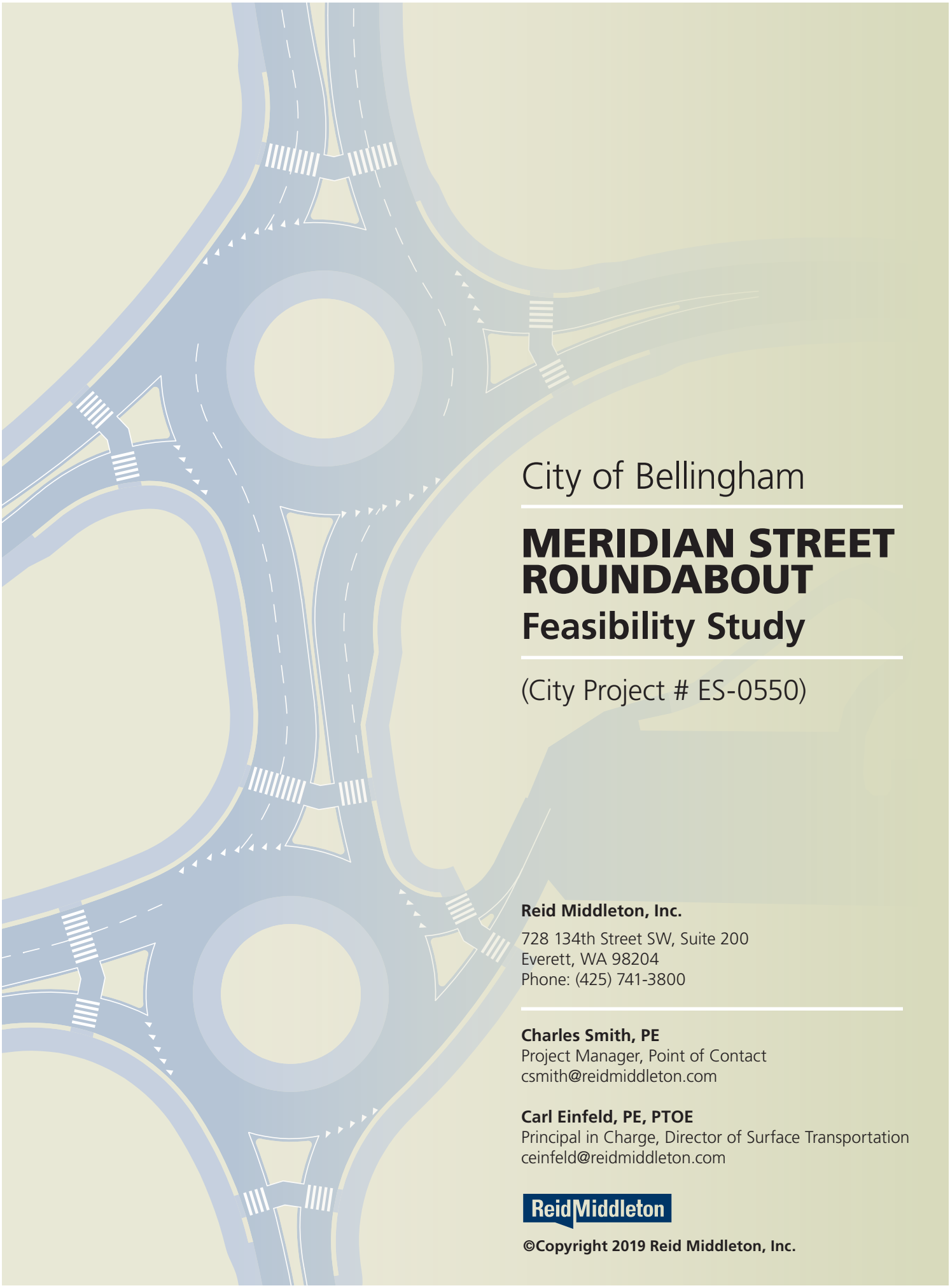

City of Bellingham

MERIDIAN STREET ROUNDABOUT

Feasibility Study

(City Project # ES-0550)

Reid Middleton, Inc.

728 134th Street SW, Suite 200
Everett, WA 98204
Phone: (425) 741-3800

Charles Smith, PE
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Reid Middleton

Table of Contents

ReidMiddleton

CIVIL ENGINEERING
STRUCTURAL ENGINEERING
PLANNING
SURVEYING

January 17, 2019

City of Bellingham Purchasing Division
2221 Pacific Street
Bellingham, WA 98229

Subject: Statement of Qualifications for Meridian Street Roundabout Feasibility Study City Project # ES-050

Dear Selection Committee:

With significant growth anticipated for the Bellingham Waterfront District and the Fountain District Urban Village, the City needs to evaluate options for improvements to Meridian Street to accommodate an increase in traffic. We appreciate the City's mission to provide safe, reliable, and fiscally-responsible transportation infrastructure for the community. At Reid Middleton we are dedicated to helping you develop creative solutions that meet the needs of all users. Similar to the City's Cordata and Stuart Roundabout, Wharf Street Roundabout, Cordata Parkway Roundabouts, and Northwest Drive Roundabout, we are excited for the opportunity to continue our partnership with Bellingham to deliver another great roundabout project.

The closely-spaced Squalicum Way and Birchwood Avenue intersections present numerous challenges. Having analyzed, designed, or reviewed more than 250 roundabouts over the last 23 years, Reid Middleton has the experience and expertise to address the challenges and opportunities that are unique to this complex project:

- Context Sensitive Layout – With the flexibility of roundabout design, it is possible to minimize impacts and accommodate intersection challenges, without conceding solid design principles.
- Capacity – The roundabout configuration will need to accommodate both immediate and long-term needs for the increasing number of commercial, residential, and multimodal users of the Meridian Street corridor.
- Safety – A well-designed roundabout improves safety for pedestrians, cyclists, and drivers by controlling vehicle speeds and drive paths.

I, **Charles Smith, PE, will be leading the team as Project Manager**. My expertise in feasibility studies and roundabout design has been proven throughout my 20 year career in roadway engineering. **Carl Einfeld, PE, PTOE will be the Principal in Charge and is authorized to make representations for our firm**. Carl is the Director of our Surface Transportation Group and brings 36 years of transportation project management experience. Both Carl and I are based out of our Everett Office; our firm address and fax number are in the letterhead in the lower right corner of this page and our direct phone numbers and email addresses are located below.

We look forward to providing you with another on-time and on-budget roundabout analysis and design as we did on our recent Cordata and Stuart Roundabout project. We have assembled a terrific team of outstanding professionals and are **committed to providing the services as specified in your Request for Qualifications**. We look forward to continuing our working relationships with your staff and delivering a great project that is the right fit for these intersections and the right fit for Bellingham.

Thank you for your consideration.

Sincerely,

Reid Middleton, Inc.

Charles Smith, PE

Project Manager
csmith@reidmiddleton.com
(425) 248-2914

Carl Einfeld, PE, PTOE

Principal in Charge, Director, Surface Transportation
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Firm Qualifications & Prior Experience

Reid Middleton, Inc.

Reid Middleton is a recognized national leader in roundabout design. Since 1995, Reid Middleton has analyzed, designed, or reviewed more than 250 single and multilane roundabouts. During that time, we have learned much about the mechanics and nuances of roundabouts. Our team takes a role in establishing current guidelines and contributes to the roundabout design community by developing and sharing tools, theories, and practices. We are continually seeking out new state-of-the-art technologies that can be applied to roundabout construction. Our experts in roundabout design can help you conceptualize and design a roundabout so that future freight truck drivers, motorists, public transit, and multimodal users can safely and efficiently travel the Meridian Street corridor.

Prior Experience

Reid Middleton's experience in roundabout projects and feasibility studies will be an invaluable asset to your project. Our team has a proven ability to deliver projects on-time and on-budget. Our prior work on other roundabouts within the City such as the Cordata/Stuart, Cordata/Kellogg, and Cordata/Westerly roundabouts will provide continuity of design philosophy across the City, reinforcing driver expectations.

The following table identifies a sample of similar experience that our team members will bring to the Meridian Roundabout Feasibility Study.

Projects	Multimodal Roundabout Design & Operational Analysis	WSDOT & FHWA Standards	MUTCD, NACTO, & AASHTO Standards & Guidance for Bicycle Facilities	ADA Requirements for Crossings	City of Bellingham Development Guidelines & Improvement Standards & Bellingham Municipal Code	City of Bellingham & Department of Ecology Storm Water Management Manual for Western Washington	Department of Ecology Low Impact Development Design Specifications for Stormwater Best Management Practices	Design of Appurtenances Related to both Wet & Dry Utilities within Public Rights-of-Way	Permitting at the Local, State, and Federal Levels	Prime Consultant
Cordata Parkway/Stuart Road	●	●	●	●	●	●	●	●	●	●
Cordata Parkway/Kellogg Road Roundabout, Bellingham	●	●	●	●	●	●		●	●	●
Cordata Parkway/Westerly Road Roundabout, Bellingham	●	●	●	●	●	●		●	●	●
Wharf Street Roundabout, Bellingham	●	●	●	●	●	●		●	●	●
Northwest Drive Roundabout, Bellingham	●	●	●	●	●	●				
Commercial Ave/SR 20 Spur Roundabout, Anacortes	●	●	●	●	N/A			●	●	●
NE 116th Street Roundabout, Redmond	●	●	●	●			●	●	●	●
Pioneer Highway/Fir Island Road Roundabout, Skagit County	●	●		●			●	●	●	●
15th Street/Avenue D Roundabout, Snohomish	●	●	●	●			●	●	●	●
22nd Street/I Street Roundabout, Auburn	●	●	●	●				●	●	●
North Kelsey/Chain Lakes Road Roundabout, Monroe	●	●		●				●	●	●
Haxton Way/Kwina Road Roundabout, Lummi Nation	●	●	●	●				●	●	●

Select project experience demonstrating our experience with elements similar to those in the Meridian Roundabout Feasibility Study project include the following:

Co-location of multi-use trails and streams - Reid Middleton has extensive experience in recreational facilities planning and design including parks, sports field, and trails. We are currently working on the Kayak Point Park Master Plan for Snohomish County, and have worked on highly traversed trails such as the Interurban Trail, Burke Gilman Trail, East Lake Sammamish Trail, Thea Foss Waterway Esplanade, and Edmonds Waterfront Walkway. Our team's experience includes extensive work on trail projects in the vicinity of critical areas such as Cornwall Park Trail Improvements, Cordata Park, Cordata Community Park, Northridge Park, and Samish Crest Trail.

