,267,324**	**$14,300,000**	**$28,717,324**	**50%**

1. Previously Incurred Costs
2. Future Eligible Costs
3. 7.5% ticket fee collected on each airline ticket and dispensed by the FAA through Congress Appropriations

Source and Amounts of Funds

Funds for future eligible costs consist of secured and unsecured sources. The secured sources account for 43.5% ($11.0 million) of the total future eligible costs from non-RAISE sources. The Airport is requesting $14.3 million dollars in RAISE grant funding which accounts for 50% of the total project costs and 56.5% of total future eligible costs. A summary of the funding sources and amounts is below.

Future Eligible Costs Funding Sources				
Funding Category	**Funding Source**	**Status**	**Total (millions)**	**%**
Non-Federal	Spokane International Airport	Secured	$6.0	23.7%
Non-Federal	Federal Aviation Administration	Secured	$5.0	19.8%
RAISE	FY2021	Requested	$14.3	56.5%
Total			**$25.3**	**100%**

Uses of Funds

The majority of future eligible funds will be utilized for construction activities of the project. Preliminary engineering (design) is expected to start Summer 2021. The Airport owns the surrounding property around the project, and therefore no property acquisition is required. A summary of which funds are being utilized and how they will be utilized on this project is provided below.

Project Component	Secured Federal Funds (millions)	Secured Non-Federal Funds (millions)	RAISE Funds (millions)	Total Future Project Costs (millions)
Preliminary Engineering/Design		$2.0		$2.0
Construction	$0	$9.0	$14.3	$23.3
Total	**$0.0**	**$11.0**	**$14.3**	**$25.3**

Secured Funding Conditions

The funding secured from FAA and the Airport will not be impacted by any RAISE grant award.

IV. Selection Criteria

Primary Selection Criteria

Safety

The primary objective of this project is human safety. The most recent twelve years (2009-2020) of traffic incidents at the Spotted Road and Inbound/Outbound Airport Drive intersections collected identified over 70 collisions involving over 130 vehicles, resulting in 1 fatality and 69 injuries, 30 of which have been serious or potentially disabling. Despite recent infrastructure and safety mitigation improvements collisions continue to occur at these intersections. This project aims to improve safety and reduce future collisions.

2009-2013:
1 Fatality
31 Injured
58 Vehicles Involved

2014-2020:
38 Injured
80 Vehicles Involved

Spokane International Airport was first known as Geiger Field in 1939, where it served as a World War II facility. Commercial service was later transferred from Felts Field in the late 1940s to Geiger Field, solidifying the Airport as GEG. Geiger Field was later renamed to Spokane International Airport in the late 1950's, when the population of Spokane was around 122,000. Today, the current population of Spokane exceeds 222,000 and the Airport is experiencing an annual growth of approximately 10% in commercial air traffic and 8% in cargo air traffic. The original infrastructure in the area around the Airport cannot safely support the associated increase in traffic volumes and future development. The area north of Airport Drive has since been built up and industrial, light industrial, and manufacturing businesses have been developed in this area, making Spotted Road part of the Critical Urban Freight Corridor (CUFC). This has resulted in an increase of traffic through the area, particularly using Spotted Road to connect the businesses

surrounding the Airport with the regional transportation infrastructure. Vehicle traffic volumes along this corridor are expected to grow by 20% over the next decade as a result of future development and an increase in air traffic at the Airport.

The current intersection layouts allow for Airport Drive traffic to remain unimpeded, making it easy for Airport travelers to gain access. Spotted Road crosses both Inbound and Outbound Airport Drive with a short segment in between. Numerous collisions at these intersections over the years have prompted several studies including a Traffic Impact Analysis, a Sight Distance Analysis, Posted Speed Limit Considerations, and subsequent planning and feasibility studies.

In an attempt to improve safety in the short term, additional infrastructure and safety measures have been added to the intersections such as yield signage, wide solid stop bars, painted islands to designate turn lanes, through and turn lane arrows, wrong way and one-way signage, rumble strips, Stop Ahead signs with flashing lights, overhead flashing beacons, and real time speed notification signs. Landscaping was also removed to improve intersection sight distances. Despite these efforts to reduce collisions and improve safety, there has been a minimal decrease in the number of collisions at the intersections. There have been over 130 vehicles involved in collisions at these intersections since 2009, resulting in 69 people being injured and one fatality. In order to keep people safe, the interchange between Spotted Road and Airport Drive must be constructed. Studies show that a grade-separated interchange at this location would reduce collisions by 80%.

