Bicycle Advisory Board

Tuesday November 16, 2021 – 6:00 PM to 7:30 PM

TELECONFERENCE

Staff Liaisons:	Colin Quinn-Hurst	(509) 625-6804 cquinnhurst@spokanecity.org
	Inga Note	(509) 625-6331 inote@spokanecity.org

	Board Briefing Session:
6:00 – 6:20	1) Approve October 2021 Minutes 2) Liaison Reports 3) Chair Report 4) Staff Report
	Workshops:
6:20 – 7:30	1) University District Active Transportation Planning – Gonzaga Sr. Design Studio 2) Fish Lake Trail Bridges Update - Staff
	Next BAB meeting is scheduled for Tuesday December 21, 2021

Microsoft Teams meeting

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Bicycle Advisory Board – Minutes

October 19, 2021
Virtual – MS Teams
Meeting Minutes: Meeting called to order at 6:00 PM by Grant Shipley

Attendance:

- *Board Members Present:* Grant Shipley (Chair), Pablo Monsivais, Rhonda Young, Mike Bjordahl, Charlie Greenwood, Taylor Stevens, Satish Shrestha
- *Board Members Not Present:* Jason Oestreicher, Rian Hidalgo
- *Quorum Present: yes*
- *Staff Members Present:* Colin Quinn-Hurst, Inga Note, Kevin Picanco

Public Comment:

Jeff Sevela commented on construction detour challenges and the need for improved standard treatments.

Briefing Session:

Minutes from the September 21, 2021 meeting approved unanimously.

1. **Liaison Report -**
   - Grant Shipley reported that the Citizen Transportation Advisory Board (CTAB) is still undergoing changes, but projects are moving forward.
   - Rhonda Young reported that the Plan Commission Transportation Subcommittee met and discussed upcoming projects and that she provided a report on recent Bicycle Advisory Board activities.
   - Jessica Engelman reported that the Pedestrian Traffic and Transportation Committee (PeTT) chair Paul Kropp would like to resign as chair at the end of the year and suggested that the PeTT has fulfilled its role but left the decision of continuing the Committee to the remaining members.
2. **Chair Report –**
   - Mr. Shipley discussed
3. **Staff Report -**
   - Colin Quinn-Hurst reported several upcoming vacancies on the board and the need for a new vice-chair. Following up on crash and safety data discussion from September, invited Rhonda Young to present analysis of crash statistics, supporting a yearly report including crash and safety statistics for the past year.

Workshops:

1. Construction Detour Follow-up
   - Introduction by Colin Quinn-Hurst and Grant Shipley. Reported that a BAB subcommittee will be convened to look at best practices and draft a letter supporting improved standards.
   - Questions asked and answered
   - Discussion ensued

2. 2022 Street Resurfacing / Bike Plan Overlap – Maple/Ash from Maxwell to NW Blvd, Post St from Buckeye Ave. to Garland Ave.
   - Presentation provided by City Staff
   - Questions asked and answered
   - Discussion ensued

Note: Minutes are summarized by staff. A recording of the meeting is on file with Planning Services.

- **Motion made by Rhonda Young to include buffered bicycle lanes when Maple and Ash are resurfaced from Maxwell Avenue to Northwest Boulevard, and that when maintenance issues are resolved for protected bike lanes, that this be transitioned to a protected bike lane with the addition of vertical bollards or other physical separation, using this as an evaluation of how a buffered bike lane functions on a high-volume arterial. Seconded by Grant Shipley. Motion passed unanimously.**

Meeting Adjourned at 7:32 PM

Next Bicycle Advisory Board Meeting scheduled for Tuesday, November 16, 2021

Note: Minutes are summarized by staff. A recording of the meeting is on file with Planning Services.

Project Plan
Bike and Pedestrian Mobility in the University District – CEL
ENSC 22

Presented by:

(Max Nelson)

(Samuel Johnson)

(Michael Cosper)

Reviewed & Accepted By:

Dr. Young (Faculty Advisor)

13 October 2021
Date

GONZAGA UNIVERSITY | School of Engineering & Applied Science

CENTER FOR ENGINEERING DESIGN & ENTREPRENEURSHIP

Disclaimer: This report is student work. The contents of this report reflect the outcome of an undergraduate student learning experience and contains the student-produced data, analysis, and conclusions described herein and should not be interpreted as the results of a professional engineering team.

13 October 2021

Juliet Sinisterra

Ignite NW Building, 120 N Pine St, Ste 292

Spokane, WA 99202

Dear Juliet Sinisterra,

SMS Engineering is a uniquely qualified team at Gonzaga University to provide solutions to enhance transportation connectivity and to address pedestrian and bike mobility constraints that affect the University District of Spokane. Each member of our team has been a full-time student at Gonzaga University, and a resident of the University District for over three years. In that time, we have all become familiar with the University District through our personal exploration of the area. We have all lived, worked, and played in the University District since 2018. Each member of the team has eight semesters of Civil engineering classes, with three transportation related engineering courses each. The team members also have experience with the faculty advisor, and all are familiar with one another's work style. Together each member plays to their strengths and supports each other as necessary to produce the highest quality product. We look forward to working with you on this project.

Sincerely,

Samuel Johnson

Michael Cosper

Project Plan

ENSC22: Bike and Pedestrian Mobility in the University District – CEL

Figure 1. University District Bridge (Hunter, 2018)

Prepared By: Michael Cosper, Sam Johnson, Max Nelson

Executive Summary

The Spokane University District is an organization with goals of creating a neighborhood that is an exemplary area to learn, work, live, and play. The University District is a true multimodal district that includes routes for vehicles, freight trucks, transit buses, pedestrians, bicyclists, and paddle crafts and this project is looking to further improve the connectivity for pedestrians, bicycles, and paddle crafts throughout the District and to connect to other areas of the City of Spokane and region. To achieve this, our team, comprised of University District users and residents for multiple years will work to create a prioritized list of possible transportation improvements in the District along with graphics to visualize where these areas are and see how they may be addressed. For the client's highest priority needs, preliminary designs and cost estimates will be developed. Our teams' goals are to create a database of current and future funded projects that will help show what is planned for the University District, create a prioritized list of five to ten future projects, create designs for some of the priority projects that will increase connectivity in the area for cyclists, pedestrians, and river users.