Bellingham multi-modal transportation plans – Our team is familiar with the City of Bellingham, having worked on numerous projects, including the Alabama Street Corridor Study and Citywide Multimodal Transportation Impact Fee (TIF) Program. Through this past work, team members have worked closely with City staff on project development and implementation, including permitting, and are familiar with Bellingham's technical requirements and prior transportation initiatives, including the Transportation Improvement Program (2019-2024), Comprehensive Plan (2016), and other key planning efforts. Having led the development of Bellingham's TIF Program, our subconsultant, Fehr & Peers, also has recent experience applying the City's travel model to understanding and forecasting future growth in the local area.

Traffic control signal system design – Our team has extensive knowledge and experience with traffic signal design and operations and can draw on the decades of experience of our principle-in-charge, Carl Einfeld, who has designed and reviewed more than 400 traffic signals. Recent projects include Westminster Way/N 155th Street for the City of Shoreline and 204th Street NE/74th Avenue NE for the City of Arlington.

The following projects further demonstrate our roundabout expertise and experience:

Cordata Parkway & Stuart Road Roundabout Bellingham, WA

The City of Bellingham selected Reid Middleton to prepare plans, specifications, and estimates for reconstruction of the existing two-way, stop-controlled intersection into a multimodal roundabout that would increase long-term intersection capacity and improve safety of all users. A hybrid roundabout (multi-lane north/south, single lane east/west) was designed initially and modified to a single lane roundabout to within the footprint of the hybrid layout to facilitate future conversion. The roundabout was designed to minimize impacts to adjacent utilities and wetlands. Right-of-way determinations were made and legal descriptions and exhibits were prepared for acquisition of additional right-of-way by the City. The project included construction of sidewalks, illumination, channelization, signing, and a stormwater collection and conveyance system. Site improvements included grading, paving, drainage, stormwater management, and landscaping. A critical areas assessment and mitigation plan were prepared for impacts to adjacent wetlands.

Wharf Street Roundabout Bellingham, WA

This intersection is located at the terminus of a one-way couplet that intersects with three other legs that are all two-way roadways. The resultant five-leg intersection was complicated and awkward. Reconfiguring this intersection into a roundabout was an ideal solution to connect and consolidate all of the existing legs while also improving access to the south end of the Port of Bellingham property. The landscape design, led by HBB, provides a gateway for the waterfront development area and incorporates two rain gardens to treat stormwater. New connections to an adjacent major bike trail were added. Parking for a nearby commercial property was reconfigured to accommodate access upstream of the roundabout. The City received surplus federal stimulus money to fund the construction of this project.

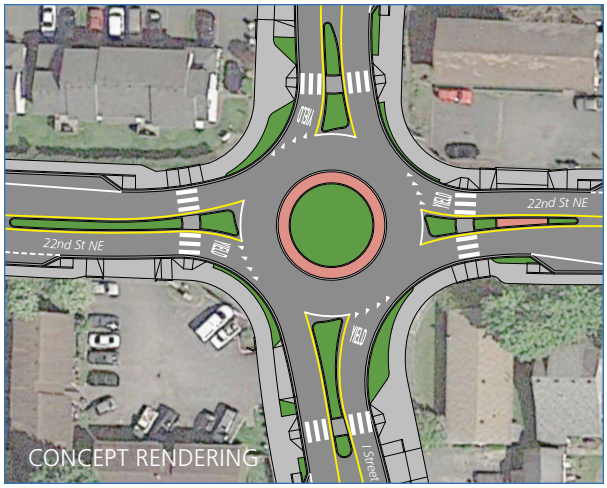
Cordata Parkway Roundabouts
Bellingham, WA

Reid Middleton conducted a traffic analysis and prepared PS&E for the Cordata Parkway corridor for the City of Bellingham. Using the findings from the traffic analysis, Reid Middleton prepared plans, specifications, and estimates for multi-lane and a hybrid (multi-lane north/south, single lane east/west) roundabouts at the Cordata Parkway intersections with Kellogg Road and Westerly Road, respectively.

The Cordata Parkway and Kellogg Road Roundabout is a multi-lane roundabout located at the entrance of Whatcom Community College. The roundabout was designed to accommodate projected capacity needs while minimizing the impact on an existing landscaped rockery and waterfall at the entrance to the college. Reid Middleton assisted the City with an intensive public involvement campaign, including a project website, open house with an HO scale model of the roundabout, a PowerPoint presentation, and a brochure specific to the Kellogg roundabout.

The second roundabout, located at Westerly Road, is a hybrid roundabout and was also designed to avoid a controlling feature, an existing building located close to one corner of the intersection. Installation of the two roundabouts along the corridor allowed the cross section between these intersections to remain at three lanes as opposed to the five lane section, which would have been required for signalized intersections. This resulted in cost savings in right-of-way acquisition, detention, and water quality facilities.

Auburn 22nd Street NE & I Street NE Roundabout
Auburn, WA



The existing 22nd Street NE and I Street NE intersection was a confusing, all-way, stop-controlled configuration with multiple approach and exiting lanes. As a result of this geometry, the intersection was experiencing delays and safety concerns for drivers, pedestrians, and bicyclists. The City selected Reid Middleton to design an urban compact roundabout to improve the intersection performance and enhance safety for all users. Working within the design constraints of remaining within the existing right-of-way, accommodating driveways in close proximity to the roundabout, and the need to keep the east leg of the intersection open at all times during construction, our roundabout designers crafted a solution that met the safety and operational needs of the intersection.

As the prime consultant for the project, Reid Middleton provided the project design, including roundabout layout and analysis, grading, driveway reconfiguration, channelization and signing, pavement reconstruction, illumination, traffic control and construction sequencing, and detour and pedestrian detours. This project also included drainage improvements, replacing water mains on all legs of the intersection, and reconfiguring a side sewer connection.

Project Manager

Our team will be led by Charles Smith, a Professional Engineer who has been delivering projects to improve intersections, roadways, urban arterials, and highways in the Puget Sound region for more than 20 years. Charles is an excellent communicator who has managed multi-disciplinary teams and possesses the proven ability to successfully navigate projects through complex issues such as utility impacts/relocations, critical area impacts, and right-of-way acquisition. Throughout his career, he has served as project manager and lead engineer on many roadway projects throughout the region. Charles's diverse transportation experience includes feasibility studies, roundabouts, traffic signals, multi-modal facilities, drainage facilities, roadway widening, and pavement restoration.

Team Organization

Our team will address key project elements as shown in the organizational chart below and to the right. We are adept at designing outstanding, cost-effective projects. We develop solutions that incorporate functionality, are low maintenance, and result in long-term benefits. We have partnered with firms that bring both a history of successful projects and established relationships with Reid Middleton and the City.

PROJECT MANAGER
Charles Smith, PE*
Reid Middleton, Inc.

PROJECT PRINCIPAL & QA/QC
Carl Einfeld, PE, PTOE*
Reid Middleton, Inc.

ENGINEERING & SUPPORT SERVICES

ROUNDABOUT GEOMETRICS/DESIGN
Rachel Price, PE*
Billy McKeever, EIT
Reid Middleton, Inc.

SURVEYING
Kyle Haggith, PLS
LDES

GEOTECHNICAL INVESTIGATION
Sean Cool, PE
GeoEngineers

TRAFFIC ANALYSIS
Jeff Pierson*
Fehr & Peers

LANDSCAPE DESIGN
Aaron Luoma, ASLA
HBB

ENVIRONMENTAL SUPPORT
Molly Porter, PWS
Northwest Ecological Services

RIGHT-OF-WAY SUPPORT
Mitch Legel, SR/WA*
UFS

STREAM HYDRAULICS
Pat Flanagan, PE
Indicator Engineering

STRUCTURAL ENGINEERING
Brian Moon, SE
Reid Middleton, Inc.

STORMWATER MANAGEMENT
Mark Davis, PE*
Reid Middleton, Inc.

CONSTRUCTION MANAGEMENT
Ramon Llanos, PE
LDES

**indicates key personnel*

Project Management & Methodology

Charles Smith will be the Reid Middleton project manager, managing the project scope, budget, and schedule. Charles will be the primary point of contact for the City and will be heavily involved in the design and delivery of the project. Charles brings his multifaceted engineering background that includes managing and delivering similar projects involving feasibility studies, roundabouts, traffic signals, multi-modal facilities, stormwater management, roadway widening, and pavement restoration. Charles will use his hands-on project management style, excellent communication skills, and technical insights honed from delivering similar projects to guide the design team and convey the City's vision and expectations for this project. During contract development with City staff, your expectations will be integrated into the final work plan. Based on the initial meeting with the City, Charles will assemble the design team and support staff, sharing the work plan along with defining the budget and schedule for each work assignment. Each member will be provided with the work plan and assignments, deliverables, and delivery dates for their reference.