Airport Drive is the only access route to and from the Airport terminal. The current alignment of Airport Drive east of Spotted Road includes a superelevation along a horizontal curve. This extreme curvature ahead of the Spotted Road intersection reduces sight distance for inbound Airport traffic and makes it difficult for motorists to judge vehicle closing speeds at the intersection. This geometric problem is exacerbated in times of low visibility conditions attributed to dense fog that occurs seasonally as well as heavy and/or blowing snow. The current alignment of Spotted Road crosses Airport Drive twice – once crossing inbound traffic to the Airport and again crossing outbound traffic from the Airport. Crossing Airport Drive in such close proximity to the Airport presents unique risks with respect to traffic.

Inbound airport travelers present risks as people are:

- Rushing to catch a plane or pick up a loved one, often times leading to increased travel speeds despite radar speed feedback devices
- Distracted by the upcoming steps on their journey (dropping off a rental car, where to park, which entrance to go to, arriving at work)
- Possibly not familiar with the road
- Distracted by emotional factors (potential nervousness around air travel, for example)
- Nearing their destination where the upcoming steps of their journey will require action

Outbound airport travelers present risks as they are:

- Tired from traveling
- Relieved to be "home" and anxious to leave the Airport, often times leading to increased travel speeds despite a speed feedback devices just ahead of the Spotted Road intersection
- Emotional from having just picked up or dropped off a loved one
- Possibly not familiar with the road
- Nervous about driving an unfamiliar vehicle (i.e. rental car) in an unfamiliar setting (for out-of-towners) and trying to get their bearings
- Thinking about the next steps of their journey (e.g. upcoming business meeting, wedding, funeral, vacation, etc.)

Traffic on Spotted Road largely consists of commercial and industrial traffic, and these travelers also present risks as they:

- Are carrying heavy loads, often times accelerating slowly to cross the roadways
- Have to stop and start twice in sort order to cross both segments of Airport Drive, leading to excessively slow speeds crossing each section of Airport Drive
- Are possibly not familiar with the road
- Are likely not considering the unique risks that present with inbound and outbound airport travelers when making driving decisions

By realigning the crossing of Spotted Road and Inbound and Outbound Airport Drive, and constructing a grade-separated interchange, we are protecting the safety of:

- Local business and agency employee traffic
- Local school bus and student traffic
- Local, regional, and national freight traffic
- Out-of-town visitors, including US citizens and International travelers

The new interchange improves safety by eliminating the two intersection points of Spotted Road with Airport Drive and replacing them with a single overpass with on-ramps and off-ramps. Vehicle traffic on Spotted Road will cross Airport Drive via overpass with the new design, thereby eliminating the risk of bisecting traffic flows. The intersections of the ramps with Spotted Road will be designed to meet current American Association of State Highway Transportation Officials (AASHTO) criteria and will provide adequate sight distance to enhance the interchange safety. The new interchange design will consider freight, passenger, shuttle and bus, bicycle, and pedestrian traffic to and from the Airport, thereby supporting a safe multimodal transportation network. The crash reductions by converting at-grade intersections into a grade-separated interchange is 42% (CMF ID 459).

The project will also include streetlighting in the design, which will illuminate vehicle conflict points as well as bicycle and pedestrian facilities. The installation of streetlighting will reduce crashes that occur during dark hours. Additionally, the project will provide dedicated pedestrian facilities that meet the Americans with Disabilities Act (ADA) criteria along Spotted Road, thereby reducing the conflict of pedestrians and vehicles and providing an accessible route for all pedestrian traffic. The crash reductions of nighttime crashes by installing street lighting at the new interchange is 69% (CMF ID 191).

As the development of the West Plains area progresses, Spotted Road will experience an increase in traffic. As the region's general population increases, there will be a correlated rise in airport use and therefore an increase in traffic along Airport Drive. As traffic increases along both of these roadways there will naturally be an increased

risk of collision. Given that this is already a high-risk intersection of roads, inaction to mitigate that risk will most certainly result in more collisions resulting in injury or death. To protect the safety of all road-users, action must be taken to reduce the risk at the intersections of these two roads.

By aligning over half the new road with an existing road we can recycle old materials, reduce the need for new materials, and reduce the footprint of the project.

