



DEVELOPMENT SERVICES DEPARTMENT  
ENVIRONMENTAL COORDINATOR  
450 110<sup>th</sup> Ave NE., P.O. BOX 90012  
BELLEVUE, WA 98009-9012

**OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS**

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 15-129670-LO  
Project Name/Address: Auto Nation BMW  
11959 Northup Way

Planner: Carol Hamlin

Phone Number: (425)-452-2731

**Minimum Comment Period: December 31, 2015, 5PM**

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other:

**ENVIRONMENTAL CHECKLIST**

10/9/2009

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

**INTRODUCTION****Purpose of the Checklist:**

The State Environmental Policy Act (SEPA), Chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

**Instructions for Applicants:**

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

**Use of a Checklist for Nonproject Proposals:** *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

**Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.**

## BACKGROUND INFORMATION

Property Owner:

Proponent:

Contact Person:

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address:

Phone:

Proposal Title:

Proposal Location:

(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description:
2. Acreage of site:
3. Number of dwelling units/buildings to be demolished:
4. Number of dwelling units/buildings to be constructed:
5. Square footage of buildings to be demolished:
6. Square footage of buildings to be constructed:
7. Quantity of earth movement (in cubic yards):
8. Proposed land use:
9. Design features, including building height, number of stories and proposed exterior materials:
10. Other

Estimated date of completion of the proposal or timing of phasing:

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

Please provide one or more of the following exhibits, if applicable to your proposal. (Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone) Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development  
Preliminary plat map
- Clearing & Grading Permit  
Plan of existing and proposed grading  
Development plans
- Building Permit (or Design Review)  
Site plan  
Clearing & grading plan
- Shoreline Management Permit  
Site plan

#### A. ENVIRONMENTAL ELEMENTS

##### 1. Earth

- a. General description of the site:  Flat  Rolling  Hilly  Steep slopes  Mountains  Other
- b. What is the steepest slope on the site (approximate percent slope)?
- c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
  
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
  
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
  
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

## **2. AIR**

- a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
  
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
  
- c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

## **3. WATER**

- a. Surface
  - (1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
  
  - (2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

- (3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
  
- (4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
  
- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
  
- (6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

b. Ground

- (1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.
  
- (2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

c. Water Runoff (Including storm water)

- (1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
  
- (2) Could waste materials enter ground or surface waters? If so, generally describe.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

#### 4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

c. List threatened or endangered species known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

#### 5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

- Birds: hawk, heron, eagle, songbirds, other:
- Mammals: deer, bear, elk, beaver, other:
- Fish: bass, salmon, trout, herring, shellfish, other:

- b. List any threatened or endangered species known to be on or near the site.
- c. Is the site part of a migration route? If so, explain.
- d. Proposed measures to preserve or enhance wildlife, if any:

## **6. Energy and Natural Resources**

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
- c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

## **7. Environmental Health**

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

(1) Describe special emergency services that might be required.

(2) Proposed measures to reduce or control environmental health hazards, if any.

b. Noise

- (1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?
  
- (2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.
  
- (3) Proposed measures to reduce or control noise impacts, if any:

**8. Land and Shoreline Use**

- a. What is the current use of the site and adjacent properties?
  
- b. Has the site been used for agriculture? If so, describe.
  
- c. Describe any structures on the site.
  
- d. Will any structures be demolished? If so, what?
  
- e. What is the current zoning classification of the site?
  
- f. What is the current comprehensive plan designation of the site?
  
- g. If applicable, what is the current shoreline master program designation of the site?
  
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.
  
- i. Approximately how many people would reside or work in the completed project?
  
- j. Approximately how many people would the completed project displace?



## **11. Light and Glare**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
- c. What existing off-site sources of light or glare may affect your proposal?
- d. Proposed measures to reduce or control light or glare impacts, if any:

## **12. Recreation**

- a. What designated and informal recreational opportunities are in the immediate vicinity?
- b. Would the proposed project displace any existing recreational uses? If so, describe.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

## **13. Historic and Cultural Preservation**

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
- b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.
- c. Proposed measures to reduce or control impacts, if any:

## **14. Transportation**

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
- c. How many parking spaces would be completed project have? How many would the project eliminate?

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
- g. Proposed measures to reduce or control transportation impacts, if any:

**15. Public Services**

- a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
- b. Proposed measures to reduce or control direct impacts on public services, if any:

**16. Utilities**

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**Signature**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature..........Date Submitted.....12.10.15.....

***APPENDIX A***

**Supplemental Environmental  
Checklist Responses**

# **APPENDIX A**

## **SUPPLEMENTAL ENVIRONMENTAL CHECKLIST RESPONSES**

*The following contains supplemental information to the Environmental Checklist prepared for BMW of Bellevue.*

### **BACKGROUND INFORMATION**

#### **Legal Description**

PARCEL A

THAT PORTION OF THE NORTH 470 FEET, AS MEASURED ALONG THE EAST LINE OF THAT PORTION OF THE WEST 1274.13 FEET, AS MEASURED ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, WHICH LIES EASTERLY OF THE EASTERLY MARGIN OF THE NORTHERN PACIFIC RAILWAY COMPANY RIGHT-OF-WAY;

EXCEPT THAT PORTION CONDEMNED IN KING COUNTY SUPERIOR COURT CAUSE NO. 731778 FOR HIGHWAY 520;

AND EXCEPT THAT PORTION THEREOF CONVEYED TO THE STATE OF WASHINGTON FOR HIGHWAY PURPOSES BY DEED RECORDED UNDER RECORDING NO. 5869978;  
AND EXCEPT ANY PORTION THEREOF LYING WITHIN 120TH AVENUE NORTHEAST AS CONVEYED TO THE CITY OF BELLEVUE UNDER RECORDING NOS. 6367816 AND 6367819;

TOGETHER WITH THAT PROPERTY CONVEYED BY THE STATE OF WASHINGTON TO VERNELL'S FINE CANDIES, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NO. 8705271035;

(PURSUANT TO CITY OF BELLEVUE DECLARATION OF LOT COMBINATION NO. DLC# 91-9854, RECORDED JULY 28, 1992 UNDER RECORDING NO. 9207281592);

EXCEPT THAT PORTION CONDEMNED BY THE STATE OF WASHINGTON BY THAT STIPULATED JUDGMENT AND DECREE OF APPROPRIATION FILED SEPTEMBER 10, 2013 IN KING COUNTY SUPERIOR COURT CAUSE NO. 12-2-29043-1.

PARCEL B:

ALL THAT PORTION OF THE WESTERLY 15 FEET OF THE EASTERLY 65 FEET OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S RAILROAD COMPANY'S (FORMERLY NORTHERN PACIFIC RAILWAY COMPANY) 150 FOOT WIDE SEATTLE BELT LINE RIGHT OF WAY BEING 50 FEET WIDE ON THE WEST SIDE AND 100 FEET WIDE ON THE EAST SIDE OF SAID RAILWAY COMPANY'S MAIN TRACT CENTERLINE, AS NOW LOCATED AND CONSTRUCTED UPON, OVER AND ACROSS THE

NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY WASHINGTON, LYING BETWEEN TWO LINES DRAWN PARALLEL WITH AND DISTANT 35.00 FEET AND 50.00 FEET RESPECTIVELY, EASTERLY OF AS MEASURED AT RIGHT ANGLES TO SAID RAILWAY COMPANY'S MAIN TRACT CENTERLINE,

BOUNDED BETWEEN THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, AND A LINE DRAWN PARALLEL TO AND 400.00 FEET SOUTHERLY OF THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, AS MEASURED ALONG SAID MAIN TRACK CENTERLINE;

EXCEPT THAT PORTION CONDEMNED BY THE STATE OF WASHINGTON BY THAT STIPULATED JUDGMENT AND DECREE OF APPROPRIATION FILED SEPTEMBER 10, 2013 IN KING COUNTY SUPERIOR COURT CAUSE NO. 12-2-29043-1.

PARCEL C:

ALL THAT PORTION OF THE EASTERLY 50.00 FEET OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S (FORMERLY NORTHERN PACIFIC RAILWAY COMPANY) 150.00 FOOT WIDE SEATTLE BELTLINE RIGHT OF WAY, BEING 50.00 FEET WIDE ON THE WEST SIDE AND 100.00 FEET WIDE ON THE EAST SIDE OF SAID RAILWAY COMPANY'S MAIN TRACT CENTERLINE, AS NOW LOCATED AND CONSTRUCTED UPON, OVER AND ACROSS THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST W.M., IN KING COUNTY, WASHINGTON, LYING BETWEEN TWO LINES DRAWN PARALLEL WITH AND DISTANT 50.00 FEET AND 100.00 FEET RESPECTIVELY, EASTERLY OF AS MEASURED AT RIGHT ANGLES TO SAID RAILWAY COMPANY'S MAIN TRACK CENTERLINE BOUNDED BETWEEN THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST W.M. AND A LINE DRAWN PARALLEL TO AND 400.00 FEET SOUTHERLY OF THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST W.M., AS MEASURED ALONG SAID MAIN TRACK CENTERLINE;

EXCEPT THAT PORTION CONDEMNED BY THE STATE OF WASHINGTON BY THAT STIPULATED JUDGMENT AND DECREE OF APPROPRIATION FILED SEPTEMBER 10, 2013 IN KING COUNTY SUPERIOR COURT CAUSE NO. 12-2- 29043-1.

### **Project Description**

Lowe's Home Center currently occupies the project site; the home center intends to vacate the facility in 2016.

The proposed project involves redevelopment of the former home center facility to accommodate an automobile dealership. **BMW of Bellevue** is currently located at 13617 Northup Way NE. Once the new facility is completed at the former Lowe's site, the dealership will relocate to the new facility and dispose of the site and building at the existing dealership.

Redevelopment of the former home center facility will require demolition of the eastern two-thirds (approximately 80,220 sq. ft.) of the building and replacement with a new building. The existing home center contains approximately 143,400 sq. ft. The completed BMW of Bellevue facility will comprise approximately 209,858 sq. ft. of gross floor area including parking garage and rooftop parking. The occupied building space will consist of an estimated 118,486 sq. ft. on the ground floor and 9,608 sq. on a mezzanine level (total building area is 128,094 sq. ft.). Covered and rooftop parking covers 81,764 SF.

Uses that are proposed within the ground floor of the building will include a showroom, parts department, office area, approximately 50 service bays, an indoor display inventory area, and a

30,475 sq. ft. collision center. The mezzanine level will contain a parts storage area, break room, and a conference room.

The roof of the structure will provide rooftop parking, as well as display areas along the north and the west portions of the building for new cars. Rooftop parking will be accessed by a ramp located in the south-central portion of the new building.

**Figure 1** is a Vicinity Map, **Figure 2** is the Site Plan, and **Figure 3** is an aerial architectural rendering of the proposed project as viewed from the northeast corner of the site. As indicated by **Figure 3**, the height of portions of the building will approximate 22 ft. above-grade, the roof parking area will be at a height of approximately 31 ft. above-grade, and the highest portion of the roof structure will be 45 ft. above-grade.

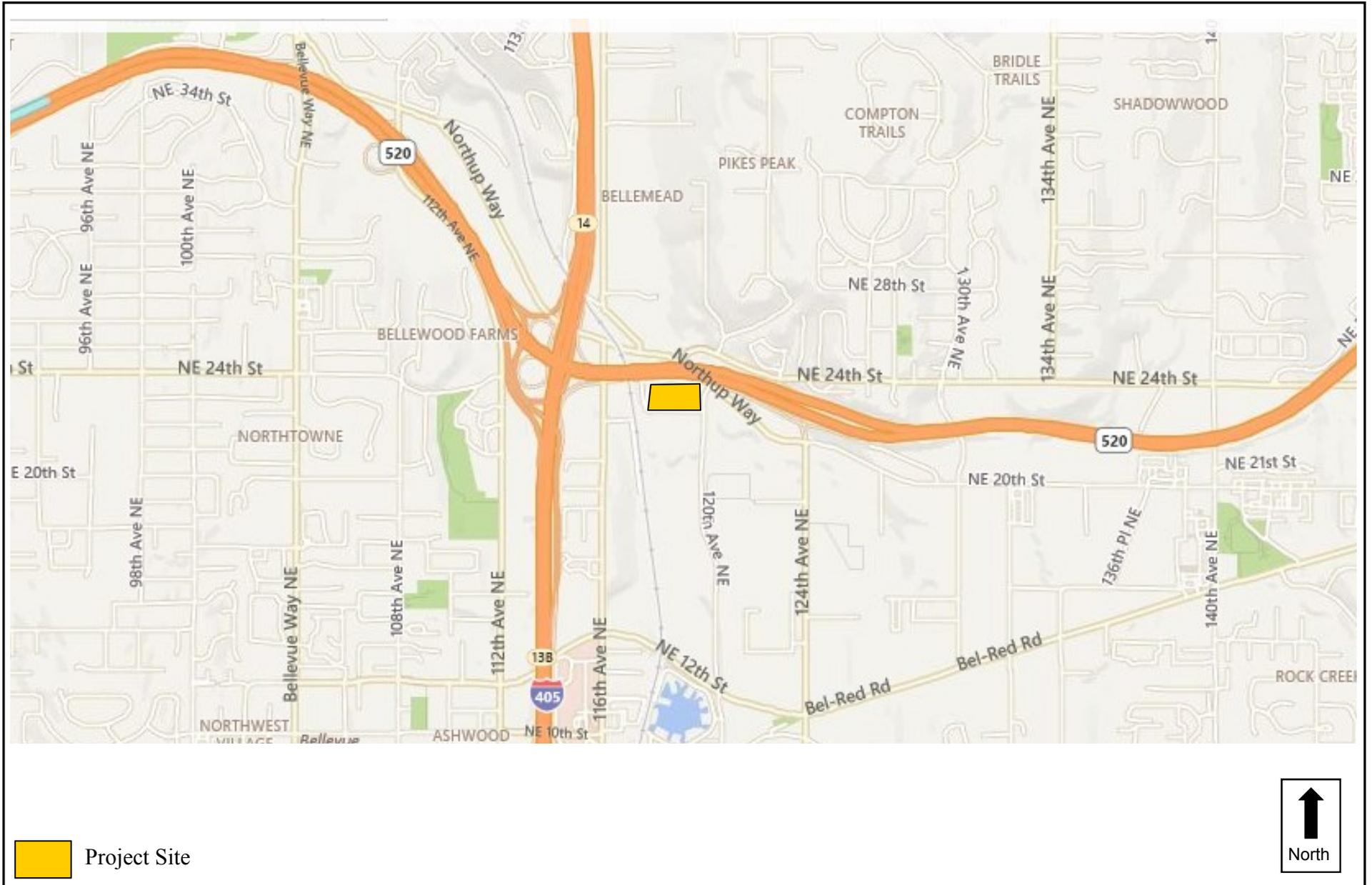
On-site parking is proposed for approximately 666 vehicles, as indicated below:

Customer parking -- <b>56</b> spaces	Employee parking -- <b>111</b>	New car inventory/display -- <b>245</b>
CPO inventory -- <b>93</b>	Demonstrators -- <b>4</b>	Loaners -- <b>11</b>
In-service parking -- <b>140</b>		

Vehicle ingress and egress to the site will be the same as presently exists with the home center. This includes a full access driveway from 120<sup>th</sup> Ave. NE in the southeast portion of the site and a right-in/right-out only driveway on Northup Way.

Construction of the proposed **BMW of Bellevue** facility is anticipated to begin in 2016 with the facility operational by 2017.

# BMW of Bellevue Development Environmental Checklist

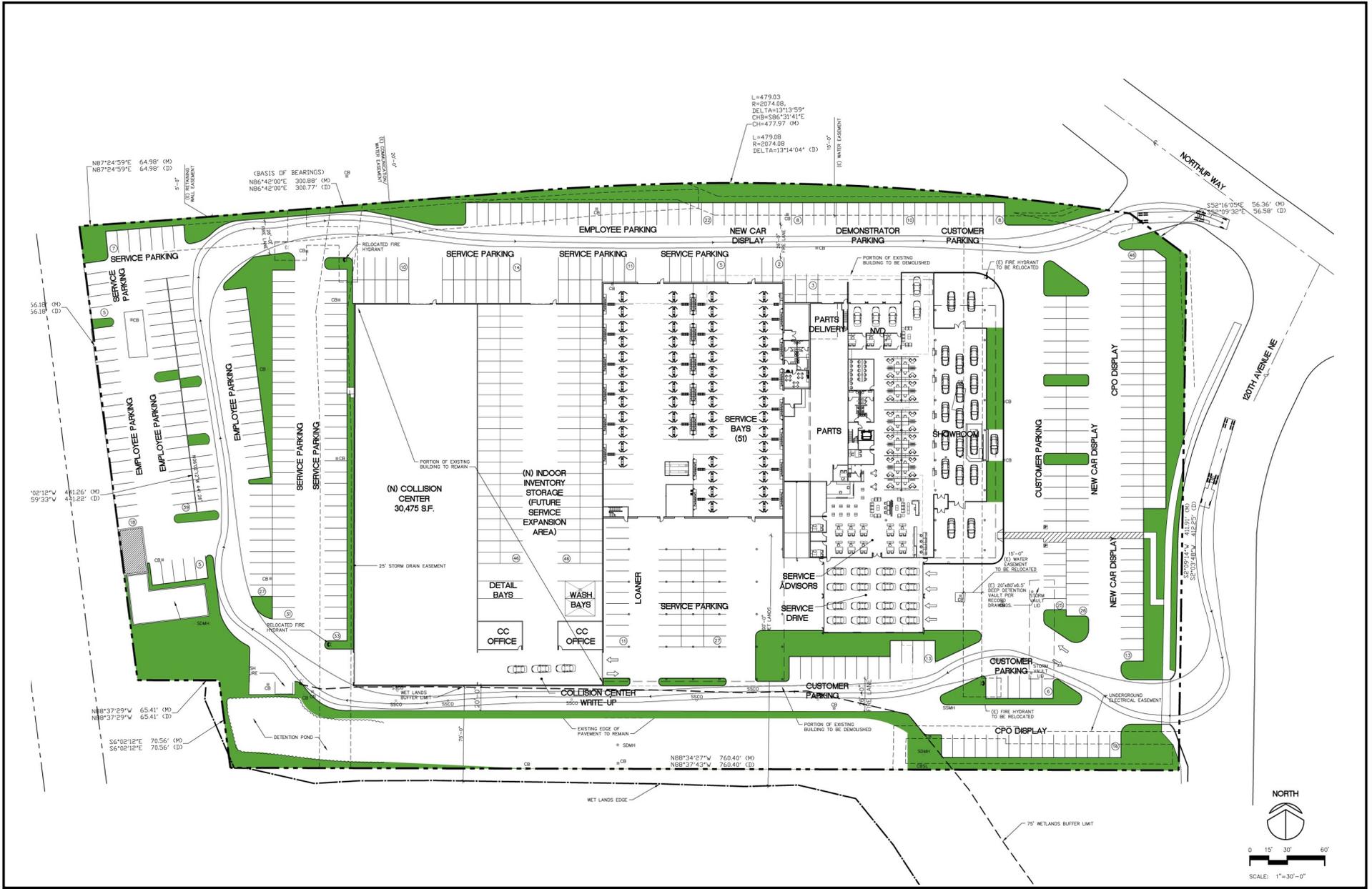


Source: Bing Maps, 2015



**Figure 1**  
Vicinity Map

# BMW of Bellevue Development Environmental Checklist

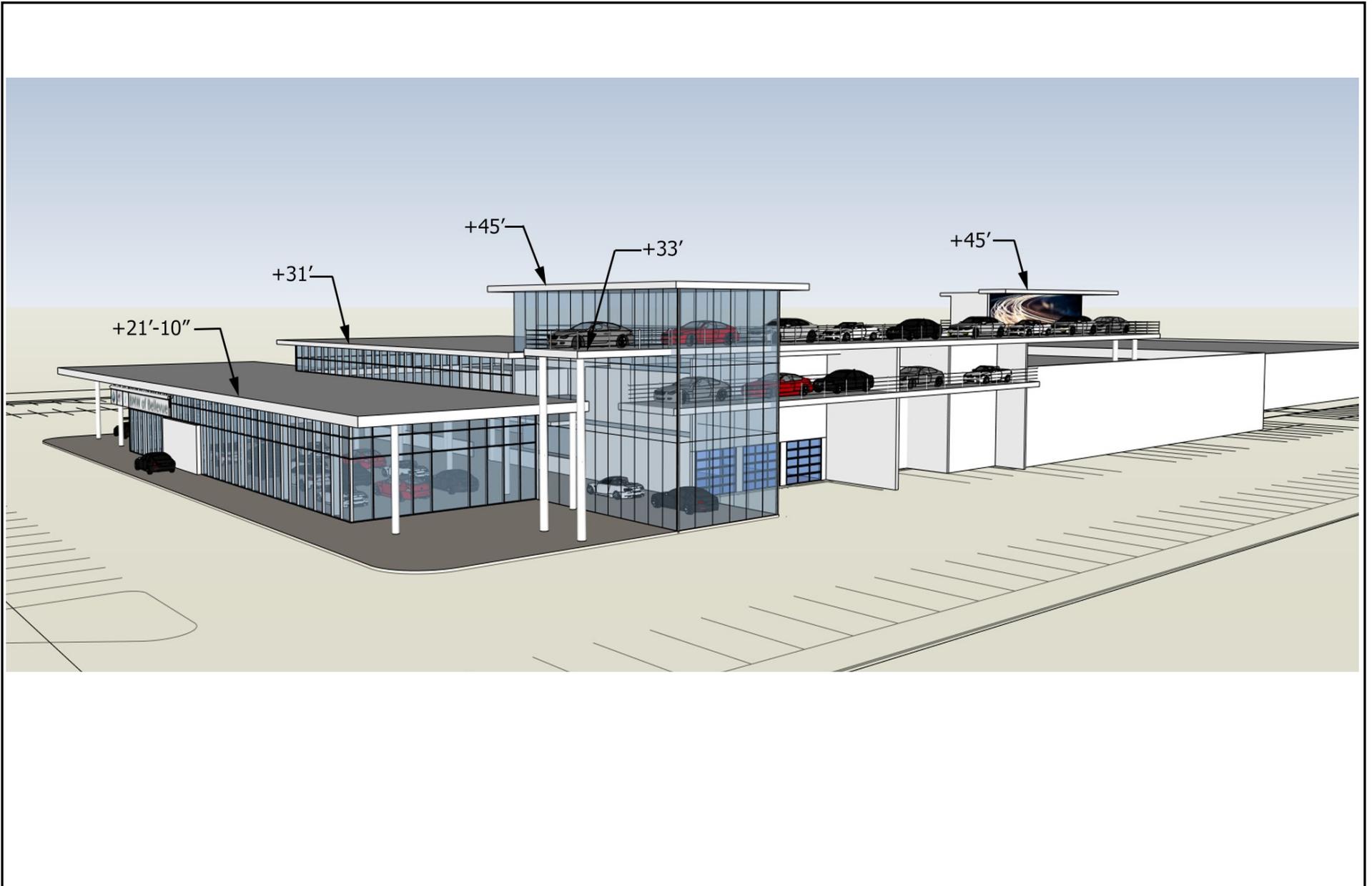


Source: Stantec, 2015



**Figure 2**  
Site Plan

# BMW of Bellevue Development Environmental Checklist



Source: Stantec, 2015



**Figure 3**

Aerial Architectural Rendering of the Project as Viewed  
from the Northeast Corner of the Site

