STATEMENT OF QUALIFICATIONS

CP|H
CONSULTANTS

October 2012

INTRODUCTION

CPH Consultants is a full-service civil engineering design and land use consulting company founded on the premise and understanding that successful projects are the result of a strong and energetic team led by clear communication and competent professionals. Our team has worked together with clients and consultant teams to successfully complete a variety of large and complex public infrastructure and site development projects throughout the Puget Sound.

Our team leaders leverage their collective 30+ years of professional experience, the skills of our in-house staff, and the latest in technology resources to ensure the highest quality consulting and design services with a constant focus on project goals and strategy, creative design alternatives, responsiveness, and communication with the client and consultant team. CPH Consultants provides veteran expertise with a focus on personal service.

It is the personal interest we take and attention we give to our client's needs that distinguishes us from other consulting firms. We employ a collaborative and open approach to design and consulting. Our approach on every project is to first understand the client's goals, and identify potential challenges and solutions early with the team. In doing so, we continue to deliver efficient, cost-effective, and creative solutions. We are confident not only in our technical expertise and resources, but equally so in our abilities to communicate as part of a team and as advocates for our clients.

There are other consulting firms that can claim the same technical services that we do, but none are more dedicated to the success of their clients, quality design, and to maintaining long-term working relationships than CPH Consultants.

PROFESSIONAL SERVICES

CPH Consultants offers complete planning, design, entitlement, and professional project services for both public works and private sector clients. Our in-house services reflect the strong expertise and specialized skills developed by our staff over their many years in consulting.

Site Planning, Permit Support, and Land Use Entitlements

- Site Layout and Concept Planing
- Site Feasibility, Highest-Best-Use Analysis, and Real Estate Acquisition Support
- Land Use Entitlements/Permitting
- Development Agreements
- SEPA, NPDES, and EIS Applications and Support
- Permit Compliance
- GIS Research, Analysis, and Graphics

Civil Engineering Design

- Preliminary Engineering and Design Reports
- Site Grading and Storm Drainage
- Roadway Infrastructure
- Water Resource Engineering
- Hydrologic and Hydraulic Analysis
- Water and Sanitary Sewer Utilities
- Earthwork Analysis
- Erosion and Sediment Control BMP's
- Engineering Cost Estimates
- Design/Build Engineering Services
- Storm Water Pollution Prevention (SWPPP) and Spill Control Plans
- Value Engineering, Alternatives Analysis
- Low Impact Design

Project Management

- Consultant Team Coordination and Project Management
- Construction Support Services
- Project Scheduling
- Contract Administration
- Public Presentations
- Project Marketing Support

personal service and solutions from experienced professionals

TEAM LEADERS

Matthew Hough, PE, President

Experience: 19 years

Education:
BS, Civil Engineering
(Washington State University)

Registrations:
Professional Engineer,
Washington

Professional Affiliations:
Master Builders Association,
American Public Works Association,
American Council of Engineering Consultants

Matt is a principal at CPH with the majority of his professional consulting experience in the Puget Sound region and Washington State. His expertise includes all aspects of land use planning, entitlement, and design for both public works and private sector projects of varying size, type, and design challenges.

He has led multidiscipline design teams and represented owners as a project manager on some of the most complex community master plans and other residential development projects in the Puget Sound including Trilogy at Redmond Ridge, Redmond Ridge East, Woodside at McGarvey Park, and Barbee Mill. Matt has also led design and project management efforts for large mixed-use, hospitality, and commercial projects including Kent Station and Discovery Heights at Issaquah Highlands.

Matt's strengths include dedication to the client and project, communication, collaboration, recognizing alternate design solutions, and an ability to understand and consult for the *whole project*.

Jamie Schroeder, PE, Vice President

Experience: 17 years

Education:
BS, Civil Engineering
(University of Idaho)

Registrations:
Professional Engineer,
Washington, Idaho

Professional Affiliations:
Master Builders Association, American Public Works Association, American Society of Civil Engineers, American Council of Engineering Consultants

Jamie is a civil engineer and principal at CPH whose responsibilities include site planning, engineering design, and overall management of projects, multi-discipline consultant teams, and in-house design staff. Much of his professional experience has been in the state of Washington (more specifically the Puget Sound region) with an emphasis in site development, roadway, and utilities infrastructure projects.

His expertise includes all aspects of final civil engineering design as well as conceptual and preliminary analysis in support of project feasibility efforts, environmental impact studies, land use entitlements, and value engineering alternatives.

Jamie is known for providing responsive design and communication to his clients. He has a complete project perspective with a focus on the client and their objectives, which makes him a strong value to every project team.

Michael Huey, PE, Sr. Project Manager

Experience: 17 years

Education:
BS, Civil Engineering
(University of Washington)

Registrations:
Professional Engineer,
Washington

Professional Affiliations:
Master Builders Association

Michael brings a strong combination of development, entitlement, and engineering design experience to CPH and its clients from his professional background in both the private and public sectors. He has performed and managed others' efforts for design and design review for municipal departments and consulting firms. His expertise includes project management and other land use consulting for complex land development and infrastructure projects as a former employee of a prominent developer in the Puget Sound.