Numerous studies have been conducted to determine the most feasible option for addressing the safety concerns associated with these intersections. Nine alternatives were developed and studied, with further evaluation being conducted on five alternatives to determine the most viable alternative. It was determined that grade-separating Spotted Road from Airport Drive through installation of a new interchange is the most effective alternative for reducing traffic accidents and enhancing safety along these vital corridors.

While neither of the roads involved are part of a Hazardous Goods Route, vehicle fluids such as oil and fuel are often released to the environment in the event of a collision. Preventing collisions protects against the unnecessary release of vehicle fluids into the environment, thereby protecting the entire ecosystem.

The improvement of the interchange between Spotted Road and Inbound and Outbound Airport Drive will protect the safety of the environment and of all travelers who use these roads while having the added benefit of improving efficiency for visitors, commuters, transit users, and freight traffic along these critical travel routes.

Environmental Sustainability

The Airport and all project partners understand the value and importance of incorporating environmentally sustainable designs and practices into a project. While the primary driver of this project is improving safety, environmental stewardship and sustainability have been considered and are at the forefront throughout the design phase.

Climate Change

The design of the new interchange considers climate change and protects the environment by:

- Minimizing the footprint of the new interchange
- Protecting wildlife and natural vegetation while protecting aircraft safety
- Managing stormwater during and after construction
- Recycling materials and using existing infrastructure where possible
- Reducing the travel time and vehicle delay
- Reducing vehicle emissions
- Implementing LED streetlighting
- Forecasting future traffic patterns to reduce the likelihood for re-development (and therefore further construction)
- Leaving the existing infrastructure in place and developing a re-use plan for it (namely, maintenance and emergency access)
- Stipulating that environmentally sustainable construction practices be followed

A major consideration in the new design was aligning approximately 60% of the new road with an existing roadway that travels around the RPZ toward the new interchange. Full-depth reclamation will be used along this existing roadway to reduce the need for new materials by recycling the existing asphalt pavement and pavement sections.

Limited wildlife utilize this corridor; however, protection of wildlife was considered during the conceptual design phase and will be carried forward throughout the final design. Due to the proximity of the intersection to the Airport and the RPZ, it is important to minimize bird attraction to the area for the safety of the birds and airplane traffic. While similar interchanges elsewhere may incorporate stormwater ponds that serve as wetlands to attract and support birds, in this project the design has specifically eliminated exposed surface water to deter birds.

The Airport's stormwater system is fully contained on Airport property and does not discharge to any navigable waters of the US or surface waters of the State. The system has three outfall areas that drain to the east area of the Airport and are fully managed and maintained by the Airport, under a State Waste Discharge Permit by Rule approved by the Washington State Department of Ecology.

Environmental impacts caused by the intersection between Spotted Road and Inbound and Outbound Airport Drive are minimal and primarily related to idling vehicle emissions. The redesign of the intersection will reduce traveling and idling time for vehicles traveling on Spotted Road, thereby reducing overall vehicle emissions.

In addition, environmental considerations have been made in planning the construction phase of the project. Pre-cast concrete materials will be used to accelerate bridge construction. This means the project will be completed faster, thereby reducing costs and emissions caused by construction-related traffic delays. Landscaping in the final construction stages will utilize native grasses and plant species to maintain consistency with the natural ecosystem.

Due to the nature of this project, there are limited opportunities to explore measures for reducing climate change effects, introducing zero emission vehicle infrastructure, or reducing air or water pollution.

The completion of the interchange will provide the necessary infrastructure to accommodate for roadway network resiliency in the future, allowing the connection of the proposed 21st Avenue parallel east-west arterial extension. This proposed road expansion will provide a redundant arterial network to US 2 and provide for a second arterial route in the area to connect with interchanges along I-90, which can then be utilized for emergency evacuation.

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people so that they may enjoy the same degree of protection from environmental and health hazards and have equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

While this project was not instigated by environmental injustice, it has the consequential benefit of protecting all local residents and travelers along this corridor as they benefit from safer traffic patterns, whether they utilize these roads for business or pleasure. No cultural impacts are associated with this project.

Quality of Life

Improved safety and job creation resulting from this project will improve the quality of life for local residents and anyone who uses the Airport for business or personal travel. In addition to improving safety and reducing medical bills associated with vehicle collisions, improved pavement conditions will ultimately reduce the cost of vehicle repairs for businesses and the general public, thereby improving quality of life.

This project will protect the safety of over **4 million people each year**.