## **Environmental Information that has been Prepared**

- TENW. 2015. **Traffic Impact Analysis**
- TALASAEA. 2015. **Wetland Analysis**

## **Governmental Approvals Needed**

### ***City of Bellevue***

- Critical Areas Permit
- Demolition Permit
- Clearing and Grading Permit
- Building Permit
- Stormwater Review
- Street Use Permits (construction – temporary)
- Street Improvements
- Mechanical Permit
- Elevator Permit
- Occupancy Permit

### ***King County Department of Health***

- Plumbing Permit

### ***Puget Sound Clean Air Agency***

- Demolition Permit

### ***Washington Department of Ecology***

- Construction General NPDES Permit

## 2. Air

### **a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

*The Proposed Action could result in localized increases in air emissions (primarily carbon monoxide) due to construction activities and vehicular traffic associated with the proposed development.*

*With regard to Greenhouse Gas Emissions (GHG), the scale of global climate change is so large that a project's impacts can only be evaluated on a cumulative scale and it is not anticipated that a single development project, even one of the scale of the proposed project, would cause an individually discernible impact on global climate change.*

*In order to evaluate the climate change impacts of the proposed project, a Greenhouse Gas Emissions Worksheet has been prepared to estimate the emissions footprint for the lifecycle of the development on a gross-level basis. The emissions estimate is based on the combined emissions from the following sources:*

- *Embodied Emissions – extraction, processing, transportation, construction and disposal of materials and landscape disturbance;*
- *Energy-related Emissions – energy demands created by the development after it is completed; and,*
- *Transportation-related Emissions – transportation demands created by the development after it is completed.*

*The Worksheet estimate is based on building square footage. In total, the estimated lifespan emissions estimate for the project is approximately 111,295 MTCO<sub>2e</sub>. The Greenhouse Gas Emissions Worksheet used to estimate project emissions is contained in **Appendix B** of this Checklist. In comparison, the existing 141,398 sq. ft. Lowe's building on the site would have generated greenhouse gas emissions of approximately 121,649 MTCO<sub>2e</sub>.*

*The proposed project has been designed to conform to the applicable regulations and standards of agencies regulating air quality in Bellevue. These include the Environmental Protection Agency (EPA), Washington State Department of Ecology (DOE), and the Puget Sound Clean Air Agency (PSCAA). The project will contain a collision center facility for painting cars, and the paint booths in the collision center will have filtered exhaust air to address possible emissions from that source.*

*The **BMW of Bellevue Development** will target LEED Certification. Potential LEED and sustainable measures are currently being reviewed as part of the building design process.*

## **8. Land and Shoreline Use**

### **a. What is the current use of the site and adjacent properties?**

*The **BMW of Bellevue** site is located at 11959 Northrup Way in Bellevue and presently contains a Lowe's home improvement store and surface parking. The existing building on the site is approximately 136,952 sq. ft.. Surface parking associated with the building is located along the north, east and west sides of the building.*

*Surrounding land uses are primarily industrial and include:*

- *North – the SR-520 roadway;*
- *East – a 2-story, 19,800 sq. ft. retail/warehouse building, and a 1-story, 21,000 sq. ft. storage warehouse*
- *South – a forested wetland area and a 1-story, 21,000 sq. ft. light industrial building (Grainger Building) located to the east of the wetland area; and,*
- *West – a 1-story, 4,900 sq. ft. heavy industrial manufacturing building and storage warehouse (2,000 sq. ft.), and an industrial park with a 2-story, 31,000 sq. ft. building.*
- *Residential uses are present across SR-520.*

### **i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

*The project site is located in the Bel-Red Subarea, one of 14 distinctive subareas within the City. The Bel-Red Subarea is intended to “develop a sustainable urban development pattern that dramatically reshapes the future of the Bel-Red Subarea, while allowing the area to transition gracefully from its past”.*

*The proposed **BMW of Bellevue** development would continue retail density (car dealership) on a site that currently contains a Lowe's home improvement store. Consistent with the goals and policies identified for Bel-Red subarea, the project would contribute to creating a distinctive commercial neighborhood for the Eastside. The proposed development would be consistent with the type and scale of existing and planned land uses surrounding the site within the Bel-Red Subarea, and is consistent with the City's Land Use Code.*

## **10. Aesthetics**

### **b. What views in the immediate vicinity would be altered or obstructed?**

*The project will require demolition of the east portion of the existing one-story Lowe's building located on the site. New development will largely replace the footprint of the east portion of the building that is demolished. Overall, the new building is projected to have a footprint of approximately 123,282 sq. ft., which is approximately 13,000 sq. ft. less than the footprint of the existing building (136,952 sq. ft.).*

*The new multi-level building would be 45 ft. at its tallest.*

*Views of the project site would be altered from that of an older, low-rise structure surrounded by surface parking, to a more modern, low-rise structure, which would continue to occupy the*

majority of the site, would have more opacity and modulation, and would be up to three levels tall. Refer to **Figure 3** for a rendering of the proposed development.

It is City policy to consider the impact of a building on views of “Lake Washington, the Seattle skyline, the Olympic Mountains and Cascade Mountains from the major public open spaces and the major pedestrian corridor.” In addition, public views from public spaces and areas of pedestrian concentration are to be considered. To address these considerations, one photosimulation was prepared looking southeast toward the site from 120<sup>th</sup> Avenue NE, see **Figure 4** for a viewpoint location map. The existing and proposed view from this location is described below.

As shown by **Figure 5**, the Existing View from this location features portions of the low-rise Lowe’s building in the mid-field view; mainly the white roof is visible. Under the Proposed View, existing development on the site would be replaced by the new **BMW of Bellevue** building. While the shape and color of the building would change, and some additional modulation and taller building levels would be visible, the general character of the view from this location would remain similar to existing conditions and no significant impacts would be anticipated.

## **11. Light and Glare**

### **a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

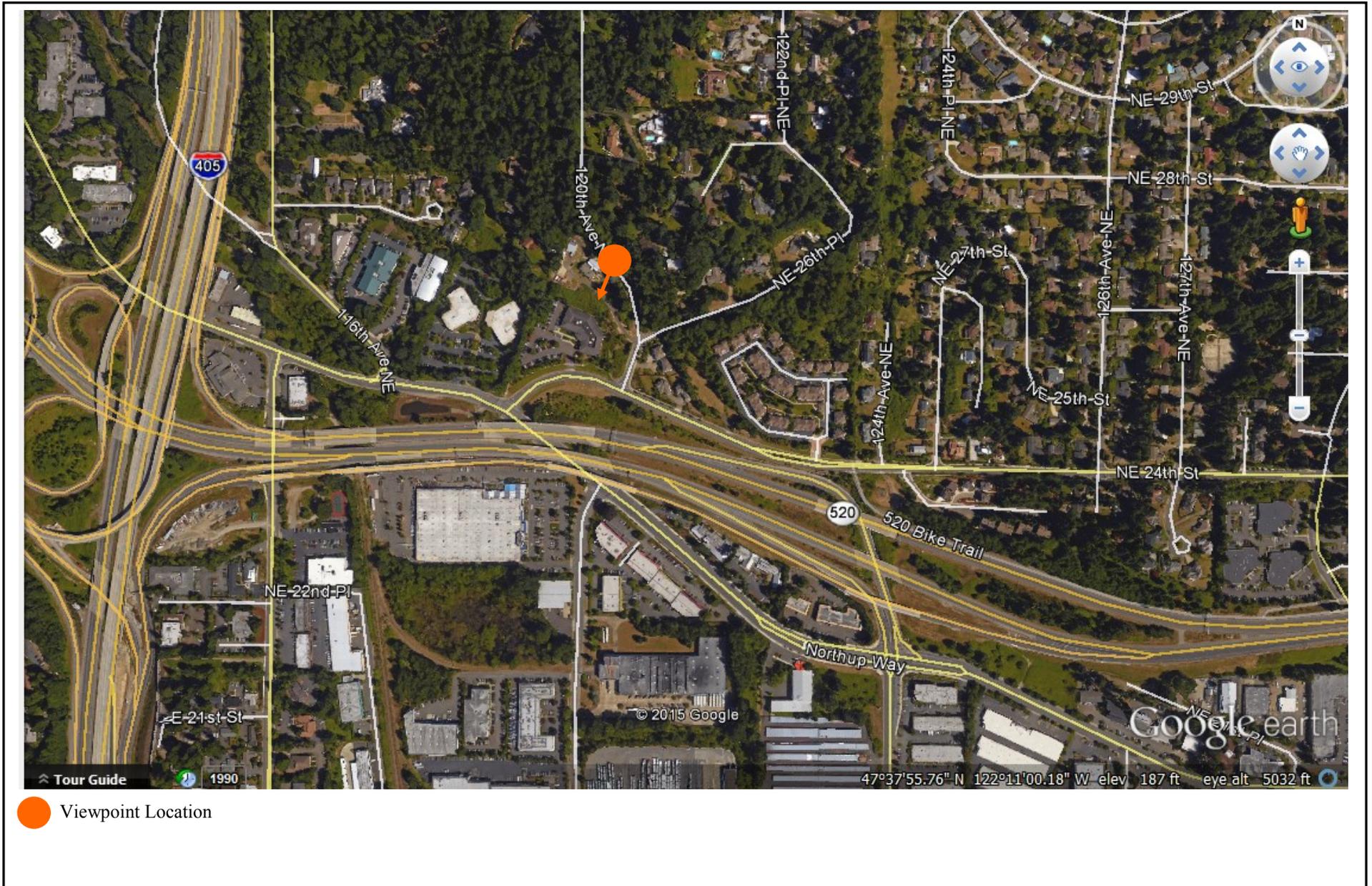
Principal sources of light and glare produced by the proposal would include both stationary sources of light (e.g., interior lighting, pedestrian-level lighting, illuminated signage, parking lot lighting) and mobile sources, principally from vehicles maneuvering and operating within the site. Lighting from the proposed **BMW of Bellevue** project could be visible from locations proximate to the project site, and would mainly be visible at nighttime. Specific information relative to stationary building light fixtures, signage, façade materials (in terms of specular or reflective characteristics) and glazing would be provided as part of the construction-level plans associated with the City’s Building Permit process. As well, a lighting and glare study will be prepared and submitted to the City to further evaluate potential glare and nighttime lighting impacts in the site vicinity.

## **14. Transportation**

### **a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

The site is served by 106<sup>th</sup> Avenue NE and by NE 4<sup>th</sup> Street. Vehicular access to the proposed below-grade parking garage would be provided via a driveway on 106<sup>th</sup> Ave. NE and NE 4<sup>th</sup> Street.

# BMW of Bellevue Development Environmental Checklist



Source: EA, 2015



**Figure 4**  
Viewpoint Location Map

# BMW of Bellevue Development Environmental Checklist

Existing



Proposed



Source: Stantec, 2015



**Figure 5**  
Viewpoint 1—From 120th Avenue NE Looking Southwest  
to Project Site

***APPENDIX B***

**GHG Emissions Worksheet**

**BMW of Bellevue**

**Section I: Buildings**

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO <sub>2</sub> e)			Lifespan Emissions (MTCO <sub>2</sub> e)
			Embodied	Energy	Transportation	
Single-Family Home.....	0		98	672	792	0
Multi-Family Unit in Large Building .....	0		33	357	766	0
Multi-Family Unit in Small Building .....	0		54	681	766	0
Mobile Home.....	0		41	475	709	0
Education .....		0.0	39	646	361	0
Food Sales .....		0.0	39	1,541	282	0
Food Service .....		0.0	39	1,994	561	0
Health Care Inpatient .....		0.0	39	1,938	582	0
Health Care Outpatient .....		0.0	39	737	571	0
Lodging .....		0.0	39	777	117	0
Retail (Other Than Mall).....		129.0	39	577	247	111295
Office .....		0.0	39	723	588	0
Public Assembly .....		0.0	39	733	150	0
Public Order and Safety .....		0.0	39	899	374	0
Religious Worship .....		0.0	39	339	129	0
Service .....		0.0	39	599	266	0
Warehouse and Storage .....		0.0	39	352	181	0
Other .....		0.0	39	1,278	257	0
Vacant .....		0.0	39	162	47	0

**Section II: Pavement.....**

Pavement.....		0.00				0
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**Total Project Emissions:**

**111295**

**King County Department of Development and Environmental Services**  
**SEPA GHG Emissions Worksheet**  
**Version 1.7 12/26/07**

**Introduction**

The Washington State Environmental Policy Act (SEPA) requires environmental review of development proposals that may have a significant adverse impact on the environment. If a proposed development is subject to SEPA, the project proponent is required to complete the SEPA Checklist. The Checklist includes questions relating to the development's air emissions. The emissions that have traditionally been considered cover smoke, dust, and industrial and automobile emissions. With our understanding of the climate change impacts of GHG emissions, King County requires the applicant to also estimate these emissions.

**Emissions created by Development**

GHG emissions associated with development come from multiple sources:

- The extraction, processing, transportation, construction and disposal of materials and landscape disturbance (Embodied Emissions)
- Energy demands created by the development after it is completed (Energy Emissions)
- Transportation demands created by the development after it is completed (Transportation Emissions)

**GHG Emissions Worksheet**

King County has developed a GHG Emissions Worksheet that can assist applicants in answering the SEPA Checklist question relating to GHG emissions.

The SEPA GHG Emissions worksheet estimates all GHG emissions that will be created over the life span of a project. This includes emissions associated with obtaining construction materials, fuel used during construction, energy consumed during a buildings operation, and transportation by building occupants.

**Using the Worksheet**

1. Descriptions of the different residential and commercial building types can be found on the second tabbed worksheet ("Definition of Building Types"). If a development proposal consists of multiple projects, e.g. both single family and multi-family residential structures or a commercial development that consists of more than one type of commercial activity, the appropriate information should be estimated for each type of building or activity.

2. For paving, estimate the total amount of paving (in thousands of square feet) of the project.
3. The Worksheet will calculate the amount of GHG emissions associated with the project and display the amount in the "Total Emissions" column on the worksheet. The applicant should use this information when completing the SEPA checklist.
4. The last three worksheets in the Excel file provide the background information that is used to calculate the total GHG emissions.
5. The methodology of creating the estimates is transparent; if there is reason to believe that a better estimate can be obtained by changing specific values, this can and should be done. Changes to the values should be documented with an explanation of why and the sources relied upon.
6. Print out the "Total Emissions" worksheet and attach it to the SEPA checklist. If the applicant has made changes to the calculations or the values, the documentation supporting those changes should also be attached to the SEPA checklist.

Definition of Building Types

Type (Residential) or Principal Activity (Commercial)	Description
Single-Family Home.....	Unless otherwise specified, this includes both attached and detached buildings
Multi-Family Unit in Large Building .....	Apartments in buildings with more than 5 units
Multi-Family Unit in Small Building .....	Apartments in building with 2-4 units
Mobile Home.....	
Education .....	Buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not classroom are included in the category relating to their use. For example, administration buildings are part of "Office," dormitories are "Lodging," and libraries are "Public Assembly."
Food Sales .....	Buildings used for retail or wholesale of food.
Food Service .....	Buildings used for preparation and sale of food and beverages for consumption.
Health Care Inpatient .....	Buildings used as diagnostic and treatment facilities for inpatient care.
Health Care Outpatient .....	Buildings used as diagnostic and treatment facilities for outpatient care. Doctor's or dentist's office are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).
Lodging .....	Buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.
Retail (Other Than Mall).....	Buildings used for the sale and display of goods other than food.
Office .....	Buildings used for general office space, professional office, or administrative offices. Doctor's or dentist's office are included here if they do not use any type of diagnostic medical equipment (if they do, they are categorized as an outpatient health care building).
Public Assembly .....	Buildings in which people gather for social or recreational activities, whether in private or non-private meeting halls.
Public Order and Safety .....	Buildings used for the preservation of law and order or public safety.
Religious Worship .....	Buildings in which people gather for religious activities, (such as chapels, churches, mosques, synagogues, and temples).
Service .....	Buildings in which some type of service is provided, other than food service or retail sales of goods
Warehouse and Storage .....	Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).
Other .....	Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial/ manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category.
Vacant .....	Buildings in which more floorspace was vacant than was used for any single commercial activity at the time of interview. Therefore, a vacant building may have some occupied floorspace.

Sources: .....

Residential 2001 Residential Energy Consumption Survey  
 Square footage measurements and comparisons  
<http://www.eia.doe.gov/emeu/recs/sqft-measure.html>

Commercial Commercial Buildings Energy Consumption Survey (CBECS),  
 Description of CBECS Building Types  
<http://www.eia.doe.gov/emeu/cbeecs/pba99/bldgtypes.html>

Embodied Emissions Worksheet

**Section I: Buildings**

Type (Residential) or Principal Activity (Commercial)	# thousand sq feet/ unit or building	Life span related embodied GHG missions (MTCO2e/ unit)	Life span related embodied GHG missions (MTCO2e/ thousand square feet) - See calculations in table below
Single-Family Home.....	2.53	98	39
Multi-Family Unit in Large Building .....	0.85	33	39
Multi-Family Unit in Small Building .....	1.39	54	39
Mobile Home.....	1.06	41	39
Education .....	25.6	991	39
Food Sales .....	5.6	217	39
Food Service .....	5.6	217	39
Health Care Inpatient .....	241.4	9,346	39
Health Care Outpatient .....	10.4	403	39
Lodging .....	35.8	1,386	39
Retail (Other Than Mall).....	9.7	376	39
Office .....	14.8	573	39
Public Assembly .....	14.2	550	39
Public Order and Safety .....	15.5	600	39
Religious Worship .....	10.1	391	39
Service .....	6.5	252	39
Warehouse and Storage .....	16.9	654	39
Other .....	21.9	848	39
Vacant .....	14.1	546	39

**Section II: Pavement.....**

All Types of Pavement.....			50
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	Columns and Beams	Intermediate Floors	Exterior Walls	Windows	Interior Walls	Roofs	Total Embodied Emissions (MTCO2e)	Total Embodied Emissions (MTCO2e/ thousand sq feet)
Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building	5.3	7.8	19.1	51.2	5.7	21.3		
Average Materials in a 2,272-square foot single family home	0.0	2269.0	3206.0	285.0	6050.0	3103.0	88.0	38.7
MTCO2e	0.0	8.0	27.8	6.6	15.6	30.0		

**Sources**

All data in black text

King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Residential floorspace per unit

2001 Residential Energy Consumption Survey (National Average, 2001)  
Square footage measurements and comparisons  
<http://www.eia.doe.gov/emeu/recs/sqft-measure.html>

Floorspace per building

EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)  
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003  
[http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed\\_tables\\_2003/2003set9/2003excel/c3.xls](http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls)

Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building

Athena EcoCalculator  
Athena Assembly Evaluation Tool v2.3- Vancouver Low Rise Building  
Assembly Average GWP (kg) per square meter  
<http://www.athenasmi.ca/tools/ecoCalculator/index.html>  
Lbs per kg 2.20  
Square feet per square meter 10.76

Average Materials in a 2,272-square foot single family home

Buildings Energy Data Book: 7.3 Typical/Average Household  
Materials Used in the Construction of a 2,272-Square-Foot Single-Family Home, 2000  
[http://buildingsdatabook.eren.doe.gov/?id=view\\_book\\_table&TableID=2036&t=xls](http://buildingsdatabook.eren.doe.gov/?id=view_book_table&TableID=2036&t=xls)  
See also: NAHB, 2004 Housing Facts, Figures and Trends, Feb. 2004, p. 7.

Average window size

Energy Information Administration/Housing Characteristics 1993  
Appendix B, Quality of the Data, Pg. 5.  
<ftp://ftp.eia.doe.gov/pub/consumption/residential/rx93hct.pdf>

### **Embodied GHG Emissions.....Worksheet Background Information**

#### *Buildings*

Embodied GHG emissions are emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbance and changes in above ground biomass).

Estimating embodied GHG emissions is new field of analysis; the estimates are rapidly improving and becoming more inclusive of all elements of construction and development.

The estimate included in this worksheet is calculated using average values for the main construction materials that are used to create a typical family home. In 2004, the National Association of Home Builders calculated the average materials that are used in a typical 2,272 square foot single-family household. The quantity of materials used is then multiplied by the average GHG emissions associated with the life-cycle GHG emissions for each material.

This estimate is a rough and conservative estimate; the actual embodied emissions for a project are likely to be higher. For example, at this stage, due to a lack of comprehensive data, the estimate does not include important factors such as landscape disturbance or the emissions associated with the interior components of a building (such as furniture).

King County realizes that the calculations for embodied emissions in this worksheet are rough. For example, the emissions associated with building 1,000 square feet of a residential building will not be the same as 1,000 square feet of a commercial building. However, discussions with the construction community indicate that while there are significant differences between the different types of structures, this method of estimation is reasonable; it will be improved as more data become available.

Additionally, if more specific information about the project is known, King County recommends two online embodied emissions calculators that can be used to obtain a more tailored estimate for embodied emissions: [www.buildcarbonneutral.org](http://www.buildcarbonneutral.org) and [www.athenasmi.ca/tools/ecoCalculator/](http://www.athenasmi.ca/tools/ecoCalculator/).

#### *Pavement*

Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle. For specifics, see the worksheet.

### **Special Section: Estimating the Embodied Emissions for Pavement**

Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle.

The results of the studies are presented in different units and measures; considerable effort was undertaken to be able to compare the results of the studies in a reasonable way. For more details about the below methodology, contact [matt.kuharic@kingcounty.gov](mailto:matt.kuharic@kingcounty.gov).

The four studies, Meil (2001), Park (2003), Stripple (2001) and Treolar (2001) produced total GHG emissions of 4-34 MTCO<sub>2</sub>e per thousand square feet of finished paving (for similar asphalt and concrete based pavements). This estimate does not including downstream maintenance and repair of the highway. The average (for all concrete and asphalt pavements in the studies, assuming each study gets one data point) is ~17 MTCO<sub>2</sub>e/thousand square feet.

Three of the studies attempted to thoroughly account for the emissions associated with long term maintenance (40 years) of the roads. Stripple (2001), Park et al. (2003) and Treolar (2001) report 17, 81, and 68 MTCO<sub>2</sub>e/thousand square feet, respectively, after accounting for maintenance of the roads.

Based on the above discussion, King County makes the conservative estimate that 50 MTCO<sub>2</sub>e/thousand square feet of pavement (over the development's life cycle) will be used as the embodied emission factor for pavement until better estimates can be obtained. This is roughly equivalent to 3,500 MTCO<sub>2</sub>e per lane mile of road (assuming the lane is 13 feet wide).

It is important to note that these studies estimate the embodied emissions for roads. Paving that does not need to stand up to the rigors of heavy use (such as parking lots or driveways) would likely use less materials and hence have lower embodied emissions.

