

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion and Update of the North Maintenance Facility		
DEPARTMENT:	Public Works		
PRESENTED BY:	Randy Witt, Public Works Director		
ACTION:	<input type="checkbox"/> Ordinance	<input type="checkbox"/> Resolution	<input type="checkbox"/> Motion
	<input checked="" type="checkbox"/> Discussion	<input type="checkbox"/> Public Hearing	

PROBLEM/ISSUE STATEMENT:

In February staff updated the City Council on the development of the North Maintenance Facility (NMF). In that presentation staff shared that the preliminary estimated cost of developing the NMF ranged from \$14 million to \$17.8 million. TCF Architects was commissioned to further the project design for two alternatives with a focus on increasing understanding and certainty on elements with a “high cost risk” and update the project estimate. This work reduced the uncertainty in the earlier estimate, but showed an estimated cost of \$21.8 million to \$23.3 million for the alternatives. Tonight, staff is seeking guidance on the approach to continue forward in the development of the NMF.

RESOURCE/FINANCIAL IMPACT:

The current preliminary estimated cost of developing the NMF for the two alternatives being considered range from \$21.8 million to \$23.3 million. Staff estimates that approximately half of the cost will be allocated to the Utility funds (Surface Water and Wastewater) and the remainder will be allocated to the Operating Budget (General Fund and Street Fund).

In 2013, the City issued \$3.565 million in Councilmanic General Obligation bonds to acquire the property and initiate preliminary design and improvements; approximately \$300,000 of this funding remains available for this project. There remains over \$3.3 million in outstanding debt from this initial bond issuance. As additional funds will be needed for the design and construction phases of this redevelopment, the outstanding bonds would be refinanced into any newly issued debt that is issued to fund the construction of the project. Resolution No. 366, adopted by the City Council on November 10, 2014, authorized the Surface Water Fund to loan to the General Fund an amount of \$600,000 in order to finance the debt service payments through December 31, 2018. This interfund loan currently stands at a balance of \$433,876.25 and would be repaid to the Surface Water Fund by the General Fund by refinancing it into any newly issued bonds.

This project is not funded for design or construction in the 2017-2022 Capital Improvement Program (CIP) and a finance plan has not been developed. Early projections of debt service, based on updated cost estimates, would be in the range of \$1.5 million to \$1.8 million per year, with operating budgets bearing at least 50% of this cost. The lower number reflects a 30-year repayment period and the higher number reflects a 20-year repayment period.

The City Council is currently considering the refinance of other Councilmanic General Obligation bonds that will provide annual savings of approximately \$155,000 per year beginning in 2020 through 2039, after which those bonds will be retired. While not enough to cover the anticipated operating funds portion of debt service for the NMF during this time, the savings could be used to help offset that cost. Additionally, revenues associated with sale or lease of properties along Aurora have been identified as potentially available to offset the cost of the NMF. The City Council has asked staff to explore the use of the 198th/Aurora property as land for affordable housing. Based on early discussions with King County, some scenarios would result in no funding stream for the City to apply towards the NMF. At this time no other general revenue source has been identified for this purpose.

Currently there is no existing revenue stream for the project to move to the construction phase (regardless of its location) and as such, before the City could move to that phase, a new revenue stream would need to be identified.

RECOMMENDATION

Staff recommends that the City pause the development of NMF at the current location and use the programming information developed in Phase 1 of the project to identify alternative properties in the City that can meet the Public Works maintenance facility needs. The goal of this effort would be to either identify a location that meets the Public Works maintenance facility functions at a lower cost, or confirm the NMF site is the best location and value allowing continued development of NMF at the current location. In addition, a funding stream must be identified to finance the facility before the project can move forward to the construction phase.

Approved By: City Manager **DT** City Attorney **MK**

INTRODUCTION

Development of the North Maintenance Facility (NMF) was started in October 2015. Programming and space requirements are complete and alternative conceptual layouts and preliminary (budget level) cost estimates for the existing NMF property were discussed with the City Council in February 2016. Two alternatives were then further developed with a focus on increasing understanding and certainty on elements with a “high cost risk” and to update the project estimate. The updated estimated cost of developing the NMF for the alternatives ranges from \$21.8 million to \$23.3 million. Tonight, staff is seeking guidance on the approach to continue forward with the development of the NMF.

BACKGROUND

The City has used Hamlin Yard for Public Works and Parks maintenance operations since just after the incorporation of the City. Over time, a series of modest improvements have been made to the property as the City has provided an increasing amount of Parks and Public Works services with in-house staff. This property is ageing, inefficient and has been at capacity for some time.