His experience, technical skills, and first hand knowledge of land development make him a valuable team member. He always maintains a focus of moving projects efficiently through design, approval, and construction.

SELECT PROJECT EXPERIENCE

MULTIFAMILY HOUSING

Discovery Heights

ISSAQUAH, WASHINGTON

CPH Consultants was the civil engineering lead through the site plan approvals, final design and permitting, and construction of this 8.5-acre, 250 unit multi-family project located in the master-planned community of Issaquah Highlands. The project includes a dense mixture of townhome, flat-style, and carriage unit residential buildings; a central amenity facility with indoor swimming pool, exercise and sport courts, and other community resources; and a variety of private and public on-site open spaces including pea patch gardens, a dog park, trails, and central park areas.

Site infrastructure improvements included the extension of approximately 3,500 feet of 12-inch water main; 2,200 feet of sanitary sewer mains; 3,200 feet of storm drainage conveyance systems; and urban local access roads and pedestrian facilities. CPH coordinated closely with the owner, architectural team, and general contractor to effectively locate building services, establish finished floor elevations and site grades, and optimize parking ratios with size open space areas and public trail systems for this urban site.

Our staff maintained coordination efforts with the owner and architectural team during the building design while its staff led a separate permit track in order to expedite construction of the civil/site improvements. CPH also consulted and provided project management services to the owner for required boundary line adjustment, off-site easement approvals, and other survey efforts.

Services: Site planning and permitting; civil engineering design, permitting, and construction plans; construction support services; NPDES permitting, and SWPPP preparation; Agency coordination; project management of survey efforts for boundary line adjustments and off-site easements

Special Design Considerations: Special perimeter wall and on-site grading design to facilitate multiple building types, trail and other pedestrian access, and connections to existing infrastructure

Lea Hill Village

AUBURN / KING COUNTY, WASHINGTON

This mixed-use, affordable multi-family residential development included new surface parking, grading, storm drainage, water and sanitary sewer utilities, and frontage roadway improvements for the project's 332 residential units; 39,000 square feet of retail/commercial space; and an approximately 5-acre wetland enhancement on an urban 15-acre parcel in east King County. CPH Consultants was the lead consultant and project civil engineer responsible for the coordination of the public utility and roadway improvements, all SEPA documentation, and NPDES permitting.

CPH worked cooperatively with the project architect, Owner, and wetland specialists on the team to design passive storm drainage systems that could be incorporated into restored buffer areas to both maintain hydrologic sources and reduce the size of constructed storm drainage facilities. Surface water controls included a rain garden feature incorporated within the wetland mitigation area. Utility design and construction for the project included nearly 6,700 lineal feet of domestic water and 2,800 lineal feet of sanitary sewer mains to extend the City of Auburn's existing systems. Fire sprinkler service connections and facilities were also designed with the on-site water systems.

The project site fronts South 312th Street which is a major collector arterial road that serves as a primary route from SR-518 to the nearby Green River Community College campus, an adjacent elementary school, and other Lea Hill/City of Auburn services. This regional access road was widened with the

project to maintain single east- and west-bound traffic lanes while providing a new two-way left turn lane, bicycle lanes, sidewalk, street lighting, and landscape improvements.

Services: Site planning; civil engineering design; prepare construction plans and provide construction support services; SEPA documentation, NPDES permitting, and SWPPP preparation; Agency coordination and permitting

Special Design Considerations: Low impact design and development efforts to maintain hydrology to on-site wetland mitigation; value engineering alternatives to reduce below-grade storm system sizing; coordination with multiple Agencies and conflicting design standards

Willow Tree Grove II

BOTHELL / SNOHOMISH COUNTY, WASHINGTON

This multi-family residential apartment project proposes 181 rental units and a 7,500 square-foot recreation building on a 5.9 acre portion of a 14.2 acre site in Snohomish County. The undeveloped 8.3 acres of the property contain wetlands and buffers that will be enhanced and protected as permanent open space with the project. Site access is provided by a single commercial driveway approach to SR-527 (Maltby Road).

CPH acted as the lead consultant responsible for coordinating all team design efforts. As the project civil engineer, CPH performed all civil/site design and permitting efforts for the project including the grading, storm drainage, and water and sanitary sewer systems. On-site storm drainage facilities included a below-grade concrete detention vault, CMP detention tanks, and StormFilter® water quality treatment systems. Dispersion facilities were sized and sited within the on-site wetland buffer to discharge clean storm water from portions of the project. The project also extended approximately 1,000 LF of sanitary sewer and 1,300 LF of water mains from existing systems at Maltby Road.