#### Sources:

Meil, J. A Life Cycle Perspective on Concrete and Asphalt Roadways: Embodied Primary Energy and Global Warming Potential. 2006. Available: [http://www.cement.ca/cement.nsf/eee9ec7bbd630126852566c40052107b/6ec79dc8ae03a782852572b90061b914/\\$FILE/ATTKOWE3/athena%20report%20Feb.%202%202007.pdf](http://www.cement.ca/cement.nsf/eee9ec7bbd630126852566c40052107b/6ec79dc8ae03a782852572b90061b914/$FILE/ATTKOWE3/athena%20report%20Feb.%202%202007.pdf)

Park, K, Hwang, Y., Seo, S., M.ASCE, and Seo, H. , "Quantitative Assessment of Environmental Impacts on Life Cycle of Highways," Journal of Construction Engineering and Management , Vol 129, January/February 2003, pp 25-31, (DOI: 10.1061/(ASCE)0733-9364(2003)129:1(25)).

Stripple, H. Life Cycle Assessment of Road. A Pilot Study for Inventory Analysis. Second Revised Edition. IVL Swedish Environmental Research Institute Ltd. 2001. Available: <http://www.ivl.se/rapporter/pdf/B1210E.pdf>

Treolar, G., Love, P.E.D., and Crawford, R.H. Hybrid Life-Cycle Inventory for Road Construction and Use. Journal of Construction Engineering and Management. P. 43-49. January/February 2004.

Energy Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	Energy consumption per building per year (million Btu)	Carbon Coefficient for Buildings	MTCO2e per building per year	Floorspace per Building (thousand square feet)	MTCE per thousand square feet per year	MTCO2e per thousand square feet per year	Average Building Life Span	Lifespan Energy Related MTCO2e emissions per unit	Lifespan Energy Related MTCO2e emissions per thousand square feet
Single-Family Home.....	107.3	0.108	11.61	2.53	4.6	16.8	57.9	672	266
Multi-Family Unit in Large Building .....	41.0	0.108	4.44	0.85	5.2	19.2	80.5	357	422
Multi-Family Unit in Small Building .....	78.1	0.108	8.45	1.39	6.1	22.2	80.5	681	489
Mobile Home.....	75.9	0.108	8.21	1.06	7.7	28.4	57.9	475	448
Education .....	2,125.0	0.124	264.2	25.6	10.3	37.8	62.5	16,526	646
Food Sales .....	1,110.0	0.124	138.0	5.6	24.6	90.4	62.5	8,632	1,541
Food Service .....	1,436.0	0.124	178.5	5.6	31.9	116.9	62.5	11,168	1,994
Health Care Inpatient .....	60,152.0	0.124	7,479.1	241.4	31.0	113.6	62.5	467,794	1,938
Health Care Outpatient .....	985.0	0.124	122.5	10.4	11.8	43.2	62.5	7,660	737
Lodging .....	3,578.0	0.124	444.9	35.8	12.4	45.6	62.5	27,826	777
Retail (Other Than Mall).....	720.0	0.124	89.5	9.7	9.2	33.8	62.5	5,599	577
Office .....	1,376.0	0.124	171.1	14.8	11.6	42.4	62.5	10,701	723
Public Assembly .....	1,338.0	0.124	166.4	14.2	11.7	43.0	62.5	10,405	733
Public Order and Safety .....	1,791.0	0.124	222.7	15.5	14.4	52.7	62.5	13,928	899
Religious Worship .....	440.0	0.124	54.7	10.1	5.4	19.9	62.5	3,422	339
Service .....	501.0	0.124	62.3	6.5	9.6	35.1	62.5	3,896	599
Warehouse and Storage .....	764.0	0.124	95.0	16.9	5.6	20.6	62.5	5,942	352
Other .....	3,600.0	0.124	447.6	21.9	20.4	74.9	62.5	27,997	1,278
Vacant .....	294.0	0.124	36.6	14.1	2.6	9.5	62.5	2,286	162

Sources

All data in black text

King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Energy consumption for residential buildings

2007 Buildings Energy Data Book: 6.1 Quad Definitions and Comparisons (National Average, 2001)  
 Table 6.1.4: Average Annual Carbon Dioxide Emissions for Various Functions  
<http://buildingsdatabook.eren.doe.gov/>  
 Data also at: [http://www.eia.doe.gov/emeu/recs/recs2001\\_ce/ce1-4c\\_housingunits2001.html](http://www.eia.doe.gov/emeu/recs/recs2001_ce/ce1-4c_housingunits2001.html)

Energy consumption for commercial buildings and Floorspace per building

EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)  
 Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003  
[http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed\\_tables\\_2003/2003set9/2003excel/c3.xls](http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls)

Note: Data in plum color is found in both of the above sources (buildings energy data book and commercial buildings energy consumption survey).

Carbon Coefficient for Buildings

Buildings Energy Data Book (National average, 2005)  
 Table 3.1.7. 2005 Carbon Dioxide Emission Coefficients for Buildings (MMTCE per Quadrillion Btu)  
[http://buildingsdatabook.eere.energy.gov/?id=view\\_book\\_table&TableID=2057](http://buildingsdatabook.eere.energy.gov/?id=view_book_table&TableID=2057)  
 Note: Carbon coefficient in the Energy Data book is in MTCE per Quadrillion Btu.  
 To convert to MTCO2e per million Btu, this factor was divided by 1000 and multiplied by 44/12.

Residential floorspace per unit

2001 Residential Energy Consumption Survey (National Average, 2001)  
 Square footage measurements and comparisons  
<http://www.eia.doe.gov/emeu/recs/sqft-measure.html>

average life span of buildings,  
estimated by replacement time method

	Single Family Homes	Multi-Family Units in Large and Small Buildings	All Residential Buildings
New Housing Construction, 2001	1,273,000	329,000	1,602,000
Existing Housing Stock, 2001	73,700,000	26,500,000	100,200,000
Replacement time:	57.9	80.5	62.5

(national average, 2001)

Note: Single family homes calculation is used for mobile homes as a best estimate life span.

Note: At this time, KC staff could find no reliable data for the average life span of commercial buildings.

Therefore, the average life span of residential buildings is being used until a better approximation can be ascertained.

Sources:

New Housing Construction,

2001 Quarterly Starts and Completions by Purpose and Design - US and Regions (Excel)

[http://www.census.gov/const/quarterly\\_starts\\_completions\\_cust.xls](http://www.census.gov/const/quarterly_starts_completions_cust.xls)

See also: <http://www.census.gov/const/www/newresconstindex.html>

Existing Housing Stock,

2001 Residential Energy Consumption Survey (RECS) 2001

Tables HC1:Housing Unit Characteristics, Million U.S. Households 2001

Table HC1-4a. Housing Unit Characteristics by Type of Housing Unit, Million U.S. Households, 2001  
Million U.S. Households, 2001

[http://www.eia.doe.gov/emeu/recs/recs2001/hc\\_pdf/housunits/hc1-4a\\_housingunits2001.pdf](http://www.eia.doe.gov/emeu/recs/recs2001/hc_pdf/housunits/hc1-4a_housingunits2001.pdf)

Transportation Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	# people/ unit or building	# thousand sq feet/ unit or building	# people or employees/ thousand square feet	vehicle related GHG emissions (metric tonnes CO2e per person per year)	MTCO2e/ year/ unit	MTCO2e/ year/ thousand square feet	Average Building Life Span	Life span transportation related GHG emissions (MTCO2e/ per unit)	Life span transportation related GHG emissions (MTCO2e/ thousand sq feet)
Single-Family Home.....	2.8	2.53	1.1	4.9	13.7	5.4	57.9	792	313
Multi-Family Unit in Large Building .....	1.9	0.85	2.3	4.9	9.5	11.2	80.5	766	904
Multi-Family Unit in Small Building .....	1.9	1.39	1.4	4.9	9.5	6.8	80.5	766	550
Mobile Home.....	2.5	1.06	2.3	4.9	12.2	11.5	57.9	709	668
Education .....	30.0	25.6	1.2	4.9	147.8	5.8	62.5	9247	361
Food Sales .....	5.1	5.6	0.9	4.9	25.2	4.5	62.5	1579	282
Food Service .....	10.2	5.6	1.8	4.9	50.2	9.0	62.5	3141	561
Health Care Inpatient .....	455.5	241.4	1.9	4.9	2246.4	9.3	62.5	140506	582
Health Care Outpatient .....	19.3	10.4	1.9	4.9	95.0	9.1	62.5	5941	571
Lodging .....	13.6	35.8	0.4	4.9	67.1	1.9	62.5	4194	117
Retail (Other Than Mall).....	7.8	9.7	0.8	4.9	38.3	3.9	62.5	2394	247
Office .....	28.2	14.8	1.9	4.9	139.0	9.4	62.5	8696	588
Public Assembly .....	6.9	14.2	0.5	4.9	34.2	2.4	62.5	2137	150
Public Order and Safety .....	18.8	15.5	1.2	4.9	92.7	6.0	62.5	5796	374
Religious Worship .....	4.2	10.1	0.4	4.9	20.8	2.1	62.5	1298	129
Service .....	5.6	6.5	0.9	4.9	27.6	4.3	62.5	1729	266
Warehouse and Storage .....	9.9	16.9	0.6	4.9	49.0	2.9	62.5	3067	181
Other .....	18.3	21.9	0.8	4.9	90.0	4.1	62.5	5630	257
Vacant .....	2.1	14.1	0.2	4.9	10.5	0.7	62.5	657	47

**Sources**

All data in black text

King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

# people/ unit

Estimating Household Size for Use in Population Estimates (WA state, 2000 average)

Washington State Office of Financial Management

Kimpel, T. and Lowe, T. Research Brief No. 47. August 2007

<http://www.ofm.wa.gov/researchbriefs/brief047.pdf>

Note: This analysis combines Multi Unit Structures in both large and small units into one category; the average is used in this case although there is likely a difference

Residential floorspace per unit

2001 Residential Energy Consumption Survey (National Average, 2001)

Square footage measurements and comparisons

<http://www.eia.doe.gov/emeu/recs/recs/sqft-measure.html>

# employees/thousand square feet

Commercial Buildings Energy Consumption Survey commercial energy uses and costs (National Median, 2003)

Table B2 Totals and Medians of Floorspace, Number of Workers, and Hours of Operation for Non-Mall Buildings, 2003

[http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed\\_tables\\_2003/2003set1/2003excel/b2.xls](http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set1/2003excel/b2.xls)

Note: Data for # employees/thousand square feet is presented by CBECS as square feet/employee.

In this analysis employees/thousand square feet is calculated by taking the inverse of the CBECS number and multiplying by 1000.

vehicle related GHG emissions

Estimate calculated as follows (Washington state, 2006)\_

56,531,930,000 2006 Annual WA State Vehicle Miles Traveled

Data was daily VMT. Annual VMT was 365\*daily VMT.

<http://www.wsdot.wa.gov/mapsdata/tdo/annualmileage.htm>

6,395,798 2006 WA state population

<http://quickfacts.census.gov/qfd/states/53000.html>

8839 vehicle miles per person per year

0.0506 gallon gasoline/mile

This is the weighted national average fuel efficiency for all cars and 2 axle, 4 wheel light trucks in 2005. This includes pickup trucks, vans and SUVs. The 0.051 gallons/mile used here is the inverse of the more commonly known term "miles/per gallon" (which is 19.75 for these cars and light trucks).

Transportation Energy Data Book. 26th Edition. 2006. Chapter 4: Light Vehicles and Characteristics. Calculations based on weighted average MPG efficiency of cars and light trucks.

[http://cta.ornl.gov/data/tebd26/Edition26\\_Chapter04.pdf](http://cta.ornl.gov/data/tebd26/Edition26_Chapter04.pdf)

Note: This report states that in 2005, 92.3% of all highway VMT were driven by the above described vehicles.

[http://cta.ornl.gov/data/tebd26/Spreadsheets/Table3\\_04.xls](http://cta.ornl.gov/data/tebd26/Spreadsheets/Table3_04.xls)

24.3 lbs CO2e/gallon gasoline

The CO2 emissions estimates for gasoline and diesel include the extraction, transport, and refinement of petroleum as well as their combustion.

Life-Cycle CO2 Emissions for Various New Vehicles. RENew Northfield.

Available: <http://renewnorthfield.org/wpcontent/uploads/2006/04/CO2%20emissions.pdf>

Note: This is a conservative estimate of emissions by fuel consumption because diesel fuel, with a emissions factor of 26.55 lbs CO2e/gallon was not estimated.

2205

4.93 lbs/metric tonne

vehicle related GHG emissions (metric tonnes CO2e per person per year)

average life span of buildings, estimated  
by replacement time method

See Energy Emissions Worksheet for Calculations

Commercial floorspace per unit

EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)

Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003

[http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed\\_tables\\_2003/2003set9/2003excel/c3.xls](http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls)

***APPENDIX C***

**Critical Areas Report**

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**CRITICAL AREAS ASSESSMENT REPORT**

**BELLEVUE BMW**

**BELLEVUE, WASHINGTON**

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*Prepared For:*  
STANTEC ARCHITECTURE, INC.

*Prepared By:*  
TALASAEA CONSULTANTS, INC.

9 December 2015

**Critical Areas Assessment Report**  
**Bellevue BMW**  
**Bellevue, Washington**

*Prepared For:*  
Stantec Architecture, Inc.

*Prepared By:*  
Talasaea Consultants, Inc.  
15020 Bear Creek Road NE  
Woodinville, Washington 98077  
(425) 861-7550

9 December 2015

## EXECUTIVE SUMMARY

**PROJECT NAME:** Bellevue BMW

**CLIENT:** Autonation, Architect, Stantec

**SITE LOCATION:** The site address is 11959 Northup Way in Bellevue, Washington. The Site consists of one parcel which totals approximately 6 acres in size. The King County Tax Parcel number for the Site is 282505-9047. The Site is bordered on the west by a Sound Transit right-of-way, on the north by State Road 520 and Northup Way, on the east by 120<sup>th</sup> Ave NE, and on the south by Grainger West. The Public Land Survey System location is the NW ¼ of the NW ¼ of Section 28, T25N, R5E, Willamette Meridian.

**PROJECT STAFF:** Bill Shiels, Principal; Ann Olsen, Senior Project Manager; Jennifer M. Marriott, Senior Ecologist; Erin L. Warren, Ecologist

**FIELD SURVEY:** Wetlands were delineated on 12 November 2015 and flags were professionally surveyed on November 23-24, 2015.

**CRITICAL AREAS DETERMINATION:** The Bellevue BMW site is located north and east of West Tributary, a tributary of Goff Creek (and subsequently Kelsey Creek) and north of an associated approximately 4.5-acre riparian wetland. The northern wetland boundary is located near the southern Site boundary, though the majority of the wetland occurs on Grainger's parcel to the south. This wetland was delineated in order to identify critical area buffers that could constrain future redevelopment within the Site. This wetland was previously identified during the redevelopment to the current Lowe's hardware store from another previous commercial use as a candy factory with a 50-foot wide Native Growth Protective Area (NGPA) identified on the plans. This wetland is rated as a Category II wetland with a Habitat Score of 19 points. The current standard buffer for this wetland is 75 feet with an additional 20-foot structure setback from a previously approved and recorded NGPA. The existing buffer consists of paved access and the stormwater system and appurtenances. The berms are vegetated with Himalayan blackberry, reed canarygrass, snowberry, vine maple, red alder, Western red cedar and cottonwood.

In addition to the large wetland, the City of Bellevue and King County map a stream, West Tributary, as occurring through this large wetland. No evidence of a stream channel was observed in the field within the study area due to the presence of a beaver dam near the wetland outlet which has, in turn, caused a backwater effect throughout much of this wetland. West Tributary is a Type N water and would possess a standard 50 foot buffer per the Bellevue City Code (BCC) 20.25H.075(C)(c).

A stormwater bio-filtration pond is located on-site along the southern parcel boundary within the Native Growth Protective Area. This area has been graded to create a double berm for stormwater discharge via underground pipes and surface conveyance. A stormwater detention pond is located within the southwest corner of the Site, and collects stormwater from the western portion of the parking area before discharging into the wetland to the south.

**VEGETATION:** The Site is mostly devoid of native vegetation except for a relatively narrow (approximately 20- to 60-foot-wide) band along the southern property line around the stormwater bio-filtration pond. Vegetation in this band consists of black cottonwood, red alder, Western red cedar, and various shrubs, as well as Himalayn blackberry in the understory. Various landscaping trees, shrubs, and grasses are present along the 120<sup>th</sup> Ave NE frontage and interspersed through the parking lot.

**SOILS:** Four soil series are mapped on the Site. A majority of the property is mapped as urban land (Ur), particularly where the main building and associated parking is located. Small areas along the eastern, southern, and western boundaries are mapped as Everett gravelly sandy loam, 5 to 15% slopes (EvC), Seattle Muck (Sk), and Kitsap silt loam, 15 to 30% slopes (KpD), respectively.

**HYDROLOGY:** Hydrology for the off-site West Tributary and wetland is provided, in part, by stormwater runoff from both on-site and off-site sources, direct interception of precipitation, and shallow groundwater seepage. Hydrology to the West Tributary and wetland is also provided by the storm water bio-filtration pond and stormwater detention pond, which discharge stormwater from the Site to the northern wetland boundary via a system of catch basins and underground and culverts. A beaver dam constructed near the discharge point of both West Tributary and the wetland on the Grainger property to the south has restricted discharge flow and increased the length of inundation within the wetland.

**PROJECT DESCRIPTION:**

The Site is currently developed and used as a Lowe's hardware store with associated parking and infrastructure. The current edge of asphalt is located, on average, approximately 50-feet from the wetland boundary and will be maintained through the proposed redevelopment.

AutoNation purposes to develop the Site as a BMW dealership, identified as Bellevue BMW, and associated infrastructure, including a service center, parts, collision center, and showroom for car sales. Project details are provided in the civil engineering plans provided by Dave Evans and Associates.

**ASSESSMENT OF DEVELOPMENT IMPACTS:** The proposed site plan has been designed to minimize impacts to the critical areas on the project site to the extent possible while conforming to City of Bellevue requirements and meeting the needs of the project. No direct stream or wetland impacts will occur as a result of the proposed development. The wetland buffer boundary will remain at the current edge of asphalt as agreed upon during a team meeting with the City of Bellevue on 4 November 2015. The wetland buffer will be retained as the area between the current wetland edge and the current edge of asphalt, and will be enhanced through removal of nuisance/invasive plant species and supplemental plantings with native species, while retaining the functions of the bioswale.

Lighting has been designed to minimize impacts to the wetland and adjacent buffer, as outlined in the Civil Plans provided by Dave Evans and Associates.

**PROPOSED BUFFER ENHANCEMENT:** Buffer enhancement on-site will total 21,108 square feet. Enhancement measures will include removal of nuisance/invasive species, including Himalayan blackberry, stabilizing all bare-soil areas with 3 inches of bark mulch, and replanting with a variety of native evergreen and deciduous trees and shrubs. A seed mix will be added to the central portion of the bioswale consisting of native emergent vegetation. All mitigation areas will be monitored for five years post construction.

**Critical Area Fence and Signs:** All post-construction critical areas will be placed in native growth protection area easement. A split-rail or similar style fence will be installed at the outer edge of the buffer areas, adjacent to the current edge of asphalt, and critical area signs will be installed at intervals determined by the City.

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**Appendix C:** City of Bellevue Habitat Rating Form  
**Appendix D:** Vegetative Management Plan

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## CHAPTER 1. INTRODUCTION

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### 1.1 Report Purpose

This report is the result of a critical areas assessment for the Lowe's Bellevue Site (referred to as Site hereinafter) located at 11959 Northup Way in Bellevue, Washington (**Figure 1**). The Site is currently developed and used as a hardware store with associated parking and infrastructure. The purpose of this report is to: 1) identify and describe critical areas located on or adjacent to the project site, including wetlands, streams, and fish and wildlife habitat conservation areas; and, 2) describe potential impacts to critical areas resulting from the proposed redevelopment.

Information presented in this report will be utilized by the Applicant to support the proposed redevelopment of the Site into a different commercial use. The proposed mitigation plan is designed to meet the requirements as stated in the Bellevue Land Use Code (BLUC) Part 20.25H *Critical Areas Overlay District*.

This report will provided and describe the following information:

- Project Location;
- General property description;
- Methodology for Critical Areas Investigations;
- Results of Critical Areas Background Review and Field Investigation;
- Regulatory Review;
- Habitat Functional Assessment;
- Project Description;
- Assessment of Development Impacts;
- Mitigation and Buffer Enhancement Details;
- Summary.

### 1.2 Statement of Accuracy

The information contained in this report was conducted by trained professionals at Talasaea Consultants, Inc., and adhered to the protocols, guidelines, and generally accepted industry standards available at the time work was performed. The conclusions in this report are based on the results of analyses performed by Talasaea Consultants and represent our best professional judgment. To that extent, and within the limitations of project scope and budget, we believe the information provided herein is accurate and true to the best of our knowledge. Talasaea Consultants does not warrant any assumptions or conclusions not expressly made in this report, or based on information or analyses other than what is included herein.

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## CHAPTER 2. GENERAL PROPERTY DESCRIPTION AND LAND USE

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### 2.1 Site Location

The site address is 11959 Northup Way in Bellevue, Washington. The Site consists of one parcel which totals approximately 8.6 acres in size. The King County Tax Parcel number for the Site is 2825059047. The Site is bordered on the east by 120<sup>th</sup> Ave NE, on the north by State Road (SR) 520 and Northup Way, on the west by a Sound Transit right-of-way, and on the south by Grainger West. The Public Land Survey System location is the NW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 28, T25N, R5E, Willamette Meridian.

### 2.2 Site Description

The Site is currently developed and used as a Lowe's hardware store with associated parking and infrastructure. The Site contains a warehouse-type structure and associated parking that wraps around the west, north and east portion of the building. An approximately 20-foot wide emergency vehicle and truck access road is provided to the south of the building.

The Lowe's Bellevue site is located north and east of West Tributary, a tributary of Goff Creek (and subsequently Kelsey Creek) and north of an associated approximately 4.5-acre riparian wetland. The northern wetland boundary is located near the southern Site boundary, though the majority of the wetland occurs on Grainger's parcel to the south, and thus was delineated in order to identify critical area buffers that could constrain future redevelopment within the Site. The existing buffer consists of paved access and the stormwater system and appurtenances. The berms are vegetated with Himalayan blackberry, reed canarygrass, snowberry, vine maple, red alder, Western red cedar, and cottonwood. A storm water bio-filtration pond is located on-site along the southern parcel boundary. This area has been graded to create a double berm for stormwater discharge via underground pipes and surface conveyance. A stormwater detention pond is located within the southwest corner of the Site, and collects stormwater from the western portions of the parking area. Various landscaping trees, shrubs, and grasses are present along the 120<sup>th</sup> Ave NE frontage and interspersed through the parking lot.

### **CHAPTER 3. METHODOLOGY**

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The critical areas analysis of the Site involved a two-part effort. The first part consisted of a preliminary assessment of the Site and the immediate surrounding area using existing published environmental information. This information includes:

- 1) Wetland and soils information from resource agencies;
- 2) Critical Areas information from the City of Bellevue and King County;
- 3) Orthophotography imagery;
- 4) LIDAR terrain data; and
- 5) Relevant studies completed or ongoing in the vicinity of the Site.

The second part consisted of site investigations where direct observations and measurements of existing environmental conditions were made. Observations included plant communities, soils, hydrology, and riparian conditions. This information was used to help characterize the existing conditions at the site and to define the limits of critical areas for regulatory purposes (see **Section 3.2 - Field Investigation** below).