In 2002, the City and the Ronald Wastewater District (RWD) agreed to an assumption of RWD by the City in 2017. There is insufficient space at Hamlin Yard to absorb the RWD Operations and Maintenance (O&M) staff and equipment. In planning for the assumption, the City looked for a new site to accommodate Public Works operations. In 2013, the City acquired the old County Road maintenance property, then called the Brugger’s Bog Maintenance Facility, near Ballenger Way and 25th Avenue NE as a future site for a new Public Works maintenance facility to support public works and utility activities (see map, Attachment A). The site is bounded by Brugger’s Bog Park on the north, 25th Avenue NE on the east, multifamily residential on the south and Ballinger Way on the western edge.

The City retained TCF Architects in October 2015 to prepare a master plan, design and provide construction assistance on a new maintenance facility on the Brugger’s Bog Maintenance Facility property, now identified as the North Maintenance Facility (NMF) property. Work was authorized on Phase 1 of that contract which involved developing space requirements, preparing conceptual layouts, preparing a facility master plan, managing a public input process, and completing preliminary design and cost estimates. Four alternatives were developed and presented to the City Council on February 22, 2016. The preliminary estimated cost of developing the NMF ranged from \$14 million to \$17.8 million. The staff report for this Council discussion is available at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2016/staffreport022216-9a.pdf>.

DISCUSSION

At the February 22nd meeting, the Council asked that Alternative B (Attachment B) and Alternative B.1 (Attachment C) undergo further design with a focus on increasing understanding and certainty on elements with a “high cost risk” and updating the project

estimate. That work is now complete, with Attachment D, Preliminary Schematic Cost Estimate Narrative, summarizing the issues, design recommendations and cost of the mitigation strategies. The updated estimated cost of developing the NMF for the alternatives ranges from \$21.8 million to \$23.3 million. The estimated costs of Alternative B and Alternative B.1 are summarized below. More detailed cost estimates for these two alternatives are attached as Attachment E (Alternative B) and Attachment F (Alternative B.1).

NMF cost breakout			
Activity	February Estimate	August Estimate	Comment
Alt. B Site Prep.(Const.)	\$4,078,000	\$7,051,647	Phase 1&2
Alt. B Buildings (Const.)	\$9,591,880	\$8,374,281	
Alt. B Total	\$16,273,117	\$21,845,559	Inc. soft and other costs
Alt. B.1 Site Prep.(Const.)	\$4,389,000	\$7,351,647	Phase 1&2
Alt. B.1 Buildings (Const.)	\$8,158,000	\$8,670,690	
Alt. B.1 Total	\$17,696,095	\$23,366,496	Inc. soft and other costs

The high cost risk areas that were the focus of this review were the wetland delineation, geotechnical information and contaminated soils. The table below summarizes the risk areas, what was found in the review and the recommendation incorporated in the updated design and cost estimate.

Review of NMF High Risk Cost Items		
High Cost Risk Areas	Finding	Design & Cost Accommodation
Wetland delineation on northeast portion of lot	The existing wetland buffers in the design report are appropriate.	No further design accommodation or change needed
Geotechnical – walls on west side (along Ballinger Way) and in the rest of the site		<ul style="list-style-type: none"> • No soil nailing • Concrete Cantilever Wall up to 4'tall • Concrete cantilevered wall with increased footing from 4' to 8' tall • Soldier pile walls over 8' tall • Limit depth of temp. excavations at slope toe
Geotechnical – pavement area	Test pits found high ground water, a peat layer and material reminiscent of “digging in a dump”. This provides a lower structural support for the pavement.	<ul style="list-style-type: none"> • 1' granular fill – excavate to accommodate • Thicken Portland Cement Concrete (PCC) pavement section and add reinforcement
Geotechnical - building foundations	Test pits found high ground water, a peat layer and material reminiscent “digging in a dump”. This provides a lower structural support for the building foundations.	<ul style="list-style-type: none"> • Rammed aggregate piers/geopiers or similar • Groundwater control • Cut soil not reusable elsewhere on site

Contamination	Two test pits had hydrocarbon odor.	<ul style="list-style-type: none"> • Samples taken for further analyses • Increase budget allowance
Stormwater	High ground water throughout the site complicates the surface water management improvements; a further risk is uncertainty in the final design pipe elevations and construction timing of the 25 th Avenue storm drainage system improvements.	Two detention vaults required
Buildings	No new issues beyond those mentioned above; furthered the design to improve estimate.	Costs refined through further design
Contingency	Design	<ul style="list-style-type: none"> • Design contingency based upon the level of design work, construction contingency based upon the total estimated construction cost • Allowances provided for areas of unknown quantity (e.g. over excavation, contaminated soils disposal, etc.)

In summary, the investigation found that soil conditions were worse than anticipated due to poor soil quality and high ground water. It improved information on contaminated soils but is not a complete investigation and management plan. The cost of the design and construction of accommodations to address these issues has increased the overall project costs.