Improvements to Maltby Road were required for the project. These improvements included a widened arterial section to provide additional vehicle travel lane width, landscape strip, and sidewalks for the full frontage length. Retaining walls were used along the roadway edge to minimize impacts to the existing wetland buffer. New storm drainage conveyance and Filterra™ water quality facilities were also required for the project frontage roadway improvements.

Snohomish County is the regulatory jurisdiction for all of the proposed on-site improvements including buildings, critical areas (i.e., wetland), grading, and storm drainage. The City of Bothell and WSDOT were the agencies that reviewed and approved frontage roadway improvements. Alderwood Water and Wastewater District was the review and approval agency responsible for the water and sanitary sewer systems for the project

Services: Site planning; civil engineering design, permitting, and construction plans; construction services; public and private utilities, and Agency coordination; NPDES permitting, and SWPPP preparation

Special Design Considerations: Low impact design and development efforts to maintain hydrology to on-site wetland mitigation; critical area impact mitigation; shallow existing storm drainage connections; coordination with multiple regulatory Agencies

SeaTac Multi-family

SEATAC, WASHINGTON

This 23-unit townhome project involved a 1.7-acre site with access via a new driveway intersection directly to South 154th Street — a major east-west arterial — in the City of SeaTac. CPH led the project's entitlement, permitting, and engineering design efforts with three separate local regulatory jurisdictions including the City of SeaTac, ValVue Sewer District, and King County Water District 125. The project also required permit review and approval by the Washington State Department of Transportation (WSDOT) because the site fronted the limited access zone of State Route 518.

CPH Consultants was the prime consultant and acted as the agent for the owner throughout the entitlement, design, and permitting efforts for the project. CPH provided site planning services that included preliminary and final building/parking/access layout, development code research, and SEPA documentation and entitlement. Civil engineering design and permitting tasks included all on-site and off-site grading and storm drainage improvements, domestic and fire supply systems, sanitary sewer facilities, and completion of developer extension agreements.

Services: Site plan review and SEPA documentation and entitlement; site planning; civil engineering design, permitting, and construction plans; prepare NPDES permit and SWPPP; coordination with multiple Agency jurisdictions, including WSDOT

Special Design Considerations: coordination of frontage improvements with future City roadway project; driveway location at WSDOT limited access zone

The Lofts at Kent Station

KENT, WASHINGTON

This 150 unit multi-family residential project was part of the multi-phased Kent Station Master Planned Development (MPD). The 1.5 acre Lofts site included surface parking, pedestrian facilities, grading, storm drainage, and water and sanitary sewer improvements for a 3 story structure with below-grade garage.

CPH Consultants was the project civil engineer as part of an architect-led design team. Civil site improvements were planned to proceed ahead of building construction. As such, CPH prepared a stand-alone Site Improvement Package and led the permitting efforts directly with the City of Kent.

Services: Site planning; civil engineering design, permitting, and construction documents; utility coordination; and Agency coordination

Special Design Considerations: Shallow groundwater conditions, lack of topographic relief over the site, and connection to existing utility infrastructure

MIXED USE AND HOSPITALITY

Kent Station, Phase IV

KENT, WASHINGTON

Kent Station, Phase IV includes the re-development of an approximately 1 acre parcel within the Kent Station Master Planned Development (MPD) to facilitate a four story, approximately 74,000 square foot retail and ommercial office building.

As the project civil engineer, CPH Consultants was responsible for the overall site improvements and extension of existing utility infrastructure to support the new commercial building. This included design, permitting, and construction support services for the project's new surface parking lot, grading, storm drainage facilities, water and sanitary sewer services and main line extensions, and frontage roadway widening.CPH Consultants also worked with Comcast, King County I-net, and contractor to design a dry utility corridor to extend fiber optic communication service to the project site.

Services: Site planning, civil engineering design and permitting, utility coordination, construction services, and Agency coordination

Special Design Considerations: Shallow groundwater conditions; lack of topographic relief over the site; connection to existing utility infrastructure; accommodation of existing retail businesses and parking areas

The Maxwell Hotel

SEATTLE, WASHINGTON

This project re-developed an approximately 0.4 acre existing surface parking lot for a new, 140-key hotel within downtown Seattle.

On-site and off-site frontage improvements included grading, storm drainage, ground water underdrain/intercept, water and sanitary sewer, access, and utility coordination/extensions. CPH Consultants

was the project civil engineer on this architect-led design team.

Right-of-way improvements including water and sanitary sewer connections, grading and storm drainage, pedestrian facilities, and channelization related to the project were permitted separately through the Seattle Department of Transportation (SDOT) and CPH led those efforts.

Services: Site planning; civil engineering design, permitting, and construction plans; construction services; utility and Agency coordination

Special Design Considerations: Off-site ground water contributions, excavation and services for below grade parking and meeting rooms, and connections to existing utility infrastructure

Everett Courtyard by Marriott Hotel

EVERETT, WASHINGTON

CPH is the civil engineer on a multi-discipline design team for this new 156 guest room, high-rise hotel project. This 8 story hotel project redeveloped an existing City parking lot on a 0.4 acre parcel in downtown Everett. It includes 3 levels of below-grade parking and approximately 4,300 square feet of retail space at the ground level.