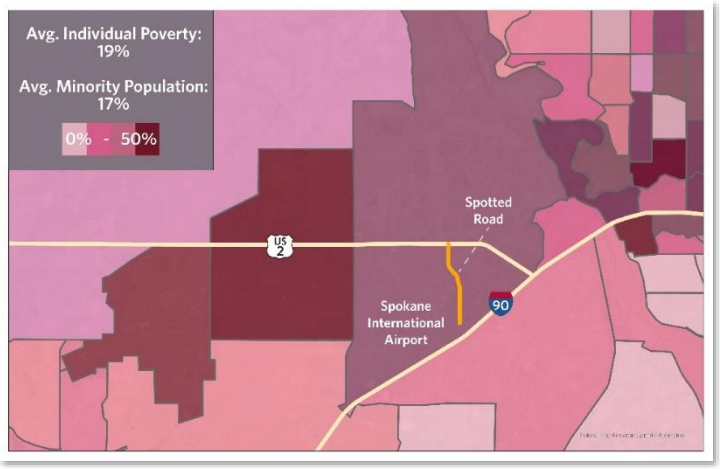
The Airport provides competitive transportation options for over 4 million people each year. These people are traveling for business or personal reasons and trust that the infrastructure and transportation options are safe. Industrial/cargo carrier drivers who use Spotted Road are primarily employees, and these employees deserve to work in a safe environment. Since 2009 at least 69 people have been injured and one life lost at the existing intersections of Spotted Road and Inbound and Outbound Airport Drive. These people and their families have been adversely affected by the tragedy of vehicle collisions, and there are associated financial, physical, emotional, and mental impacts resulting from these collisions. By rebuilding a safer roadway system we are protecting the lives of everyone who uses these two roadways.

Separating this Critical Urban Fright Corridor route from the commuter and passenger vehicles traveling to and from the Airport will protect everyone's safety. Bike routes and walkways have been incorporated along Airport Drive and are being included in the Spotted Road design, allowing for safe intermodal connectivity for cyclists, pedestrians, motorists, and air travelers. The design also allows for public transit to move safely along these routes.

As safety is improved around the Spotted Road and Inbound and Outbound Airport Drive intersections, a positive travel experience will enhance tourism and further support commercial and industrial development in the West Plains area. Development is further supported by efficiency introduced by the new interchange design, which will ultimately create more employment opportunities in this area. Additionally, industrial expansion could provide employment opportunities in the construction sector as new facilities are built as well as generate permanent jobs for local residents at companies that have come to the Spokane region. The new overpass design provides every worker in this region improved safety on a daily basis by removing the risk associated with the dangerous intersections.

Racial Equity Barriers to Opportunity

Given the nature of this project, there is not anticipated to be a significant impact to underserved or disadvantaged communities, or communities that are underserved by transportation.

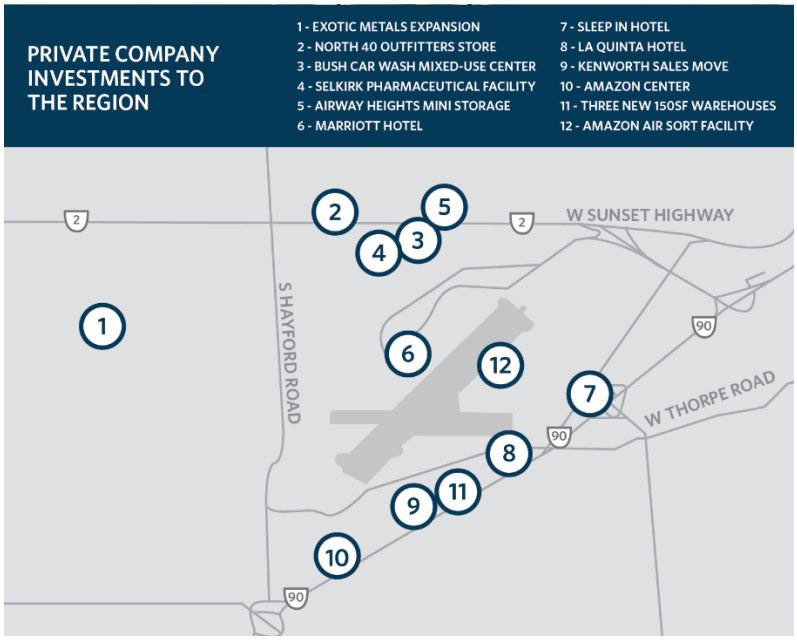


According to the 2010 Census, the population around the West Plains area grew by nearly 19% from 2000 to 2010 – a growth rate higher than that of both Spokane County and the City of Spokane. This region provides a combination of inexpensive and largely undeveloped land, efficient multi-modal and intermodal transportation options, and close proximity to major employment locations (such as the City of Spokane). At that time, the area supported over 10,000 jobs. The median household income of the area was $47,620 in 2010 which is below the median income of Spokane County, Washington State and the United States. Improvement of infrastructure in this region will support continued growth and economic opportunity for residents of this area.