Alternatives for Moving Forward

The estimated cost of the NMF development gives pause due to the cost itself and the City’s ability to finance the redevelopment work. However, the project remains important to the City as a whole and the Public Works Department. Several alternatives have been considered to move the project forward. They include:

- 1. Move Forward with Redevelopment:** Fund the design work on the NMF property in 2017 and 2018, refine estimates and identify construction funding, targeting construction in 2018/19. In this work, phasing of the construction can be explored.
- 2. Pause Redevelopment (staff recommendation):** Recognizing that siting the NMF on this property is having challenges, an alternative is to pause development of NMF at the current location and using the programing information developed in Phase 1 of the project, identify alternative properties in the City that can meet the Public Works Department’s maintenance facility needs. The goal of this effort would be to either identify a location that meets the Department’s maintenance facility functions at a lower cost, or confirm the NMF

site is the best location and value allowing continued development of NMF at the current location. This work could include:

- Use the established building and site program to develop an ideal site alternative layout to better understand minimum site area and dimensions.
 - Search for potential available sites that accommodate the ideal site alternative layout and develop site plans illustrating how the NMF program fits within the potential site.
 - If a potential site is found that warrants further investigation,
 - Perform a Traffic Impact Analysis to understand the impact of a new facility,
 - Research site development requirements (zoning, setbacks, mitigation, etc.), and
 - Verify the ideal site alternative layout will work on potential site.
 - An option to consider is to prepare an analysis of travel costs for the personnel and functions associated with the NMF. The analysis will utilize data provided by the City for personnel travel profiles including types of vehicles, number of and salary averages for personnel, frequency of trips, and vehicle costs per mile for fuel and maintenance. The goal will be to determine where the best general area is within the city limits for the new NMF. Deliverables will include a Travel Analysis detail spreadsheets and summary sheets providing cost data.
- 3. Partially Redevelop:** Partially redevelop the North Maintenance Facility property to relieve the Hamlin Yard facility, including constructing decant facilities and snow and ice removal and material storage facilities, if construction is envisioned to start later than 2019.

In all of these alternatives, a funding source needs to be identified to fund this project.

COUNCIL GOAL(S) ADDRESSED

This project supports City Council Goal #2: "Improve Shoreline's utility, transportation, and environmental infrastructure"; Action Step #8: "Redevelop the North Maintenance Facility and Shoreline Police Station at City Hall to better meet community needs."

RESOURCE/FINANCIAL IMPACT

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At this time no other general revenue source has been identified for this purpose. Frankly there is no existing funding source within the existing operating budget. Current estimates are that the operating budget would need to identify \$750,000 to \$900,000 annually to fund this project. The refinancing of the City Hall bonds will allow approximately \$150,000 of fund currently used to pay debt service on City Hall to be allocated to the debt service of the NMF, but this leaves a gap of \$600,000 to \$750,000 per year. A new funding stream will be required to generate the monies needed to fund this project before moving forward with construction.

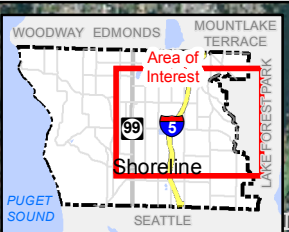
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RECOMMENDATION

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ATTACHMENTS

- Attachment A – City Facilities Location Map
- Attachment B – Site and Building Development - Alternative B
- Attachment C – Site and Building Development - Alternative B.1
- Attachment D – Preliminary Schematic Cost Estimate Narrative
- Attachment E – Detailed Cost Estimate - Alternative B
- Attachment F – Detailed Cost Estimate - Alternative B.1