CPH was responsible for design, plan preparation, and construction support for all civil/site improvements for the project. Our efforts include direct coordination with City staff, Snohomish County PUD, and other private utility purveyors.

The westerly portion of the garage structure is located below the already fully improved Colby Avenue. Frontage improvements included removal and replacement of existing paved parking, curb and gutter, sidewalk, and storm drainage utilities. Building utility service connections were provided from existing City mains at the adjacent roads/alley.

Services: Civil engineering design, permitting, and construction plans; construction services; public and private utilities, and Agency coordination

Special Design Considerations: ground water collection, site constrained on each side by existing roads, alley, or buildings to remain; connection and/or relocation of existing utility infrastructure

Springbrook Ridge

RENTON, WASHINGTON

CPH Consultants led a multi-discipline design team for the site planning, land use entitlement, SEPA processing, and preliminary civil engineering design of this 3.8 acre mixed-use development project in the City of Renton, Washington. This Planned Urban Development (PUD) project included 97 multi-family residential units in one new building and 8,900 square feet of retail and 17,800 square feet of commercial office space in a second building.

The project site is fronted by SE 172nd Street, SR-515 (Benson Drive), and Benson Road South (108th Ave SE). Vehicular access is provided from each one of these frontages with a restricted right-in/right-out driveway at SR-515. A stream and associated buffers bisects the site and an abandoned coal mine was also located within the developable portion of the property. These sensitive areas required special design considerations and coordination with the project biologist and project geotechnical engineer respectively.

Services: Site planning, preliminary civil engineering design, SEPA documentation and entitlement, including PUD approval; utility coordination, and Agency coordination

Special Design Considerations: Stream and buffer impacts analysis, special pedestrian connections off-site, and coordination of frontage improvements with WSDOT

SINGLE-FAMILY RESIDENTIAL

Trilogy at Redmond Ridge

REDMOND/KING COUNTY, WASHINGTON

Parcels M and N of the Trilogy at Redmond Ridge UPD (TRR) included the planning, design, and construction of the final 148 single-family residential lots within this master planned residential community comprised of a total of 1,500 single-family residential units, 900 multi-family units, 17 acres of retail/commercial area, and an 18-hole golf course with clubhouse.

Parcels M and N included the planning, design, and construction of approximately 5,800 LF (1.1 miles) of new neighborhood collector and local access roadways with sidewalks and landscape areas; 6,035 LF of storm drainage collection and conveyance systems, 6,100 LF of domestic water mains; 6,100 LF of gravity and 1,550 LF of force main sanitary

sewer facilities. Site grading was challenged by the natural topography of the site which had areas of relief of more than 150 feet. Accommodation of the existing grade in the developed condition required significant structural walls with consideration of access to golf course amenities, existing trail systems, and view potentials.

Services: Project management; civil engineering design, permitting, and construction plans; utility coordination; site planning including preliminary and final platting approvals; construction support services; and Agency coordination

Special Design Considerations: existing/occupied homes, golf course, public trail, and roadway, storm drainage, and utilities; maintenance of sensitive areas buffers

Delaney Park

RENTON/KING COUNTY, WASHINGTON

CPH Consultants was the prime consultant responsible for the site planning, entitlement (preliminary subdivision), and final engineering design for this 8.8 acre, 27-lot subdivision in the City of Renton. Preliminary subdivision efforts for this high-density, detached single-family project site proceeded under the jurisdiction of King County and in cooperation with the City of Renton. Final engineering design and permitting efforts for the project were completed per Renton permit and design standards as a result of the site's annexation subsequent to preliminary plat approval. CPH coordinated with multiple agencies and private utility purveyors throughout the entitlement and design processes to develop a preferred site plan and to obtain preliminary subdivision and final engineering approvals.

Minimizing impacts to existing on-site wetlands, streams, and associated buffers was a significant consideration in the design of the site. Final storm drainage design implemented dispersion to both reduce the impacts and maintain hydrology to the on-site wetlands. Extension of existing domestic water and sanitary sewer facilities was required to service the project. The design of these systems required coordination with the respective purveyors and other off-site projects that were either complete or in the process of design approvals.

Services: Site planning, preliminary and final civil engineering design, SEPA documentation and entitlement, and multiple Agency and utility purveyor coordination

Special Design Considerations: Wetland, stream and buffer impacts analysis, small lot grading and drainage provisions, and coordination of frontage improvements with KCDOT

Sophia's Court

KIRKLAND, WASHINGTON

CPH Consultants is the lead consultant responsible for the site planning, preliminary subdivision approvals, and final engineering design for this approximately 1.2 acre, 7-lot residential project in the City of Kirkland, Washington. This high-density, single-family residential infill project required creative site design and implemented low impact development features to achieve the required storm drainage controls with limited facility sizes.