#### **3.1 Background Data Reviewed**

Background information from the following sources was reviewed prior to field investigations:

- U.S. Fish and Wildlife Service (USFWS), National Wetland Inventory (NWI), Wetlands Online Mapper (<http://wetlandsfws.er.usgs.gov/wtInds/launch.html>);
- Natural Resources Conservation Service (NRCS), Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>);
- Natural Resources Conservation Service, National Hydric Soils List by State (<http://soils.usda.gov/use/hydric/lists/state.html>);
- King County GIS Database (King County, 2014);
- City of Bellevue GIS Database (City of Bellevue, 2014);
- Pacific States Marine Fisheries Commission (PSMFC) StreamNet ([www.streamnet.org](http://www.streamnet.org));
- SalmonScape database, 2013 ([www.wdfw.wa.gov/mapping/salmonscape/databases](http://www.wdfw.wa.gov/mapping/salmonscape/databases));
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Database on the Web (May 2012) (<http://wdfw.wa.gov/mapping/phs/>);
- Washington State's Water Quality Assessment 303d list; and
- Orthophotography from USDA's National Agricultural Imagery Program (NAIP), USGS EarthExplorer, and Google Earth.

### 3.2 Field Investigation

Site evaluation and wetland delineation occurred on 12 November 2015. The existing site conditions were evaluated and recorded based upon the guidance of the following documents:

- City of Bellevue Land Use Code Critical Areas Ordinance (§20.25H);
- U.S. Army Corps of Engineers *Regional Supplement to the Corps of Engineers Wetland Delineation and Identification Manual: Western Mountains, Valleys, and Coast Region* (U.S. Army Corps of Engineers 2010);
- *Flora of the Pacific Northwest* (Hitchcock, et al. 1969);
- National Wetland Plant List (Lichvar 2012);
- *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et al. 1979);
- Washington State Department of Ecology, *Washington State Wetland Rating System for Western Washington* (Hruby 2006).

The wetland delineation used the routine methodology described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0* (U.S. Army Corps of Engineers, 2010). The wetland boundary and beaver dam located at the stream and wetland outlet were marked in the field with wire flags or by surveyor's tape on vegetation. The wetland boundary and beaver dam were surveyed by Stantec on November 23-24, 2015. The wetland was rated based on the *Washington State Wetland Rating System for Western Washington* (Washington Department of Ecology Publication 04-06-025), and classified according to BLUC Part 20.25H (Critical Areas Overlay District). The ordinary high water mark for streams was evaluated using the methodology described by Washington State Department of Ecology's, *Determining the Ordinary High Water Mark on Streams in Washington State* (Olson and Stockdale 2008).

Plant species were identified according to the taxonomy of Hitchcock and Cronquist (Hitchcock, et al. 1969). Taxonomic names were updated and plant wetland status was assigned according to North American Digital Flora: National Wetland Plant List, Version 2.4.0 (Lichvar, et al. 2012). Wetland classes were determined with the U.S. Fish and Wildlife Service's system of wetland classification (Cowardin, et al. 1979). Vegetation was considered hydrophytic if greater than 50% of the dominant plant species had a wetland indicator status of facultative or wetter (i.e., facultative, facultative wetland, or obligate wetland).

Wetland hydrology was determined based on the presence of hydrologic indicators listed in the Corps regional supplement. These indicators are separated into Primary Indicators and Secondary Indicators. To confirm the presence of wetland hydrology, one Primary Indicator or two Secondary Indicators must be demonstrated. Indicators of wetland hydrology may include, but are not necessarily limited to: drainage patterns, drift lines, sediment deposition, watermarks, stream gauge data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation.

Soils on the site were considered hydric if one or more of the hydric soil indicators listed in the Corps Regional Supplement are present. Indicators include presence of organic soils, reduced, depleted, or gleyed soils, or redoximorphic features in association with reduced soils.

An evaluation of patterns of vegetation, soil, and hydrology was made along the interface of wetland and upland. **Appendix A** contains USACE wetland determination data forms prepared by Talasaea for representative locations in both upland and corresponding wetland areas. These data forms document the vegetation, soils, and hydrology information that aided in the wetland boundary determination. **Appendix B** contains the DOE wetland rating form.

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## CHAPTER 4. RESULTS

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This section describes the results of background research and field investigation. For the purpose of this report, the term “vicinity” describes an area approximately ½ mile around the Site.

### 4.1 Analysis of Existing Information

The following sources were reviewed for background information based on data compiled from resource agencies and local government.

#### 4.1.1 National Wetland Inventory

The National Wetlands Inventory Map does not indicate any wetlands on the Site, but does map a wetland on the property to the south (**Figure 2**). This wetland is identified as a palustrine forested wetland that is seasonally flooded (PFOC), and is consistent with the Grainger property wetland delineated in the field.

#### 4.1.2 Natural Resources Conservation Service

The Natural Resources Conservation Service maps four soil units on the Site (**Figure 3**). These soils are Urban Land (Ur), Seattle Muck (Sk), Everett gravelly sandy loam, 5 to 15% slopes (EvC), and Kitsap silt loam, 15 to 30% slopes (KpD). Approximately 70 percent of the site is mapped as urban land. The remaining 30 percent of the southern, western and eastern boundaries are mapped as the remaining three mapped soil series.

Urban land consists of soils that have been modified or disturbed through land clearing, grading, and construction activities in an urban area. Urban land is not listed as a hydric soil by the National Technical Committee on Hydric Soils.

Seattle Muck is made up of very poorly drained organic soils that formed in materials derived primarily from sedges. These soils are found in depressions and valleys on the glacial till plain and in river and stream valleys. The representative profile is a surface layer (approximately 11 inches) of black muck underlain by dark reddish-brown, black, very dark brown, and dark brown muck and peaty muck extending to 60 inches or more. Seattle Muck is listed as a hydric soil by the National Technical Committee on Hydric Soils. Only the a few portions along the Site’s southern boundary was found to exhibit this soil unit; most of the on-site area mapped as Seattle Muck is has been graded and filled by previous land uses.

The Everett soils are somewhat excessively drained soils that formed in glacial outwash or alluvium. These soils are very gravelly sandy loam overlain by a duff layer. Everett soils are strongly acidic. Everett soils have an O-horizon consisting of slightly decomposed plant material, such as leaves, needles, and twigs (“duff”). The A and B-horizon colors are dark brown, and the C-horizon is typically dark yellowish brown.

The Kitsap series consists of very deep, moderately well drained soils formed in lacustrine sediments. These soils are comprised of fine silt loam that are moderately acidic. A-horizon soil colors range from very dark grayish brown to grayish brown. The B-horizon is typically brown or dark brown. The C-horizon is typically light olive brown.

#### 4.1.3 King County Critical Areas Map

The King County iMap online database identifies the large wetland south of the Site consistent with the NWI mapped wetland.

#### 4.1.4 City of Bellevue Critical Areas Databases

The City of Bellevue Critical Areas GIS database indicates an erosion hazard area in the southwest corner of the Site. The City of Bellevue West Tributary Basin Map and the Critical Areas map identifies West Tributary as a non-fish bearing stream and the wetland to the south as a Type A wetland; both of these critical areas are off-site.

#### 4.1.5 WDFW Priority Habitats and Species Databases

The WDFW Priority Habitats and Species database does not identify priority habitats or species on the project site. On the Grainger property to the south, it identifies one forested/shrub wetland, consistent with the NWI PFOC and delineated wetland, and one stream (West Tributary) that supports runs of resident cutthroat (*Oncorhynchus clarkii*) trout.

#### 4.1.6 Pacific States Marine Fisheries Commission (PSMFC, StreamNet)

The StreamNet GIS database does not map any salmon species on or adjacent to the Site.

#### 4.1.7 WDFW SalmonScape

The WDFW SalmonScape GIS database does not map any salmon species on or adjacent to the Site.

### 4.2 Analysis of Existing Conditions

The Site evaluation was restricted to the Site and areas immediately adjacent to the south where the wetland boundary has the potential to negatively impact the Site. No critical areas were identified within the Site. One wetland was identified adjacent to the south of the Site with a buffer that extends onto the Site (**Figure 4**). The wetland was rated according to the Washington State Department of Ecology *Wetland Rating System for Western Washington* (Hruby 2006). The wetland rating form is in **Appendix B**. West Tributary, while mapped as occurring within the Site, was not apparent within the study area. The impoundment of water within this wetland caused by the presence of a beaver dam near the wetland outlet has likely masked the presence of a stream channel.

#### 4.2.1 Wetland A

Wetland A is a large riparian wetland that is mapped as the headwaters of West Tributary. A beaver dam is located within a narrow area near the wetland outfall under 120<sup>th</sup> Avenue NE. This beaver dam has impounded water within the wetland, thus altering the hydroperiod of this system over the past decade or more. Much of the boundary of Wetland A is artificially defined and is located at the toe of slope of development from multiple developments, as well as the railroad corridor along the western and southern boundaries of the wetland.

Wetland A is an ecologically diverse system with emergent, scrub-shrub, and forested components, though the emergent components are small and scattered across the Site. A number of large snags are located within the wetland that are indicative of the larger, more upland trees that were present within this area prior to the beaver dam and subsequent hydrologic impacts. Currently, much of the wetland is dominated by willows with Douglas' meadowsweet, reed canarygrass, and cattails. Typical forested species include red alder, Western red cedar, and cottonwood with an understory of Himalayan blackberry, reed canarygrass, and vine maple. These species are also commonly found within the adjacent uplands.

At least three stormwater pipes discharge into this wetland: two locations from the Site and one additional discharge point from the main Grainger facility. Stormwater from Highway 520 appears to discharge into this wetland. Additional discharge points are likely present. However, these were not identified as part of this study. Ultimately, this wetland receives a large amount of stormwater discharges from multiple sources, in addition to the presence of the beaver dam restricting the wetland's outlet.

A stream discharges into the southwest corner of the wetland that originates from the west side of the existing train tracks located immediately west of the wetland. However, this stream quickly loses all indications of a bed and bank within three (3) feet of entering the wetland as the water broadly disperses within the wetland.

Wetland A rated 28 points for Water Quality Functions, 6 points for Hydrology Functions, and 19 points for Habitat Functions. The Total Score for Functions is 53, which satisfies the requirements for classification as a Category II wetland. Category II wetlands in the City of Bellevue with a Habitat Score of less than 20 have a 75-foot standard buffer. This wetland was previously identified during the redevelopment to the current hardware store with a 50-foot wide Native Growth Protective Area (NGPA) from another previous commercial use as a candy factory.

#### 4.2.2 West Tributary (Off-site)

West Tributary is a tributary of Goff Creek (and subsequently Kelsey Creek) which then becomes Mercer Slough downstream of its confluence with Sturtevant Creek. West Tributary was not identified within the field. It is mapped by King County as starting near the northeast corner of the wetland. However, that was not consistent with field our investigations. Two (2) pipes that discharge into the northwest corner of the wetland that originate from the on-site stormwater detention pond. It is more likely that the King County mapped West Tributary may be the same stream that occurs on the west side of the railroad tracks that discharges into the southwest corner of the wetland. However, despite the questionable location and source of this stream, this stream quickly loses all indications of a bed and bank within three (3) feet of entering the wetland as the water broadly disperses within the wetland.

#### 4.3 Habitat Evaluation

We performed an evaluation of potential habitat on the Site using the City of Bellevue's *Urban Wildlife Habitat Functional Assessment Model* (the Watershed Company, 2009) as part of a preliminary habitat assessment of the property. The results of that analysis are provided below.

The Bellevue Urban Wildlife Habitat Function Assessment Model assesses and rates the ability of a property within the City limits to provide usable habitat for wildlife. The datasheets for this analysis are included in **Appendix C**. The Site scored 24 points for potential habitat function, which indicates that the property has high habitat value potential for wildlife, including species of local importance. The habitat value scores were weighted heavily by the presence of the wetland to the south despite the actual potential habitat on-site being minimal.

Section VIII of the Critical Areas Overlay District (COB §LUH 20.25H) deals with habitat associated with species of local importance. This list is included on **Table 1** below along with an analysis of the likelihood of a species presence on the Site.

**Table 1. Species of Local Importance (BLUC 20.25H.150)**

Scientific Name	Common Name	Likelihood of presence	Rationale for Presence
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Migration only	Tall trees on the property might provide roosting habitat. However, the property does not provide sufficient open habitat for foraging. It is most likely that bald eagle might use the property during annual migrations.

Scientific Name	Common Name	Likelihood of presence	Rationale for Presence
<i>Falco peregrinus</i>	Peregrine falcon	No	Peregrine falcons typically utilize open country with suitable cliffs for roosting and nesting. Alternatively, they may utilize the downtown commercial areas of major cities. The subject property, however, does not provide suitable habitat for peregrine falcon.
<i>Gavia immer</i>	Common loon	No	Common loons are unable to walk on land and require open water (large rivers, lakes, and ponds) for suitable habitat. There are no such habitat types in the vicinity of the subject property.
<i>Drycopus pileatus</i>	Pileated woodpecker	No	Pileated woodpeckers require relatively large tracts of mature forest with a significant number of dead or dying trees. Standing snags of suitable diameter serve both as sites of nesting cavities and for insects, which comprise its diet. The Site does not possess suitable habitat.
<i>Chetura vauxi</i>	Vaux's swift	No	Vaux's swift require old-growth forests with hollow trees or abandoned chimneys for nesting and roosting. The forest on the subject property does not have the essential characteristics to support Vaux's swift.
<i>Falco columbarius</i>	Merlin	No	Merlin generally prefer open country to dense forest. The Site lacks suitable habitat.
<i>Progne subis</i>	Purple martin	No	Purple martins typically require open space and the presence of artificial nesting boxes (gourds, martin houses, etc.). The subject property does not have suitable habitat.

Scientific Name	Common Name	Likelihood of presence	Rationale for Presence
<i>Aechmophorus occidentalis</i>	Western grebe	No	Like the common loon, western grebe are unable to walk on land and require open water in the form of large rivers, lakes, or ponds for suitable habitat. There are no large rivers, lakes, or ponds in the vicinity of the subject property.
<i>Ardea Herodias</i>	Great blue heron	No	Great blue heron require wetlands, ponds, lakes, or streams for suitable habitat. There is no suitable habitat within the Site.
<i>Pandio haliaetus</i>	Osprey	Not Likely	Osprey are piscivorous eagles and must be near large rivers or lakes. The subject property is not located near suitably large rivers or lakes.
<i>Butorides striatus</i>	Green heron	No	Green heron require wetlands, lakes, or other shallow water areas. No such habitat exists on the subject property.
<i>Buteo jamaicensis</i>	Red-tailed hawk	Not Likely	The Site possess some trees that may provide provide suitable perches, but the Site generally lacks suitable habitat for foraging or potential nest trees.
<i>Plecotus townsendii</i>	Townsend's big-eared bat	Not Likely	Townsend's big-eared bat will utilize many different types of habitats, but the habitat must be near caves. However, the Site is too far from the required cave habitats to be considered suitable habitat.

Scientific Name	Common Name	Likelihood of presence	Rationale for Presence
<i>Myotis keenii</i>	Keen's myotis	Not Likely	Keen's myotis, like Townsend's big-eared bat, requires caves, tree cavities, or loose bark for suitable roosting habitat. Tree cavities, or trees with loose bark are indicative of more mature forests. There is no suitable roosting habitat within the Site but there is potential habitat in the general vicinity of the Site.
<i>Myotis volans</i>	Long-legged myotis	No	Long-legged myotis is a more montane-adapted species and more likely present at elevations over 4,500 feet.
<i>Myotis evotis</i>	Long-eared myotis	Not Likely	Long-eared myotis have similar habitat requirements as Keen's myotis and may be present in the general vicinity of the Site.
<i>Rana pretiosa</i>	Oregon spotted frog	No	No suitable habitat exists in the general vicinity of the subject property, though the wetland to the south may be home to other amphibian species.
<i>Bufo boreas</i>	Western toad	Not likely	Western toads prefer grasslands or meadows that are near ponds. The required adjacent upland habitat is lacking in the general vicinity of the pastures on the subject property, despite the presence of the beaver pond.
<i>Clemmys marmorata</i>	Western pond turtle	Not likely	Western pond turtles have been mostly extirpated from King County. Their preferred habitat includes lakes, ponds, wetlands, and slow-moving streams. This type of habitat is not provided on the subject property, but could potentially be present in the wetland to the south.

Scientific Name	Common Name	Likelihood of presence	Rationale for Presence
<i>Oncorhynchus tshawytscha</i>	Chinook salmon	No	No streams occur within the Site.
<i>Salvelinus confluentus</i>	Bull trout	No	No streams occur within the Site.
<i>Oncorhynchus kisutch</i>	Coho salmon	No	No streams occur within the Site.
<i>Entosphenus tridentatus</i> (formerly <i>Lampetra tridentatus</i> or <i>L. ayresii</i> )	River lamprey	No	No streams occur within the Site. Current maps of river lamprey populations indicate that these fish are not typically found in King County.

The moderate score for habitat on the Site is not surprising considering the limited forested areas along the southern property boundary. Of the list of species of local importance provided on **Table 1**, none were determined to have a high likelihood of being present on the Site due to a general lack of native vegetation. Eight (8) species were identified as potentially occurring on-site but only as fly-overs, or due to the presence of the large wetland to the south.

## CHAPTER 5. REGULATORY REVIEW

### 5.1 City of Bellevue Critical Areas Regulations

Critical areas on the project site are subject to the regulations of Bellevue Land Use Code (BLUC) Part 20.25H. This section contains standards and requirements for the protection of designated critical areas and defines permissible uses within the Critical Areas Overlay District. BLUC 20.25H Section III establishes allowed alterations within the Critical Areas Overlay District. BLUC 20.25H Section IV establishes standards and requirements for protection of streams, Section V establishes standards and requirements for protection of wetlands, Section VI establishes standards and requirements for protection of shorelines, and Section VIII establishes standards and requirements for protection of habitat associated with species of local importance. Section XII of BLUC 20.25H provides the purpose, submittal requirements, and reporting requirements for Critical Areas Reports for projects that may alter or impact critical areas of their buffers.

Development on sites that have a wetland or wetland buffer shall also incorporate where applicable the performance standards provided in BLUC Part 20.25H.100, which are listed below. Despite no wetlands located on-site, the following guidelines are also being applied to the on-site wetland buffer for this project.

- A. Lights shall be directed away from the wetland. Lighting levels shall meet the outdoor lighting standards for spillover into critical areas, per BLUC 20.25H;
- B. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the wetland, or any noise shall be minimized through use of design and insulation techniques;
- C. Toxic runoff from new impervious surface area shall be routed away from the wetlands;
- D. Treated water may be allowed to enter the wetland critical area buffer;

- E. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use;
- F. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

The project will implement several of the mitigation measures listed above as follows (**Table 2**):

**Table 2. Summary of Proposed Mitigation Performance Standards**

<b>Examples of Disturbances</b>	<b>Measures to Minimize Impacts</b>
<b>Lights</b>	Street and security lighting will be placed so that illumination is directed away from the buffer.
<b>Noise</b>	Planting of dense vegetation specified for mitigation of light-related impacts will also ameliorate impacts due to noise.
<b>Toxic Runoff</b>	Operational covenants will stipulate that no pesticides or herbicides will be used within 150 feet of the stream buffer (the use of herbicides to control non-native, invasive species in the course of routine mitigation monitoring and maintenance will be allowed as described in <b>Chapters 9 and 10</b> ). Road runoff will be collected and transferred to the project's on-site stormwater treatment and detention facilities.
<b>Stormwater runoff</b>	All road runoff will be detained and cleaned by the proposed stormwater system for the project.
<b>Pets and Human Disturbances</b>	Buffer areas will be permanently protected by fencing to help prevent human and pet intrusions into the buffer, and the buffer areas (will be placed in a separate Natural Growth Protection Area (NGPA), per City requirements.

## 5.2 State and Federal Regulations

Wetlands on the project site are also subject to Federal and State regulation under Sections 404 and 401 of the Clean Water Act, and other applicable State laws protecting Waters of the State. However, since the project does not propose any direct impacts to waters of the U.S. or waters of the State, proposed critical areas impacts on the project site are only subject to regulation under applicable local codes, including BLUC Part 20.25H.

## CHAPTER 6. PROPOSED PROJECT

### 6.1 Project Description

The purpose of the project is to redevelop the Site with a new retail facility for Bellevue BMW (**Figure 5**). The proposed development will be a combined facility with showroom space for car sales as well as a service department, parts department, and collision center with associated surface parking and infrastructure. The project also includes utility infrastructure typical for a project of this type. Access to the BMW dealership will be provided off of 120th Avenue NE.

The proposed site plan has been designed to minimize impacts to the critical areas on the project site to the extent possible while conforming to City of Bellevue requirements and meeting the needs of the project. No direct stream or wetland impacts will occur as a result of the proposed development. The wetland buffer boundary will remain the current edge of

asphalt as agreed upon during a team meeting with the City of Bellevue on 4 November 2015. The wetland buffer will be retained as the area between the current wetland edge and the current edge of asphalt, and will be enhanced through removal of nuisance/invasive plant species and supplemental plantings with native species, while retaining the functions of the bioswale.

## **6.2 Stormwater Management**

The existing site is composed of three drainage basins. Detailed stormwater management plans are included as part of the Civil Plans prepared by Dave Evans and Associates.

- Basin 1 is comprised of the existing east parking lot and approximately 46,000 square feet of the eastern half of the existing building. This basin is approximately 3.3 acres.
- Basin 2 is comprised of the remaining approximately 90,000 square feet of the existing building, the northern parking lot, and the western parking lot to the west edge of Parcel A as described on the ALTA Survey dated 11/11/2015. This basin is approximately 4.3 acres.
- Basin 3 is the 65'x320' parcel west of Parcel A as described on the ALTA survey dated 11/11/15. This basin is approximately 0.5 acres.

All three basins currently discharge into the existing wetland located on the parcel south of the site. The majority of the project redevelopment will occur in Basin 1. The existing drainage systems, water quality, and detention systems in Basin 2 and Basin 3 will remain undisturbed and continue to function as previously designed.

The proposed stormwater runoff in Basin 1 will be collected via proposed catchbasins, roof drains, and area drains. The stormwater will then be treated with Filterras for water quality treatment, and conveyed via a storm drainage system to a proposed on-site detention vault. The proposed detention vault will discharge to the existing control structure SDMH #11053, which will then discharge into the existing swale south of the fire lane as previously designed. All structures south of the existing curbline will remain and continue to discharge to the existing swale, which subsequently discharges to the existing wetland located of the parcel south of the site.

The controlled discharge from this basin is expected to be less than existing due to the stricter detention standards. The detention vault will mitigate all storms less than the 100-year storm and discharge at release rates based on pre-developed forested conditions. The 100-year storm will not be detained by the detention vault and overflow into the swale before discharging to the wetland. This unmitigated storm discharge is not expected to be greater than the existing 100-year storm discharge to the wetland due the fact that we are not increasing the total impervious area in Basin 1.

## **CHAPTER 7. MITIGATION PLAN**

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### **7.1 Agency Policies and Guidance**

The proposed mitigation plan was designed in accordance with the policies and guidance provided in BLUC Part 20.25H. Pursuant to BLUC 20.25H.245, all proposed mitigation shall be based on best available science and shall demonstrate no net loss of critical areas functions and values.