To achieve these goals a review of existing studies and other public documents, individual meetings with major stakeholders in the area including City of Spokane, Spokane Transit Association, Universities, Business Associations and residents, field studies, and meetings to review design options will be used. These activities will help the team to gain background knowledge about the University District and other transportation projects of similar nature as well as involve the community in the process of designing solutions to address gaps in the transportation system that are identified. Field visits along with the input form the community will help to understand the real needs of areas and populations around these projects. Design option meetings will be held with multiple expert planners and engineers to ensure that the designs our team creates are feasible and best serve the District. These designs will then be brought forward to the University District board to work together and create an understanding of which projects are most worthwhile in supporting the economic and population growth that is expected in the area. There will also be a sustainability and social impact assessment with each design to ensure that they are meeting the needs of populations within the University District and create a more connected University District to the City of Spokane as a whole.

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Project Description

The University District (UD) is a non-profit that acts as a chamber of commerce for a designated sub-area of Spokane. Figure 1 shows the boundaries of the University District within the City of Spokane limits marked by the orange outline. The university district is located East of downtown and encompasses the area from I-90 to the North border of Gonzaga University. Its East West limits are Division Street and the Spokane River with a portion South of the river extending further to the East. A more detailed view of the UD can be seen in figures 2 and 3.

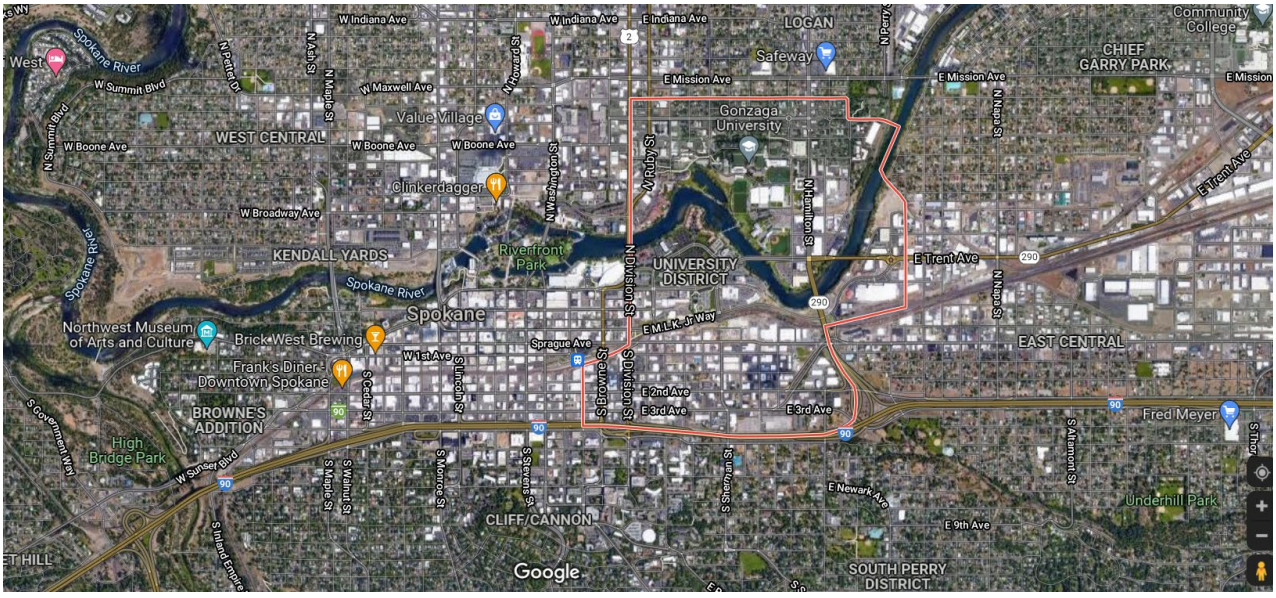


Figure 2. Map showing University District Limits (Google, 2021)

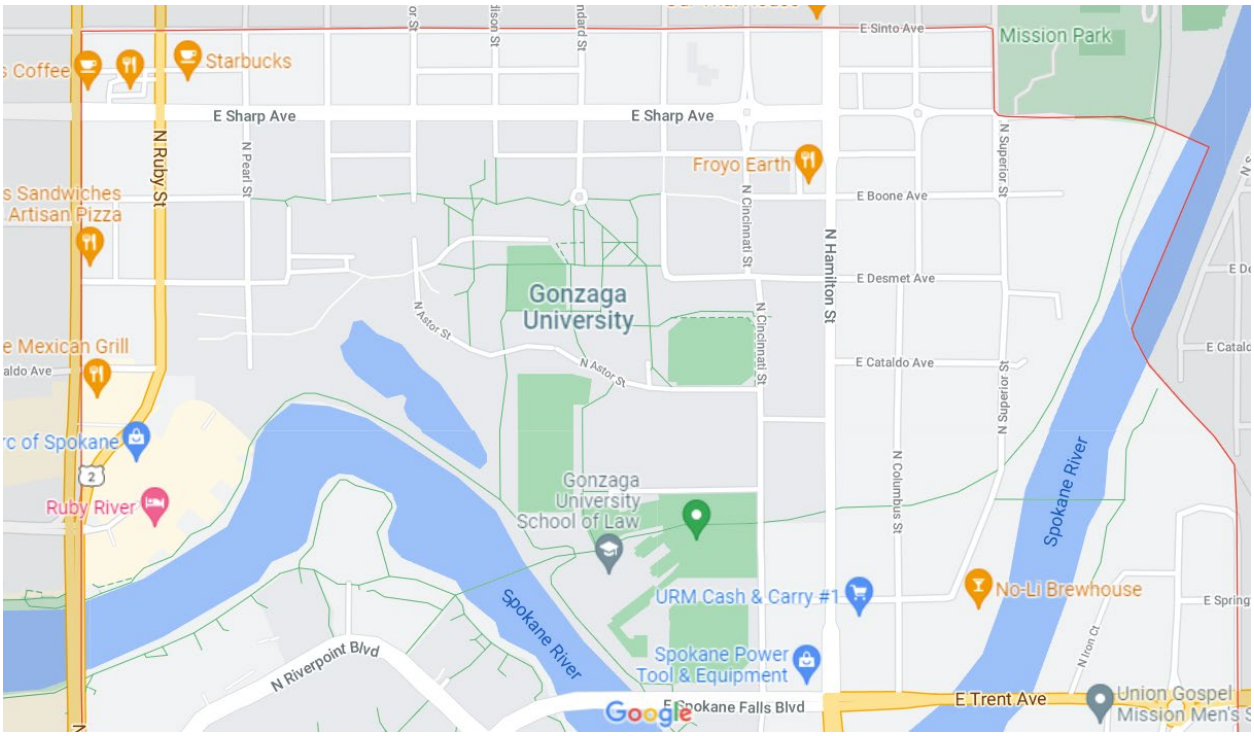


Figure 3. Detailed View of North Half of UD (Google, 2021)