CPH coordinated with the project landscape architect, client, and City review staff to complete the planning and final engineering design of rain gardens across the site. These facilities combined with two shallow, on-site overflow cells to provide the storm detention volumes necessary to achieve the Level 2 flow control standard for the project. The storm drainage facilities integrated closely with the grading and landscape elements to accommodate a unique "L" shaped building product with private courtyard areas and shared driveways. Site grading and road frontage improvement included coordination and connection to existing roads, sidewalks, and developed commercial properties adjacent to the project site.

Services: Site planning, preliminary land use entitlement and site design, and final engineering design and PS&E

Special Design Considerations: challenging "rear yard" siting of combined rain garden and overflow detention cells to achieve storm water standards

Woodridge

WOODINVILLE, WASHINGTON

CPH Consultants led a multi-disciplined design team for the preliminary subdivision and final engineering design of this 12-lot single-family project on 2.85 acres in the City of Woodinville. The project required the planning and design of all new access, storm drainage, and utility infrastructure. These facilities were provided by extension of existing City or Woodinville Water District systems. Access, grading, and drainage design required special consideration of the steep topography of the existing site. One such special consideration was the implementation of a partially-buried storm water detention and water quality vault located on the lowest-most point of the site adjacent to the public right-of-way. The vault acted as a retaining structure as well as meeting storm water requirements, thus saving costs on walls and earthwork for the project.

Services: Site planning; SEPA documentation and entitlement including preliminary plat approval; civil engineering design and permitting; utility coordination; and coordination of multiple Agency and private purveyors

Special Design Considerations: Significant topographic constraints; access to public facilities; accommodating and connecting existing, substandard roadway and pedestrian facilities

Cameron Place

REDMOND, WASHINGTON

CPH Consultants provided final civil engineering design and coordinated a multi-discipline design team for this 13-lot single-family residential development project. The site is approximately 5 acres in size, located in the City of Redmond, Washington.

The lots and their development infrastructure were clustered on the western portion of the property to minimize impacts to a Class III stream and a number of classified wetlands located on-site. Buffer mitigation and wetland enhancements for both on-site and off-site resources were considerations

in the site design and permit approvals. The project also constructed roadway and off-site pedestrian improvements including sidewalks along its frontage and soft-surface trails off-site to create a safe and continuous pedestrian path from nearby neighborhoods to the existing elementary school.

Services: Civil engineering design and permitting, utility coordination, NPDES permitting, SWPPP preparation, construction services, and Agency coordination

Special Design Considerations: Challenging site soil conditions, wetland and stream impacts, special pedestrian connections off-site, and coordination of frontage improvements with future City of Redmond roadway project

Maplewood Park East

RENTON, WASHINGTON

CPH Consultants is the lead consultant and client representative responsible for the site planning and preliminary subdivision approvals for this approximately 4.5 acre, 14-lot residential subdivision in the City of Renton, Washington. The land use entitlements for this detached single-family project site are under the jurisdiction of the City of Renton. Site planning efforts resulted in a unique, narrow road section to maintain optimal lot density. This required preparation, submittal, and approval of a formal road standards modification with the City. Preliminary design efforts also involved site grading, storm drainage facilities, and water and sanitary sewer systems design. The existing primary access road to the site was widened to a full urban section along the project frontage.

Services: Site planning, preliminary land use entitlement and civil engineering design, and SEPA documentation and permitting

Special Design Considerations: special roadway section design; site planning and grading for significant tree removal and replacement

Yaklich Plat

DUVALL, WASHINGTON

CPH Consultants is the project civil engineer and lead consultant responsible for the final engineering design of this 4.6-acre, 30-lot single family residential subdivision in the City of Duvall, Washington. The site is constrained by existing residential developments and public roadways on each of its sides. CPH worked with the client to revise the previously approved preliminary subdivision plan to better fit the desired product mix as well as to minimize infrastructure improvement costs. This revision was coordinated with and approved by the City cooperatively with the final engineering design and PS&E packages. Existing water, sanitary sewer, and storm drainage mains and their associated easements had to be accommodated by the site plan and utility infrastructure design. Site services are provided by extension of these existing public systems. The final storm drainage design made use of a single combined water quality/detention pond.

Services: Site planning, revision to approved preliminary subdivision, and final engineering design and PS&E

Special Design Considerations: split storm drainage collection and conveyance to take advantage of available capacity of off-site regional storm drainage facility, coordination of wetland fill with US Army Corps of Engineers

Mineral Lake Estates

LEWIS COUNTY, WASHINGTON

This approximately 2,085 acre project site is comprised of 25 individual parcels in the foothill area of Mount Rainier. This privately owned forest land includes more than 9,000 feet of shoreline along Mineral Lake as well as a significant length of waterfront along the Nisqually River and Mineral Creek.

The prime objective of the project was to evaluate current Lewis County zoning codes, comprehensive plan criteria, and development standards to re-aggregate these large parcels into a configuration that optimized their value for single-family use while maintaining the majority of the property as productive timber land.