As the work progresses, Charles will consistently monitor production status to ensure compliance with the scope of work. In addition to scheduled meetings, Charles will maintain open communication through weekly status updates to the City's project manager and document all team interaction with the City and other stakeholders via meeting minutes, email, and phone conversation records. Charles will also maintain daily communication with the design team, making sure that they have the necessary information and resources to perform tasks without delay so that the project remains on schedule.

Subconsultants

The Reid Middleton team brings highly qualified staff with relevant project experience to the Meridian Street Roundabout Feasibility Study. Each of the subconsultants was selected based on reputation, project knowledge, and established relationship with your staff and Reid Middleton. A brief description of subconsultant qualifications is provided below.

Fehr & Peers
Traffic Analysis

Fehr & Peers has more than 33 years of experience specializing in transportation planning and engineering, including core services areas such as traffic operations analysis, travel demand modeling and forecasting, and freight planning and forecasting. Firm-wide, Fehr & Peers has worked on more than 70 roundabout projects, including conducting analyses and peer reviews of proposed roundabouts as part of freeway and corridor improvement studies for WSDOT, making the firm's staff experts in multimodal operations and simulation for roundabout intersections as well as truck operations.

Universal Field Services
Right-of-Way Support

Universal Field Services, Inc. (UFS) has been providing professional right-of-way acquisition and relocation services throughout the Puget Sound region for over 45 years. The majority of Universal's current and recently completed projects required Right-of-Way Certification in compliance with the Federal and WSDOT process.

Hough Beck & Baird Inc.
Landscape Design

Since 1990, Hough Beck & Baird Inc. (HBB) has provided landscape architecture, planning and urban design services throughout the Pacific Northwest. It is extremely familiar with the City of Bellingham, having worked on several Parks and Transportation projects in the City, including the Wharf Street and McLeod Road Roundabouts. HBB is also a certified Disadvantaged Business Enterprise/Women's Business Enterprise (Certificate Identification Number: D2F0008876).

Northwest Ecological Services
Environmental Support

Northwest Ecological Services, LLC (NES) is a specialized environmental consulting firm. It has extensive experience along the Cordata Parkway corridor and over 25 years of experience in providing dependable environmental services to both public and private sector clients. It is also a Washington State certified Women's Business Enterprise (WBE).

GeoEngineers
Geotechnical Investigation

GeoEngineers has provided geologic, hydrogeologic, hydrologic, geotechnical, and environmental services to the City of Bellingham for many years from an on call roster agreement, and works seamlessly with City of Bellingham staff, including Public Works and Bellingham Parks Departments. GeoEngineers has been working with local agencies, civil engineers and others developing stormwater/low impact (LID)/infiltration strategies for the local clay soils.

Indicator Engineering PLLC
Stream Hydraulics

Indicator Engineering PLLC specializes in hydraulic, hydrologic, and geomorphic analyses and design. The firm has evaluated hydraulic conditions at hundreds of rivers, creeks, and stormwater systems throughout Washington, including Squalicum Creek in Bellingham.

Land Development Engineering & Surveying
Surveying & Construction Management

Land Development Engineering & Surveying, Inc. (LDES) is a multi-disciplinary firm that provides professional services in the fields of civil engineering, construction management, surveying, stormwater management, land development, and drafting. Its team has established an excellent record of successful project delivery and has comprehensive experience collaborating with local, state, and federal agencies.

Project Approach & Understanding

Understanding

Meridian Street is a critical link in the City's transportation network. It provides connections between the Waterfront District, Fountain District, and I-5 for the City's residents, freight traffic, and WTA transit buses. The City of Bellingham's proposed improvement of replacing the existing traffic signals at the Meridian Street/Squalicum Way and Meridian Street/Birchwood Avenue intersections with multi-modal roundabouts has the potential to increase long-term intersection capacity and improve safety for all users. Increased capacity is needed to accommodate the anticipated growth in traffic that will occur with completion of the Orchard-Birchwood connector in 2020 along with significant planned development in the Bellingham Waterfront District, Fountain District Urban Village, and areas north of I-5. The existing signal operation of these two closely-spaced intersections is inefficient due to the split side street signal phases. This causes significant delay to traffic creating a bottleneck effect for the flow of traffic on Meridian Street. This condition is exacerbated by the heavy flow of truck traffic that uses Squalicum Way as the designated truck route to and from the City's waterfront industrial area.

Recent improvements within the adjacent Cornwall Park connect Meridian Avenue to the Bay to Baker Trail via the new trail through the park. The proposed roundabout will need to accommodate a trail crossing of Meridian for future extension of the Bay to Baker trail to the west.

Coordination with WTA will be necessary to make sure that proposed improvements are compatible with their intended implementation of a GO line along Meridian Street. WTA's GO Lines offer service every 15 minutes on weekdays along corridors in Bellingham.

There are additional significant constraints to be considered when developing proposed improvement alternatives. Immediately adjacent land uses, limited available right-of-way, and sensitive environmental habitats within the project area will all influence the design alternative. In order to minimize these impacts, we will consider creative designs that maximize use of existing right-of-way and minimize encroachment into adjacent critical areas, while continuing to provide improvements that serve the capacity and safety needs of all users.

Heavy truck turning movements between Squalicum Way and Meridian Street

The City anticipates that acquisition of right-of-way will be necessary to accommodate the improvements. A phasing plan will be developed that presents an attainable timeline for acquisition of property. Right-of-way acquisition is likely to be the critical path leading up to construction.

Completion of 30% design and cost estimates will position the City to better identify and pursue local, state and federal funding options.

Approach

Project Initiation

Our project manager, Charles Smith, will hold a kickoff meeting with you to establish your preferred methods of communication, reporting, and project management. Our kickoff meeting will further our understanding of the project and identify specific concerns our team may need to address, such as BNSF and other stakeholder expectations, project constraints that may affect the location of proposed facilities, and funding opportunities that may influence environmental and right-of-way acquisition procedures to be followed.

Following the kickoff meeting, Charles will develop the project work plan in collaboration with you.

Communication

One of the keys to a successful project is effective communication, which Charles will accomplish this by:

- providing you with weekly monitoring of work completed and work planned to keep the project on schedule.
- serving as the main point of contact for our team, including all subconsultants. He will maintain continuous communication via email, phone, and team meetings to facilitate compliance with project goals and deadlines.
- coordinating meetings with outside stakeholders such as BNSF, WTA, and permitting agencies to gain input on issues critical to the success of the project.

Traffic Operations

Our approach to developing a successful design for the two study intersections begins with a thorough understanding of the existing and future needs for all current and future users of this corridor. Our traffic experts, led by Jeff Pierson of Fehr & Peers, will use WCOG's Regional Travel Demand Model to ensure that our forecasted demand for personal vehicles and freight trucks is consistent with the City's long-term growth plans and that we have correctly identified the critical movements with the heaviest volumes that will need to be served. We will also ensure that we incorporate and maintain consistency with all relevant projects and plans from the City of Bellingham's TIP, Comprehensive Plan, Bicycle Master Plan, Pedestrian Master Plan, and Parks, Recreation, and Open Space Plan.

In order to properly evaluate each of the alternatives,our team will use Vissim microsimulation software. This tool gives us the flexibility to examine any geometric design, as well as the ability to conduct a multimodal analysis for all users of Meridian Street, including vehicles, freight, transit, pedestrians, and bicyclists. The experience of each of these groups will be evaluated and a preferred alternative will be selected that balances the needs of each group while maximizing safety and minimizing the alternative's costs.

Pedestrian/Bicycle Facilities

The demand for people to walk and bike near Birchwood Avenue, Squalicum Way, and Meridian Street will increase with the planned completion of the regional Bay to Baker multi-use trail. Our design team will work collaboratively to incorporate connections to the existing and future trail segments on either side of Meridian Street and provide crossings of the roundabout configuration considering the use of RRFBs to enhance safety.

Geometric Design

Geometry is the foundation upon which all other elements of the roundabout are developed. Several context-sensitive design features associated with this location are outlined below with bulleted numbers in Figure 1 (to the right).

- The conceptual roundabout layout demonstrates the potential to minimize impacts to the existing culvert crossing for Tributary W and associated stream and buffer impacts.
- A single crosswalk location can be implemented between Birchwood Avenue and Squalicum Way to accommodate connection to existing and future segments of the Bay to Baker Trail.
- A multi-use path is shown around the outside which will be refined to incorporate bike ramp connections allowing an alternative choice for cyclists who prefer to be separated from traffic.
- Rectangular Rapid Flashing Beacons (RRFBs) are recommended at the multi-lane crossings.

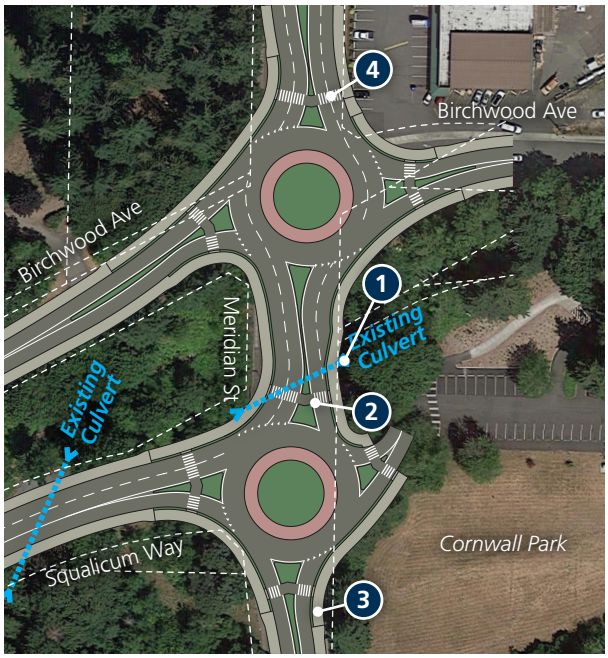


Figure 1

Stormwater Management

Many of Reid Middleton's projects meet redevelopment standards per the Department of Ecology standards; as such, we have extensive experience in determining the applicable requirements, including water quality and flow control needs. Our lead stormwater engineer, Mark Davis, will apply appropriate DOE requirements for the project and work closely with our lead geotechnical engineer, Sean Cool with GeoEngineers, to conduct an investigation of the subsurface soils and determine the applicability of LID alternatives.