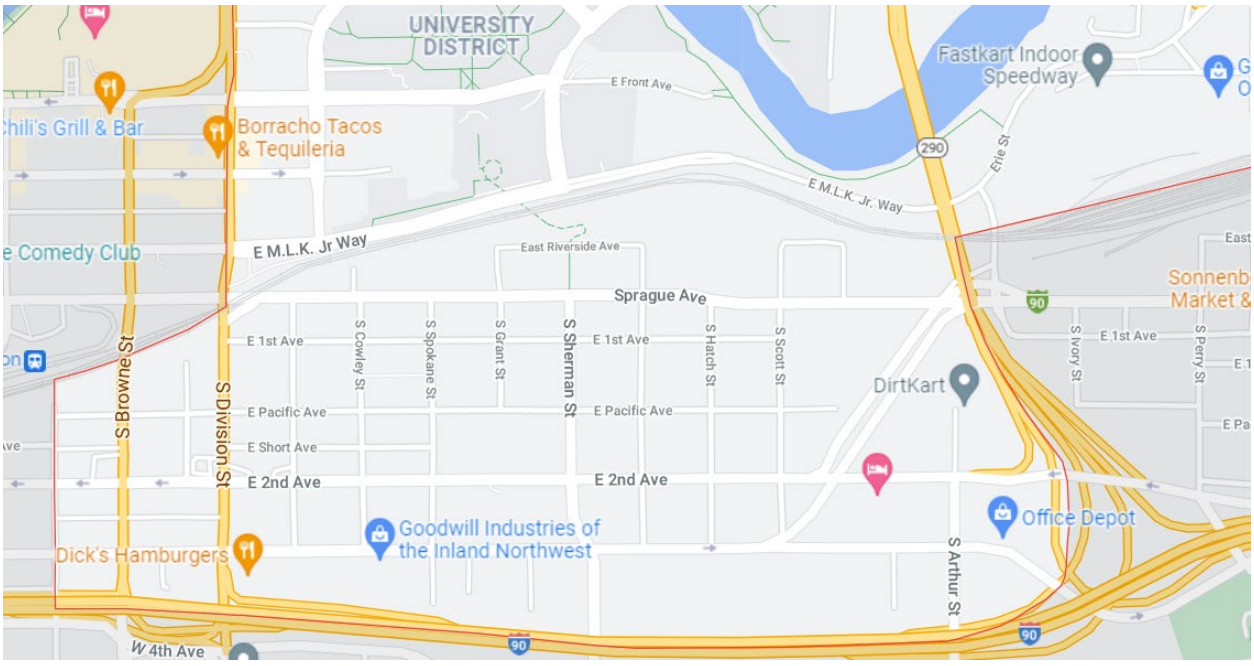


Figure 4. Detailed View of South half of UD (Google, 2021)

The UD spans both North and South of the Spokane river, in areas where there are many young people and economic diversity. This project will focus on creating an area that is

connected and easily navigable for all. the majority of the Northern part of the UD is the Gonzaga University campus. There is another senior design group who is focused on an active transportation pan on and around the Gonzaga University campus which means that our team will focus on taking the lead on improvements to the South of the river but will be involved with the other group in changes made to the campus and surrounding areas that are within the University District. Our team will focus on creating a more connected and accessible University District that will be able to support the anticipated economic and housing growth in the area.

With planning beginning in the late 1990's, the UD has objectives of activating underused or vacant properties, promoting job growth and housing, supporting higher education programs, and generating revenue streams from infrastructure investments to sustain the organization and the programing that it executes. The University District Revitalization area (UDRA) was established in 2009 and set the boundaries for the tax revenue that the UD receives. The UD is funded by tax incremental financing (TIF). TIF is a funding method that is used as a subsidy for redevelopment, infrastructure, and community improvement projects. A portion of taxes in the UD are refunded or diverted back to them to finance both private and public development in the area. Projects in the UD can be credited to both the City of Spokane and the University District. The University District Development Association (UDDA) is a non profit formed in 2011 with the goals of planning and developing projects in the area and pushing for public support. In 2015, the University District Public Development Authority (UDPA) was formed to act as a quasi-municipal corporation that receives the TIF funding and redistributes it to projects within the UD. Construction projects in the UD are able to be fully funded by the City or the UD, it is also possible for projects to be funded jointly. The UD's community design goal 3 is focused on support for pedestrian and bicycle facilities through the UD. This project aims to aid in connecting previously completed projects including the pedestrian bridge over the railroad tracks, promotion of mixed-use land, the addition of the Central City Line through the area, and the Sprague corridor updates with the rest of the UD and the greater Spokane area.

Project Goals

The primary goal for the project is to analyze and investigate the current transportation system within the UD and develop projects and designs to improve the safety mobility of bicyclists and pedestrians throughout the District to create a vibrant multimodal transportation system. As the University District prioritizes itself as a location to live, work, and play, the improvement to the transportation system will be vital to maximizing this vision. Whether that's through repaving streets, expanding sidewalks, reallocating roadway space to support multiple transportation, introducing a greenway, or creating new pedestrian paths, all options will be explored to create a transportation system that fully supports the existing and future land uses in the District. This will be completed through research of all the current projects and directions the UD currently has planned. Maps, figures, and preliminary design drawings will be used to illustrate how the projects and new designs will benefit the mobility of the transportation system. Pedestrians, cyclists, and to a lesser extent paddle craft, will be the focus of this project. However, vehicle, freight, and transit modes will be considered as to how these modes will interact and support each other.

Project Requirements

The Sponsor requires a report for the University District that will assess the current projects and plans for the transportation systems and to analyze how they all fit together to determine how the overall multimodal system will function and to identify ways to improve the system to support the expected growth in the District and to improve safety and mobility ror all road users. It is required to identify the critical gaps in existing plans and projects throughout the UD. Project descriptions and rough cost estimates will be required for all projects. Additionally, preliminary cost estimates based on 30% design documents will be provided for the projects that move to the design phase. The project team will need to work with the city, STA, campus facilities departments, and local active transportation expert consultants. Lastly, the project team will need to follow the community engaged learning requirements.