CPH Consultants prepared a master site plan that created 18 waterfront lots along Mineral Lake with at least 20 acres each. Site planning efforts considered existing access roads, view opportunities, topographic constraints, and potential building sites. Potential building sites and access routes to each parcel also considered septic and well locations based on preliminary soil explorations. The master site plan included a narrative summarizing code compliance along with potential benefits, challenges, and alternatives for the planned development. Alternative approaches to entitlement/land use.

Services: Code and land use consulting, master site planning, graphics

Yakima Orchards

YAKIMA, WASHINGTON

A number of individual properties totaling more than 400 acres comprise the Yakima Orchards project site. These mostly contiguous parcels cross over multiple development zones and bound a mix of residential, commercial, and industrial neighborhoods within the City of Yakima.

CPH provided master site planning services which included evaluation of potential impacts and opportunities of current and proposed zoning and comprehensive plan designations for the existing parcels. These research and planning services were used as a basis for CPH's preparation of a master plan for the ultimate development of the site.

CPH prepared two master site plan concepts, each having a proposed mix of residential, commercial, and industrial uses. One plan provided a conventional subdivision over the single-family residential properties (low- to medium-density). An alternate plan provided a concept for a golf course community over the centralized residential parcels. CPH produced graphic plans with summaries of the development and density criteria for each program which were used by the team's real estate advisors.

Services: Code and land use consulting, master site planning, graphics

Turtleback Mountain

Orcas Island, Washington

CPH Consultants provided site planning services for the approximately 1,600-acre property containing a regionally recognized topographic feature known as Turtleback Mountain. Site planning efforts evaluated access, view opportunities, topographic constraints, and building siting to prepare a development plan that optimized the number of potential residential, large-lot parcels.

CPH prepared colored graphic plans for use in marketing the project as well as electronic versions of the plan for use by the project surveyor to record the Assessor's plat that ultimately created the individual 40-plus acre residential properties.

Services: Code and land use consulting, master site planning, graphics

Lehualani Farms

Kona, Hawaii

CPH Consultants provided site planning and project management services for this 147-acre site in Kona, Hawaii. The site is comprised of 5 individual properties having sole access from a state highway along its frontage and a total of 1,300 feet of vertical relief over the property.

CPH prepared two single-family residential land plans for the site which were used by local consultants to complete the subdivision and early development processes for the project. The first plan established the ultimate subdivision and density of the property. The second plan, but first to be entitled, re-configured the existing 5 parcels to match those of the ultimate subdivision.

A local land surveyor, civil engineer, and real estate professional assisted with the platting, SEPA, and initial entitlement processes. CPH reviewed all plans and deliverables produced by the team and also provided the owner with other project management services including consulting on project approach, scopes of work, content and completeness of deliverables, constructability and construction costs, and consultant invoices.

Services: Code and land use consulting, master site planning, project management

ROADWAY AND PUBLIC INFRASTRUCTURE

SR-99 Roadway Widening

Fife, Washington

This approximately 1,100 LF (0.2 mile) roadway project included pavement widening, storm drainage, channelization, signal, and pedestrian improvements at an existing 5-lane portion of State Route 99 (SR-99). CPH Consultants designed the project in accordance with WSDOT/APWA standards.

Project stakeholders included the Puyallup Tribe of Indians, City of Fife, WSDOT, and Pierce Transit. Each of these team members had specific performance needs that were coordinated and implemented in the final design of the project. CPH worked with the project transportation consultant to complete all necessary WSDOT permit review and approvals.

Filterra™ pre-manufactured treatment systems were implemented within the landscape strip to provide storm water treatment. These specialty systems were selected due to right-of-way constraints and for construction efficiencies.

Services: Civil engineering design and permitting for grading, storm drainage, and roadway improvements; prepare construction documents including plans and specifications; utility coordination; construction support services; and multiple Agency coordination.

Special Design Considerations: Expedited (3-month) design, Agency review, and permitting process required to accommodate adjacent commercial operations; WSDOT coordination and approvals; compensatory storage analysis and design considerations; constructability considerations to maintain high traffic volumes of existing highway

Cedar Park Crescent Roadway Extension and Redmond Ridge Drive Roundabout

Redmond/King County, Washington

The Cedar Park Crescent roadway extension project provided for approximately 3,500 lineal feet of new public road through a previously established, approximately 600-acre sensitive area tract and wildlife corridor. The corridor for this roadway extension project was carefully selected and analyzed during planning and design to minimize impacts to these existing sensitive areas. However, the project still included impacts to jurisdictional and non-jurisdictional wetlands and their associated buffers.

The urban roadway section employed a modified section to accommodate the use of low impact development storm drainage controls as well to minimize impacts to existing wetlands and native buffer areas. Coordination with King County biologists as well as U.S. Army Corps of Engineers and state Department of Fish and Wildlife staff was required to ensure compliance with all local, state, and federal standards.