Economic Competitiveness

The Airport and industrial area are poised to support and enhance the regional economy, with an annual economic impact of $1.8 billion. The West Plains area is expected to add approximately 5,000 sustainable, family wage jobs to the region. These new jobs include entry points into the quickly advancing industrial, aerospace and technology, logistics and manufacturing positions coming to the Spokane region. Investing in improved traffic safety and efficiency will improve accessibility to Airport travel and support continued passenger, freight, aerospace and technology, industrial, and manufacturing growth in the regional economy. The project will improve long-term efficiency in traffic patterns by providing a safe, alternative route for Spotted Road travelers to cross Airport Drive. Improving safety reduces costs associated with collisions at these intersections and ultimately reduces costs associated with transportation of goods.

In addition to benefiting this critical regional economic engine, these infrastructure improvements will provide economic benefits through reductions in traffic congestion and travel time. Further, new infrastructure costs less to maintain allowing the Airport to allocate these savings to other needed development and infrastructure. The new infrastructure will improve the long-term efficiency, reliability, and economic competitiveness of the transportation system as it continues to support additional traffic due to regional growth. These improvements will support multiple modes of transportation including freight, commuter, and active and public transit.



Reducing risks to Airport employees and users as well as workers in the industrial region will make this area more accessible to industries and commercial businesses, thereby enhancing the economic strength of this region. Residents of Spokane County and the City of Spokane will benefit from economic growth which will ultimately create opportunities and increase property values in the region while having the significant benefit of improving their safety.

State of Good Repair

Spotted Road is part of Washington's Critical Urban Freight Corridor. Critical access through the corridor will be maintained throughout the construction phase of the project and overall efficiency will be enhanced by the new interchange design. Overall, the new infrastructure will require additional maintenance to the existing infrastructure but will have reduced repair costs for the next 20 years. The existing infrastructure is aging and will require further maintenance and upgrades, eventually leading to complete rebuilds.

The project includes leaving much of the existing infrastructure in-place, reducing the amount of waste generated by the project. The existing roadways may still be used by maintenance vehicles and emergency vehicles, thereby serving continued purpose. The roadways are currently in moderate condition and would be in need of significant maintenance and/or reconstruction, according to the 2015 Airport Pavement Management Plan. It is anticipated that, with minimal use for maintenance and emergencies, the infrastructure will stay in working-order for approximately 4 years.

The new infrastructure associated with the realignment of Spotted Road will be designed with sustainability in mind. New pavement and infrastructure will improve the pavement condition to enhance freight travel through this corridor. Preventative maintenance would be required for approximately 15 to 20 years, throughout which the Airport would incur reduced maintenance costs when compared against the option of maintaining the current roadway. The Airport is committed to the long-term maintenance of the new infrastructure both technically and financially.

By improving efficiency in the transport of goods, this project will help support sustainable revenue for businesses that use this corridor for the transport of goods, leading to reginal sustainable revenue.

If no action is taken to significantly change the infrastructure at this intersection, the current infrastructure will continue to threaten public safety as well as inhibit transportation and economic growth. The overall cost to protect safety in our society is negligible compared to the potential cost of inaction.

Secondary Selection Criteria

Partnership

Collaboration between several government entities and various stakeholders have contributed to the vision and current design of the project, including the City of Spokane, Spokane County, Washington State Department of Transportation, Fairchild Air Force Base, the Spokane Regional Transportation Council (SRTC), the Federal Aviation Administration (FAA), the Kalispel Tribe, and the Airport. These long-standing partners have worked together to address this public safety issue through performing multiple studies and conducting the planning and preliminary design of the project. These partners continue to work together to support the final design of the project and will support the construction phase through to completion. Each of the partners is committed to providing safe and effective transportation infrastructure to one of the region's key transportation hubs.