### **7.2 Mitigation Sequencing**

Mitigation sequencing has been applied to the proposed project pursuant to BLUC 20.25H.215. The mitigation sequencing requirements are:

- Avoiding the adverse impact altogether by not taking a certain action or parts of an action;
- Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
- Rectify the adverse impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the adverse impact over time by preservation and maintenance operations; or,
- Compensating for the adverse impact by replacing, enhancing, or providing substitute resources or environments.

The mitigation sequencing process was an intrinsic part of the analysis of the site development. Site development has been designed to minimize impacts to the existing wetland buffer to the maximum extent practicable while still meeting the requirements for a viable project, including compliance with all zoning code requirements for site access, circulation, setbacks, and parking. The project will compensate for unavoidable impacts by providing adequate mitigation in the form of buffer enhancement, described in the following section.

### **7.3 Proposed Mitigation Plan**

Buffer enhancement of 21,108 square feet will be completed to provide greatly improved buffer functions and habitat value (**Figure 5**). Enhancement activities will include removal of nuisance/invasive species, including Himalayan blackberry, stabilizing all bare-soil areas with 3 inches of bark mulch, and replanting with native trees and shrubs.

The restored buffer will be planted with a variety of native evergreen and deciduous trees and shrubs appropriate for upland buffer habitat in the Puget Sound lowlands. Tree species to be potentially used will include big-leaf maple, vine maple, paper birch, Pacific dogwood, Douglas fir, western red cedar, and others. Shrub species may include oceanspray, tall Oregon grape, thimbleberry, red elderberry, snowberry, and others. A seed mix will be added to the central portion of the bioswale consisting of native emergent vegetation.

### **7.4 Mitigation Design Elements**

#### **7.4.1 Mulch**

The Client shall provide 3 inches of medium bark mulch around all installed plants. Mulch shall be derived from fir, pine or hemlock species and shall not contain trash, rocks, or other debris that may be detrimental to plant growth.

#### **7.4.2 Plantings**

A variety of native tree and shrub will be planted in the buffer mitigation area (**Figure 5**). Plant species have been chosen for a variety of qualities, including: adaptation to specific water regimes, value to wildlife, value as a physical or visual barrier, pattern of growth (structural diversity), and aesthetic values. Native species were chosen to increase both the structural and species diversity of the mitigation areas, thereby increasing the value of the area to wildlife for food and cover. Plant materials will consist of a combination of bare-root stock (if available) and containers. A full plant list with the proposed plant species, including quantities, size, and spacing, is provided on **Figure 6**.

#### **7.4.3 Temporary Irrigation System**

A temporary irrigation system is not anticipated to be needed for enhancement plantings within existing vegetated buffer areas. Plantings shall be installed in the dormant season to help reduce transplant shock and encourage successful establishment. Plants shall be watered immediately after planting, and shall be provided with supplemental irrigation during the dry

season if drought stress is evident during the establishment period (generally the first two growing seasons after planting). Supplemental irrigation can be provided by hand if necessary.

#### **7.4.4 2-Board Fence and Critical Area Signs**

Permanent fencing and critical areas signs shall be installed at the perimeter of all critical area buffers on the site. The fencing will be a rail style fence, split or 2-board type.

#### **7.5 Mitigation Goals, Objectives, and Performance Standards**

The goal of the mitigation plan is to restore the functions and values of a portion of the wetland buffer on the Site. The mitigation will be evaluated through the following objectives and performance standards. Mitigation monitoring will be performed by a qualified wetland biologist or ecologist.

**Objective A:** Create habitat structure and plant species diversity in the wetland buffer enhancement areas.

***Performance Standard A1:*** *At least 8 species of desirable woody plants will be present in the wetland buffer restoration areas during each year of the monitoring period.*

***Performance Standard A2:*** *Percent survival of all planted woody species must be at least 100% at the end of Year 1 (per contractor warranty), and at least 80% for each subsequent year of the monitoring period.*

**Objective B:** Limit the amount of invasive and exotic species within the wetland buffer enhancement areas.

***Performance Standard B:*** *After construction and following every monitoring event for the duration of the monitoring period, exotic and invasive plant species will be maintained at levels of 20% or less total cover throughout the mitigation areas. These species include, but are not limited to: Scot's broom, Himalayan and evergreen blackberry, Japanese knotweed, purple loosestrife, hedge bindweed, morning glory, and creeping nightshade.*

## **CHAPTER 8. CONSTRUCTION SEQUENCING**

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### **8.1 Mitigation Construction Sequencing**

The following provides the general sequence of activities anticipated to be necessary to complete this mitigation project. Some of these activities may be conducted concurrently as the project progresses.

1. Conduct a site meeting between the contractor, Talasaea Consultants, and the owner's representative to review the project plans,
2. Survey clearing limits, flag and protect vegetation to remain,
3. Install silt fence and any other erosion and sedimentation control BMPs necessary for work in the critical areas,
4. Clear and grub non-native/invasive vegetation from the wetland buffer,
5. Inspect plant stock and review plant layout with contractor,
6. Add top soil as needed,
7. Install plant material as indicated on the planting plan,
8. Provide 3-inches of mulch around installed woody plants,
9. Complete site cleanup,
10. Install split-rail fence and critical area signs.

## 8.2 Post-Construction Approval

Following construction completion Talasaea Consultants shall also notify the City in writing when the planting is completed for a final site inspection and subsequent final construction approval.

## 8.3 Post-Construction Baseline Assessment

Once construction is approved by the City, a qualified wetland ecologist from Talasaea Consultants shall conduct a post-construction assessment. The purpose of this assessment will be to establish baseline conditions at Year 0 of the required monitoring period. A Baseline Assessment report, including “as-built” drawings, will be submitted to the City. The as-built plan set will identify and describe any changes in planting or other features in relation to the original approved plan.

## CHAPTER 9. MONITORING PLAN

### 9.1 Monitoring Schedule

Per BLUC 20.25H.220(D), performance monitoring is required for a minimum of five years.

**Table 4** below presents the schedule of maintenance, monitoring, and report submissions.

**Table 3. Projected Calendar for Performance Monitoring and Maintenance Events**

Year	Date	Maintenance Review	Performance Monitoring	Report Due to City
Year 0, Baseline Assessment	Fall/Winter	X	X	X
1	Spring	X	X	
	Fall	X	X	X
2	Spring	X	X	
	Fall	X	X	X
3	Spring	X		
	Fall	X	X	X
4	Spring	X		
	Fall	X	X	X
5	Spring	X		
	Fall	X	X	X*

\*Obtain final approval to facilitate bond release from the City of Bellevue (presumes performance criteria are met).

### 9.2 Monitoring Reports

Each monitoring report will adhere to the requirements of BLUC Part 20.25H. The reports will include: 1) Project Overview, 2) Requirements, 3) Summary Data, 4) Maps and Plans, and 5) Conclusions. If the performance criteria are met, monitoring for the City will cease at the end of year five, unless objectives are met at an earlier date and the City accepts the mitigation project as successfully completed.

### 9.3 Monitoring Methods

The following monitoring methods will be used to evaluate the approved performance standards.

#### 9.3.1 Methods for Monitoring Vegetation Establishment

Vegetation monitoring methods may include counts; photo-points; random sampling; sampling plots, quadrats, or transects; stem density; visual inspection; and/or other methods deemed appropriate by the City of Bellevue. Vegetation monitoring components shall include general

appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weed cover.

Permanent vegetation sampling plots, quadrats, and/or transects will be established at selected locations to adequately sample and represent all of the plant communities within the mitigation project areas. The number, exact size, and location of transects, sampling plots, and quadrats will be determined at the time of the baseline assessment.

Percent areal cover of woody vegetation will be evaluated through the use of point-intercept sampling methodology. Using this methodology, a tape will be extended between two permanent markers at each end of an established transect. Trees and shrubs intercepted by the tape will be identified, and the intercept distance recorded. Percent cover by species will then be calculated by adding the intercept distances and expressing them as a total proportion of the tape length.

The established vegetation sampling locations will be monitored and compared to the baseline data during each performance monitoring event to aid in determining the success of plant establishment. Percent survival of shrubs and trees will be evaluated in a 10-foot-wide strip along each established transect. The species and location of all shrubs and trees within this area will be recorded at the time of the baseline assessment, and will be evaluated during each monitoring event to determine percent survival.

#### **9.4 Photo Documentation**

Locations will be established within the mitigation area from which panoramic photographs will be taken throughout the monitoring period. These photographs will document general appearance and relative changes within the plant community. Review of the photos over time will provide a semi-quantitative representation of success of the planting plan. Vegetation sampling transect/plot/quadrat and photo-point locations will be shown on a map and submitted with the baseline assessment report and yearly performance monitoring reports.

#### **9.5 Wildlife**

Birds, mammals, reptiles, amphibians, and invertebrates observed in the wetland and buffer areas (either by direct or indirect means) will be identified and recorded during scheduled monitoring events, and at any other times observations are made. Direct observations include actual sightings, while indirect observations include tracks, scat, nests, song, or other indicative signs. The kinds and locations of the habitat with greatest use by each species will be noted, as will any breeding or nesting activities.

#### **9.6 Water Quality and Site Stability**

Water quality will be assessed qualitatively, unless it is evident there is a serious problem. In such an event, water quality samples will be taken and analyzed in a laboratory for suspected parameters. Qualitative assessments of water quality include:

- oil sheen or other surface films,
- abnormal color or odor of water,
- stressed or dead vegetation or aquatic fauna,
- turbidity, and
- absence of aquatic fauna.

Observations will be made of the general stability of slopes and soils in the mitigation areas during each monitoring event. Any erosion of soils or slumping of slopes will be recorded and corrective measures will be taken.

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## CHAPTER 10. MAINTENANCE AND CONTINGENCY

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### 10.1 Maintenance and Contingency Measures

Regular maintenance reviews will be performed according to schedule presented in **Table 3** to address any conditions that could jeopardize the success of the mitigation project. Following maintenance reviews by the biologist or ecologist, required maintenance on the site will be implemented within ten (10) business days of submission of a maintenance memo to the maintenance contractor and permittee.

Established performance standards for the project will be compared to the yearly monitoring results to judge the success of the mitigation. If during the course of the monitoring period there appears to be a significant problem with achieving the performance standards, the permittee shall work with the City to develop a Contingency Plan in order to get the project back into compliance with the performance standards. Contingency plans can include, but are not limited to, the following actions: additional plant installation, erosion control, modifications to hydrology, and plant substitutions of type, size, quantity, and/or location. If required, a Contingency Plan shall be submitted to City by December 31<sup>st</sup> of any year when deficiencies are discovered.

The following list includes examples of maintenance (M) and contingency (C) actions that may be implemented during the course of the monitoring period. This list is not intended to be exhaustive, and other actions may be implemented as deemed necessary.

- During Year One, replace all dead woody plant material (M).
- Water all plantings at a rate of 1" of water every week between June 15 – October 15 during the first two years after installation, and for the first two years after any replacement plantings (C & M).
- Replace dead plants with the same species or a substitute species that meets the goals and objectives of the mitigation plan, subject to Talasaea and City approval (C).
- Re-plant area after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.) (C).
- After consulting with City staff, minor excavations, if deemed to be more beneficial to the existing conditions than currently exists, will be made to correct surface drainage patterns (C).
- Remove/control weedy or exotic invasive plants (e.g., Scot's broom, reed canarygrass, Himalayan blackberry, purple loosestrife, Japanese knotweed, etc.) by manual or chemical means approved by the City. Use of herbicides or pesticides within the mitigation area would only be implemented if other measures failed or were considered unlikely to be successful, and would require prior City approval. All non-native vegetation must be removed and disposed of off-site. (C & M).
- Weed all trees and shrubs to the dripline and provide 3-inch deep mulch rings 24 inches in diameter for shrubs and 36 inches in diameter for trees (M).
- Remove trash and other debris from the mitigation areas twice a year (M).
- Selectively prune woody plants at the direction of Talasaea Consultants to meet the mitigation plan's goal and objectives (e.g., thinning and removal of dead or diseased portions of trees/shrubs) (M).
- Repair or replace damaged structures including weirs, signs, fences, or bird boxes (M).

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## CHAPTER 11. POST-MONITORING VEGETATION MANAGEMENT

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A Vegetation Management Plan (VMP) has been prepared to guide general landscape maintenance practices for the Bellevue BMW Project, as well as maintenance practices for the mitigation areas following the conclusion of the five-year performance monitoring period. The goal of the VMP is to ensure long-term vegetation management that is consistent with the objectives and performance standards of the mitigation plan approved by the City of Bellevue.

This includes vegetation management techniques as well as restrictions on activities in critical area buffers. **Appendix D** contains the complete VMP.

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## **CHAPTER 12. FINANCIAL ASSURANCES**

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The permittee shall post a financial assurance device, if required by the City, pursuant to the requirements of BLUC 20.25H.260 and BLUC 20.40.490, in order to ensure the mitigation plan is fully implemented as designed. The assurance device shall be of a type and in an amount as required by BLUC 20.40.490.

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## **CHAPTER 13. SUMMARY**

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The Site is currently developed and used as a Lowe's hardware store with associated parking and infrastructure, and is mostly devoid of native vegetation except for a narrow strip along the southern property boundary. A Category II wetland occurs near the southern property boundary with a standard 75-foot buffer that extends onto the Site. The City of Bellevue and King County map a stream (West Tributary) as occurring through this large wetland though no evidence of a stream channel was observed in the field within the study area. A storm water bio-filtration pond is located on-site along the southern parcel boundary within the current wetland buffer on-site in an area formerly identified as a Native Growth Protective Area. A stormwater detention pond is located within the southwest corner of the Site, and collects stormwater from the western portions of the parking area that is then discharged into Wetland A.

Autonation purposes to develop the Site with a BMW dealership and associated infrastructure, including a service center, parts, collision center, and showroom for car sales. No direct stream or wetland impacts will occur as a result of the proposed development. The wetland buffer boundary will remain the current edge of asphalt as agreed upon during a team meeting with the City of Bellevue on 4 November 2015. Approximately 21,108 square feet of wetland buffer will be retained as the area between the current wetland edge and the current edge of asphalt, and will be enhanced through removal of nuisance/invasive plant species and supplemental plantings with native species, while retaining the functions of the bioswale.

All mitigation areas will be monitored for five years post construction. All post-construction critical areas will be placed in native growth protection area easement. A split-rail or similar style fence will be installed at the outer edge of the buffer areas, adjacent to the current edge of asphalt, and critical area signs will be installed at intervals determined by the City.

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**CHAPTER 14. REFERENCES**

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## FIGURES

- Figure 1** – Vicinity Map & Driving Directions
- Figure 2** – National Wetland Inventory
- Figure 3** – NRCS Soils Map
- Figure 4** – Existing Conditions
- Figure 5** – Impacts and Mitigation
- Figure 6** – Candidate Plant List, Planting Typical & Details

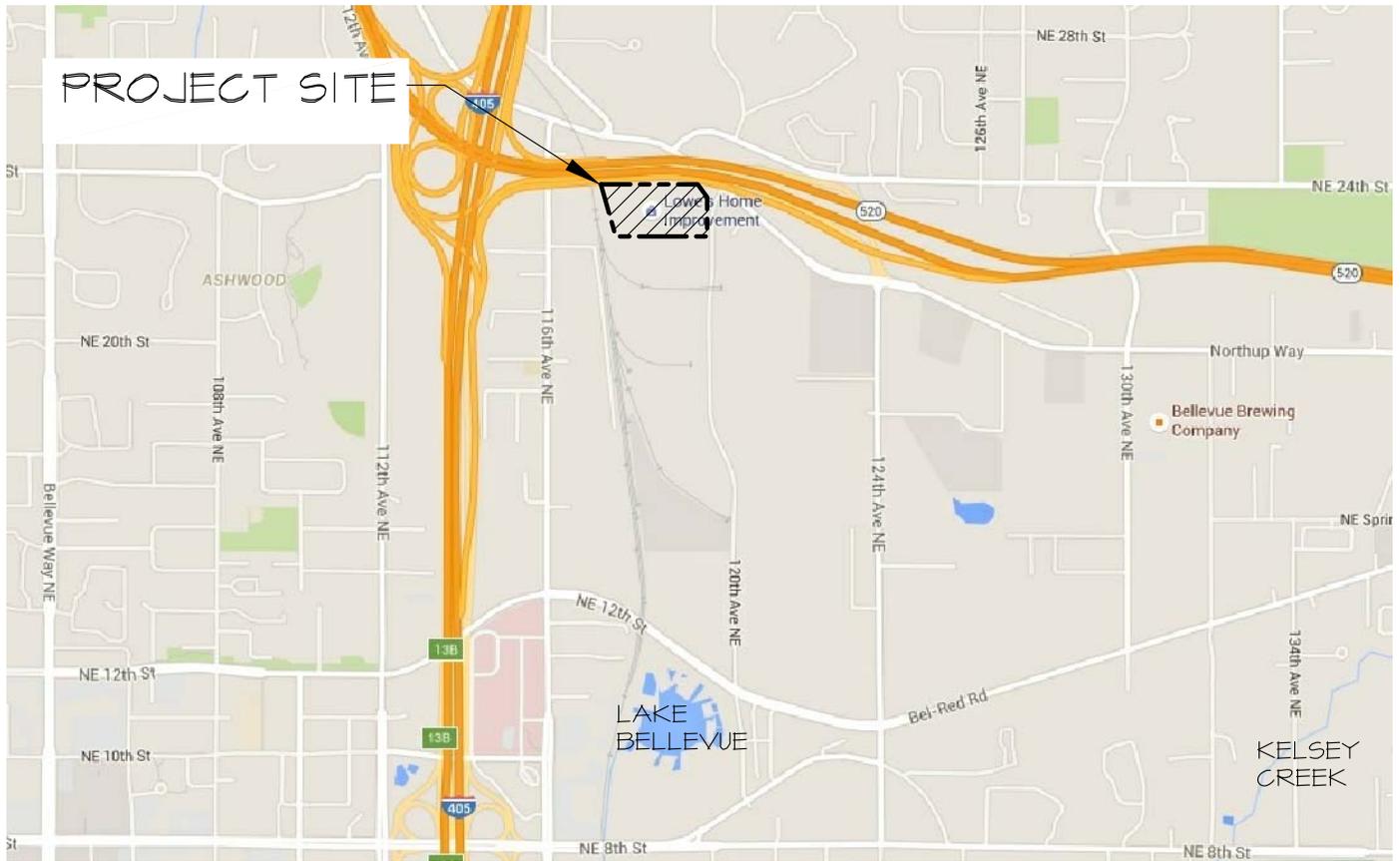


IMAGE SOURCE: GOOGLE MAPS, WWW.MAPS.GOOGLE.COM (ACCESSED 7 DEC 2015)

DRIVING DIRECTIONS:

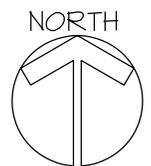
1. FROM I-405, TAKE THE WA-520 E RAMP TOWARDS 124th AVE NE
2. TAKE THE RAMP ON THE RIGHT AND FOLLOW SIGNS FOR 124th AVE NE
3. TURN RIGHT ONTO NORTHUP WAY

DESTINATION AND PARKING LOT WILL BE ON YOUR RIGHT.

DESTINATION ADDRESS:

11959 NORTHUP WAY  
 BELLEVUE, WA 98005

KING COUNTY PARCEL #2825059156



**TALASAEA**  
**CONSULTANTS, INC.**

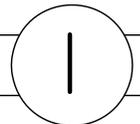
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 15020 Bear Creek Road Northeast  
 Woodinville, Washington 98077  
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FIGURE #1

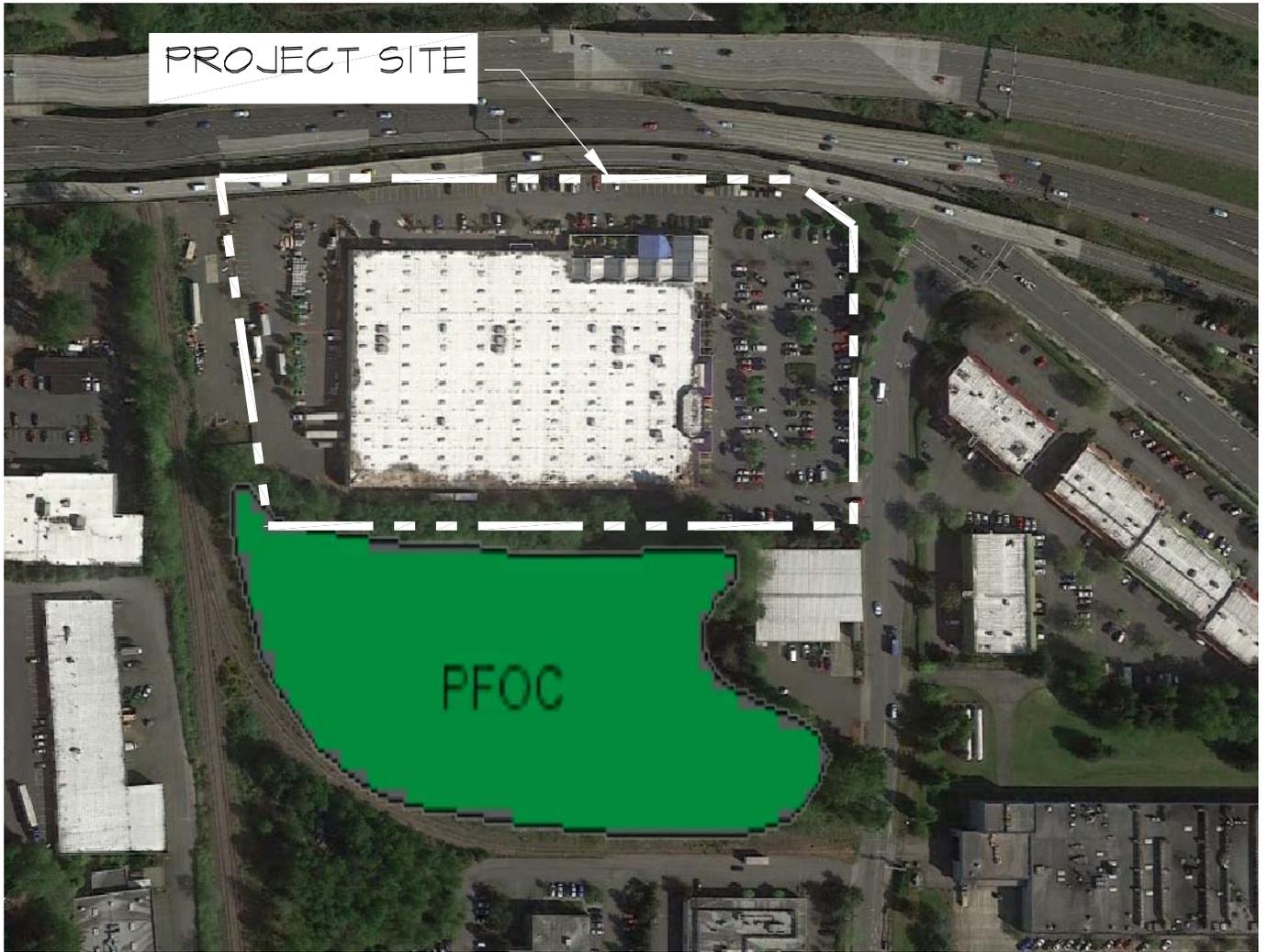
VICINITY MAP & DRIVING DIRECTIONS

BELLEVUE BMW  
 BELLEVUE, WASHINGTON

DESIGN	DRAWN	PROJECT
	ELW	1566
SCALE		
NTS		
DATE		
12-7-2015		
REVISED		



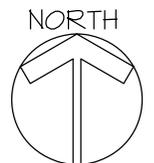
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## LEGEND