There are no restrictions placed on the project by the sponsor. Additionally, there are no restrictions for the use of public right of way (ROW) throughout the UD unless the ROW is currently planned for a different project. However, alternative designs for currently planned and

funded projects may be considered if additional improvements are considered warranted. Permitting, such as through the Washington Department of Ecology and other regulatory bodies may be require permitting applications throughout the project. To maximize likelihood for securing funding, financial feasibility will be a strong consideration for project design. Due to regulatory issues, no improvements that affect railroad right of way will be considered. All designs will be done considered local, state, and Federal transportation design guides including the following: *Traffic & Highway Engineering*, 5th Edition by Garber and Hoel, *Manual on Uniform Traffic Control Devices (MUTCD),* Federal Highway Administration, 2009 http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm, *A Policy on Geometric Design of Highways and Streets,* American Association of State Highway and Transportation Officials, Sixth Edition, 2011, *Roadside Design Guide, 4th Edition, 2011. Additionally, the Urban Street Design Guide,* National Association of City Transportation Officials (NACTO), 2013, *Urban Bikeway Design Guide,* National Association of City Transportation Officials (NACTO), 2012, *Guide for the Planning, Design, and Operation of Pedestrian Facilities,* American Association of State Highway and Transportation Officials (AASHTO), 2004, *Guide for the Development of Bicycle Facilities, 4th Edition, A*merican Association of State Highway and Transportation Officials (AASHTO), 2014, *Guide for Geometric Design of Transit Facilities on Highways and Streets, 1st Edition, A*merican Association of State Highway and Transportation Officials (AASHTO), 2014, City of Spokane Design Standards https://my.spokanecity.org/business/bid-and-design/design-standards/. Lastly, the City of Spokane Design Standards and Washington Department of Transportation Design Manual will be consulted.

The Progress Report will be presented digitally to the client on Wednesday, December 1st, 2021, that will contain an evaluation of design options for alternative transportation routes that fill gaps within the district. Additionally, recommendations for the current scope of work within the UD will be presented based on the sponsor-selected criteria. The final report will be presented with a hard copy, as well as digitally, on Wednesday April 20th, 2022. It will contain a list of funded and planned active transportation projects along with their relative details, design status, funding, etc. The gaps within planned projects will be identified to fulfill the connected and active area. There will be visual aids that express the critical elements of what is planned for the area. The projects will be drafted by prioritization, timing, and cost. Preliminary designs for the projects that currently have not been designed through previous projects are labeled as "gap"

areas will be provided. An existing condition's report for the stakeholders and supporting partners will be provided. Lastly, we will develop and present our findings to the critical stakeholders to support the implementation of our projects. Our drawings are designed in ArcGIS and Civil3D will be presented on 11x17 paper or a larger poster.

Project Approach

The overall approach to this project can be divided into nine distinct steps each of which will be crucial in the development of the final product. Each step will specify what actions will be taken, as well as the roll of the team, its individual members, the faculty advisor, and the steak holders. So long as the team adheres to this approach at a timely rate, the project will be completed with adequate time for review and improvement before any project deadlines. The approach list is as follows:

1. The team will begin by familiarizing themselves with the University District by traveling the corridor via Lime Scooter and identifying gaps in transportation with the faculty advisor, as well as identifying and mapping all currently planned, funded, and new projects. The areas identified will be marked on a master map held by the faculty advisor as a visual aid.
2. The team will begin their literature review by identifying and mapping all currently planned, funded, and new projects. The currently planned projects will be researched and located on the master map to represent the current work in the University District. The currently funded projects will be identified and mapped to further the understanding of the projects that are going to shape the new University District. All projects will be identified with their project sponsors, partnerships, and current parties involved.
3. The team will document the timeline and status of each project in a spreadsheet, allowing for the current landscape of the University District's future to be clear. The timeline for the projects will be presented so the updates to the transportation grid are understood. The current status and cost of each project will be presented as a firm budget and will need to be agreed upon.
4. The team will meet with their stakeholders to determine the expectations for the project. Each team member will become lead contact with one stakeholder and oversee communications with that individual, such as for one-on-one meetings and direct communications. The stakeholders will provide guidance to the team, who will utilize such information over the course of the project.
5. The project manager will meet with the faculty advisor to review the master map of identified critical gaps between planned, funded, and new projects that prevent easy and safe connections through the University District. Passenger vehicles, city transit, walking

pedestrians, bicyclists', and scooter riders will all be prioritized and taken into account. The map will be transcribed into an itemized list containing a brief description of the issue at that location.

6. The team will take the list of potential areas in need of improvement to the stakeholders for review. At the discretion of the stakeholders, the list will be ranked in order of importance.
7. Three to six projects will be selected near the top of the ranked list. Each team member will take an equal share of the proposed project areas and take lead on those sections.
8. Each team member will perform preliminary designs for their areas, brainstorming solutions and drafting potential solutions. Engineering software will be used to draft potential solutions for each problem area.
9. Each team member will develop cost estimates for their design(s) as well as a life cycle cost analysis. The team will also work together to perform a social impact analysis on the overall project area.

Project Management

The project schedule and engineering budget can be found in the following sections. A full copy of both the schedule and budget will be made available to the client. Team member introductions can also be found at the end of this section.

Schedule of Design Work

Our team will work through two semesters with a holiday break from mid December 2021 to early January 2022. There are deliverable reports noted throughout the schedule to ensure that progress is being met on the project. The team will work through main tasks of creating lists and visuals of current or planned projects in the University District and a list of transportation gaps in the area from September to December. Beginning in 2022, the team will work on design alternatives for 3-6 of the identified gap areas as prioritized by the client. Figures 5,6, and 7 show this schedule in the form of a Gantt chart.

Task Name	Duration	Start	Finish	Prede
Background and Resource Review	**31 days**	**Wed 9/8/21**	**Wed 10/20/21**	
Project Plan	**25 days**	**Wed 9/8/21**	**Wed 10/13/21**	
Literature Review	15 days	Wed 9/8/21	Tue 9/28/21	
Draft 01 Due	0 days	Wed 9/29/21	Wed 9/29/21	
Graded Draft Due	0 days	Wed 10/6/21	Wed 10/6/21	
Plan Due in Edusource	0 days	Wed 10/13/21	Wed 10/13/21	
Project Plan presentation	**10 days**	**Wed 10/6/21**	**Wed 10/20/21**	
Create Slides/ Content	8 days	Wed 10/6/21	Fri 10/15/21	
Distribute who will present what	8 days	Wed 10/6/21	Fri 10/15/21	
Draft Slides and Practice Presentation	0 days	Mon 10/18/21	Mon 10/18/21	
Project Plan Presentatio	0 days	Wed 10/20/21	Wed 10/20/21	
Needs Assesment and Primary Goals	**21 days**	**Mon 10/4/21**	**Mon 11/1/21**	
Meeting with STA	5 days	Mon 10/4/21	Fri 10/8/21	
Meeting with City of Spokane	5 days	Mon 10/4/21	Fri 10/8/21	
Attend neighborhood council meetings	21 days	Mon 10/4/21	Mon 11/1/21	