This roadway extension project also warranted the need to improve the capacity and traffic controls at the existing intersection of Redmond Ridge Drive. Initial plans for these public roadway improvements proposed a signalized intersection, but it was later determined by King County Department of Transportation staff that a modern roundabout would be preferred given the anticipated vehicular volumes.

CPH designed the roundabout in cooperation with King County DOT engineers to minimize impacts to adjacent sensitive areas and existing utility infrastructure, as well as to limit necessary right-of-way acquisition. Design efforts and construction considerations for the roundabout also included incorporation of existing pedestrian facilities including a multi-use, hard-surface regional trail and extension and relocation of existing storm drainage facilities. Relocation of existing luminaires, signage, irrigation, and underground power/communication trunk lines also had to be accommodated in the design.

Existing public, soft-surface pedestrian and equestrian trails within the planned roadway corridor required re-connection—including safe mid-block crossings of the proposed arterial. Special provisions for wildlife crossings under/over the new roadway were also provided with the design of this roadway.

Services: Project management and coordination of multi-discipline consultant team; civil engineering design, permitting, and preparation of construction documents for grading, storm drainage, and roadway improvements; utility coordination; construction services; and Agency coordination.

Special Design Considerations: U.S. Army Corps of Engineers coordination and permitting; maintenance of wetland hydroperiods; surface water dispersion facilities at native areas; horizontal and vertical adjustments to minimize wetland impacts and accommodate LID storm water controls; maintenance and connection of existing storm drainage and main line utilities; horizontal and vertical adjustments to minimize wetland/buffer impacts

Woodinville-Snohomish Roadway Improvements

Woodinville, Washington

This public roadway improvement for the City of Woodinville involves pavement widening, re-channelization, signal upgrades, new pedestrian facilities, and storm drainage systems for a major arterial. CPH Consultants is providing civil engineering design services to a multi-discipline design team for this traffic capacity and safety improvement project. Our design efforts include roadway geometrics, site grading, and storm drainage improvements.

The project area involves a major intersection in the immediate vicinity of SR-522 that contained significant existing underground utilities and CPH was responsible for researching as-built conditions and conflict resolution for the proposed improvements. CPH also assisted the City and design team with the environmental permitting and prepared the NOI and SWPPP documents necessary for NPDES compliance.

Services: Preliminary and final civil engineering design; prepare construction plans, specifications, engineer's estimate (PS&E); NPDES permitting and SWPPP preparation

59th Avenue East Roadway and Utility Improvements

FIFE, WASHINGTON

CPH Consultants acted as the lead consultant for the design of this approximately 1,220 LF (0.2 mile) new public roadway for the City of Fife. This project was proposed to provide traffic circulation between the existing SR-99 highway and 12th Street East—a commercial industrial arterial. It included the widening and extension of the existing local access road to an arterial section with sidewalks each side, storm drainage collection and conveyance systems, flow control and water quality treatment facilities, channelization, illumination, and provision for relocation and undergrounding of existing dry utilities.

CPH also provided engineering design services and prepared construction plans and details for approximately 1,000 lineal feet of public sanitary sewer and water main improvements. These systems extended and connected to existing public infrastructure facilities to serve the 59th Avenue East corridor between SR-99 and 12th Street East.

The corridor for this project lies within the regulated 100-year flood plain which required special compensatory flood storage and utility design/ construction considerations. CPH Consultants' tasks include an analysis of the displaced flood plain volume and assistance in the identification of suitable off-site properties for compensatory storage.

Services: Parcel research and right-of-way acquisition support; civil engineering design and permitting for grading, storm drainage, and roadway improvements; construction documents including plans and specifications; utility coordination; NPDES permitting, and SWPPP preparation; construction support services; and multiple Agency coordination

Special Design Considerations: Multiple Agency review and permitting process with City and WSDOT; traffic control/constructability for high-volume intersection at SR-99; right-of-way acquisition; high groundwater and compensatory storage analysis and design considerations

12th Avenue Sidewalk Improvements

KIRKLAND, WASHINGTON

The 12th Avenue Sidewalk project proposes to connect and extend existing sidewalk improvements, widen roadway pavement, and improve storm drainage systems within an established neighborhood in the City of Kirkland. CPH led a multidiscipline design team for this pedestrian oriented project.

Special design considerations included stream and wetland crossings which required low impact design alternatives including boardwalks, pervious concrete pavement, and grassed swales for storm drainage controls over portions of the project area.

Services: Preliminary and final civil engineering design; prepare construction plans, specifications, engineer's estimate (PS&E)

NE 47th Street Storm Drainage Improvements

YARROW POINT, WASHINGTON

The NE 47th Street Storm Drainage Improvement project upgraded approximately 500 LF of public storm drainage system owned and maintained by the Town of Yarrow Point. CPH Consultants served as the civil engineer and lead consultant responsible for design and preparation of a complete PS&E package for this public infrastructure project.