Attachment A
North Maintenance Facility

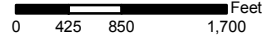
City Hall

Hamlin Park

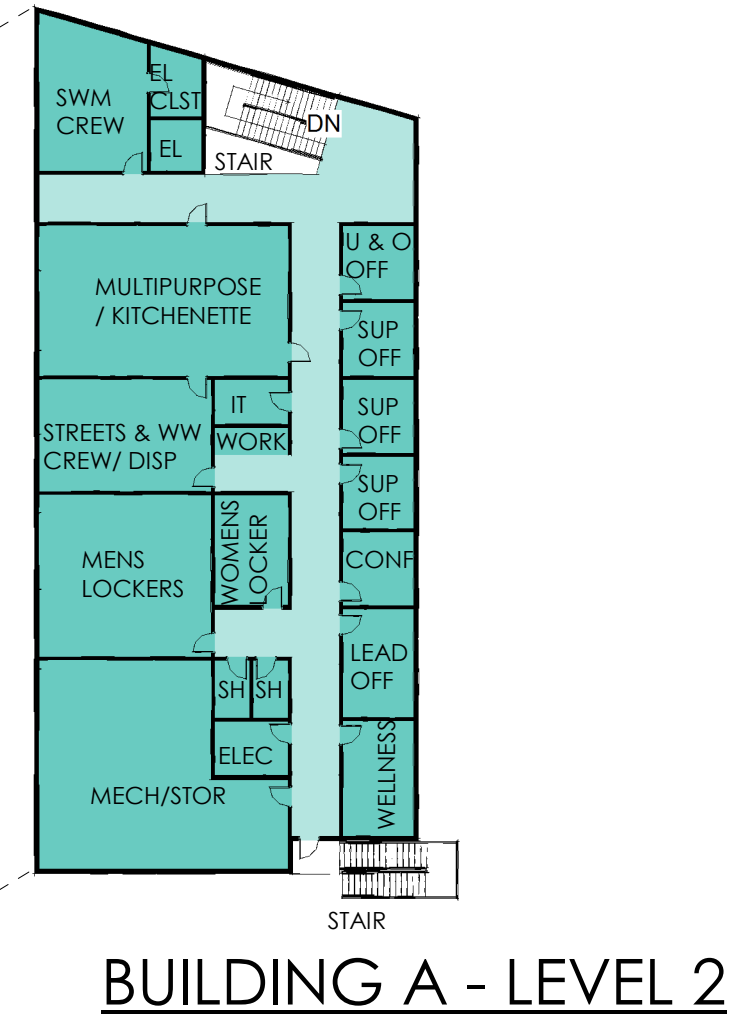
Attachment A



This map is not an official map. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.



Date: 2/11/15
Author: J. Delacruz
Path: \\GIS\Mapsty\033\Operations\North Maintenance Facility.mxd



- ADMIN/CREW
- BUILDING CIRCULATION
- ENCLOSED/HEATED SHOPS & VEHICLE STORAGE
- CANOPY COVER
- EXISTING STRUCTURES ON ADJACENT PROPERTIES

SITE
127,530 SF

BUILDINGS

BUILDING A
7,000 SF - LEVEL 1 CREW/SHOPS
8,500 SF - LEVEL 2 ADMIN/CREW
15,500 SF - TOTAL

BUILDING B
5,180 SF - CANOPY TOTAL

BUILDING C
10,660 SF - HEATED/ENCLOSED
5,000 SF - CANOPY STORAGE
1,000 SF - CANOPY WASH BAY
1,000 SF - CANOPY FUEL BAY
17,660 SF - TOTAL

BUILDING D
4,220 SF - CANOPY TOTAL

42,560 SF TOTAL PROGRAM AREA

PARKING

4 - VISITOR

38 - PERSONNEL

CITY-OWNED (SHADED)

LARGE 12' x 40' (3)

MEDIUM 10' x 30' (16)

SMALL 10' x 20' (26)

X-SMALL 8' x 12' (9)

XX-SMALL 8' x 8' (21)