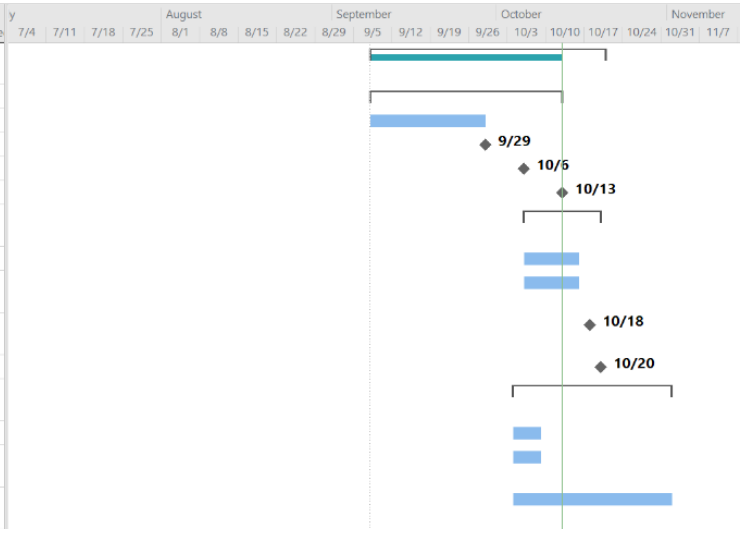
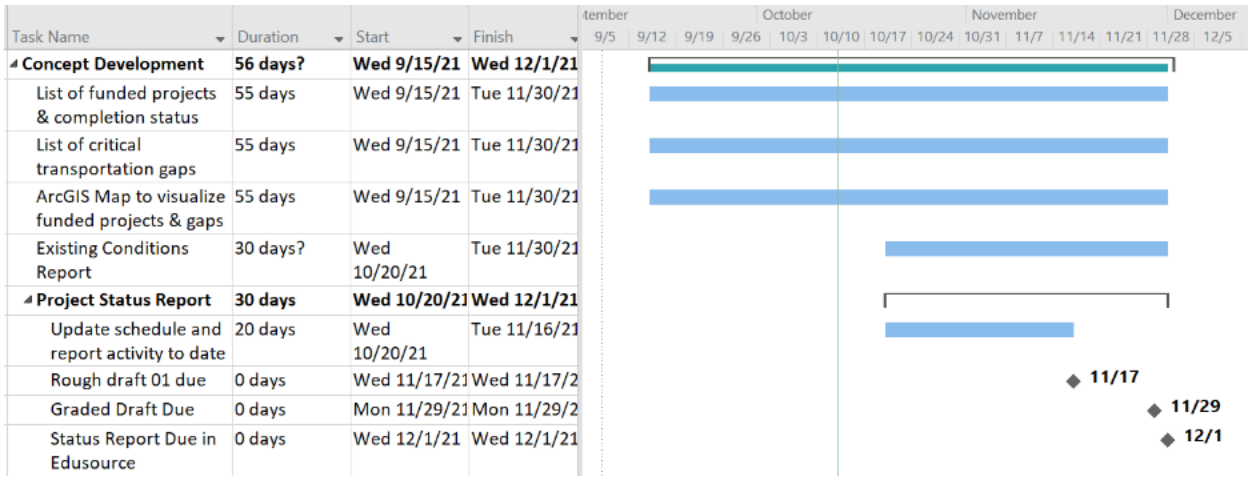
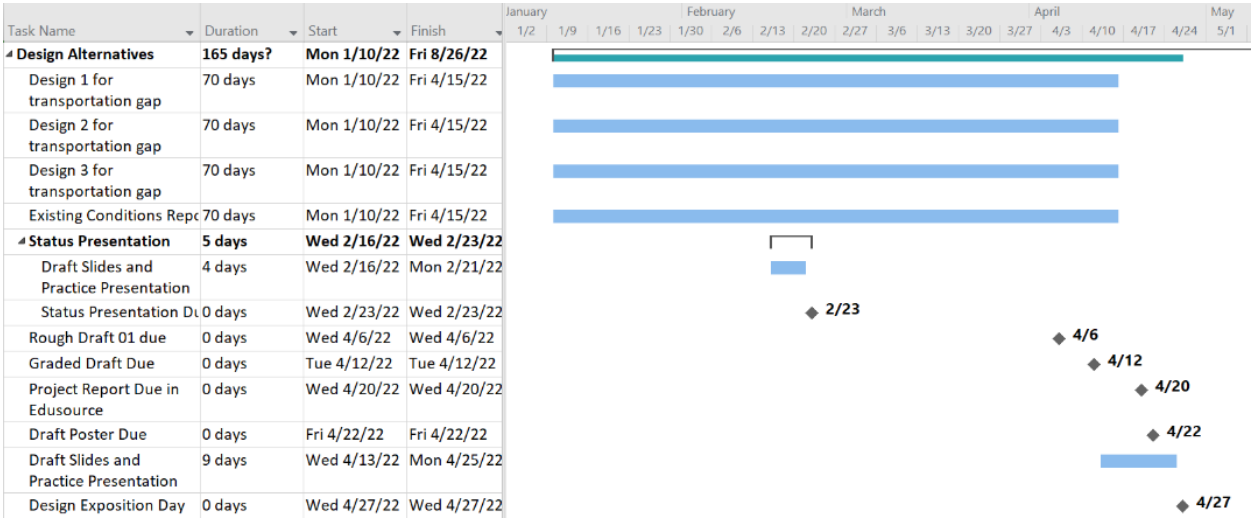


Figure 5. Project schedule for background and needs assessment



Task Name	Duration	Start	Finish
Concept Development	**56 days?**	**Wed 9/15/21**	**Wed 12/1/21**
List of funded projects & completion status	55 days	Wed 9/15/21	Tue 11/30/21
List of critical transportation gaps	55 days	Wed 9/15/21	Tue 11/30/21
ArcGIS Map to visualize funded projects & gaps	55 days	Wed 9/15/21	Tue 11/30/21
Existing Conditions Report	30 days?	Wed 10/20/21	Tue 11/30/21
Project Status Report	**30 days**	**Wed 10/20/21**	**Wed 12/1/21**
Update schedule and report activity to date	20 days	Wed 10/20/21	Tue 11/16/21
Rough draft 01 due	0 days	Wed 11/17/21	Wed 11/17/2
Graded Draft Due	0 days	Mon 11/29/21	Mon 11/29/2
Status Report Due in Edusource	0 days	Wed 12/1/21	Wed 12/1/21