In addition to the public agency partners, S3R3 Solutions is fully supportive of the project as are the numerous existing industrial, aerospace and technology, and manufacturing businesses, including Amazon, Triumph, Parker Aerospace Exotic Metals Division, Kenworth, McKinstry, and FedEx.

Innovation

Innovative Technologies

The Spotted Road overpass will be the first and only overpass constructed at the Airport. Most of the construction work can be completed without impacting the current traffic flows, and a relatively seamless opening of the new road alignment can occur once the project construction is complete, thereby protecting safety of the construction workers as well as motorists traveling in the area during the construction phase. Smart work-zone Intelligent Transportation System (ITS) devices may be deployed during construction, including connected speed management systems.

Low impact, green infrastructure construction techniques will be incorporated. Re-use of existing roadways will allow recycling of construction materials as well as minimizing the ecological footprint of the new design. Stormwater design will minimize adverse impacts to wildlife and birds by considering the hazard of having birds in the Runway Protection Zone and eliminating standing water that might attract wildlife or birds.

Innovative Project Delivery

An innovative approach has been taken in the design by eliminating two hazardous intersections and realigning the roadway to allow vertical separation between the bisecting traffic flows. The project conceptual design is well underway, with the Environmental Assessment and NEPA approvals through the FAA anticipated this summer, which will expedite the schedule of the project. To keep the cost of the project to a minimum and expedite delivery, proven designs will be implemented, and standard construction processes will be followed. Pre-cast concrete will be used to accelerate bridge construction. More pointedly, Accelerated Bridge Construction (ABC) will be sought after to reduce the construction duration and limit impacts to the traveling public.

V. Demonstrated Project Readiness

Environmental Risk

All Federal, State, and local environmental approvals will be obtained prior to commencement of construction. This project is expected to obtain all environmental approvals through the Environmental Assessment (EA), currently underway and expected to be completed and approved this summer by the FAA to comply with NEPA. This project will not impact any wetlands or other 4(f) lands. All land is currently owned and controlled by the Airport. All environmental approvals are scheduled to be approved this summer prior to beginning design phases of the project.

Technical Capacity

The Airport has been managing a multimodal transportation system efficiently and effectively providing a gateway from the Inland Northwest to the world. The Airport has a team of design professionals with the design and management experience and expertise to complete the improvements on time and within budget. The Airport's Planning & Engineering department personally directs and oversees all planning, engineering, construction, and operations at the facility. Formulation studies previously completed have concluded that all aspects of the project are technically feasible.

As planning and environmental studies have largely been completed for the project, and with preliminary engineering soon to be underway beginning this summer, this project is on schedule and ready to complete all pre-construction services and obligate all grant funding well before September 30, 2024. The Airport Board has mechanisms in place to allow the project to proceed immediately and expeditiously to complete all phases of the project.

The Airport has been successful in implementing multimodal and safety projects using local and FAA federal dollars, including maintenance activities of the owned and operated facilities. The Airport continues to deliver airside projects that are funded by federal sources. The Airport is successfully delivering the Rail-Truck Transload Facility design using BUILD grant funds through the U.S. Department of Transportation and is meeting all reporting requirements.

Financial Capacity

The Airport has a vast amount of experience in efficiently administering Federal funds for infrastructure projects as well as managing cash flow and reporting on Federally funded projects. Given the project status with the EA anticipated to be approved this summer leading to the initiation of the preliminary engineering/design later this summer, the design is anticipated to be complete by spring of 2023 with obligation of construction funding in summer of 2023, well ahead of the September 30, 2024 obligation deadline.

The Airport local funding is secured and there is no financial risk associated with it. The preliminary engineering/design will be completed using Airport funding with no financial risk. The FAA federal funding is secured with no financial risk associated and will be used for construction activities.

The Airport is completely aware of the need to expend all grant funding by 2029 and currently has the project scheduled to complete construction by 2025, a full four years prior to the deadline. There are no legal, technical, or financial issues with the Airport that would make this a high-risk project.

The estimates completed to date for the project were created by local engineering professionals with a substantial amount of experience in the industry, who utilized recent and local unit pricing to provide an accurate, confident assessment of anticipated project costs. In addition, sufficient contingencies were added to each element along with estimates for industry inflation to coincide with the project schedule.