BULK MATERIALS

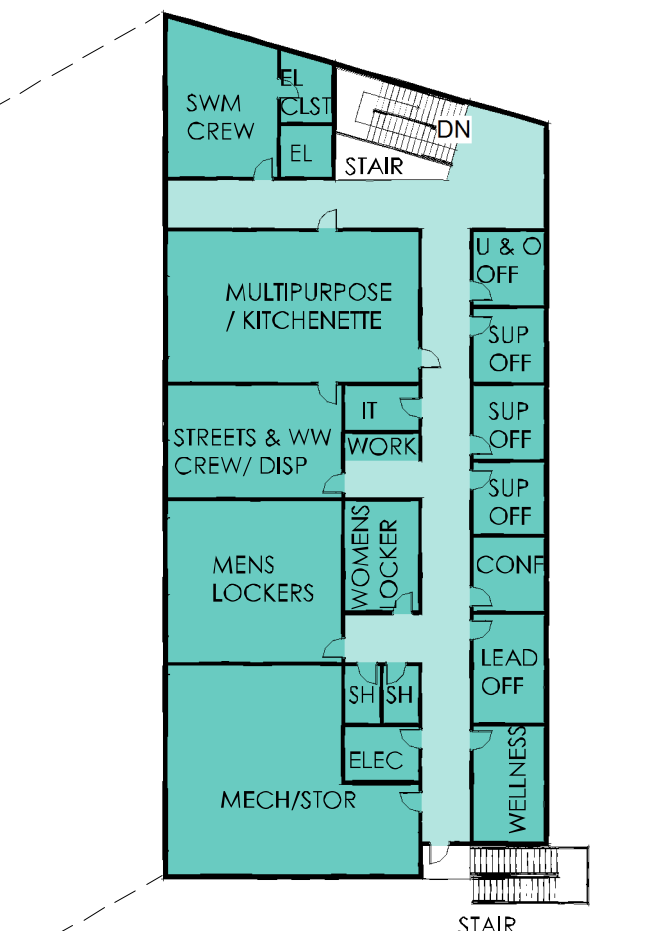
18' x 20' 5/8" MINUS

18' x 20' 1 1/4" MINUS

12' x 20' CONCRETE WASTE

12' x 20' ASPHALT WASTE

12' x 20' BRUSH



- ADMIN/CREW
- BUILDING CIRCULATION
- ENCLOSED/HEATED SHOPS & VEHICLE STORAGE
- CANOPY COVER
- EXISTING STRUCTURES ON ADJACENT PROPERTIES

SITE
 127,530 SF
 13,400 SF ADJACENT PARCEL
 140,930 SF TOTAL

BUILDINGS

BUILDING A
 7,000 SF - LEVEL 1 CREW/SHOPS
 8,500 SF - LEVEL 2 ADMIN/CREW
 15,500 SF - TOTAL

BUILDING B
 8,090 SF - CANOPY TOTAL

BUILDING C
 10,660 SF - HEATED/ENCLOSED
 5,000 SF - CANOPY STORAGE
 1,000 SF - CANOPY WASH BAY
 1,000 SF - CANOPY FUEL BAY
 17,660 SF - TOTAL

BUILDING D
 4,220 SF - CANOPY TOTAL

45,470 SF TOTAL PROGRAM AREA

PARKING

4 - VISITOR
 40 - PERSONNEL

CITY-OWNED (SHADED)

LARGE 12' x 40' (3)
 MEDIUM 10' x 30' (16)
 SMALL 10' x 20' (26)
 X-SMALL 8' x 12' (9)
 XX-SMALL 8' x 8' (21)

BULK MATERIALS

18' x 20' 5/8" MINUS
 18' x 20' 1 1/4" MINUS
 12' x 20' CONCRETE WASTE
 12' x 20' ASPHALT WASTE
 12' x 20' BRUSH

City of Shoreline**North Maintenance Facility****PRELIMINARY SCHEMATIC DESIGN COST ESTIMATE NARRATIVE****SCOPE OVERVIEW**

TCF Architecture and its consulting team completed the full scope outlined in the original Phase 1 - Predesign proposal, with additional fee remaining. The Predesign work exposed several high risk or high uncertainty items including storm water management system design, retaining wall system design, possible increased wetland setbacks, and soil contamination remediation. See the Draft Predesign report for additional information. TCF and the City of Shoreline agreed to use the remaining Predesign fee to continue exploring the high risk items and to further develop the architectural design of the buildings to provide a more detailed preliminary Schematic Design project estimate for the Project. The estimate will be used to establish the Maximum Allowable Construction Cost (MACC) budget for the Project.

APPROACH**Architectural (TCF Architecture)**

Building Development: Expanding on work initiated in the Predesign Phase, the architecture of each building was further developed. Building massing, heights, and possible materials and finishes are suggested in the Predesign architectural narrative and conceptual renderings. The final design concept and materiality have not yet been thoroughly reviewed or approved by the City, but will provide the basis for estimating and budget-setting.

Cost Estimate Information: The building information was provided to the project's cost estimator in order to determine a more detailed estimate for architectural elements.

Structural Engineering (AHBL)

Building Development: Expanding on work initiated in the Predesign Phase, structural framing and foundation plans for each building were developed. Updated soils information provided by the Geotechnical Engineer informed over excavation (see civil) and foundation sizing requirements.

Retaining Wall Development: Additionally, the site requires retaining walls along several edges of the site ranging from 3' - 20'+. AHBL provided retaining wall preliminary designs, including concrete cantilever wall up to 4' above grade, a concrete cantilevered wall with increased footings from 4'-8' above grade, and a soldier pile wall for walls over 8' above grade. All retaining wall options are without soil nailing. Adding soil nailing will potentially reduce cost, but it will require coordination with WSDOT and the use of the right-of-way along Ballinger Way (SR 104).

Cost Estimate Information: Building structural layouts and retaining wall information were provided to the project's cost estimator in order to determine a more detailed estimate of structural elements.

Mechanical & Electrical Engineering (BCE Engineers)

Systems Development: The Mechanical and Electrical engineers met with City representatives to discuss mechanical, electrical, plumbing, security and communication systems to confirm design approach and understand the extent of systems to meet the city's project goals.

Cost Estimate Information: With the information collected from the meeting, BCE provided an estimate for these systems to the project's cost estimator for inclusion into the overall project estimate.