Figure 6. Project schedule for concept development



Task Name	Duration	Start	Finish
Design Alternatives	**165 days?**	**Mon 1/10/22**	**Fri 8/26/22**
Design 1 for transportation gap	70 days	Mon 1/10/22	Fri 4/15/22
Design 2 for transportation gap	70 days	Mon 1/10/22	Fri 4/15/22
Design 3 for transportation gap	70 days	Mon 1/10/22	Fri 4/15/22
Existing Conditions Repo	70 days	Mon 1/10/22	Fri 4/15/22
Status Presentation	**5 days**	**Wed 2/16/22**	**Wed 2/23/22**
Draft Slides and Practice Presentation	4 days	Wed 2/16/22	Mon 2/21/22
Status Presentation Du	0 days	Wed 2/23/22	Wed 2/23/22
Rough Draft 01 due	0 days	Wed 4/6/22	Wed 4/6/22
Graded Draft Due	0 days	Tue 4/12/22	Tue 4/12/22
Project Report Due in Edusource	0 days	Wed 4/20/22	Wed 4/20/22
Draft Poster Due	0 days	Fri 4/22/22	Fri 4/22/22
Draft Slides and Practice Presentation	9 days	Wed 4/13/22	Mon 4/25/22
Design Exposition Day	0 days	Wed 4/27/22	Wed 4/27/22

Figure 7. Project schedule for design alternatives

This schedule will be updated as new activities arise or current activities change. A copy of the full schedule will be made available to the client.

Project Budget

For the University District Bike-Pedestrian Mobility project the budget consists solely of billable hours by the team members. No travel or supplies are needed for the project.

To complete the job there will be one project manager (who is rotated throughout the year), and two project engineers. One project engineer works as the ArcGIS technician, while the other works as the Civil3D technician. An average of six hours per week per person will be billed out for the first half of the project, and nine hours per week per person for the second half

of the project. This is subject to change based on the scope of work and project schedule but provides a general outline. Below is the breakdown of our entire budget for the project.

Table 1: Cost Breakdown of Tasks			
Tasks	Project Engineer: Michael	Project Engineer: Sam	Project Manager: Max
5.1 Project Management	60	60	80
5.2 Site Walk	10	10	10
5.3 Project Plan	8	8	10
5.3.1 Project Plan Presentation	11	11	11
5.4 Meetings with Clients, Sponsor, and Stakeholders	18	18	22
5.5 List of funded projects and completion status	10	10	9
5.5.1 List of critical transportation gaps	12	12	12
5.6 Create ArcGIS Map	25	25	0
5.7 Design 1 for transportation gap	20	20	20
5.7.1 Design 2 for transportation gap	20	20	20
5.7.2 Design 3 for transportation gap	20	20	20
5.8 Status Presentation	2	3	4
5.9 Design Exposition	17	17	17
Totals			
Total Hours	233	234	235
Rate ($/hr)	$130.00	$130.00	$180.00
Design Fee ($)	$30,290.00	$30,420.00	$42,300.00
Reimbursable Direct Expenses			
Report Copies	1 report ($10 per report)		$10.00
Total Design Fees	$103,010.00		
Total Direct Expenses	$10.00		

Total Consulting Cost	$103,020.00	

The hourly rate for the project engineers is $130 an hour, whereas the project manager's hourly rate is $180. This difference is due to the experience and expertise that the project manager provides for the project. His time is extremely valuable as he generates revenue for the company, as well as making sure the project is completed correctly and efficiently. The project engineers complete much of the work; however, they are monitored by the project manager so that everything completed is correct.

Project Meetings and Communication

Meetings will occur both in person and over zoom to accommodate the ever-changing landscape of Covid-19. Weekly communication will occur between the team and client with a scheduled bi-weekly meeting. The main method of communication between the team and sponsors will be via email. The team will have a rotating project manager throughout the year that will be the main point of contact between the client, the UD and Juliet Sinisterra and the team. Sam Johnson is the communication lead for the City of Spokane, Michael Cosper is the communication lead for the Spokane Transit Authority (STA), and Max Nelson is the communication lead for campus planners at WSU, Eastern, Gonzaga, and Whitworth.

Project Data

Paper and electronic maps will be updated by the team when a gap area is identified. This area will also be entered into a list so that further information about the area or if there is a future project can be found. Data used for designs will be taken from existing City of Spokane and WSDOT resources. All of the team's data will be collected and stored within a Microsoft teams library that is accessible to team members, advisors, and clients. This data will be organized in different folders to allow for ease of navigation when searching for project documents.

Project Quality Assurance

To ensure that the data collected and the engineering plans submitted to the client are free from error and confusion our team will review each other's work before submitting anything to clients or advisors by checking for both grammatical and content mistakes and giving feedback to the member who is submitting the work. After we have reviewed our work, it will be submitted to our project faculty advisor, Dr. Rhonda Young and our Design Advisor Board

(DAB) mentor, Lindsay Gilbert. This will help to ensure that the product shared with the client is up to a professional standard. Our team has experience through internships and previous project report writing that will ensure we are able to provide a polished product to the client. Our qualifications for completing this project in a professional manner can be seen in the following section of the report.

Team Introductions

Each team member that will be working on the project is qualified and has academic and work experience in the civil engineering field. See introduction paragraphs for each member below and find full CVs in appendix A.

Michael Cosper is a student graduating in 2022 with a B.S. in Engineering Management. His previous experience includes a roll as a project engineer at Whiting-Turner Contracting Company, which gave him engineering and managerial knowledge that he will apply in this project. He is also taking a transportation design course at Gonzaga which will provide useful experience for the design portion of the project.

Sam Johnson is a student graduating in 2022 with a B.S. in Civil Engineering. Sam has been a student at Gonzaga University for 3 years, consistently engaging with the pedestrian and cycling amenities offered in the UD to reach class as well as areas downtown. His previous experience includes work at a heavy highway civil construction company, KLB Construction, on both private and public projects that included pedestrian and cycling facilities. He also has taken coursework in transportation engineering and transportation design at Gonzaga which will help with implementing the design phase for the chosen projects.