The proximity of the tributary culvert crossing of Meridian Street just north of Squalicum Way presents a challenge to minimizing impacts to both the stream and culvert with proposed roundabout improvements. The existing culvert has been identified by WDFW as being a partial blockage for fish passage. Further consulta-

tion with WDFW will be necessary to determine mitigation requirements associated with project impacts. Our hydraulic engineer, Pat Flanagan, will conduct hydraulic modeling as needed to evaluate the culvert crossing and associated upstream and downstream impacts.

Utility Coordination

Our project team will coordinate early with utilities having underground or overhead facilities within the project vicinity, including Cascade Natural Gas, PSE and other franchise utilities. Existing base maps and proposed designs will be distributed and discussed with utility companies to confirm utility information is accurately shown and to identify and resolve conflicts.

Landscape Design

Our team's landscape designer, Aaron Luoma will work with City staff and other stakeholders as needed to create a public space that reinforces the character of the Fountain District while enhancing the visual character of the area, meeting roundabout sightline requirements and incorporating appropriate low maintenance plantings.

Environmental/Permitting

The project area contains critical areas that NES, our team's wetland scientists, will assess and evaluate impacts for as project feasibility is considered. Known critical areas include two streams (Squalicum Creek and tributary), stream buffers, and potentially floodplain and floodways associated with these streams. NES will field-confirm stream and stream buffers, as well as determine if other critical areas, such as wetlands, are located within the project area.

Right-of-Way Acquisition

In order to preserve the City's eligibility for future federal funding opportunities, we recommend all right-of-way planning, feasibility and support services be conducted in-line with the City's WSDOT approved Right-of-Way Acquisition Procedures, including WSDOT's LAG Manual, Section 25 – Right-of-Way Procedures, the Federal Uniform Relocation Assistance and Real Property Acquisitions Policies Act, and the Washington Administrative Code (WAC) 468-100.

Mitch Legel with Universal Field Services (UFS) will coordinate early on with Charles to help identify the real property rights (permanent and temporary) that may be required and evaluate the potential acquisition impacts as they relate to right-of-way acquisition cost and schedule.

Early "one-on-one" meetings with property owners may be conducted as part of a vetting process to integrate concerns with the design team; conduct assessment of an owner's remaining use of their property; proximity impacts (distance from residences and proposed right-of-way) if any; driveway and access issues, etc.

Over the past few years, Mitch has developed a strong and successful relationship with BNSF's representatives at Jones Lang LaSalle located in downtown Seattle. We aim to allow sufficient time in the project phasing plan to complete real estate transactions with BNSF.

Public Involvement

We are prepared to assist the City with public involvement as needed. A tool that we have found to be highly effective is providing a roundabout roll plot at HO scale along with HO scale model vehicles for open house meetings. This approach allows the public to experience a hands-on visualization of the design.

Roundabout HO Scale Model.

Technical Knowledge & Qualifications

Key Personnel

Brief qualifications of Reid Middleton key personnel available to support project manager Charles Smith follow; full resumes for all staff listed in the organization chart on page 5 are located in the appendix.

Carl Einfeld, PE, PTOE, has more than 37 years engineering and project management experience covering the design and improvement of transportation and traffic engineering projects throughout the Puget Sound Region. As project principal, Carl is responsible for monitoring budgets and schedules, QA/QC, resource allocation, general design guidance, determining scopes of work, project administration, and client relations. He has served as project principal on projects ranging from $150,000 to $10 million in construction value. Carl will provide the City of Bellingham with excellent QA/QC service.

Rachel Price, PE, has an unmatched level of expertise that comes from laying out the geometry of more than 200 roundabouts. Her 17-year career at Reid Middleton has been dedicated entirely to the analysis, design, peer review, and promotion of roundabouts. She is familiar with WSDOT standards; MUTCD, NACTO, and AASHTO stands and guidelines for bicycle facilities; City of Bellingham Development Guidelines and Improvement Standards, and the Bellingham Municipal Code, ADA Requirements; Permitting of similar projects at the local, state, and federal levels; and public outreach and engagement.

Mark Davis, PE, is a civil engineer with 18 years of experience in site civil design, specializing in low impact stormwater management, utilities, and site development. His experience includes preliminary design and feasibility studies, roadway design, quantity calculations, construction cost estimates, site grading, storm, sanitary, and water systems design.

Additional Reid Middleton Resources

Structural Engineering. Along with Brian Moon, SE, Reid Middleton has 15 additional structural engineers in our Everett office. Recognized as leaders in structural engineering, we have an extensive resume of designing retaining walls, culverts, and other transportation related structures.

Surveying. LDES will provide survey services for this project. However, our four survey team members based in our Everett office are available to support the survey needs of the project should they be needed.

Subconsultants

Jeff Pierson, Fehr & Peers, is a senior transportation planner who specializes in travel demand forecasting, multimodal simulation, and traffic operations analysis. He has managed numerous freeway and arterial corridor improvement studies, many of which included analysis of roundabouts, and served as a technical lead on many projects overseeing the development and application of regional travel demand models, citywide DTA models, and corridor simulation models. Jeff specializes in developing customized applications within multiple software packages to enhance the capabilities of travel demand models and to provide simple solutions to complex questions.

Mitch Legel, SRWA, UFS, has more than 20 years of experience in real property acquisition, relocation, project management and has been involved in all phases of the land acquisition and relocation process. He is knowledgeable and experienced with multiple right-of-way acquisition policies and procedures, including the Washington State Department of Transportation Local Agency Guidelines – Section 25 (Right-of-Way Procedures), the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA), Washington Administrative Real Estate Regulations and various local public agency policies and procedures.

Schedule & Management

Other Resources

Reid Middleton has assigned to this contract a core group of key staff with comprehensive knowledge of roundabout feasibility and design, permitting, and construction requirements in Puget Sound. The core group will be supported by an extensive network of professionals and support staff with roadway and multimodal design experience. Reid Middleton tracks staffing levels and availability through monthly resource and contract projections. Additionally, project schedules, man-power requirements, and staffing assignments are updated weekly.

Availability

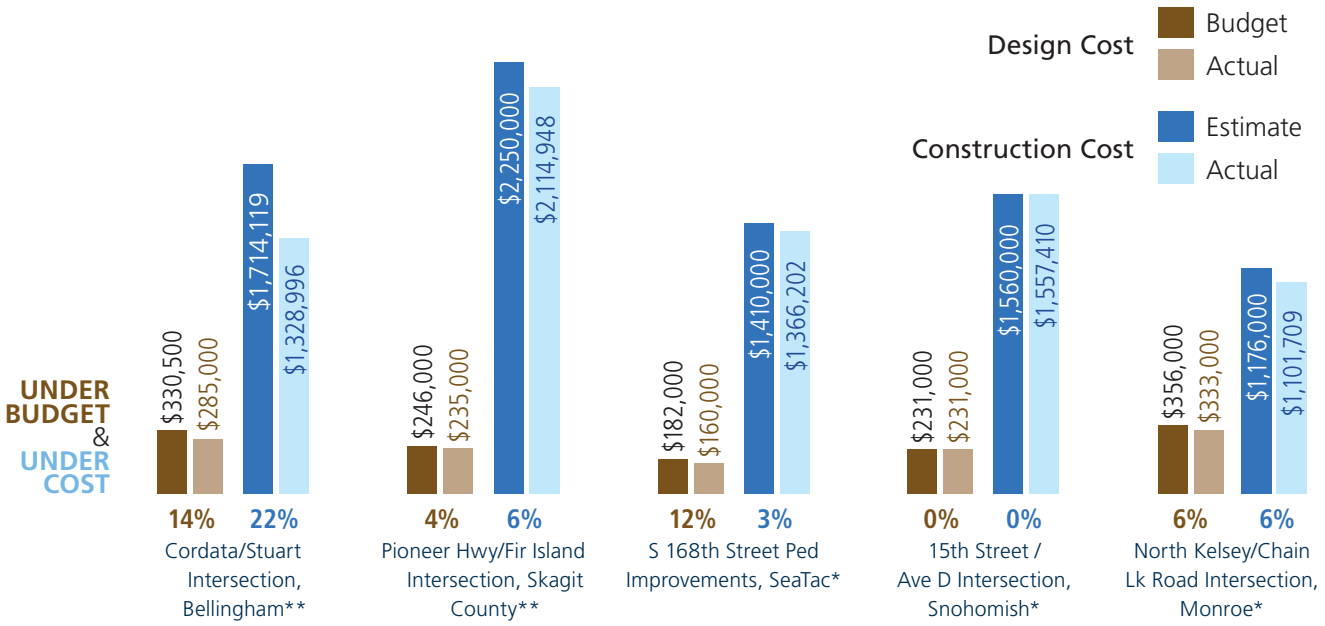
All individuals listed in the organizational chart shown on page 5 will be available throughout the life of this project. Each member of the project team is committed to the completion of your project. Our team members have assessed their availability; our team has more than enough capacity to handle additional work, giving us the ability to respond immediately to your needs.