Civil Engineering (Perteet)

Expanding on work initiated in the Predesign Phase, Perteet further developed the grading and stormwater pre-design site concepts and updated the cost estimate for these portions of the design. There were some minor modifications to other aspects of the civil design but the majority of the changes were to the stormwater and grading costs.

Stormwater / Grading Development: Information was obtained from the Geotechnical Engineer, as well as the City's consultant on the 25th Avenue NE Flood Reduction project that helped Perteet further develop the stormwater and grading costs. The Geotechnical Engineer was able to perform additional borings on the site and provided information pertaining to approximate groundwater elevation and the condition of the soil underlying the site (see below). In short, the groundwater is high and the soil condition is poor (see below for additional information) which both resulted in added dewatering costs and increased costs due to a greater estimated quantity of excavation. This information was also used to estimate the quantity of overexcavation that would be required to support building foundations.

The 25th Avenue NE Flood Reduction project team provided the likely future 2-year storm event water surface elevation of 210.3 as well as the likely future invert elevation of 208.7 just downstream of the North Maintenance Facility site. Preliminary stormwater modeling was performed to size two separate detention vaults on the site as well as two water quality (stormfilter) vaults downstream of the detention vaults. Since the only water surface elevation provided was from the 2-year event, the preliminary layout and elevation of the stormwater system was set such that flow during the 2-year event would not back up in to the two water quality vaults. As designs for both the 25th Avenue NE Flood Reduction project and the North Maintenance Facility progress, continued coordination will be required to make sure the stormwater system on the North Maintenance Facility site function properly during more intense storm events such as the 25 and 100-year event.

Stream / Wetland Buffer: After further discussion with the City of Shoreline planning department, it has been determined, based on the City's Code, that the wetland buffer ends at the existing pavement edge. Therefore, no wetland mitigation is required.

Geotechnical Engineering (Terracon)

Terracon provided additional subsurface explorations, analysis and structure-specific recommendations for buildings and retaining structures. The updated information is reflected in the updated designs and cost estimate. A summary of their findings are below.

Soil Findings:

- For the cut walls along SR 104, the ground slopes relatively steeply up to SR 104, and along some portions of the slope a gabion wall is already present. Temporary cut slopes for construction of a wall along this portion of the site have the potential to undermine the existing gabion wall or trigger slope instability in the WSDOT right-of-way. Terracon recommends significantly limiting the depth and extent of any temporary excavations for retaining wall construction at the toe of this existing steep slope in order to limit the potential for slope instability on the WSDOT right-of-way. At this time, Terracon has only been able to complete one boring at the top of the slope along SR 104 due to restrictions imposed by WSDOT on boring locations. Based on that single boring, it is Terracon's opinion that the soil is not well suited for soil nails. A cantilever soldier pile wall for cuts up to a maximum height of about 10 feet or so, and a soldier pile wall is recommended with permanent tieback anchors for cuts greater than about 10 feet.
- At two test pit locations, some soil with a noticeable hydrocarbon odor was detected. Samples of the soil has been saved and will need further analysis to understand the full extent of contamination and type.
- Some of the fill encountered in the test pits was reminiscent of digging in a dump. Some of the test pits disclosed pieces of metal, wood, plastic, asphalt, organic material, etc. mixed in with the soil fill.

- Because of the highly variable and undocumented nature of the fill, it is recommended that the buildings not be supported directly on the existing fill. In many areas of the site, the fill covers a layer of peat or highly organic soil. The peat and highly organic soil can undergo consolidation and settlement under new loads with a significant potential for differential settlement. For that reason, it is also recommended that the buildings not be supported above the peat and organic soil without ground improvement.

Ground Improvement at Buildings:

There are three basic approaches to providing a good subgrade for foundation and floor slab support in the building areas:

1. Overexcavate and remove the existing fill and highly organic soil and replace the removed soil with compacted structural fill;
2. Implement some type of ground improvement such as rammed aggregate piers, geopiers, etc. that effectively improves the poor soil and helps transfer the building loads down to more competent soil layers at depth; or
3. Provide pile support for the building and slab.

Overexcavation and removal of the existing fill and replacement with compacted structural fill is commonly used to address relatively shallow depths of unsuitable soil. In some areas of this site where fill is more shallow this approach could be cost effective. However, deeper fill and groundwater within the peat or organic soils was observed on site which would need to be removed. Groundwater control would need to be a component of the overexcavation and backfill process. The groundwater will require groundwater control to accomplish the excavation and removal, and portions of the excavated soil are expected to be quite wet and more difficult to handle. It should be assumed that backfill of the excavations would require imported granular material. Given the depth of overexcavation that is required in some areas, the presence of groundwater, and the need to remove most of the unsuitable soil from the site and replace it with imported structural fill, it is expected that this alternative would be more expensive than ground improvement.