The project involved work within the right-of-way to replace one of three of the Town's primary storm drainage outfalls to Lake Washington. These improvements required impacts to private landscaping features, trees, and other established and maintained vegetation within the right-of-way. Special coordination with residents was desired by the Town to limit impacts to these public/private landscape areas.

Services: Review and summarize engineering studies; civil engineering design; prepare construction plans, specifications, engineer's estimate (PS&E); Army Corp of Engineers, Washington State Dept. of Fish and Wildlife, and National Marine Fisheries coordination and permitting

Special Design Considerations: Retaining adjacent landscaping (citizen and park); Avoiding existing utilities; TESC during construction; Timing around neighborhood activities; Coordination w/other Town park and storm drainage projects; permitting of outfall system to Lake Washington

243rd Avenue NE and Novelty Hill Road Improvements

KING COUNTY, WASHINGTON

This public roadway improvement project included pavement widening, channelization, intersection realignment, and overlay of approximately 1200

lineal feet of NE Novelty Hill Road and 243rd Ave NE. The improvements provide an additional 12-foot wide two-way center turn lane between 242nd Place NE and 243rd Avenue NE, a 100-ft south bound left turn lane for west-bound traffic from NE Novelty Hill Road to 243rd Avenue NE, and new west bound left turn lane from 243rd Avenue NE.

The existing intersection of 243rd Ave NE and Novelty Hill Road was re-located approximately 75 feet west with this project to improve the intersection angle, entering sight distance and overall traffic safety at this intersection.

CPH Consultants was the project civil engineer and lead consultant responsible for the coordination of illumination, structural, and landscape disciplines. Storm drainage facilities consisted of closed pipe conveyance and water quality treatment utilizing an underground storm water vault. Storm water runoff was connected to an existing tightline which discharges directly to the Snoqualmie River. Engineering design included backwater analysis to confirm that the existing tightline pipe system had available capacity for the project.

Roadway clearing and grading plans included specific details to construct tiered structural rockeries within the northern half of the right-of-way. Profiles looking west from 243rd Avenue NE were also prepared to lower the existing grades and achieve improved sight distance. CPH worked closely with the project Landscape Architect to select roadside planting that would maintain sight lines while restoring the native vegetation impacted by the roadway widening and re-grading.

Services: Civil engineering design; prepare construction plans; earthwork calculations; services during construction; sub-consultant and agency coordination

Special Design Considerations: Intersection re-alignment adjacent to steep slopes; tiered rockery design to limit impacts to native buffers and private properties; maintain major arterial traffic during construction

INSTITUTIONAL AND RECREATION

Redmond Ridge East Recreation Complex

King County, Washington

The Redmond Ridge East (RRE) Recreation Complex is an approximately 45-acre recreation site planned to accommodate up to 8 regulation soccer fields, a dog park, pedestrian trails, and associated commercial access drives and parking for public events/use. CPH Consultants was the prime consultant responsible for all engineering design, plan preparation, sub-consultant coordination and agency permitting efforts for the project.

Stormwater controls for this multi-use park facility was accomplished using bio-filtration facilities for treatment and infiltration for discharge. The infiltration facility was a large, open pond with a storage capacity of 26 acre-feet. A secondary storage cell of 12 acre-ft was also incorporated into the adjacent recreation area (i.e., future soccer fields). CPH worked integrally with the Owner, geotechnical engineer, and geologists on the team to design an infiltration pond in high ground water conditions to maintain natural recharge of a local aquifer and surrounding wetlands.

Grading and storm drainage design required close coordination with Puget Sound Energy and Bonneville Power Association to accommodate clearance and safety standards for portions of the improvements located under high voltage transmission lines bisecting the site.

Services: Site planning; civil engineering design, permitting, and construction documents earthwork calculations; DOE Dam Safety analysis and permitting; agency coordination and permitting

Special Design Considerations: Phasing for soils management of topsoil and excess site materials; high groundwater conditions at the infiltration pond site; coordination with multiple Agencies and conflicting design standards

Green River Community College, Trades and Industry Complex Pre-design

AUBURN, WASHINGTON

CPH Consultants provided site planning, preliminary civil engineering design, outline specifications, and cost estimating services in cooperation with an architectural-led team of consultants for the planned relocation of the Trades and Industry complex of buildings at the Green River Community College (GRCC) campus. The project involved the pre-design efforts to site facilities, evaluate phasing concepts for maintaining the on-going curriculum during the transition to a new facility, and early estimates of the costs to design and construction the new TI facilities.

The team's efforts were part of the pre-design study and report prepared for the Washington State Department of General Administration (DGA) and GRCC administrators, which was to be used as a basis for future funding and authorization of final design and construction for the project. The pre-design study/report was prepared in general accordance with the 2006 Pre-design Manual produced by the Washington State Office of Financial Management.

Services: Preliminary civil engineering design, including hydrologic and hydraulic analyses of storm water systems, site grading, and utilities; record data research for planning and utility coordination; outline specifications, quantity takeoffs, and cost estimates for civil/site elements

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