Max Nelson is a student graduating in 2022 with a B.S. in Civil Engineering and a minor in Entrepreneurship. Max has been a resident of Spokane for over three years, spending two summers living in the University District while working internships in the area. In the summer of 2020, Max explored the University District and greater Spokane/Riverfront area on foot five days a week. This was both for exercise and for the chance to observe local transportation planning and infrastructure. Max's previous experience includes work at a VEEV, HMH Engineering, and Budinger and Associates. VEEV is a steel framing company where Max learned the basics of project planning and organization. HMH Engineering a respected transportation engineering in North Idaho, where he learned practical knowledge and skills that he will apply to this project. Budinger and Associates is an established materials testing firm in Spokane Valley. There, Max spent the summer working on projects around Spokane and Spokane Valley, including inspection on infrastructure projects in the University District. He has also taken three transportation engineering courses and is currently enrolled in transportation design at Gonzaga University, which will aid in the report and design sections of this project.

ENSC 22 Team Photo

(In order from left to right: Dr. Young, Sam Johnson Michael Cosper, and Max Nelson)

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Appendix A

Michael Cosper

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EDUCATION

Bachelor of Science in Engineering Management (Civil Engineering focus)
Minor: Business Management — Graduation Date: May 2022
Gonzaga University, Spokane, WA
GPA: 3.23

TECHNICAL SKILLS

ArcGIS, Bluebeam Revu, Civil3D, Primavera, On-Screen Take-Off, MATLAB, MS Excel, Surveying, Sketch-Up

ENGINEERING EXPERIENCE

Bike-Pedestrian Mobility University District - CEL | Senior Design — September 2021-Current Date

- Researched the current transportation projects, gaps, and issues the University District (UD) in Spokane, WA to improve the mobility of pedestrians and bicyclists throughout the area
- Working with the Spokane Transit Authority (STA), city, campus facility authorities, and the department of ecology to develop transportation systems to improve the safety, efficiency, and climate within the UD
- Designing intersections, roads, and pedestrian paths to close transportation gaps within the district
- Evaluating the priority of the district, costs, and timetable to create a more sustainable and safer transportation system within the district

Project Engineer Intern | Whiting-Turner Contracting Company — May 2021-August 2021

- Calculated Quantity Take-Offs for a variety of materials on multiple different projects
- Assisted project managers with budgets on project proposals by estimating costs on materials for projects
- Built relationships with subcontractors to locate work and receive bids on projects
- Lead a team on interns through the bidding process for the Whiting-Turner intern competition
- Created project schedules and logistics plans

WORK EXPERIENCE

Supervisor | Rudolf Fitness Center (RFC) | Spokane, WA — May 2021-Current Date

- Promoted to Supervisor role at the RFC to assist the directors with running intermural, customer service, and lifeguard positions following two years of service as an intermural official
- Plan and run trainings for over 100 new employees and develop projects to improve the functionality of the RFC
- Serve as a mentor to new officials and manage tense situations
- CPR and first aid certified

LEADERSHIP EXPERIENCE

President | ASEM | Spokane, WA — October 2019-Current Date

- Elected to the American Society of Engineering Management board for the chapter at Gonzaga University Junior year
- Elected President last September and run a board of five other members
- Run career prep events, interactive club activities, and put together case competition teams for International Annual Conference for Engineering Management

Max Nelson

Mnelson19@zagmail.gonzaga.edu – (650) 868-4896 – 2734 Carolina Ave, Redwood City, CA, 94061

Education

Bachler of Science in Civil Engineering Graduation Date: May 2022
Minor in Entrepreneurship
Gonzaga University, Spokane, WA
GPA: 3.28

Gonzaga in Florence, Florence, Italy Graduation Date: May 2022

Technical Skills

- HEC RAS
- EPANET
- ARC GIS
- Density Testing
- Sketch up
- Public Speaking
- Road Paving Inspection
- Materials Testing
- MS Power Point
- MS Excel
- MS Power Point
- MS Teams

Engineering Experience

Senior Design: ENSC 22: Bike-Pedestrian Mobility University District – CEL August 2021 – May 2022
The UD's 770 acres host rails, trails, highways, rivers, and more, and as such the City, State of Washington, Spokane Transit Authority (STA), higher ed institutions, and other property owners have invested in many infrastructure, mobility, and place making projects. However, there was/is no single guiding plan to ensure all connectivity gaps are identified and priorities addressed. A 2021 priority for the UD is to identify and map all the currently-planned projects (primarily but not limited to bike and pedestrian projects/active transportation), document the timeline/status of each, and, most critically, identify the gaps between identified or funded projects that prevent easy and safe connections through the UD on foot or bike/scooter. This is part of a holistic parking and mobility conversation that recognizes that to reduce SOV trips there need to be convenient and attractive alternatives.

Intern – Budinger and Associates – Spokane Valley, Washington May 2021 – July 2021

- Shadowing technicians in both lab and field environments, performing a multitude of soil tests as well as learning how those results impact fieldwork.
- Worked with drilling teams, inspectors, and lab technicians throughout the summer.
- Shadowing the engineer in charge of project bidding and was shown various aspects of that process.
- This experience outlined the basics of hands on materials testing, client relations, and the importance of proper time and employee management.

Intern – HMH Engineering llc. – Coeur d'Alene, Idaho May 2020 – August 2020

- Engineering training and materials testing in transportation engineering on both government and private projects.
- Tasked with learning the software HEC RAS, a previously unfamiliar software, to map out the flood plain of a river using survey data from the 1980s.
- Also tasked with inspecting interstate road paving on-site, as well as assisting the Professional Engineering staff with determining materials billing.

Intern – VEEV – Hayward, California May 2019 – August 2019 & July 2018 – August 2018

- A general intern working for the various sections within the Veev warehouse and office.
- Experience in panel assembly, project management, and ERP software.
- Worked as the link between the warehouse and office sections learning the new ERP system and passing along communications.

Instructor – Mathnasium – Menlo Park, California April 2018 – August 2018

- Math tutor working with young children to improve math skills and prepare them for higher level middle and high school courses.

Leadership Experience

Hogan Entrepreneurship Program – Gonzaga University August 2019 – May 2022

- Three year program training in entrepreneurship and business leadership

ASCE Chapter Treasurer – Gonzaga University January 2021 – December 2021

- In charge of fund allocation and fundraising, succeeded in receiving funds from Gonzaga club fund

NEC Semi-Finalist 2021

- Delivered video business pitch and participated in live pitch and questioning from North-West angel investors and entrepreneur business leaders.