Installation of ground improvement such as rammed aggregate piers, geopiers, or similar contractor-designed ground improvement techniques could be implemented within the building footprints for support of both the building and floor slabs. It is expected that this alternative will be more economical than overexcavation and removal of the existing fill and backfilling with compacted structural fill given the depth involved and the presence of groundwater in the overexcavation. The selected ground improvement technique would need to be capable of installation through saturated soil and groundwater. Pile foundations are often used for foundation support in areas of deep unsuitable soils. Pile foundation support at the relatively shallow depths at this site would likely be more expensive than the ground improvement alternative. Assume ground improvement at each building.

Ground Improvement at Pavement:

For planning purposes, a minimum one-foot thickness of compacted granular fill as subbase beneath the pavement section is assumed. In areas of fill this could be satisfied by the placement and compaction of good quality fill. In cut areas, it may require cutting an additional foot of material in order to accommodate the suggested subbase layer. During construction it is also likely that there may be localized areas of poor subgrade that could require overexcavation and removal.

Differential settlement resulting from consolidation of the poor soil at the depth that is not removed has the potential to be more noticeable in terms of cracking and distress of the rigid PCC pavement. This presents a cost / risk / performance issue that needs to be considered by the design team and the City. Post-construction differential settlement of paved areas can be reduced by delaying the time between fill placement and paving to allow a portion of the settlement to occur prior to paving. The integrity of a PCC pavement section can be improved by thickening the PCC section and adding additional reinforcement and placing a thicker section of base course material below the PCC. These steps do not reduce the settlement,

but tend to make the PCC pavement better able to span over localized areas of poor, settlement prone soil and likely reduce (but not eliminate) the potential for damaging differential settlement. This topic probably warrants more discussion with the design team and the City regarding the cost / risk / performance trade-offs.

Use of Cut Soil:

Only very limited areas of the site contain cut soil that would be suitable for use as structural fill under most conditions. The cut soil often consists of existing fill of highly variable quality and consistency. Some areas of the existing fill contain construction debris or organic materials that would be clearly unsuitable for reuse as fill. The majority of the soil to be cut is silty sand. During wet weather construction it would not be practical to use this silty material because of its sensitivity to moisture. During dry weather, the silty sand could potentially be useable for use as structural fill on the site provided it is at the proper moisture content, can be effectively segregated from the unsuitable soil, and can be placed and properly compacted. Given the potential difficulty and uncertainty with the reusing the on-site soil for structural fill, it is recommended that the cut soil be removed from the site for preliminary estimating purposes

Cost Estimating (The Robinson Company)

The Robinson Company provided cost estimating services for Preliminary Schematic Level design documentation to establish overall cost budgets for all site and building elements (based on public works bidding and prevailing wage process), estimated off-site costs, FF&E (fixtures, furnishings & equipment), soft costs (sales tax, professional services, permits, etc.), construction contingencies, and escalation factors. The site and building estimates will include design contingencies based on the level of design work. Cost estimates for civil systems, mechanical, plumbing, fire protection and electrical systems and landscaping were provided to The Robinson Company by the consultants for incorporation into the total project estimate.

Project Scope Description	Qty	Unit	Unit Cost	Estimate	Remarks
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Estimates are developed based on the Pre-Schematic Design estimate prepared by The Robinson Company, dated July 25th, 2016. The estimate is inclusive of mobilization, general conditions and 4%/Year escalation to July 2017.

A1 - SITE WORK					
Site Work (including 25th ave street improvement)	3.16	AC	\$2,258,433	7,136,647	
Ballinger Way Street Improvement	1.00	LS	\$150,000	\$150,000	Confirm with planning what extent will be required
Soil Remediation Allowance	1.00	LS	\$65,000	\$65,000	
Total Estimated Site Costs				\$7,351,647	

A2 - BUILDINGS					
Building A - Admin/Crew/Shops	15,018	SF	\$317.72	\$4,771,519	Two- story wood-framed building
Building B - Covered Storage	8,100	SF	\$102.21	\$827,901	Pre-engineered metal, shed roof with walls on 3 sides
Building C - Enclosed/Canopy Storage, Fuel/Wash	20,683	SF	\$155.92	\$3,224,893	Pre-engineered metal bldg system, enclosed, heated,
Building D - Covered Storage/Decant	4,300	SF	\$84.52	\$363,436	Pre-engineered metal, shed roof with walls on 3 sides
Deicer Tank & Pump Equipment	1	LS	\$15,000.00	\$15,000	
Total Estimated Building Costs	48,102	SF	\$191	\$9,202,749	