Managing Project Schedule

All communications for the Reid Middleton team will be through our project manager, Charles Smith. This will also include document control and tracking. Charles will strive to provide timely feedback and response, listen and address your needs, and build a collaborative partnership. Charles will provide weekly monitoring of work completed and work planned to keep the project on schedule. Our monthly invoices will detail work performed, budget and schedule status for our effort. For budget tracking, Charles has access to real-time monitoring of staff hours and costs through our Vision accounting software.

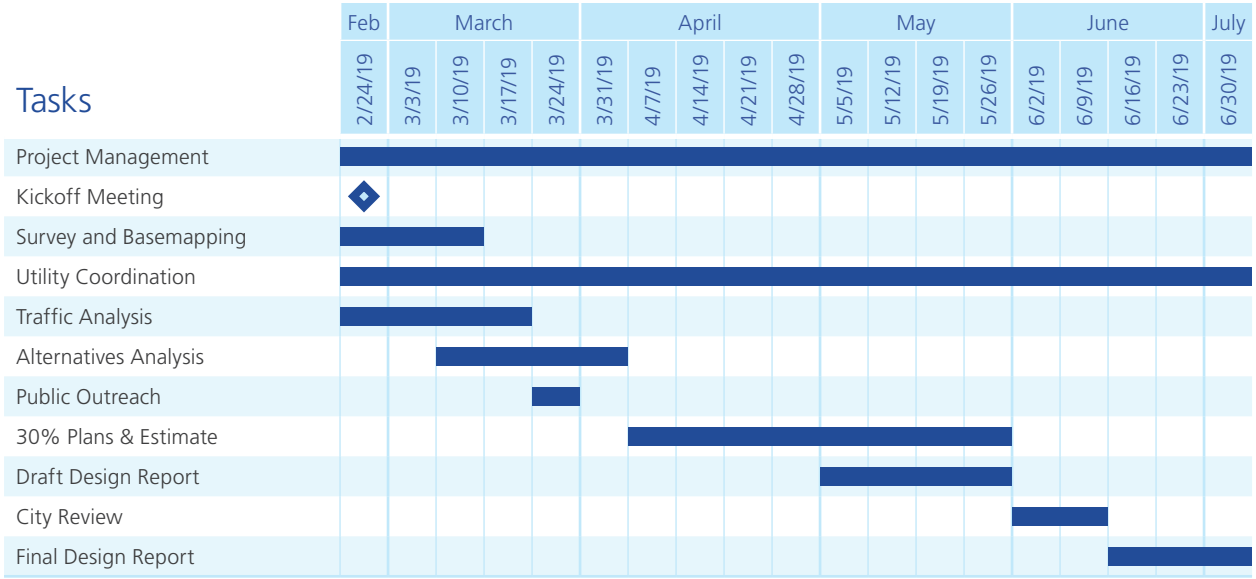
Documentation of Project History

Reid Middleton's ability and commitment to meeting established project schedules and staying within project budgets has been proven repeatedly throughout our history. The following chart demonstrates our ability to control costs and meet time constraints on similar projects.



* Completed on schedule ** Accelerated schedule, completed on time

Schedule



Ease of Access to the Firm's Project Staff

Reid Middleton is located just over an hour away from the City of Bellingham and the Meridian Street roundabout project location. The Reid Middleton team commits to being on-site for scheduled meetings and field work when our presence is requested and will also facilitate communication via conference calls, video conferencing, and screensharing with applications such as GoToMeeting when our presence in-person is not required.

References

Sam Shipp, PE
City of Bellingham
(360) 778-7942

Andy Sics, PE
City of Snohomish
(360) 568-3174

Seth Wickstrom, PE
City of Auburn
(253) 804-5034

Charles Smith, PE

Reid Middleton, Inc.

PROJECT MANAGER

Charles has 20 years of experience in public works engineering and has developed a variety of municipal transportation projects from the initial planning stages through construction. Charles has provided design, construction management, and inspection services for transportation projects, including roadway design and construction, steel and concrete structures, drainage, grading, excavation, embankments, signals and illumination, signing, electrical, channelization, paving, demolition, and landscaping.

EDUCATION

Bachelor of Science, Civil Engineering, Washington State University

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA

Charles's select project experience includes:

Cordata Parkway & Stuart Road Roundabout, Bellingham, WA

Project engineer for this project to design a hybrid roundabout at the intersection of Cordata Parkway and Stuart Road. Prepared PS&E that included customized bicycle and pedestrian ramps to enhance access for pedestrians and bicycles at this intersection. The goals of this project were to increase long-term intersection capacity and improve safety of all users. The project has been designed to accommodate new bike lanes along Cordata Parkway, a designated bike route in for the City of Bellingham. Additionally, the roundabout design includes future expansion with minimal rework to accommodate projected traffic volumes as the adjacent areas are developed. Charles was the lead engineer for the project and was involved in all aspects of finalizing the PS&E, permitting, bid support, and pre-construction utility coordination.

Roundabout & Intersection Feasibility Studies, Bellevue, WA

Charles is the project engineer for a feasibility study evaluating intersection alternatives for the City of Bellevue. The study compares signal improvement alternatives to roundabout options for multiple intersections along two highly congested corridors. The two corridors are Lake Hills Connector/SE 8th Street and Lakemont Blvd SE/SE Newport Way. Alternatives analysis includes impacts to adjacent sensitive areas, right of way needs, and future Level of Service impacts for each improvement option. A Transportation Analysis Report is being developed for each of the project locations to summarize the results of the alternatives. Preliminary cost estimates are being prepared for comparing the alternatives, and conceptual (10%) design plans will be prepared for the selected alternatives.

3rd Avenue & Tietan Street Roundabout, Walla Walla, WA

Charles served as the lead engineer and assistant project manager for the 3rd Avenue & Tietan Street Roundabout project for the City of Walla Walla. The project included geometric roundabout design, conceptual design layout for the mini roundabout, preparation of a Roundabout Validation Report, lighting analysis, review of City developed plans for the project, and public outreach for community awareness of the proposed roundabout. The geometric design of the roundabout was catered to the specific site conditions of the intersection to maximize the functionality of the mini roundabout while minimizing impacts to adjacent properties.

Carl Einfeld, PE, PTOE

Reid Middleton, Inc.

PROJECT PRINCIPAL & QA/QC

EDUCATION

Bachelor of Science, Civil Engineering, University of Washington

Bachelor of Science, Biology/Chemistry, Calvin College

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA, OR

Professional Traffic Engineer: OR

Professional Traffic Operations Engineer, Institute of Transportation Engineers

PROFESSIONAL AFFILIATIONS

Institute of Transportation Engineers (ITE)

American Society of Civil Engineers (ASCE)

American Public Works Association (APWA)

Carl has more than 37 years engineering and project management experience covering the design and improvement of transportation and traffic engineering projects throughout the Puget Sound Region. His areas of expertise include stakeholder and project management, roadway design, traffic signals, roundabouts, and quality assurance/quality control (QA/QC). His projects have included feasibility studies, design reports, and final plans, specifications, and estimates (PS&E). Carl is often responsible for managing multi-disciplinary teams and public involvement related to project documentation, stakeholder approvals, right-of-way documents and acquisition, and feasibility analyses.

Carl's select project experience includes:

Cordata Parkway & Stuart Road Roundabout, Bellingham, WA

Carl was the project principal and provided QA/QC on this project to design a hybrid roundabout at the intersection of Cordata Parkway and Stuart Road. The goals of this project were to increase long-term intersection capacity and improve safety of all users. Already-present congestion is expected to worsen at this intersection as development occurs to the north, west, and east. Based on our analysis, the selected roundabout alternative will accommodate projected traffic volumes with ease for the next 20 years.

Roundabout & Intersection Feasibility Studies, Bellevue, WA

Carl is the project manager for a feasibility study for the City of Bellevue that is evaluating replacement of existing traffic signals with roundabouts along two highly congested corridors and installation of a traffic signal at a third location. The two corridors are Lake Hills Connector/SE 8th Street and Lake Hills Connector/Richards Road. The third location is the Lakemont Blvd SE/SE Newport Way interchange at I-90 which involves improvements to two intersections. Alternatives are being evaluated that consider impacts to adjacent sensitive areas and right-of-way needs. A traffic analysis was conducted and a Transportation Analysis Report will be prepared for each of the three project locations that will summarize the results of the alternatives analysis, including preliminary cost estimates. 10% design plans will be prepared for the selected alternatives.

22nd Street NE & I Street NE Roundabout, Auburn, WA

Reid Middleton provided PS&E for an urban compact roundabout at the intersection of 22nd St NE and I St NE to mitigate the high number of pedestrian and bicycle collisions this location has been experiencing. Carl was the project principal and provided QA/QC for this project. He received regular updates from the project manager to confirm that proper protocols were being followed and documented; confirmed that staff was utilized based on experience, expertise, capability, and the needs of the project; and provided an independent review of plans, specifications, and estimates prior to submittals.

Rachel Price, PE

Reid Middleton, Inc.

ROUNDABOUT GEOMETRICS/DESIGN

EDUCATION

Bachelor of Science, Civil and Environmental Engineering, Marquette University

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA, ID, TX, HI, TX, WI

PROFESSIONAL AFFILIATIONS

Transportation Research Board (TRB)

American Public Works Association (APWA)

Rachel's 17-year career at Reid Middleton has been dedicated entirely to the analysis, design, peer review and promotion of single- and multilane roundabouts. She has a level of experience that comes from laying out the geometry of more than 200 roundabouts. Rachel teaches our Troubleshooting Roundabouts class, provides individualized training for agencies and consultants, prepares PS&E, and provides design review services. Rachel is also active with the TRB Roundabout Committee and takes a role in establishing current guidelines and contributes to the roundabout design community by developing and sharing tools, theories, and practices. As a member of the West Coast focus group, Rachel provided input to update the current FHWA Roundabout Informational Guide. She has also created roundabout guidelines for several local agencies.