TYPE	DESCRIPTION
PFOC	PALUSTRINE FORESTED SEASONALLY FLOODED

SOURCE: U.S. FISH AND WILDLIFE SERVICE, (JAN 2015). NATIONAL WETLANDS INVENTORY WEBSITE, U.S. DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE, WASHINGTON D.C.  
<http://www.fws.gov/wetlands/data/wetland-codes.html>



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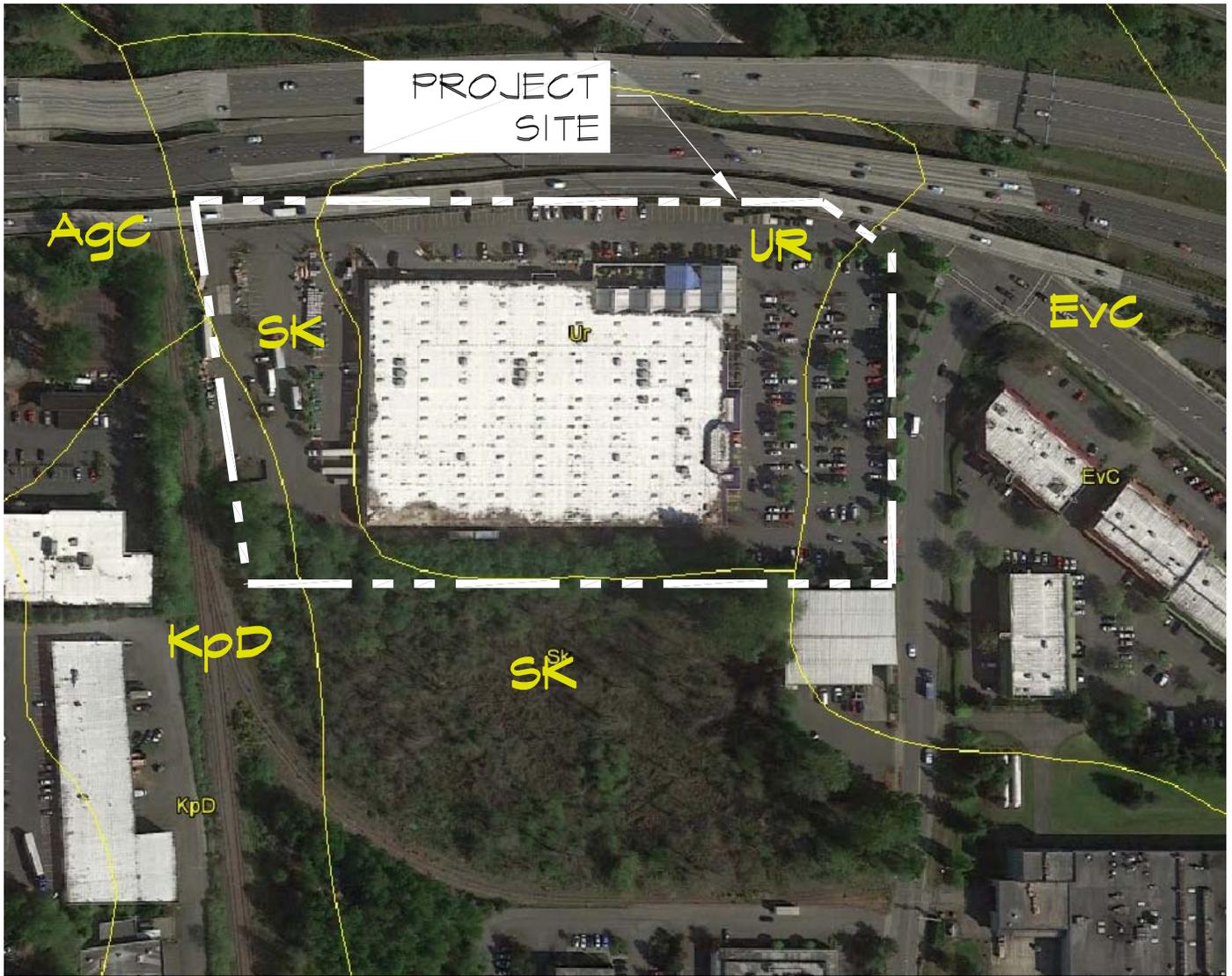
FIGURE #2

NATIONAL WETLAND INVENTORY

BELLEVUE BMW  
 BELLEVUE, WASHINGTON

DESIGN	DRAWN	PROJECT
	ELW	1566
SCALE NTS		
DATE 12-7-2015		
REVISED		

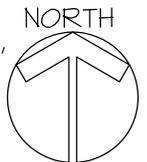
2



## LEGEND

TYPE	DESCRIPTION, SLOPES
UR	URBAN LAND
SK	SEATTLE MUCK
KpD	KITSAP SILT LOAM
AgC	ALDERWOOD GRAVELLY SANDY LOAM
Evc	EVERETT GRAVELLY SANDY LOAM

SOURCE: SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, WEB SOIL SURVEY. AVAILABLE ONLINE AT <http://websoilsurvey.nrcs.usda.gov/>. ACCESSED DECEMBER 7 2015



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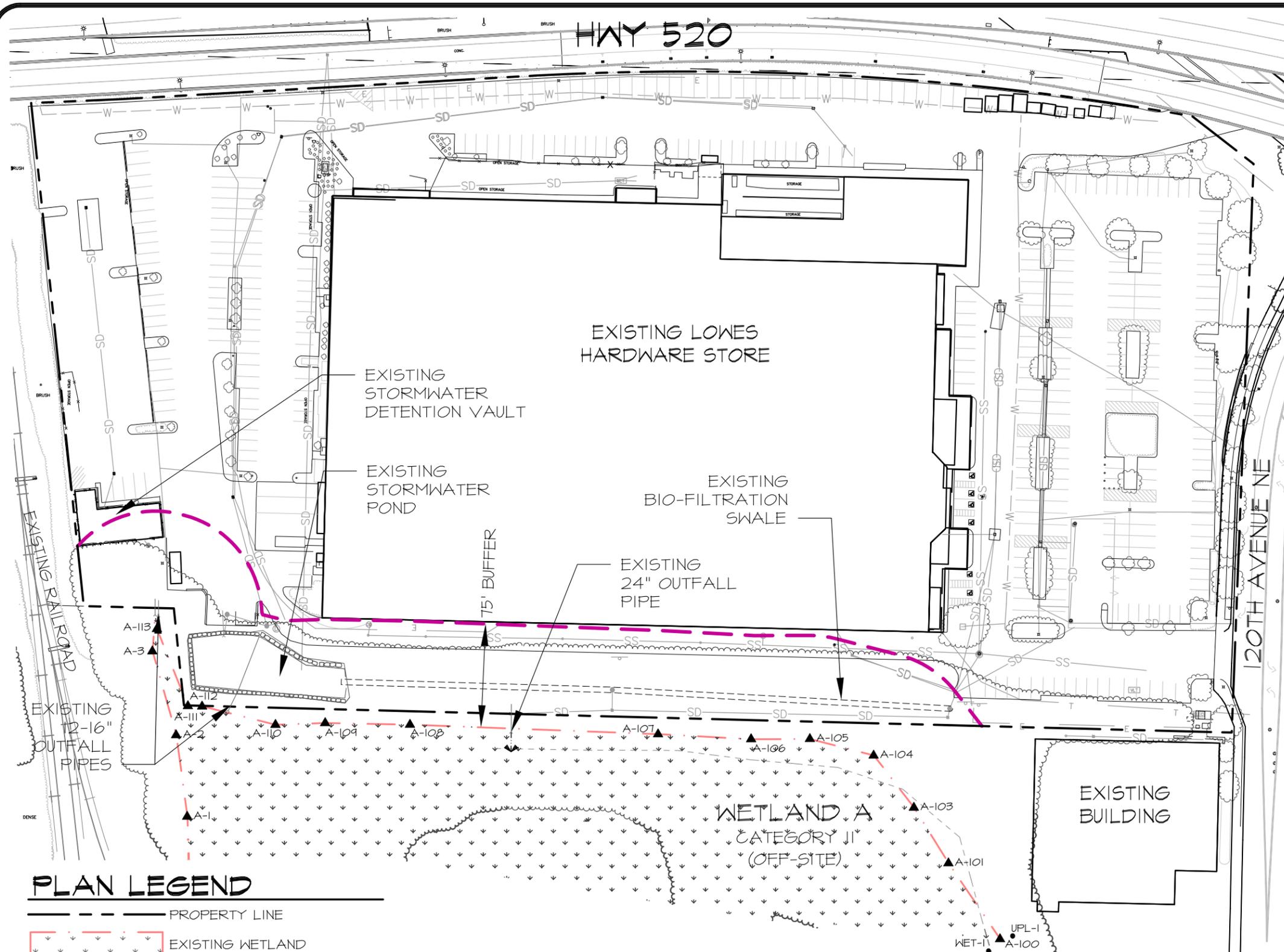
FIGURE #3

NRCS SOIL MAP

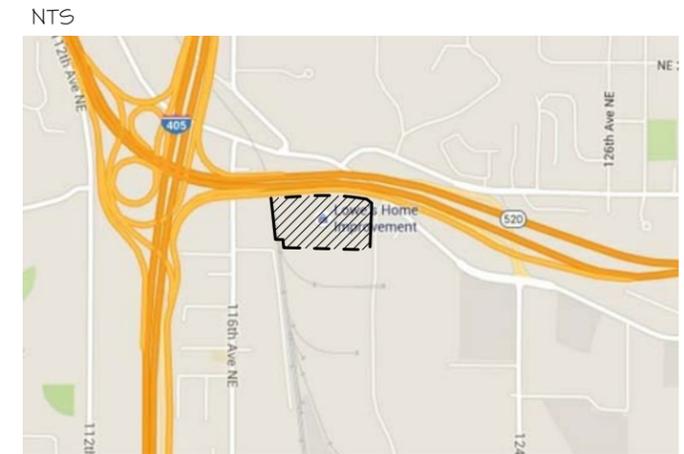
BELLEVUE BMW  
BELLEVUE, WASHINGTON

DESIGN	DRAWN	PROJECT
	ELW	1566
SCALE NTS		
DATE 12-7-2015		
REVISED		

3



### VICINITY MAP



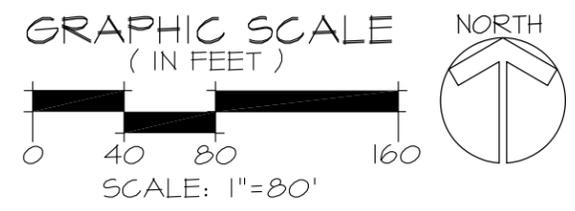
SOURCE: GOOGLE MAPS; WWW.MAPS.GOOGLE.COM (ACCESSED 12-8-2015)

### CONTACTS

- APPLICANT**  
 NAME: NORTHWEST FINANCIAL GROUP, INC.
- ARCHITECT/SURVEYOR**  
 NAME: STANTEC  
 ADDRESS: 38 TECHNOLOGY DRIVE SUITE 100 IRVINE CA 92618-5312  
 PHONE: (949) 923-6903  
 CONTACT: LARRY TIDBALL, ARCHITECT
- ENGINEER**  
 NAME: DAVID EVANS AND ASSOCIATES, INC.  
 ADDRESS: 415 118TH AVE SE, BELLEVUE, WA 98005  
 PHONE: (425) 519-6504  
 CONTACT: ANGELA CHUNG PE, LEED-AP
- ENVIRONMENTAL CONSULTANT**  
 NAME: TALASAEA CONSULTANTS, INC.  
 ADDRESS: 15020 BEAR CREEK RD. NE WOODINVILLE, WA 98077  
 PHONE: (425) 861-7550  
 CONTACT: ANN OLSEN, SENIOR PROJECT MANAGER  
 JENNIFER MARRIOT, PROJECT ECOLOGIST

### PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND
- WETLAND BUFFER
- DITCH CENTERLINE
- EXISTING CONTOUR
- A-# WETLAND FLAG LOCATION
- TP-# SOIL TEST PLOT LOCATION
- EXISTING TREES

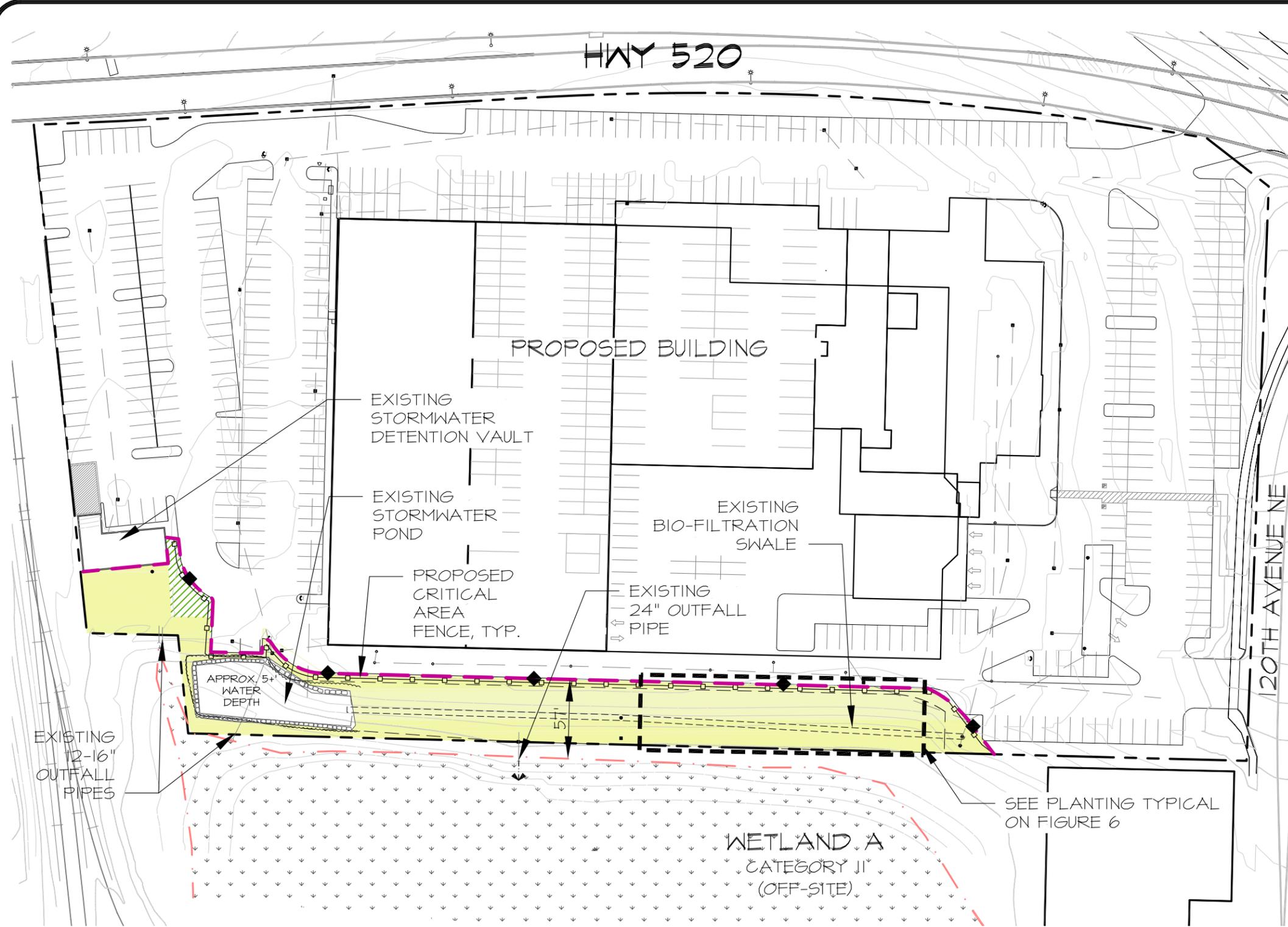


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 Woodinville, Washington 98077  
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FIGURE #4  
 EXISTING CONDITIONS  
 CONCEPTUAL MITIGATION PLAN  
 BELLEVUE BMW  
 BELLEVUE, WASHINGTON

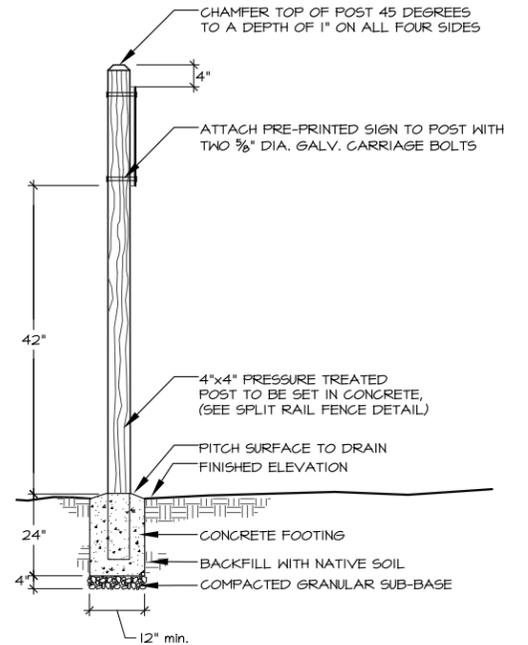
DESIGN	DRAWN	PROJECT
ABS	ABS	1566
SCALE		
NTS		
DATE		
12-8-2015		
REVISED		

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### MITIGATION LEGEND

BUFFER ENHANCEMENT		
	BUFFER ENHANCEMENT	20,084 SF
	BUFFER REPLACEMENT	1,024 SF
TOTAL ENHANCEMENT: 21,108 SF		
	NGPA SIGNS	



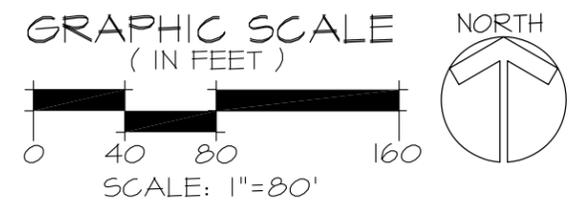
1 NGPA SIGN DETAIL TYP.  
N.T.S.

### CONSTRUCTION SEQUENCE

1. CONDUCT A SITE MEETING BETWEEN THE CONTRACTOR, TALASAEA CONSULTANTS, AND THE OWNER'S REPRESENTATIVE TO REVIEW THE PROJECT PLANS,
2. SURVEY CLEARING LIMITS, FLAG AND PROTECT VEGETATION TO REMAIN,
3. INSTALL SILT FENCE AND ANY OTHER EROSION AND SEDIMENTATION CONTROL BMPs NECESSARY FOR WORK IN THE CRITICAL AREAS,
4. CLEAR AND GRUB NON-NATIVE/INVASIVE VEGETATION FROM THE WETLAND BUFFER,
5. INSPECT PLANT STOCK AND REVIEW PLANT LAYOUT WITH CONTRACTOR,
6. INSTALL PLANT MATERIAL AS INDICATED ON THE PLANTING PLAN,
7. PROVIDE 3-INCHES OF MULCH AROUND INSTALLED WOODY PLANTS,
8. COMPLETE SITE CLEANUP,
9. INSTALL SPLIT-RAIL FENCE AND CRITICAL AREA SIGNS.

### PLAN LEGEND

	PROPERTY LINE
	EXISTING WETLAND
	POST CONSTRUCTION WETLAND BUFFER



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FIGURE #5  
IMPACTS AND MITIGATION  
CONCEPTUAL MITIGATION PLAN  
BELLEVUE BMW  
BELLEVUE, WASHINGTON

DESIGN	DRAWN	PROJECT
ABS	ABS	1566
SCALE		
NTS		
DATE		
12-8-2015		
REVISED		

5

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# CANDIDATE PLANT LIST

## TREES

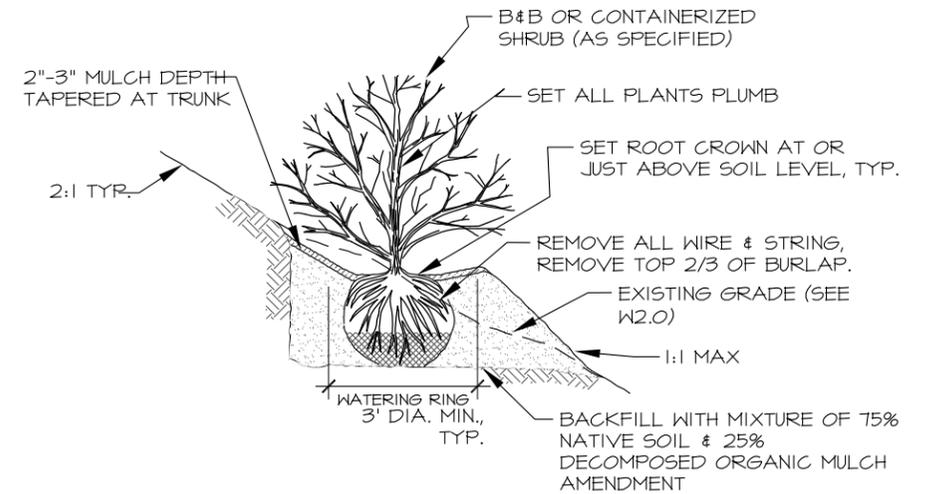
SYMBOL	SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY.	SPACING	SIZE (MIN.)	NOTES
☉	THUJA PLICATA	WESTERN RED CEDAR	FAC	13	AS SHOWN	2-3' HT.	2 GAL., FULL & BUSHY
☉	THUJA PLICATA	WESTERN RED CEDAR	FAC	6	AS SHOWN	4-5' HT.	B&B, FULL & BUSHY

## SMALL TREES & LARGE SHRUBS

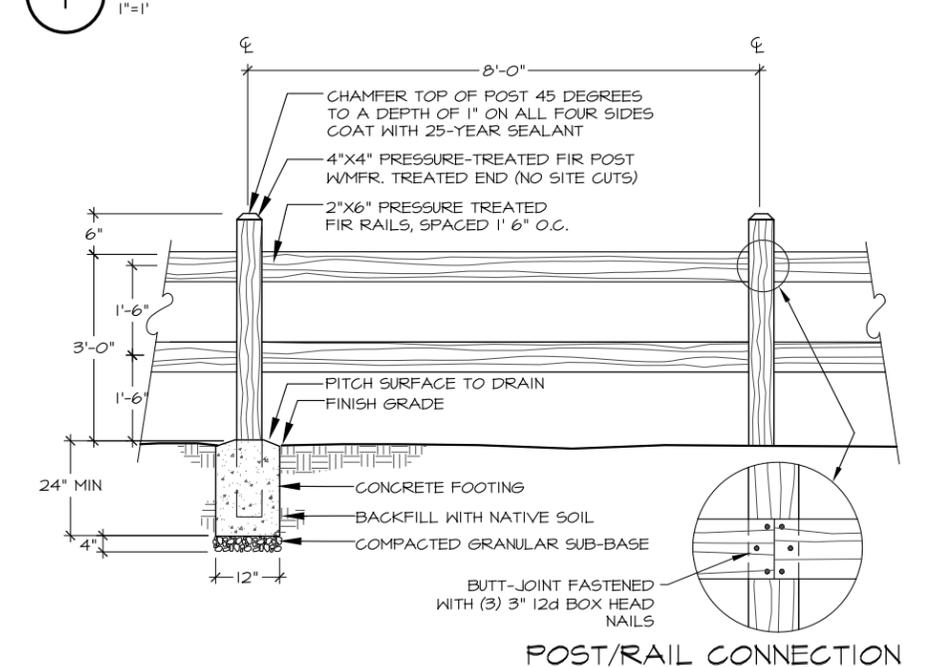
SYMBOL	SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY.	SPACING	SIZE (MIN.)	NOTES
☉	SORBUS SITCHENSIS	SITKA MOUNTAIN ASH	FAC	5	AS SHOWN	4' HT.	SINGLE TRUNK, WELL BRANCHED
☉	OEMLERIA CERASIFORMIS	INDIAN PLUM	FACU	8	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
☉	HOLODISCUS DISCOLOR	OCEAN SPRAY	FACU	59	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)
☉	ACER CIRCINATUM	VINE MAPLE	FAC	21	AS SHOWN	4' HT.	MULTI-STEM (3 MIN.)
☉	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	FACW	33	5' O.C.	24" HT.	MULTI-CANE (3 MIN.)