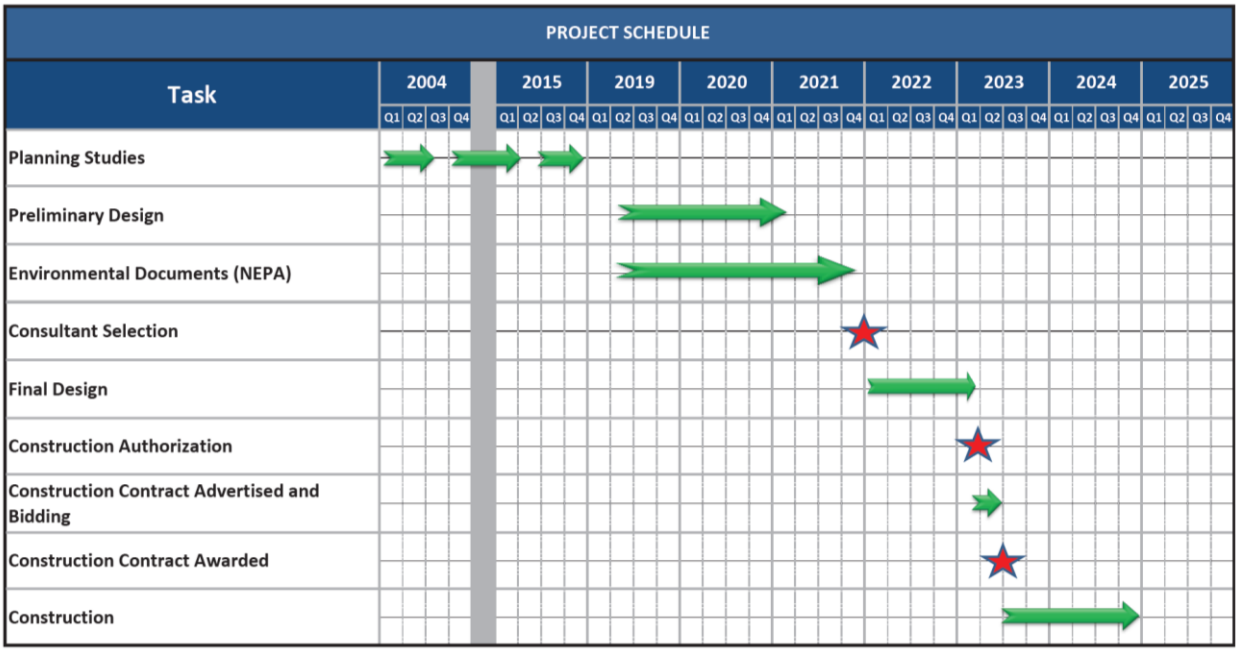
VI. Environmental Risk

In general, there are no complications anticipated to arise during the scheduling or permitting process of the project. The design and construction of the new interchange is relatively straightforward and there are no anticipated significant environmental concerns or risks associated with the project footprint. All Federal, State, and local approvals will be obtained prior to construction of the project.

Public engagement is the cornerstone of every Airport project. This project has undergone 17 years of public engagement, and stakeholder and business owner coordination will occur through both the design and construction phases. Public notices for timelines and updates of activity will occur throughout the construction process through public engagement and key stakeholder coordination.

Project Schedule

The project approval and construction milestones are shown below:



Key milestones include:

- Approved NEPA: Q4 2021
- Design Consultant Selection: Q1 2022
- RAISE Construction Funding Authorization: Q1 2023
- Construction Contract Advertised: Q1 2023
- Construction Bidding Closed: Q2 2023
- Project Construction Contract Award: Q3 2023
- Construction Complete: Q4 2024

It is anticipated that all project funds will be obligated by Q2 2023 and will be expended by September 30, 2029. All land is currently owned and controlled by the Airport, thereby eliminating the time consuming need to acquire property or right-of-way permissions.

Required Approvals

Environmental Permits and Reviews

This project will obtain all environmental approvals from the FAA to comply with NEPA.

The Environmental Assessment for this project is anticipated to be completed and approved this summer. The project does not impact any wetlands or other 4(f) lands (publicly owned parks, recreation areas, public or private historic sites, wildlife and waterfowl refuges, and other similar resources). All State Environmental Policy Act (SEPA) approvals will be completed through the design of the project, expected to begin after the NEPA approval this summer.

Environmental approval applications are underway and are not anticipated to cause any impacts to the proposed design or schedule of the project.