Robosub Business Lead – Gonzaga University August 2019 – December 2019

- Lead on contacting potential sponsors, fundraising, and donation processing

Sam R. Johnson

sjohnson14@zagmail.gonzaga.edu
+1 (425) 315-5663

Education

Gonzaga University – Anticipated Degree: B.S., Civil Engineering — Graduation, May 2022

- Cumulative GPA: 3.46
- Relevant Coursework: Introduction to Geomatics, Soil Mechanics, Hydrology, Transportation Engineering
- Experience in MS Excel, Bluebeam Revu, ArcGIS, Revit, and Civil 3D

Professional Experience

KLB Construction, Inc. – Mukilteo, WA — Summer 2018 – Summer 2020

- Supported the project manager, engineers, and foreman with a wide variety of tasks
- Coordinated set up and scheduling of subcontractors
- Organized the order and delivery of material on site with foreman
- Assisted in the tracking of quantities and allocation of project costs
- Created monthly reports to substantiate project completeness and billing

Sound Transit - L-200 Light Rail Extension – Shoreline, WA — May 2021 – August 2021
Project Description: Link light rail extension from the Northgate Station to the

- Wall Engineer on the project, coordinating deliveries, quality tracking, and progress with the prime contractor
- Coordinated scheduling of MSE wall work on site

Private Owner - Simonds Road Development – Kirkland, WA — June 2020 – August 2020
Project Description: Housing development site prep and utility work

- Gained experience in the project estimating process by preparing quantity takeoffs and soliciting subcontractor quotes
- Collaborated with an engineering design firm to create a vault excavation shoring plan

City of Mukilteo - Mukilteo Harbour Reach Corridor Project – Mukilteo, WA — May 2020 – August 2020
Project Description: Construction of a new roadway to alleviate traffic from a heavily used thruway

- Assisted in mitigating existing wall failure issues with manufacturer
- Prepared safety plans for work occurring on site

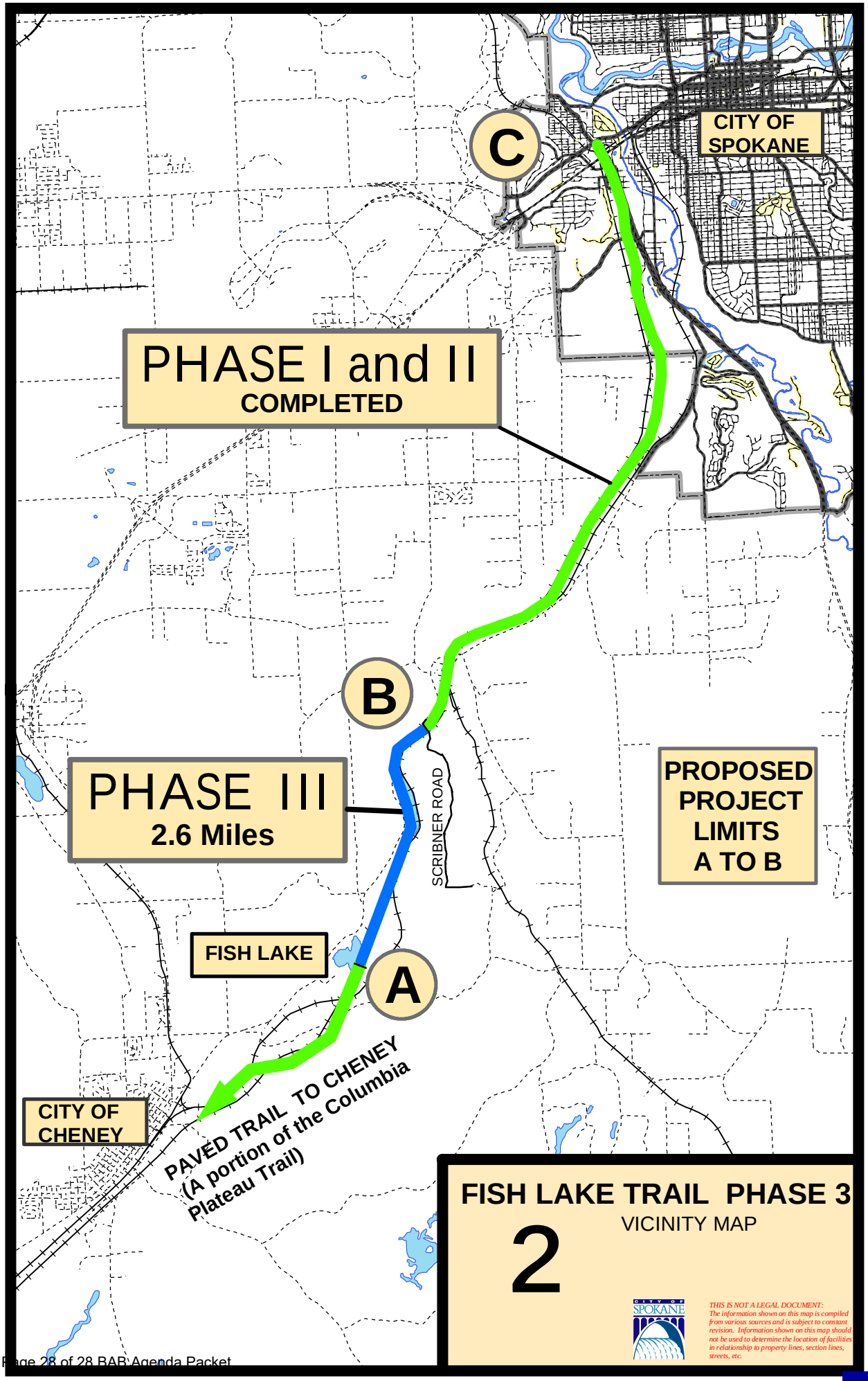
Leadership & Service Involvement

Gonzaga Without Borders — January 2020- Present
Member

- Interdisciplinary club with a focus on social justice and environmental sustainability

Gonzaga University Club Soccer — October 2018 - Present
Member

- Student led and coached club with 30+ members competing during the fall semester in the WSCA league
- Service projects completed year-round including: Habitat for Humanity and serving in soup kitchens


C
CITY OF SPOKANE
PHASE I and II
COMPLETED
B
PHASE III
2.6 Miles
SCRIBNER ROAD
PROPOSED PROJECT LIMITS A TO B
FISH LAKE
A
CITY OF CHENEY
PAVED TRAIL TO CHENEY
(A portion of the Columbia Plateau Trail)
FISH LAKE TRAIL PHASE 3
VICINITY MAP
2
THIS IS NOT A LEGAL DOCUMENT:
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