## MASSING SHRUBS

SYMBOL	SCIENTIFIC NAME	COMMON NAME	WL STATUS	QTY.	SPACING	SIZE (MIN.)	NOTES
☉	CORNUS ALBA (SERICEA)	RED-OSIER DOGWOOD	FACW	139	4' O.C.	18" HT.	MULTI-CANE (3 MIN.)
☉	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	FAC	38	4' O.C.	18" HT.	MULTI-CANE (3 MIN.)
☉	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	FACU	59	4' O.C.	18" HT.	FULL & BUSHY
☉	RUBUS SPECTABILIS	SALMONBERRY	FAC	28	4' O.C.	18" HT.	MULTI-CANE (3 MIN.)
☉	SYMPHORICARPOS ALBUS	COMMON SNOWBERRY	FACU	33	4' O.C.	18" HT.	MULTI-CANE (3 MIN.)

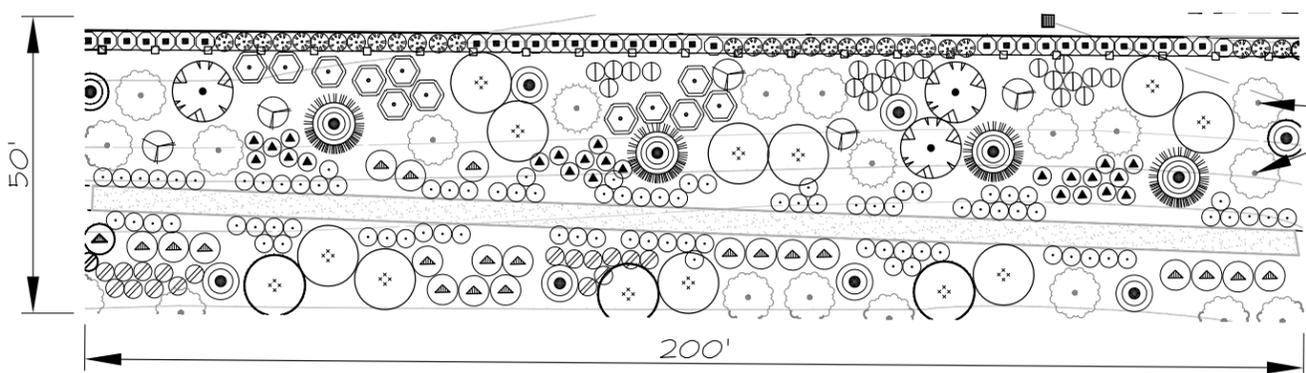


## 1 SLOPE PLANTING DETAIL



NOTES:  
 1. RAIL FENCE TO ALIGN WITH LAND GRADIENT.  
 2. TREAT WITH CLEAR PRESERVATIVE UPON COMPLETION OF INSTALLATION.  
 3. ALL FASTENERS TO BE GALVANIZED STEEL.

## 2 OPEN 2-BOARD FENCE DETAIL



NOTE: PLANT ONLY SHRUBS WITHIN 3' OF EXISTING UTILITY PIPES.

APPROX. LOCATION OF EXISTING/PRESERVED TREE OR SHRUB, TYP.

## PLANTING TYPICAL

SCALE: 1" = 30'

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FIGURE #6  
 CANDIDATE PLANT LIST, PLANTING TYPICAL & DETAILS  
 CONCEPTUAL MITIGATION PLAN  
 BELLEVUE BMW  
 BELLEVUE, WASHINGTON

DESIGN	DRAWN	PROJECT
ABS	ABS	1566
SCALE		
NTS		
DATE		
12-8-2015		
REVISED		

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## **APPENDIX A**

### **WETLAND DETERMINATION DATA FORMS**

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: BMW Bellevue (TAL-1566) City/County: Bellevue/King Sampling Date: 11/12/2015  
 Applicant/Owner: Autonation State: WA Sampling Point: UPL1  
 Investigator(s): J. Marriott, E. Warren Section, Township, Range: 28.25N.5E  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 20  
 Subregion (LRR): A Lat: 47.62999 Long: -122.18118 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Seattle Muck (Sk) NWI classification: PFOC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: <b>Sample point located on the slope between the wetland line and the Granger building. Uplands are only on fill slopes between wetland and the surrounding developments.</b>					

**VEGETATION – Use scientific names of plants**

<u>Tree Stratum</u> (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>																
1. <u><i>Pseudotsuga menziesii</i></u>	<u>40</u>	<u>yes</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
2. <u><i>Thuja plicata</i></u>	<u>10</u>	<u>no</u>	<u>FAC</u>																	
3. <u><i>Alnus rubra</i></u>	<u>10</u>	<u>no</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u> )																				
1. <u><i>Rubus armeniacus</i></u>	<u>90</u>	<u>yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>45</u> , 20% = <u>18</u>	<u>90</u>	= Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5 ft</u> )																				
1. <u><i>None</i></u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15 ft</u> )																				
1. <u><i>None</i></u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____																				
<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;"><b>Hydrophytic Vegetation Present?</b></td> <td style="width: 10%;">Yes <input type="checkbox"/></td> <td style="width: 10%;">No <input checked="" type="checkbox"/></td> </tr> </table>				<b>Hydrophytic Vegetation Present?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>														
<b>Hydrophytic Vegetation Present?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>																		

Remarks:

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	<u>10YR 4/2</u>	<u>100</u>	_____	_____	_____	_____	<u>SL</u>	<u>no redox features</u>
5"	_____	_____	_____	_____	_____	_____	_____	<u>mechanical refusal</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
<sup>1</sup> Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<b>Restrictive Layer (if present):</b>					<b>Hydric Soils Present?</b>			
Type: _____					Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Depth (inches): _____								
Remarks: Mechanical refusal at 5", incredibly thick roots, on hillslope - geomorphic position such that you wouldn't expect hydric soils, man made fill slope from construction of Granger Site many years ago.								

**HYDROLOGY**

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> High Water Table (A2)	<b>(except MLRA 1, 2, 4A, and 4B)</b>	<b>(MLRA 1, 2, 4A, and 4B)</b>	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	_____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No evidence of hydrology present within this area.			

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: BMW Bellevue (TAL-1566) City/County: Bellevue/King Sampling Date: 11/12/2015  
 Applicant/Owner: Autonation State: WA Sampling Point: Wet1  
 Investigator(s): J. Marriott, E. Warren Section, Township, Range: 28.25N.5E  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1  
 Subregion (LRR): A Lat: 47.62996 Long: -122.18125 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Seattle Muck (Sk) NWI classification: PFOC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: <b>Sample point located in the northeast portion of the wetland near the delineated boundary. Wetland receives numerous stormwater inputs and the outlet is controlled to some extent by a beaver dam. Feature labeled as Wetland A and it occurs immediately south of the project's southern boundary.</b>					

**VEGETATION – Use scientific names of plants**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. <u><i>Alnus rubra</i></u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; border: none;">Total % Cover of:</td> <td style="text-align: center; border: none;">Multiply by:</td> </tr> <tr> <td style="border: none;">OBL species _____</td> <td style="border: none;">x1 = _____</td> </tr> <tr> <td style="border: none;">FACW species _____</td> <td style="border: none;">x2 = _____</td> </tr> <tr> <td style="border: none;">FAC species _____</td> <td style="border: none;">x3 = _____</td> </tr> <tr> <td style="border: none;">FACU species _____</td> <td style="border: none;">x4 = _____</td> </tr> <tr> <td style="border: none;">UPL species _____</td> <td style="border: none;">x5 = _____</td> </tr> <tr> <td style="border: none;">Column Totals: _____ (A)</td> <td style="border: none;">_____ (B)</td> </tr> <tr> <td colspan="2" style="border: none; text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
<u>Sapling/Shrub Stratum (Plot size: 15 ft)</u>																				
1. <u><i>Alnus rubra</i></u>	<u>10</u>	<u>yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover																		
<u>Herb Stratum (Plot size: 5 ft)</u>																				
1. <u><i>Oenanthe sarmentosa</i></u>	<u>40</u>	<u>yes</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Rubus armeniacus</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>																	
3. <u><i>Equisetum arvense</i></u>	<u>1</u>	<u>no</u>	<u>FAC</u>																	
4. <u><i>Juncus effusus</i></u>	<u>5</u>	<u>no</u>	<u>FACW</u>																	
5. <u><i>Carex obtusa</i></u>	<u>1</u>	<u>no</u>	<u>OBL</u>																	
6. <u><i>Chamaenerion angustifolium</i></u>	<u>3</u>	<u>no</u>	<u>FACU</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = <u>27.5</u> , 20% = <u>11</u>	<u>55</u>	= Total Cover																		
<u>Woody Vine Stratum (Plot size: 30 ft)</u>																				
1. <u><i>None</i></u>	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____																				

Remarks:

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	<u>10YR 2/1</u>	<u>100</u>	_____	_____	_____	_____	<u>SL</u>	_____
8-12	<u>10YR 3/1</u>	<u>85</u>	<u>5YR 4/6</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>SiL</u>	_____
_____	_____	_____	<u>10YR 5/2</u>	<u>10</u>	<u>D</u>	<u>M</u>	<u>SiL</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
<sup>1</sup> Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<b>Restrictive Layer (if present):</b>					<b>Hydric Soils Present?</b>			
Type: _____					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Depth (inches): _____								
Remarks:    Organic material was present within this wetland at other locations, but not at this sample point.								

**HYDROLOGY**

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input checked="" type="checkbox"/> High Water Table (A2)	<b>(except MLRA 1, 2, 4A, and 4B)</b>	<b>(MLRA 1, 2, 4A, and 4B)</b>	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>	
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>8 in</u>		
Saturation Present? (includes capillary fringe)    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>6 in</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

## **APPENDIX B**

### **WETLAND RATING FORM**

Wetland name or number   A  

**WETLAND RATING FORM – WESTERN WASHINGTON**

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users  
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): TAL- 1566 Wetland A Date of site visit: Nov 12, 2015

Rated by Jennifer M. Marriott Trained by Ecology? Yes  No  Date of training 04/15

SEC: 28 TOWNSHIP: 25 RANGE: 5 Is S/T/R in Appendix D? Yes  No

Map of wetland unit: Figure        Estimated size 4.5 acres

**SUMMARY OF RATING**

**Category based on FUNCTIONS provided by wetland**

I  II  III  IV

Category I = Score >=70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	28
Score for Hydrologic Functions	6
Score for Habitat Functions	19
<b>TOTAL score for Functions</b>	<b>53</b>

**Category based on SPECIAL CHARACTERISTICS of wetland**

I  II  Does not Apply

<b>Cat. II</b>
----------------

**Final Category** (choose the “highest” category from above)

**Summary of basic information about the wetland unit**

Wetland Unit has Special Characteristics	Wetland HGM Class used for Rating	
Estuarine	Depressional	<input checked="" type="checkbox"/>
Natural Heritage Wetland	Riverine	<input type="checkbox"/>
Bog	Lake-fringe	<input type="checkbox"/>
Mature Forest	Slope	<input type="checkbox"/>
Old Growth Forest	Flats	<input type="checkbox"/>
Coastal Lagoon	Freshwater Tidal	<input type="checkbox"/>
Interdunal		<input type="checkbox"/>
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

<b>Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)</b>	<b>YES</b>	<b>NO</b>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal or plant</b> species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		✓
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

*To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.*

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.**

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?  
NO – go to 2                      YES – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – **Freshwater Tidal Fringe**    NO – **Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.  
NO – go to 3                      YES – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?  
\_\_\_ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;  
\_\_\_ At least 30% of the open water area is deeper than 6.6 ft (2 m)?  
NO – go to 4                      YES – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?  
\_\_\_ The wetland is on a slope (*slope can be very gradual*),  
\_\_\_ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.  
\_\_\_ The water leaves the wetland **without being impounded**?  
NOTE: *Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).*  
NO - go to 5                      YES – The wetland class is **Slope**

**5. Does the entire wetland unit meet all of the following criteria?**

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river

The overbank flooding occurs at least once every two years.

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

NO - go to 6      **YES** – The wetland class is **Riverine**

**6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.**

NO – go to 7      **YES** – The wetland class is **Depressional**

**7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.**

NO – go to 8      **YES** – The wetland class is **Depressional**

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM Classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

<b>D Depressional and Flats Wetlands</b>		<b>Points</b> (only 1 score per box)
<b>WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality</b>		
<b>D</b>	<b>D 1. Does the wetland unit have the <u>potential</u> to improve water quality?</b>	<i>(see p.38)</i>
<b>D</b>	<p>D 1.1 Characteristics of surface water flows out of the wetland:                      Unit is a depression with no surface water leaving it (no outlet) points = 3                      Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2                      Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>) points = 1                      Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> and/or outlet is a man-made ditch points = 1                      (<i>If ditch is not permanently flowing treat unit as "intermittently flowing"</i>)</p> <p style="text-align: right;">Provide photo or drawing</p>	Figure ___  1
<b>D</b>	<p>S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>)</p> <p>YES points = 4 NO points = 0</p>	4
<b>D</b>	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)</p> <p>Wetland has persistent, ungrazed, vegetation &gt; = 95% of area points = 5                      Wetland has persistent, ungrazed, vegetation &gt; = 1/2 of area points = 3                      Wetland has persistent, ungrazed vegetation &gt; = 1/10 of area points = 1                      Wetland has persistent, ungrazed vegetation &lt; 1/10 of area points = 0</p> <p style="text-align: right;">Map of Cowardin vegetation classes</p>	Figure ___  5
<b>D</b>	<p>D1.4 Characteristics of seasonal ponding or inundation.  <i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; 1/2 total area of wetland points = 4                      Area seasonally ponded is &gt; 1/4 total area of wetland points = 2                      Area seasonally ponded is &lt; 1/4 total area of wetland points = 0</p> <p style="text-align: right;">Map of Hydroperiods</p>	Figure ___  4
<b>D</b>	<b>Total for D 1</b>	<i>Add the points in the boxes above</i> 14
<b>D</b>	<b>D 2. Does the wetland unit have the <u>opportunity</u> to improve water quality?</b>	<i>(see p. 44)</i>
	<p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft  <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland  <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland  <input checked="" type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging  <input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland  <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen  <input type="checkbox"/> Other _____</p> <p><b>YES multiplier is 2      NO multiplier is 1</b></p>	multiplier  2
<b>D</b>	<b>TOTAL - Water Quality Functions</b>	Multiply the score from D1 by D2 <i>Add score to table on p. 1</i> 28

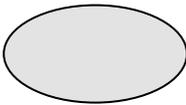
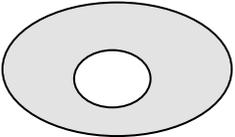
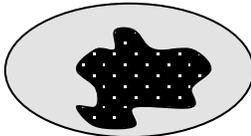
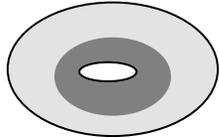
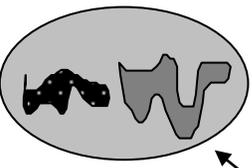
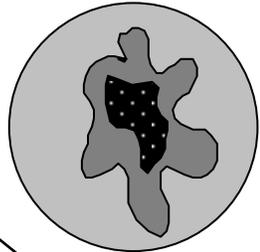
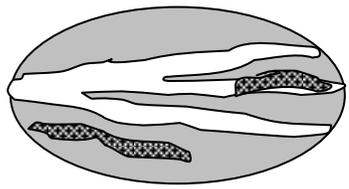
Comments: Beaver dam controls the outlet.

<b>D Depressional and Flats Wetlands</b>		<b>Points</b>
HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation		(only 1 score per box)
	<b>D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?</b>	<i>(see p.46)</i>
<b>D</b>	<p>D 3.1 Characteristics of surface water flows out of the wetland unit</p> <p>Unit is a depression with no surface water leaving it (no outlet) points = 4</p> <p>Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2</p> <p>Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> and/or outlet is a man-made ditch points = 1</p> <p><i>(If ditch is not permanently flowing treat unit as "intermittently flowing")</i></p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>) points = 0</p>	0
<b>D</b>	<p>D 3.2 Depth of storage during wet periods</p> <p><i>Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i></p> <p>Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7</p> <p>The wetland is a "headwater" wetland points = 5</p> <p>Marks of ponding between 2 ft to &lt; 3 ft from surface or bottom of outlet points = 5</p> <p>Marks are at least 0.5 ft to &lt; 2 ft from surface or bottom of outlet points = 3</p> <p>Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1</p> <p>Marks of ponding less than 0.5 ft points = 0</p>	0
<b>D</b>	<p>D 3.3 Contribution of wetland unit to storage in the watershed</p> <p><i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i></p> <p>The area of the basin is less than 10 times the area of unit points = 5</p> <p>The area of the basin is 10 to 100 times the area of the unit points = 3</p> <p>The area of the basin is more than 100 times the area of the unit points = 0</p> <p>Entire unit is in the FLATS class points = 5</p>	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	<b>3</b>
<b>D</b>	<p><b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b></p> <p>Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur.</p> <p><i>Note which of the following indicators of opportunity apply.</i></p> <p>— Wetland is in a headwater of a river or stream that has flooding problems</p> <p><input checked="" type="checkbox"/> Wetland drains to a river or stream that has flooding problems</p> <p>— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems</p> <p>— Other _____</p> <p><b>YES multiplier is 2      NO multiplier is 1</b></p>	<i>(see p. 49)</i>  multiplier  2
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	<b>6</b>

Comments: Beaver dam controls the outlet

<b>These questions apply to wetlands of all HGM classes.</b>		<b>Points</b> (only 1 score per box)											
<b>HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat</b>													
<b>H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?</b>													
<p><b>H 1.1 Vegetation structure (see p. 72)</b>            Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres.</p> <p><input type="checkbox"/> Aquatic bed  <input type="checkbox"/> Emergent plants  <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have &gt;30% cover)  <input checked="" type="checkbox"/> Forested (areas where trees have &gt;30% cover)</p> <p>If the unit has a forested class check if:  <input checked="" type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon</p> <p>Add the number of vegetation structures that qualify. If you have:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="width: 25%;">4 structures or more</td> <td style="width: 25%;">points = 4</td> </tr> <tr> <td></td> <td>3 structures</td> <td>points = 2</td> </tr> <tr> <td></td> <td>2 structures</td> <td>points = 1</td> </tr> <tr> <td></td> <td>1 structure</td> <td>points = 0</td> </tr> </table> <p>Map of Cowardin vegetation classes</p>		4 structures or more	points = 4		3 structures	points = 2		2 structures	points = 1		1 structure	points = 0	<p><b>Figure</b> <u>    </u></p> <p style="font-size: 2em;">2</p>
	4 structures or more	points = 4											
	3 structures	points = 2											
	2 structures	points = 1											
	1 structure	points = 0											
<p><b>H 1.2. Hydroperiods (see p. 73)</b>            Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><input checked="" type="checkbox"/> Permanently flooded or inundated</td> <td style="width: 25%;">4 or more types present</td> <td style="width: 25%;">points = 3</td> </tr> <tr> <td><input type="checkbox"/> Seasonally flooded or inundated</td> <td>3 types present</td> <td>points = 2</td> </tr> <tr> <td><input checked="" type="checkbox"/> Occasionally flooded or inundated</td> <td>2 types present</td> <td>point = 1</td> </tr> <tr> <td><input type="checkbox"/> Saturated only</td> <td>1 type present</td> <td>points = 0</td> </tr> </table> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland  <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> <b>Lake-fringe wetland = 2 points</b>  <input type="checkbox"/> <b>Freshwater tidal wetland = 2 points</b></p> <p style="text-align: right;">Map of hydroperiods</p>	<input checked="" type="checkbox"/> Permanently flooded or inundated	4 or more types present	points = 3	<input type="checkbox"/> Seasonally flooded or inundated	3 types present	points = 2	<input checked="" type="checkbox"/> Occasionally flooded or inundated	2 types present	point = 1	<input type="checkbox"/> Saturated only	1 type present	points = 0	<p><b>Figure</b> <u>    </u></p> <p style="font-size: 2em;">2</p>
<input checked="" type="checkbox"/> Permanently flooded or inundated	4 or more types present	points = 3											
<input type="checkbox"/> Seasonally flooded or inundated	3 types present	points = 2											
<input checked="" type="checkbox"/> Occasionally flooded or inundated	2 types present	point = 1											
<input type="checkbox"/> Saturated only	1 type present	points = 0											
<p><b>H 1.3. Richness of Plant Species (see p. 75)</b>            Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)            You do not have to name the species.            Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle</p> <p style="text-align: center;">If you counted:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="width: 25%;">&gt; 19 species</td> <td style="width: 25%;">points = 2</td> </tr> <tr> <td></td> <td>5 - 19 species</td> <td>points = 1</td> </tr> <tr> <td></td> <td>&lt; 5 species</td> <td>points = 0</td> </tr> </table> <p>List species below if you want to:</p>		> 19 species	points = 2		5 - 19 species	points = 1		< 5 species	points = 0	<p style="font-size: 2em;">2</p>			
	> 19 species	points = 2											
	5 - 19 species	points = 1											
	< 5 species	points = 0											

Total for page      **6**

<p><b>H 1.4. Interspersion of habitats (see p. 76)</b> Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  <p>High = 3 points</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  <p>High = 3 points</p> </div> <div style="text-align: center;">  <p>[riparian braided channels]</p> </div> </div> <p>NOTE: If you have four or more classes or three vegetation classes and open water the rating is always “high”. Use map of Cowardin vegetation classes</p>	<p><b>Figure</b> <u>    </u></p> <p style="font-size: 2em;">3</p>
<p><b>H 1.5. Special Habitat Features: (see p. 77)</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</li> <li><input checked="" type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</li> <li><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)</li> <li><input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet turned grey/brown</i>)</li> <li><input checked="" type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (<i>structures for egg-laying by amphibians</i>)</li> <li><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</li> </ul> <p>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</p>	<p>5</p>
<p><b>H 1. TOTAL</b> Score - potential for providing habitat <i>Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5</i></p>	<p>14</p>