State and Local Approvals

All State and local environmental approvals will be obtained prior to construction of the project. US 2 is located approximately 0.5 miles northeast of the new interchange, with interchange ramps located less than 100 yards from the project footprint. As a result, WSDOT is engaged in the approval process, although the project falls under FAA's jurisdiction. The Airport will coordinate with WSDOT, as well as the City of Spokane, during the design process where necessary and will obtain necessary approvals for traffic control plans and other approvals as necessary.

Under SEPA, local governments and state agencies use an environmental checklist to help determine whether a proposal's impacts are likely to be significant. This helps determine:

- If an applicant can put measures in place to avoid, minimize, or counter adverse effects
- Whether compensatory mitigation measures can offset significant impacts
- If an environmental impact statement (EIS) needs to be prepared for further analysis

The project is prepared to complete the checklist during the design stage and does not anticipate any significant impacts to be identified.

Projects obligating Federal or State transportation funding are required to be included in the Washington State Transportation Improvement Program (STIP). In order to do this, the Airport must submit the project through the local Metropolitan Planning Organization, which is the Spokane Regional Transportation Council (SRTC) for Spokane County, for inclusion into the regional Transportation Improvement Program (TIP). Once accepted into the SRTC TIP, then the project can be included within the STIP. The Airport will coordinate with SRTC upon receiving federal transportation funding to get this project into the regional TIP and into the STIP for obligation of the federal funds. This process will not cause delays to the locally funded design and will be completed well in advance of obligation of construction funds.

Federal Transportation Requirements Affecting State and Local Planning

All Federal environmental approvals will be obtained prior to construction of the project.

Environmental approvals will comply with NEPA and FAA requirements. At this point, there are no anticipated complications associated with obtaining approvals based on the region and nature of the project. The project does not impact any wetlands or other 4(f) lands.

Assessment of Project Risks and Mitigation Strategies

All land is currently owned and controlled by the Airport, so there is no risk associated with obtaining land or authorizations from land owners. WSDOT will be involved as necessary to ensure their requirements are met during the project design and construction as will the City of Spokane for traffic control coordination during construction.

We don't anticipate complicated environmental risks associated with the project or on the project land. The primary project risks are related to health and safety. These risks will be managed by the construction contractor as with any construction project. Strategies will include maintaining a safe traffic flow for all travelers on both roadways during the construction of the new interchange.

The scope, schedule, and budget risks for this project are low to moderate as the design will be underway upon the RAISE grant award.

VII. Benefit Cost Analysis

The cost effectiveness of the Project was measured through a Benefit Cost Analysis (BCA) to monetize social benefits associated with the Project as thoroughly as possible. The BCA in support of the Project demonstrates a sound analysis in compliance with the USDOT Benefit-Cost Analysis Guidance for Discretionary Applications (February 2021). .

Annual costs and benefits are computed over the lifecycle of the Project, which corresponds to 37 years, including 7 years of project planning and construction (2019-2025) and 30 years of operation (2026-2055). Benefits start accruing in the first year operation in 2026. The Project is predicted to generate a Benefit Cost Ratio (BCR) of 1.6 with a 3% discount rate applied for benefits from the reduction of CO_2 emissions and a 7% discount rate applied for all other benefits. A summary of the BCA findings is shown below.

Measurement	Result @ 7% Discount Rate*
Total Benefits	$32,110,133
Total Costs	$20,497,464
Net Present Value	$11,612,670
BCR	1.6
Return on Investment	57%
Payback Period	15.2 yrs
Internal Rate of Return	11%

Note: a 3% discount rate was applied for monetization of CO2 emission reductions.

Key quantifiable monetized benefits, in 2019 dollars, resulting from the analysis are highlighted in the table below.

Statistic	Total	Annual Average (Over 30 years)
Fatalities Avoided	5	0.17
Injuries Avoided	244	8
Personal Hours Saved (hours)	653,464	21,782
Motor Oil Avoided (quarts)	3,498	117
Gasoline Avoided (gallons)	-122,247	-4,075
Diesel Fuel (gallons)	-401,043	-13,368
Green House Gas Avoided (tons)	-2,572	-86
Critical Air Contaminants Avoided (tons)	-0.29	-0.01

Appendix C contains a detailed description of the Project's BCA, including methodology and assumptions. Considering all monetized benefits and costs, the estimated internal rate of return of the Project is 11%. With the discount rates applied, the $20.5 million investment would result in $32.1 million in total benefits for a Net Present Value of $11.6 million and a Benefit/Cost ratio of 1.6.

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

Spokane International Airport