Subtotal Site & Building MACC (A1+A2)				\$16,554,397	
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A3 - POSSIBLE COST REDUCTION STRATEGIES					
Geopiers in lieu of Overexcavation at Bldg's	1	LS	\$532,059	\$532,059	
Site Alternative B - Civil Cost Changes	1	LS	\$300,000	\$300,000	
Site Alternative B - Bldg B Cost Changes	2,900	SF	\$102.21	\$296,409	Reduction of 2,900 SF
Total Estimated Scope/Cost Reductions				\$1,128,468	

Adjusted Site & Building MACC (A1+A2-A3)				\$15,425,929	
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B - SOFT COSTS ON MACC					
Washington State Sales Tax			9.50%	\$1,465,463	
Professional Services			14.00%	\$2,159,630	Budgetary only
Construction Management			5.00%	\$771,296	
Permitting / Misc Fees			1.50%	\$231,389	Confirm
Special Testing Services			1.00%	\$154,259	
Construction Contingency			10.00%	\$1,542,593	Unforeseen Conditions / Additional Scope
Total Estimated Soft Costs on MACC			41.00%	\$6,324,631	

Total Estimate (A1+A2+B)				\$21,750,559	
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C - FURNISHINGS FIXTURES AND EQUIPMENT (FF&E) OWNER-PROVIDED					
Office Furnishings	1	LS	\$45,000	\$45,000	
Technology Systems by Owner (Telecomm/data)	1	LS	\$50,000	\$50,000	
Total Estimated FF&E Cost Budget				\$95,000	

Subtotal MACC, Soft Costs and FF&E (A1+A2+B+C)				\$21,845,559	
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D - PROPERTY ACQUISITION					
Purchase South Parcel	1	LS		\$0	

GRAND TOTAL PROJECT COST BUDGET				\$21,845,559	
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Project Scope Description	Qty	Unit	Unit Cost	Estimate	Remarks
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Estimates are developed based on the Pre-Schematic Design estimate prepared by The Robinson Company, dated July 25th, 2016. The estimate is inclusive of mobilization, general conditions and 4%/Year escalation to July 2017.

A1 - SITE WORK					
Site Work (including 25th ave street improvement)	3.16	AC	\$2,258,433	7,136,647	
Ballinger Way Street Improvement	1.00	LS	\$150,000	\$150,000	Confirm with planning what extent will be required
Soil Remediation Allowance	1.00	LS	\$65,000	\$65,000	
Total Estimated Site Costs				\$7,351,647	

A2 - BUILDINGS					
Building A - Admin/Crew/Shops	15,018	SF	\$317.72	\$4,771,519	Two- story wood-framed building
Building B - Covered Storage	8,100	SF	\$102.21	\$827,901	Pre-engineered metal, shed roof with walls on 3 sides
Building C - Enclosed/Canopy Storage, Fuel/Wash	20,683	SF	\$155.92	\$3,224,893	Pre-engineered metal bldg system, enclosed, heated,
Building D - Covered Storage/Decant	4,300	SF	\$84.52	\$363,436	Pre-engineered metal, shed roof with walls on 3 sides
Deicer Tank & Pump Equipment	1	LS	\$15,000.00	\$15,000	
Total Estimated Building Costs	48,102	SF	\$191	\$9,202,749	

Subtotal Site & Building MACC (A1+A2)				\$16,554,397	
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A3 - POSSIBLE COST REDUCTION STRATEGIES					
Geopiers in lieu of Overexcavation at Bldg's	1	LS	\$532,059	\$532,059	
Total Estimated Scope/Cost Reductions				\$532,059	

Adjusted Site & Building MACC (A1+A2-A3)				\$16,022,338	
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B - SOFT COSTS ON MACC					
Washington State Sales Tax			9.50%	\$1,522,122	
Professional Services			14.00%	\$2,243,127	Budgetary only
Construction Management			5.00%	\$801,117	
Permitting / Misc Fees			1.50%	\$240,335	Confirm
Special Testing Services			1.00%	\$160,223	
Construction Contingency			10.00%	\$1,602,234	Unforeseen Conditions / Additional Scope
Total Estimated Soft Costs on MACC			41.00%	\$6,569,158	

Total Estimate (A1+A2+B)				\$22,591,496	
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C - FURNISHINGS FIXTURES AND EQUIPMENT (FF&E) OWNER-PROVIDED					
Office Furnishings	1	LS	\$45,000	\$45,000	
Technology Systems by Owner (Telecomm/data)	1	LS	\$50,000	\$50,000	
Total Estimated FF&E Cost Budget				\$95,000	

Subtotal MACC, Soft Costs and FF&E (A1+A2+B+C)				\$22,686,496	
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D - PROPERTY ACQUISITION					
Purchase South Parcel	1	LS	\$650,000	\$650,000	

GRAND TOTAL PROJECT COST BUDGET				\$23,336,496	
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