Rachel's select project experience includes:

Cordata Parkway Roundabouts, Bellingham, WA

As a design engineer for the design of a multi-lane and a hybrid (multi-lane north/south, single-lane east/west) roundabout along Cordata Parkway, Rachel developed design for the roundabouts which replaced existing stop controlled intersections. Her responsibilities included geometric design; grading; storm drainage; storm water detention was provided on the southern roundabout and water quality was provided for both roundabouts; preparation of final engineering plans; and developing a cost estimate for the project.

Lakewood Station & SR 531 Roundabouts, Marysville, WA

Reid Middleton was contracted to provide design services for a roundabout at the intersection of State Route 531 and 23rd Avenue NE in the city of Marysville. To accommodate current and future capacity needs, both an ultimate build out of a hybrid roundabout and an interim single lane configuration were designed. The interim configuration is a three-leg single lane roundabout with an existing driveway that serves two residences that access the roundabout directly onto the circulating lane. As growth occurs to the south, and the two existing residences are redeveloped, the ultimate configuration will be a 4-leg hybrid (multi-lane east/west, single lane north/south) roundabout. Rachel laid out the horizontal geometry and provided grading for both configurations.

Commercial Ave & SR 20 Spur Roundabout, Anacortes, WA

This T-intersection at the entrance of the City of Anacortes, Washington, marks the transition between SR 20 Spur and the primary corridor through the City. Reid Middleton was contracted to conduct a feasibility study to determine what traffic control would best produce a safe and efficient intersection that would accommodate heavy truck traffic, bicycles, and pedestrians. The single lane roundabout was the clear intersection of choice. Rachel was the project engineer, responsible for determining the roundabout geometrics, developing the PS&E package, and providing public outreach assistance.

Billy McKeever, EIT

Reid Middleton, Inc.

ROUNDABOUT GEOMETRICS/DESIGN

EDUCATION

Bachelor of Science, Civil and Environmental Engineering, University of Washington

PROFESSIONAL REGISTRATION

Engineer in Training, WA

Billy has four years of experience specializing in transportation projects. His responsibilities include assisting with the design of roadways, and multi-modal facilities. Billy's experience includes design analysis, geometric layout, illumination, channelization and signing, and assisting with storm drainage design, plan sheet preparation, and cost estimating. Billy is a former employee of King County and as a result, he has a solid understanding of the requirements of designing projects for a public agency.

Billy's select project experience includes:

Park Street Roundabout, North Bend, WA

Reid Middleton designed a single-lane, four-leg roundabout at the intersection of East North Bend Way, East Park Street, and North Downing Avenue. East North Bend Way is an east-west arterial and truck route through the City of North Bend, and the intersection is an important thoroughfare for those accessing the City. Billy's responsibilities included the opinion of probable construction cost, ADA design, and plan production.

Arlington Valley Road Improvements, Arlington, WA

Reid Middleton provided design services for the new three-lane roadway corridor, which will support existing and planned industrial and commercial businesses. The project will provide a new trail connection to the Centennial Trail. A new traffic signal will be installed at the intersection of 74th Avenue Northeast and 204th Street Northeast. Stormwater facilities included bioretention swales and infiltration systems. Supporting infrastructure will include stormwater management, street illumination, path illumination, and water main and sanitary sewer extensions. Billy's responsibilities included assisting in roadway and stormwater design, roadway and stormwater modeling in Civil 3D, developing the opinion of probable construction cost, and plan production.

Westminster Way North and North 155th Street, Shoreline, WA

Reid Middleton designed improvements at the Westminster Way North and North 155th Street intersection. For this project, the City's goal is to increase intersection capacity while improving pedestrian and bicycle access along Westminster. A new signal will be installed at the intersection. Billy's role in this project included channelization and roadway design, stormwater design and analysis, developing the opinion of probable construction cost, and plan production.

Mark Davis, PE

Reid Middleton, Inc.

STORMWATER MANAGEMENT

Mark Davis is a civil engineer with 18 years of experience in site civil design, specializing in low impact stormwater management, utilities, and site development. His experience includes preliminary design and feasibility studies, roadway design, quantity calculations, construction cost estimates, site grading, storm, sanitary, and water systems design.

EDUCATION

Bachelor of Science, Forest Engineering, University of Washington

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA

Construction Documents Technologist

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)

Institute of Transportation Engineers (ITE)

American Railway Engineering and Maintenance-of-Way Association (AREMA)

Mark's select project experience includes:

Wharf Street Roundabout, Bellingham, WA

Project designer responsible for design of storm conveyance and water quality systems, storm drainage report for permitting that included detention, conveyance, and rain garden calculations, drainage maps and downstream analysis. The project involved the reconstruction of a 5-way intersection into a roundabout that included grading, drainage, retaining wall construction, rain garden installation for water quality, and vehicle traffic and pedestrian pavements.

15th Street & Avenue D Roundabout, Snohomish, WA

The City of Snohomish contracted Reid Middleton to design a single lane, four-leg roundabout at the intersection of Avenue D, Bickford Avenue, and 15th Street. The roundabout not only increased capacity and safety, but also created appropriate access management and an appealing environment where a diverse mix of users can successfully share the public right-of-way. Mark was part of the design team to develop bioretention and conveyance designs and stormwater details for the project.

Lundeen Parkway/Soper Hill Roundabout, Lake Stevens, WA

The project involved construction of a roundabout at the intersection of Lundeen Parkway, Vernon Road and Lake Drive. Project designer for clearing and grubbing, erosion control, wetland buffer mitigation, illumination, and coordination with utility agencies.

Brian Moon, SE

Reid Middleton, Inc.

STRUCTURAL ENGINEERING

Brian is a structural engineer with specialized expertise in transportation projects. He is experienced in the analyses and design of various types of earth retention structures for roadway and embankment stabilization projects, bridge design, and specialty structures such as special foundations. His experience includes structural systems in steel, concrete, and timber, including design of pre and post tensioned prestressed concrete systems. He is also experienced in performing design, load ratings, condition surveys, and design review for bridges and box culverts.

EDUCATION

Master of Science, Civil Engineering, University of Hawaii

Bachelor of Science, Civil Engineering, University of Hawaii

PROFESSIONAL REGISTRATION

Structural Engineer: WA, HI, GA, UT, NV

PROFESSIONAL AFFILIATIONS

Structural Engineers Association of Washington (SEAW)

Society of Military Engineers (SAME)

Brian's select project experience includes:

Cordata Parkway/Kellogg & Westerly Road Roundabouts, Bellingham, WA

Reid Middleton prepared PS&E for two multi-lane roundabouts on Cordata Parkway. The Kellogg Road roundabout serves as the main entrance to Whatcom Community College (WCC). The roundabout location minimized impact on an existing landscaped rockery and waterfall. WCC entered into a unique agreement with the city of Bellingham for WCC to exchange required right-of-way to accommodate the roundabout approach geometry for ownership of the roundabout center island. This allows WCC to maintain the center island landscaping. Brian was the structural engineer for this project.

West Lake Sammamish Parkway & Multi-Use Trail, Bellevue, WA

Structural engineer for the West Lake Sammamish Parkway project from the Redmond city limits to an area near I-90. This 5.5-mile-long project involved the inclusion of pedestrian and bike facilities into a narrow roadway section benched between steep slopes and highly interested property owners. The first 1 mile segment was designed and constructed.

Goldenrod Bridge & Road, Skagit County, WA

Structural engineer for the design and construction services for a new, federally-funded roadway and 115-ft clear span bridge structure crossing Gages Slough. The bridge design consisted of single-span prestressed concrete tee sections with a cast-in-place concrete road deck and approach slabs. The substructure consisted of concrete cast-in-place abutment and wing walls supported by auger-cast concrete piling. In addition to roadway and bridge design, the project included extensive wetland mitigation, stormwater treatment and analysis, mechanically stabilized earth walls, and significant earthwork. Reid Middleton coordinated the design with the City of Burlington, the Corps of Engineers, and the Washington State Departments of Ecology, Fisheries, and the Washington State Department of Transportation (WSDOT).

Jeff Pierson

Fehr & Peers

TRAFFIC ANALYSIS

EDUCATION

Master of Science in Engineering, Civil and Environmental Engineering, University of Washington

Bachelor of Arts, Math-Physics, Whitman College

Jeff is a senior transportation planner who specializes in travel demand forecasting, multimodal simulation, and traffic operations analysis. He has managed numerous freeway and arterial corridor improvement studies, many of which included analysis of roundabouts, and served as a technical lead on many projects overseeing the development and application of regional travel demand models, citywide DTA models, and corridor simulation models. Jeff is a member of Fehr & Peers' internal Forecasting & Operations Discipline Group and serves as a company-wide resource providing training and support for staff. He specializes in developing customized applications within multiple software packages to enhance the capabilities of travel demand models and to provide simple solutions to complex questions.

Jeff's select project experience includes:

Citywide Multimodal Transportation Impact Fees, Bellingham, WA

Working closely with the City of Bellingham, Fehr & Peers developed a multimodal transportation impact fee program to implement the City's Pedestrian and Bicycle Master Plan. This program included an entirely new impact fee basis that utilized person trips to generate a clear nexus between the fee and the project list. Determining the growth in travel demand caused by new development was a key requirement of the new program. Jeff helped apply a new method to calculating growth using data from Bellingham's forecasting model and various other data sources. He served as technical resource on this effort providing training and support in using the regional travel demand model.

SR 9/SR 204 Intersection Improvements, Lake Stevens, WA

Fehr & Peers is leading the traffic analysis for a WSDOT intersection improvement study at the SR 9/SR 204 intersection in Snohomish County. Fehr & Peers is producing several comparison measures/metrics using advanced demand forecasting and traffic simulation techniques, including person-delay, corridor travel time, transit reliability, and non-motorized accessibility. Jeff is also conducting an analysis of roundabouts within the study area. This project has required extensive use of the Vissim software to evaluate numerous at-grade and grade-separated designs within a limited right-of-way with significant environmental and land use constraints immediately adjacent to the project site.

Pines Road/BNSF Grade Separation Traffic Demand Forecasting, Spokane Valley, WA

As project manager, Jeff led the development of traffic forecasts and provided operations analysis services for several design configurations at the Pines Road/Trent Avenue intersection in Spokane Valley as part of the Pines Road/BNSF Grade Separation project. Fehr & Peers also completed a safety analysis of the design alternatives using the HSM Predictive Crash Analysis tool. This project also required evaluation of unique roundabout designs within a limited right-of-way.

Mitch Legel, SR/WA

Universal Field Services

RIGHT-OF-WAY SUPPORT

Mitch has over 20 years of experience in real property acquisition, relocation, project management and has been involved in all phases of the land acquisition and relocation process. He is knowledgeable and experienced with multiple right-of-way acquisition policies and procedures, including the Washington State Department of Transportation Local Agency Guidelines – Section 25 (Right-of-Way Procedures), the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA), Washington Administrative Real Estate Regulations, and various local public agency policies and procedures. Prior to joining Universal Field Services, Mitch worked with civil engineering and land survey firms involved in the design and construction of public roadway, utility, transit and various private development improvements. He also served as a Local Public Agency ROW Acquisitions Manager supporting all department and division right of way needs.

EDUCATION

Associate of Science, Civil Engineering

International Right-of-Way Association (IRWA) Course Work (over 300 hours)

WSDOT LAG Manual Training

PROFESSIONAL REGISTRATION

SR/WA (Senior Member of the International Right-of-Way Association)

WA State Real Estate Managing / Designated Brokers License

Notary Public

PROFESSIONAL AFFILIATIONS

International Right-of-Way Association (IRWA)

American Public Works Association (APWA)

Mitch's select project experience includes:

McLeod Road & Northwest Avenue Roundabout, Bellingham, WA

Mitch provided project management of the right-of-way acquisition process in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisitions Policies Act and WSDOT guidelines. This included completion of a project funding estimate, appraisals, and appraisal reviews. Acquisition negotiations involved the purchase of partial fee simple and temporary construction easements from five separate tax parcels. Three of the properties were single family residential use and the other two were churches. Right-of-way certification was processed and approved through WSDOT's local agency coordinator, NW Region.

Five Corners Roundabout, Edmonds, WA

Conducted right-of-way oversight for this transportation improvement. Performed random reviews of acquisition and relocation files. All right-of-way acquisition services were completed in compliance with WSDOT and federal guidelines. Scope of work included the acquisition of various real property rights from six separate tax parcels of business use properties. Services included completion of a project funding estimate, appraisals, acquisition negotiations, and obtained right-of-way certification through WSDOT Real Estate Services.

Shaw Road Extension – BNSF Grade Separation, Puyallup, WA

Mitch served as right-of-way oversight for this new roadway extension, including a grade separation over the BNSF railway and the extension of Shaw Road from Pioneer Avenue to Main Street. Universal provided fee simple, temporary, and permanent easement acquisition negotiation services from 17 real property owners and provided relocation assistance to two businesses displaced by the project under the Federal Uniform Relocation Assistance and Real Property Acquisitions Policies Act and the Washington State Department of Transportation (WSDOT) LAG Manual Section 25 – Right-of-Way Procedures.

Aaron Luoma, ASLA

HBB Landscape Architecture

LANDSCAPE ARCHITECTURE & URBAN DESIGN SUPPORT

EDUCATION

MLA, Landscape Architecture, University of Washington

Bachelor of Landscape Architecture, University of Idaho

Historic Preservation Certificate, College of Built Environments, University of Washington

PROFESSIONAL REGISTRATION

Landscape Architect, WA

PROFESSIONAL AFFILIATIONS

American Society of Landscape Architects

Aaron has 13 years of experience in urban design, planning, and landscape architecture. He brings exceptional skills to projects, working with multi-disciplinary teams. He has been involved with the design and construction of over 42 streetscape and nine roundabout projects and brings a high level of technical experience and quality control to all phases of the design process. His projects have consistently been commended for design excellence, quality control, and clear integration of the character of the community into a physical design. Aaron is very familiar with the City of Bellingham with his past participation on Wharf Street, McLeod Road, and Cordata Parkway/Stuart Roundabouts. He is currently working with the City of Bellingham on Fountain Plaza and is familiar with the Fountain District Urban Village.

Aaron's select project experience includes:

Wharf Street Roundabout, Bellingham, WA

Aaron was the landscape architect for transforming this five-way intersection into a new roundabout. The layout also incorporates the regional South Bay Trail to the north. The location of the roundabout provides an opportunity to celebrate the convergence of four neighborhoods with a large rock cairn in the center island. The rock cairn as a large traditional trail marker represents the multi-model junction of roads and trails. The rock is a locally sourced Olivine mineral rock near Mount Baker. The center island also includes outdoor lighting and enhanced native planting. Aaron provided design services for landscape features, the cairn, streetscape design, and construction administration services for this roundabout.

Cordata Parkway/Stuart Roundabout, Bellingham, WA

Aaron was the landscape architect for the Cordata Parkway/Stuart Roundabout improvements. The center roundabout includes a berm with native groundcover, shrubs, streambed cobbles, large boulders, and three distinct Oregon Oak trees. Closer to the roundabout the landscape transitions to a mix of ornamental grasses and low growing evergreen groundcover and spring bulbs. All of these plants are either native or adapted to the region, and low maintenance. Where planting areas are too narrow to maintain or irrigated, stamped concrete is included. Aaron provided planting, irrigation, urban design plans, cost estimates, and specifications.

SE 4th Street Town Center, Sammamish, WA

Aaron was the landscape architect for SE 4th Street. This streetscape project transformed the SE 4th Street corridor into an urban three lane cross section with public amenities that contributes to the character of the Town Center and provides usable space for pedestrian and bicyclists. Two planted roundabouts flank each entrance to the heart of the Town Center. Three additional mini-roundabouts are located further west and are entirely paved with a stamped cobble concrete pattern. Aaron prepared graphics to support a public open house and several City Council meetings, as well as managed the development of construction documents for planting, irrigation, urban design, cost estimates, and specifications.

SEAN COOL, PE

GeoEngineers

GEOTECHNICAL INVESTIGATION

EDUCATION

M.S.E. Geotechnical Engineering, University of Washington

Bachelor or Science, Geology, Western Washington University

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA

Sean has experience on a wide range of projects including small and large transportation projects with roadway, intersection, and pedestrian improvements, bridges, retaining walls and stormwater infrastructure, as well as utility corridors and pipelines. Sean has provided geotechnical support for numerous transportation improvements, including signalized intersections, roundabouts, and railroad crossings for urban and rural roadways. Sean's field engineering experience includes coordinating and managing large field exploration programs, including explorations with difficult site access in high-traffic and limited right-of-way areas. Sean has completed numerous projects for the City of Bellingham, Bellingham Parks and Recreation, Port of Bellingham, and throughout Whatcom, Skagit, and Island Counties. Sean brings experience and knowledge of local soil and groundwater conditions. He has also been involved with the development of PS&E, working with owners, the project team, and ultimately the contractor during construction to develop reasonable and cost effective solutions.

Sean's select project experience includes:

James Street Corridor, Bridge & Woodstock Way Intersection, Bellingham, WA

Project manager for geotechnical design and engineering services to evaluate the feasibility of replacing the James Street Bridge over tributaries of the Squalicum Creek drainage and improvements to thee James Street corridor north and south of the bridge. In addition to providing bridge foundation recommendations, the project included roadway improvements and widening, an intersection realignment at Woodstock Way, trail crossings, retaining walls and stormwater management along James Street in Bellingham, Washington.

Granary Avenue and Laurel Street, Bellingham, WA

Associate in charge for environmental and geotechnical engineering services for this federally funded project that includes a two-lane roadway with on-street parking, wide pedestrian corridors, a dedicated cycle track, multiple raised pedestrian crossing zones, street trees, lighting, large bioretention cell planters, and a full spectrum of proposed public and private utilities. GeoEngineers provided recommendations for retaining walls; new fill embankments and settlement; detailed asphalt and concrete pavement design for anticipated heavy bus traffic; light and signal foundations; below-grade utilities including pipe jacking under the existing BNSF rail line; and excavation and dewatering. Project in construction to be complete in 2019.

Mahogany Avenue Arterial, Bellingham, Washington

Associate in charge for site explorations and design recommendations for construction of 3,100 feet of new arterial roadway crossing through undeveloped forested areas, with a primitive access road and delineated wetlands over portions of the alignment. The new roadway crosses Bear Creek and the project required design of a new 4-sided concrete box culvert as well as other retaining walls and cut/fill slopes to meet new road profiles.

Molly Porter, PWS

Northwest Ecological Services (NES)

ENVIRONMENTAL SUPPORT

EDUCATION

Bachelors of Science, Environmental Science, Western Washington University

PROFESSIONAL CERTIFICATIONS

Certified Professional Wetland Scientist, Society of Wetland Scientists

PROFESSIONAL AFFILIATIONS

Society of Wetland Scientists

Washington Native Plant Society

Molly has 15 years of experience providing environmental consulting services. Molly is a senior ecologist and managing partner of Northwest Ecological Services. She has expertise in wetland ecology, water quality, stream ecology, and mitigation. Molly obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University. She is certified through the Society of Wetland Scientists (SWS) as a Professional Wetland Scientist (PWS #2064).

Molly has performed wetland delineations, habitat reviews, and shoreline assessments throughout Whatcom and Skagit Counties. She manages a variety of projects from small single-family to complex mixed-use developments. Molly is especially skilled at mitigation design, construction oversight, and long-term monitoring. She is an expert at successfully ushering projects through local, state, and federal wetland permitting, no matter the project size.

Molly's select project experience includes:

Cordata Community Park, Bellingham, WA

NES is currently working with the Cordata Community Park project team to permit a new park in the City of Bellingham. NES worked with the project team to develop a plan that maximized site development while avoiding and reducing impacts to wetlands and biological resources. NES' services included a wetland delineation, impact assessment, mitigation plan, and environmental permitting. NES assisted the team in obtaining a CWA Section 404 Permit from the Army Corps, Section 401 permit from the Department of Ecology, and local critical areas permits.

Skagit Regional Airport Improvements, Burlington, WA

NES worked with the project engineer and planner to permit runway improvements for the Skagit Regional Airport. NES prepared documentation for the Army Corps to obtain approval for a wetland exchange under the regional advanced mitigation agreement (Skagit Wetland Industry Negotiations [WIN]). NES successfully guided the team through the CWA Section 404 permitting process to obtain an Individual Permit for additional runway safety area improvements. As part of this process, NES prepared a bank use plan for mitigation bank-credits.

Haxton Way Bicycle and Pedestrian Pathway, Bellingham, WA

NES was a member of the project team that designed and permitted a 2-mile-long bicycle and pedestrian pathway along Haxton Way on the Lummi Reservation. The purpose of this Lummi Nation project was to alleviate safety concerns through construction of a multi-use trail. NES conducted wetland delineations, identified mitigation options, developed a permitting strategy, and prepared a mitigation plan. NES also assisted with the National Environmental Policy Act checklist, prepared an ESA No Effect Assessment, and obtained CWA Section 404 and Section 401 Individual permit approvals. NES also conducted construction monitoring to facilitate permit compliance.

Pat Flanagan, PE

Indicator Engineering

STREAM HYDRAULICS

Pat is a civil engineer specializing in hydrologic and hydraulic modeling and in-stream design. He has developed hundreds of numerical models in urban stormwater basins, drainage networks, creeks, and large rivers. He has applied a wide variety of models such as HEC-RAS (1D and 2D), SWMM, HSPF, WWHM, and many 2D hydraulic codes for open channel flow. Pat has previously developed and revised HEC-RAS models of Squalicum Creek, including the tributaries and Meridian Street crossings. He has experience evaluating complex flow problems and developing creative solutions. Pat has designed channel relocations, scour and bank protection, habitat features, large woody debris, and many channel and floodplain modifications to address flooding, habitat, and sediment problems.

EDUCATION

Master of Science, Civil Engineering, Hydraulic Engineering thesis, Washington State University

Bachelor of Science, Civil Engineering, Math Minor, Honors College, Washington State University

PROFESSIONAL REGISTRATION

Professional Engineer, Civil: WA

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)

Northwest Regional Floodplain Management Association (NORFMA)

Pat's select project experience includes:

James Street Bridge Replacement, Bellingham, WA

Evaluated hydraulic conditions and scour countermeasures for replacement James Street bridge over Squalicum Creek. Modified and improved a HEC-RAS unsteady hydraulic model of the complex branched flow system including various overflows, ponds, and controlling structures. Modeled and compared for regulators the 100-year water levels for the new bridge with and without various other projects planned for Squalicum Creek. Evaluated scour and erosion potential for multiple potential configurations of the creek and overflow pathways. Developed conceptual alternatives for review by multiple design teams, then prepared scour PS&E for the selected design.

Anderson Creek Bridge No. 249 Replacement, Whatcom County, WA

Hydraulic engineer and design for the replacement 90' span bridge at Roberts Road over Anderson Creek. Performed frequency analysis for peak flows, evaluated geomorphic reach conditions to assess scour and erosion potential, and developed HEC-RAS hydraulic model. Provided hydraulic design parameters for the new bridge and designed erosion countermeasures.

Fishtrap Creek Jim K. Trail and Bridge, Lynden, WA

Developed a HEC-RAS 2D hydraulic model for 2500-ft reach of Fishtrap creek, calibrated to observed high water marks, and evaluated potential impact of proposed trail and bridge project. Assessed geomorphic risk to the project in the reach, developed setbacks and targeted protection using natural materials. Performed hydrologic flood frequency analysis of Fishtrap Creek. Evaluated project for compliance with FEMA Floodway regulations and proposed design modifications.

Totem Lake Basin Stormwater Retrofits Project, Kirkland, WA

Developed 50 subbasin HSPF hydrologic model using GIS, as-built and survey data, and developed a corresponding SWMM hydraulic model for the basin. Determined drainage problems, screened entire basin for stormwater retrofits, and identified most suitable three as CIP.

RAMON LLANOS, PE

LDES

CONSTRUCTION MANAGEMENT

EDUCATION

Master of Engineering, Project and Construction Management, University of British Columbia

Civil and Structural Engineering, British Columbia Institute of Technology

Bachelor of Science, Engineering, University of Lima

Ramon is a licensed Civil Engineer, and has over 20 years of experience in municipal, commercial and residential engineering. His Master's Degree education included specialized emphasis on project and construction management. Ramon's record of successful project delivery has demonstrated his thorough knowledge of local, state and federal requirements as well as his ability to manage any project from start to finish. His experience includes a record of successful compliance with the detailed requirements for multi-agency funded projects including USDA, ARRA, WSDOT, WSDOE, EPA, Army Corps of Engineers, and FHWA. Ongoing project coordination with such agencies has provided Ramon with the necessary experience and knowledge to successfully and efficiently navigate each agency's unique requirements and procedures. Ramon has designed and managed a wide range of projects including public infrastructure involving road and storm drainage design as well as providing development design services for over 1000 lots in the Whatcom County area.

Ramon's select project experience includes:

Haxton Way & Kwina Road Roundabout, Lummi Nation, WA

Ramon was the project manager for the construction management of the Haxton & Kwina Roundabout located at the intersection of Haxton Way, the primary route to Lummi Island, and Kwina Road, where many community services are located. Ramon worked closely with Reid Middleton as he coordinated change order and submittal review. He and his team worked quickly to resolve issues as they arose. This project was completed on time and within budget.

Smokehouse Road & Haxton Way Roundabout, Lummi Nation, WA

Located approximately three and a half miles south of the Haxton & Kwina Roundabout, this project involved construction management for a single-lane roundabout at the intersection of Haxton Way and Smokehouse Road. Ramon was the project manager for this project coordinating change order and submittal review and resolve on-going issues. He worked closely with Reid Middleton and client to provide Value Engineering, which helped finish the project on time and $187,000 under the budget. The Haxton Way & Smokehouse Road Roundabout project was awarded a 2015 Paving Award in Category Commercial Paving Award – Western Washington by the Washington Asphalt Pavement Association (WAPA).

Lincoln Street, Bellingham, WA

LDES provided civil design for roughly 15 acres of mixed use development and construction management for private lot and public roadway civil improvements including road widening, sidewalks, sanitary sewer, storm sewer, potable water. Ramon was the project manager and project engineer for this project coordinating change order and submittal review and resolving construction issues. Value Engineering savings contributed to project closing at $100,000 under budget.

KYLE HAGGITH, PLS

LDES

SURVEYING MANAGER

EDUCATION

Bellingham Technical College, Surveying & Mapping

PROFESSIONAL REGISTRATION

Professional Land Surveyor, WA

Kyle has over 30 years of survey experience in Pierce, Whatcom and Skagit Counties, including project management for private developments, State Highway Transportation and Federal contracts as well as managing projects on tribal lands throughout the state. His survey experience consists of providing professional survey services required for roadway construction and construction layout as well as topographic base mapping, boundary, right-of-way acquisition, documentation and permitting. He is responsible for management of the Surveying Department including, but not limited to, proposal preparation, project management, and deliverable quality control. He regularly collaborates with various federal, state, county, and local municipalities jurisdictional authorities. Kyle has been involved as team leader in permitting multiple projects with Federal Highways.

Kyle's select project experience includes:

Cordata Parkway & Stuart Road Roundabout, Bellingham, WA

This multimodal roundabout project is under construction. Kyle was a surveying manager. LDES performed survey base mapping, ROW acquisition, and easements for this project.

Valleyview Sewer Installation, Lynden, WA

LDES provided survey and civil design for the installation of a gravity sewer under a BNSF railway. The project consisted of abandoning an existing sewer pump station and installing gravity sewer across the BNFS right-of-way. LDES worked with BNSF to get a permit for the crossing. Kyle was a surveying manager for this project and was involved to permitting process with BNSF.

Haxton Way & Kwina Road Roundabout, Lummi Nation, WA

Kyle was the survey manager for the roundabout project at Haxton Way and Kwina Road. This project reconstructed the existing two-way stop controlled intersection into a single lane roundabout. Kyle was involved in multiple phases of this project from leading the survey and base mapping, coordinating closely with Reid Middleton to provide right-of-way acquisition, leading the construction surveying, and overseeing the preparation of record drawings.

Smokehouse Road & Haxton Way Roundabout, Lummi Nation, WA

The project entailed construction of a roundabout on one of the busiest road in Lummi Nation (primary route to Lummi Island), including sidewalk, site utilities, site improvements, and associated landscaping. LDES performed project management, as well as civil inspection, survey base mapping, ROW acquisition, construction surveying and record drawings for this project. Kyle was the survey manager. He oversaw the survey crew: topographic map, construction staking, record drawings and ROW acquisition.