**Comments**

<p><b>H 2. Does the wetland unit have the opportunity to provide habitat for many species?</b></p>	
<p><b>H 2.1 Buffers (see p. 80)</b>  <i>Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <ul style="list-style-type: none"> <li>— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) <b>Points = 5</b></li> <li>— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference. <b>Points = 4</b></li> <li>— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference. <b>Points = 4</b></li> <li>— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference, . <b>Points = 3</b></li> <li>— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. <b>Points = 3</b></li> </ul> <p style="text-align: center;"><b>If buffer does not meet any of the criteria above</b></p> <ul style="list-style-type: none"> <li>— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK. <b>Points = 2</b></li> <li>— No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK. <b>Points = 2</b></li> <li>— Heavy grazing in buffer. <b>Points = 1</b></li> <li>— Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) <b>Points = 0.</b></li> <li>✓ — Buffer does not meet any of the criteria above. <b>Points = 1</b></li> </ul> <p style="text-align: right;">Aerial photo showing buffers</p>	<p><b>Figure</b> <u>    </u></p> <p style="text-align: center;">1</p>
<p><b>H 2.2 Corridors and Connections (see p. 81)</b></p> <p>H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (<i>dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor</i>).</p> <p style="text-align: center;">YES = <b>4 points</b> (go to H 2.3)                      NO = go to H 2.2.2</p> <p>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? <b>OR</b> a <b>Lake-fringe</b> wetland, if it does not have an undisturbed corridor as in the question above?</p> <p style="text-align: center;">YES = <b>2 points</b> (go to H 2.3)                      NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <ul style="list-style-type: none"> <li>within 5 mi (8km) of a brackish or salt water estuary OR</li> <li>within 3 mi of a large field or pasture (&gt;40 acres) OR</li> <li>within 1 mi of a lake greater than 20 acres?</li> </ul> <p style="text-align: center;">YES = <b>1 point</b>    NO = <b>0 points</b></p>	<p style="text-align: center;">0</p>

Total for page     1

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report <http://wdfw.wa.gov/hab/phslist.htm> )

Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*

- Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre).
  - Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*).
  - Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
  - Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
  - Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*).
  - Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
  - Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*).
  - Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
  - Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A*).
  - Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
  - Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
  - Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
  - Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long.
    - If wetland has **3 or more** priority habitats = **4 points**
    - If wetland has **2** priority habitats = **3 points**
    - If wetland has **1** priority habitat = **1 point**                      No habitats = 0 points
- Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)*

1

Wetland name or number   A  

<p>H 2.4 <u>Wetland Landscape</u> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>) (<i>see p. 84</i>)</p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. <span style="float: right;">points = 5</span></p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile <span style="float: right;">points = 5</span></p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed <span style="float: right;">points = 3</span></p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile <span style="float: right;">points = 3</span></p> <p>There is at least 1 wetland within ½ mile. <span style="float: right;">points = 2</span></p> <p>There are no wetlands within ½ mile. <span style="float: right;">points = 0</span></p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	5
<p>TOTAL for H 1 from page 14</p>	14
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	<b>19</b>



<p><b>SC 2.0 Natural Heritage Wetlands (see p. 87)</b>          Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.</p> <p>SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? <i>(this question is used to screen out most sites before you need to contact WNHP/DNR)</i>          S/T/R information from Appendix D ___ or accessed from WNHP/DNR web site ___</p> <p>YES ___ – contact WNHP/DNR (see p. 79) and go to SC 2.2                      NO ___</p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?          YES = Category I    NO ___ not a Heritage Wetland</p>	<p>No</p>
<p><b>SC 3.0 Bogs (see p. 87)</b>          Does the wetland unit (<b>or any part of the unit</b>) meet both the criteria for soils and vegetation in bogs? <i>Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3    No - go to Q. 2</p> <p>2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?          Yes - go to Q. 3    No - Is not a bog for purpose of rating</p> <p>3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the “bog” species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?          Yes – Is a bog for purpose of rating                      No - go to Q. 4</p> <p>NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16” deep. If the pH is less than 5.0 and the “bog” plant species in Table 3 are present, the wetland is a bog.</p> <p>1. Is the unit forested (&gt; 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann’s spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (&gt; 30% coverage of the total shrub/herbaceous cover)?</p> <p>2. YES = Category I    No ___ Is not a bog for purpose of rating</p>	<p>No</p>

<p><b>SC 4.0 Forested Wetlands (see p. 90)</b>                  Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife’s forests as priority habitats? <i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— <b>Old-growth forests:</b> (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.</li> </ul> <p>NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and “OR” so old-growth forests do not necessarily have to have trees of this diameter.</p> <ul style="list-style-type: none"> <li>— <b>Mature forests:</b> (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</li> </ul> <p>YES = Category I                      NO ___ not a forested wetland with special characteristics</p>	<p>No</p>
<p><b>SC 5.0 Wetlands in Coastal Lagoons (see p. 91)</b>                  Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <li>— The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</li> <li>— The lagoon in which the wetland is located contains surface water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</li> </ul> <p>YES = Go to SC 5.1                      NO ___ not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meets all of the following three conditions?</p> <ul style="list-style-type: none"> <li>— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</li> <li>— The wetland is larger than 1/10 acre (4350 square feet)</li> </ul> <p>YES = Category I                      NO = Category II</p>	<p>No</p>

<p><b>SC 6.0 Interdunal Wetlands (see p. 93)</b>          Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?          YES - go to SC 6.1                      NO __ not an interdunal wetland for rating  <i><b>If you answer yes you will still need to rate the wetland based on its functions.</b></i>          In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>• Long Beach Peninsula- lands west of SR 103</li> <li>• Grayland-Westport- lands west of SR 105</li> <li>• Ocean Shores-Copalis- lands west of SR 115 and SR 109</li> </ul> <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?          YES = Category II                      NO – go to SC 6.2</p> <p>SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?          YES = Category III</p>	<p>No</p>
<p><b>Category of wetland based on Special Characteristics</b>  <i>Choose the “highest” rating if wetland falls into several categories, and record on p. 1.</i>          If you answered NO for all types enter “Not Applicable” on p.1</p>	<p><b>NA</b></p>

## **APPENDIX C**

### **CITY OF BELLEVUE HABITAT RATING FORM**

**City of Bellevue**  
**DRAFT FUNCTIONAL ASSESSMENT TOOL**  
**for Upland Habitat**

Property address 11959 Northrup Way  
 Location Range SE Township 25N Section 28  
 Parcel number 2825059047  
 Property owner \_\_\_\_\_  
 Telephone number (\_\_\_\_) - \_\_\_\_ - \_\_\_\_\_

Project name BMW of Bellevue  
 Project contact Larry Tidwell, Stantec  
 Telephone number (949) - 923 - 6903  
 Address 38 Technology Dr, Ste 100, Irvine, CA 92618

Staff Jennifer M. Marriott, PWS

Date(s) of site visit(s) 11/12/15

Washington Department of Fish and Wildlife Priority Habitat and Species (PHS) data obtained? Y/N Y

1.0	PROPERTY DESIGNATION	Zone A	Zone B	Zone C	Zone D		Zone
1.1	Existing impervious surface	>90%	50-90%	20-50%	0-20%		<u>B</u>
2.0	LANDSCAPE PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
2.1	Land use/development density	Zone A	Zone B	Zone C	Zone D		<u>1</u>
2.2	*Occurrence (number) of habitat types	0	1	2	3+		<u>2</u>
2.3	**Proximity of known critical areas (distance to edge)	>2,500 ft	<2,500 ft	<1,200 ft	<100 ft	+1 point if contiguous with critical area	<u>4</u>
2.4	Habitat connectivity and corridors	No connection to other habitat areas	≥50-foot-wide connection to vegetated areas of at least 1 acre	≥50-foot-wide connection to vegetated areas of at least 50 acres but not listed parks***	≥50-foot-wide connection King County wildlife network or listed parks***	+1 point for ≥150-foot-wide connection King County wildlife network or listed parks***	<u>1</u>
2.5	Patch size	<0.-1.0 ac	1.0-5.0 ac	>5-10 ac	10-42 acres	>42 acres = 4 points	<u>1</u>

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**City of Bellevue**  
**DRAFT FUNCTIONAL ASSESSMENT TOOL**  
for upland habitat

2.0	LANDSCAPE PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
2.6	Interspersion of habitat patches (excluding patches <1 ac in area)	No or isolated patch (no others within 0.5-ac circle)	Low	Moderate	High	+1 point if wildlife network or listed park is included	0
3.0	LOCAL PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
3.1	Size of native trees on site	No significant trees on site	6-12" dbh tree(s) present	12-20" dbh tree(s) present	>20" dbh tree(s) present	+1 point if tree(s) >30" dbh are present	2
3.2	Coniferous component	No conifers on site	Conifers very sparse or present in understory only	Conifers co- or sub-dominant in overstory	Conifers dominant	+1 point if conifers >30" dbh are present	1
3.3	Percent cover (sample vegetated areas only)						
	Ground layer (0-2.3 ft) (5-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%; -1 point if mowed grass is >50%	1
	Shrub layer (2.3-25 ft) (10-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	0
	Canopy (>25 ft) (30-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	1
3.4	Vegetative vertical structural diversity (foliage height diversity)	FHD = 0	FHD < 0.70	FHD = 0.70-0.90	FHD > 0.90		3
3.5	Vegetative species richness	0-1 species	2-5 species	6-19 species	20+ species		2
3.6	Invasive species component	>75% cover	25-75% cover	10-25% cover	<10% cover		1

City of Bellevue  
**DRAFT FUNCTIONAL ASSESSMENT TOOL**  
for Upland Habitat

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3.0	LOCAL PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
3.7	<b>Proximity to year-round water</b>	>1.0 mi or artificial feature with maintained /invasive buffer present within 0.3-1 mi	0.3-1.0 mi or artificial feature with maintained/ invasive buffer present within <0.3 mi	<0.3 mi or artificial feature with maintained/ invasive buffer present within patch	Natural water feature present within patch with native buffer		2
3.8	<b>Snags (≥4 in dbh)</b>	No snags on site	1/ac or fewer	2-6/ac	>7/ac	Add 0.5 point for each >20 in dbh and 1 point for each >30 in dbh	0
3.9	<b>Other habitat features</b>	None	1	2-4	5 or more		2
<b>Landscape parameters points</b>							9
<b>Local parameters points</b>							15
<b>TOTAL POINTS</b>							24

\* Use circle of the appropriate size for the property's zone:

- Zone A – 0.5 ac
- Zone B – 5.0 ac
- Zone C – 100 ac
- Zone D – 250 ac

\*\* PHS data required for sites in Zone D

\*\*\*Parks: Mercer Slough, Phantom Lake wetland complex, Larson Lake wetland complex, Cougar Mountain Regional Wildland Park, Weowna Park; King County wildlife network

## **APPENDIX D**

# **VEGETATIVE MANAGEMENT PLAN**

# VEGETATION MANAGEMENT PLAN

## Bellevue BMW

### Bellevue, Washington

December 9, 2015

This Vegetation Management Plan (VMP) is intended to guide general landscape maintenance practices for the Bellevue BMW Site, as well as maintenance practices for the mitigation area. The goal of the VMP is to ensure long-term vegetation management that is consistent with the objectives and performance standards of the mitigation plan approved by the City of Bellevue in conjunction with the approval of the Critical Areas Report. This includes vegetation management techniques as well as restrictions on activities in buffers.

The VMP is intended for general application. Enforcement of the VMP shall be the responsibility of Bellevue BMW, or their representative, hereinafter referred to as "BMW". This VMP is adopted for the following purposes, which shall be considered in the administration of this plan. They are as follows:

- To preserve and enhance the physical and aesthetic character and ecological functions of the critical areas and buffers on the site;
- To promote landscape maintenance practices that result in a minimal disturbance to the natural environment;
- To promote the existence of wildlife through the establishment of native plantings;
- To allow future replanting and augmentation of native vegetation;
- To ensure prompt restoration, replanting, and effective erosion control of soil disturbances;
- To prevent and/or control erosion, and prevent stray sediment and polluted water from entering the adjacent natural systems;
- To promote maintenance practices that are consistent with the Goals, Objectives and Performance Standards of the approved Mitigation Plan prepared by Talasaea Consultants;
- To support the goals and policies of the State of Washington Environmental Policy Act, the Federal Endangered Species Act, and the Clean Water Act;
- To maintain the Site in accordance with City of Bellevue Code.

## 1.0 GENERAL SITE LANDSCAPE MAINTENANCE & MANAGEMENT

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### 1.1 Fertilizer

Any fertilizer shall be carefully applied to avoid direct and indirect entry of fertilizer into streams or water bodies. In order to accurately determine fertilizer inputs, it is recommended that a soil sample be collected by BMW for sampling of the major nutrients Nitrogen, Phosphorous, and Potassium (NPK), micronutrients, pH, and organic matter. The King Conservation District has a soil testing laboratory that will send back recommendations specific to the site and plant material so that the appropriate type and amount of fertilizer can be applied and potential contamination of surface and groundwater resulting from excess fertilizer can be avoided.

## 1.2 Control of Invasive/Noxious Species

Non-native and noxious species include Scot's broom, Himalayan and evergreen blackberry, reed canarygrass, purple loosestrife, field bindweed, knotweed sp., English ivy, Canada thistle, and bittersweet nightshade. Herbicides shall be utilized only if manual control methods are not effective. Rodeo, or an equivalent approved by the City of Bellevue (such as Aquamaster), shall be the only herbicide allowed in the protected critical areas. Recommendations for manual and chemical removal of invasive/ noxious weed species shall be in compliance with the Best Management Practices established by the King County Noxious Weed Control Board. All invasive/noxious weeds or other non-native species shall be systematically and periodically removed on a specimen-by-specimen basis and disposed of off-site at an approved dump location.

## 2.0 CRITICAL AREAS MAINTENANCE & MANAGEMENT

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After the conclusion of the 5-year performance monitoring period, maintenance of the mitigation areas and protection of on-site critical areas shall be the responsibility of BMW, who shall:

- Ensure the ongoing protection of the critical area buffer by encouraging people and pets to stay within designated areas.
- Ensure removal of all trash and debris on a routine basis.
- Coordinate the immediate control and/or removal of any erosion, stray sediment, and polluted water.
- Coordinate the protection of the installed native plant material.
- Provide routine maintenance of all newly planted (or replanted) vegetation.
- Ensure the removal of invasive/noxious species as listed on the King County Noxious Species List.
- Coordinate cleaning and maintenance of signage to maintain visibility and repair damage.
- Provide maintenance for all structures (e.g., culverts, etc.) that are required to be cleaned and repaired as needed to maintain proper function.

### 2.1 Maintenance Schedule Guidelines

BMW shall inspect the restored critical areas and shall take action to adequately address intrusion of invasive/noxious species; trash and debris, erosion, stray sediment, and/or polluted water; and plant mortality on a routine basis. It is recommended that these inspections be performed on a quarterly basis each year.

### 2.2 Contingency Items

Contingency items include, but are not limited to: additional plant installation, irrigation, erosion control, and invasive/noxious species control (Section 1.3 below). Contingency items include many of the items listed below, and shall be implemented if the purposes for adopting the VMP, as defined on page one, are not met.

Replanting – BMW will replant areas that may experience plant mortality as necessary to maintain plant survival. Areas will be replanted with the same species or a substitute species approved by the City of Bellevue.

Irrigation -- BMW shall coordinate the watering of any newly installed plants from June 15<sup>th</sup> through October 15<sup>th</sup>. Watering shall be by manual means or through provision of a temporary irrigation system. During the first year after re-planting, irrigation shall be at the rate of 1/2" of water twice per week. During the second year, irrigation shall be at the rate of 1/2" of water once per week.

Erosion Control – BMW shall promptly coordinate the correction of any erosion and shall prevent any stray sediment or polluted water from entering adjacent water bodies.

### **2.3 Control of Invasive/Noxious Species**

BMW shall coordinate the routine removal and control of invasive/noxious weeds or other non-native species with the goal of maintaining them below 10% of the total areal cover in the protected natural areas. These non-native and noxious species include Scot's broom, Himalayan and evergreen blackberry, reed canarygrass, purple loosestrife, field bindweed, Japanese knotweed, English ivy, Canada thistle, and bittersweet nightshade. Complete or near-complete removal of these species shall be performed by manual means whenever reasonably possible. Herbicides shall be utilized in the protected critical areas only if manual control methods are not effective. Rodeo, or an equivalent approved by King County (such as Aquamaster), will be the only herbicide allowed in the protected critical areas.

Recommendations for manual and chemical removal of invasive/ noxious weed species shall be in compliance with the Best Management Practices established by the King County Noxious Weed Control Board. All invasive/noxious weeds or other non-native species shall be systematically and periodically removed on a specimen-by-specimen basis and disposed of off-site at an approved dump location.

### **2.4 General Maintenance Items**

1. BMW shall coordinate the ongoing protection of the critical area by encouraging the public to stay within designated areas.
2. BMW shall coordinate the removal of all trash and other debris on a routine basis. Large and/or hazardous items or large accumulations shall be removed promptly upon their discovery.
3. BMW shall coordinate the routine maintenance of all newly planted trees and shrubs. These measures include maintaining and weeding mulch rings, including removal of all herbaceous plants within the mulch ring or dripline of all woody shrubs and trees. Invasive/noxious non-native plants shall be removed and/or controlled in all critical area.
4. BMW shall coordinate the pruning of trees and large woody plants (e.g., thinning and removal of dead or diseased portions of trees/shrubs) within the critical area at the direction of a qualified arborist.
5. BMW shall coordinate cleaning and maintenance of critical areas signage and check signage for visibility and damage. These efforts shall occur at least twice yearly.
6. BMW shall coordinate cleaning and maintenance of all structures (e.g., culverts, etc.) to be cleaned and repaired as needed to maintain proper function.
7. BMW acknowledges that the critical area is not to be maintained like traditional ornamental landscaping. Grasses and other herbaceous vegetation (other than reed canarygrass and other invasive/noxious species) shall be left alone.

## **2.5 Tree Protection and Maintenance**

All retained trees shall be maintained in healthy condition by BMW in perpetuity, unless otherwise approved by the City of Bellevue.

Pruning and maintenance of trees shall be consistent with best management practices in the field of arboriculture and shall further the long-term health of the tree. Excessive pruning shall not be allowed unless necessary to protect life and property.

Hazardous trees may be removed if the hazardous tree exhibits threat of injury to people or damage to property and if the City of Bellevue approves removal. The following conditions are some indications of a potentially hazardous tree:

- large dead or detached branches;
- significant cavities or rotten wood along the trunk or in major branches;
- fungal infection;
- significant cracks or splits in the bark;
- strong lean of the trunk;
- poor branching structure;
- a damaged root system;
- previously topped or heavily pruned.

The City requires that the hazardous condition of a tree be confirmed by a Certified Arborist and that all proper permits be obtained (per applicable City code) prior to tree removal, except in the event of an emergency that poses an imminent threat to human health and/or property.

***APPENDIX D***

**Environmental Site Assessment**

**Phase I Environmental Site Assessment  
Lowe's Home Improvement Center  
11959 Northup Way  
Bellevue, King County, Washington**

*Prepared For:*  
**AutoNation, Inc.**

**October 29, 2015**

*Prepared By:*  
**URS Corporation**

**URS Job No. 60444877**

October 29, 2015

AutoNation, Incorporated  
200 SW 1<sup>st</sup> Avenue, Suite 1400  
Fort Lauderdale, Florida 33301

Attention: Mr. Michael Archey  
Senior Counsel, Real Estate

**Re: Phase I Environmental Site Assessment Report  
Lowe's Home Improvement Center  
11959 Northup Way  
Bellevue, King County, Washington  
URS Job No. 60444877**

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Dear Mr. Archey:

Transmitted with this letter is our report titled "Phase I Environmental Site Assessment" for the "Lowe's Home Improvement Center" located at 11959 Northup Way in Bellevue, Washington. This letter also serves to allow the use of, and reliance on URS' Phase I Environmental Site Assessment Report, listed above (the Report), by AutoNation, Inc. and its affiliates, and Northwest Financial Group, Inc.

We trust this report provides you with the information you require at this time. Should you have any questions regarding the information presented in this report, or need further assistance, please contact me at 904.281.9251.

Sincerely,  
**URS Corporation**



Michael Emilio, CPM  
Project Manager

cc: file

## EXECUTIVE SUMMARY

URS Corporation (URS) was retained by AutoNation, Inc. (AutoNation) to conduct a Phase I Environmental Site Assessment (ESA) of the Lowe's Home Improvement Center located at 11959 Northup Way in Bellevue, King County, Washington (subject property). The purpose of URS' Phase I ESA was to evaluate whether current or historical activities on or near the subject property may have resulted in significant contamination by hazardous substances or wastes, also known as a Recognized Environmental Condition (REC).

URS has performed this Phase I ESA of the subject property in general conformance with the scope and limitations of the ASTM International (ASTM) Standard Practice for Environmental Site Assessments (Standard E 1527-13) and the United States Environmental Protection Agency (USEPA) 40 Code of Federal Regulations (CFR) Part 312 Standards and Practices for All Appropriate Inquiries (AAI) – Final Rule updated on December 30, 2013. The Phase I ESA was also performed in accordance with URS' proposal to AutoNation, dated September 28, 2015.

The subject property is developed as a Lowe's Home Improvement Center (Lowe's) located at 11959 Northup Way in Bellevue, King County, Washington. The subject property consists of two parcels. According to the King County Property Assessor (KCPA), the main eastern parcel (Parcel #: 282505-9047) is 8.59 acres and houses the 136,952 square foot Lowe's building which was constructed in 1993. The western auxiliary parcel is a portion of the Burlington Northern Railroad parcel (#282505-9038) and is developed with additional parking for Lowe's. The exterior of the subject property is developed with asphalt-paved parking surfaces and landscaping. A stormwater retention swale and pond are located along the southern property boundary.

Historical information was reviewed for the subject property dating back to 1895; however, the topographic maps from 1895 and 1897 did not depict individual site features on the subject property due to the map scales. One small structure was depicted on the northeastern portion of the subject property on the 1950 topographic map and, based on the previous investigations reviewed by URS (further discussed in **Section 3.4**), this structure was reportedly used as a residence, restaurant, and office from 1916 through 1992. The remainder of the site was undeveloped land prior to the 1960s. A large rectangular structure was developed near the center of the site in the early 1960s and reportedly operated as a grocery store until the early 1970s. The site was then redeveloped and operated as a candy factory, Vernell's Fine Candies, Inc., until the building was reportedly razed in 1991. The current subject building was reportedly constructed in 1993 and originally operated as Eagle Hardware & Garden. Since the early 2000s, the building has operated as Lowe's Home Improvement.

Hazardous substances observed included retail-sized containers of paints, fertilizers, pesticides, household cleaners, fuel additives, and other building maintenance and construction compounds located in various departments across the retail portion of the store as well as in the receiving area located in the southwest corner of the building. In addition, a hazardous material cage is located in the northwest corner of the building. The cage was observed to contain several 55-gallon polyethylene drums staged on wood pallets containing mold remover, spackle, insecticide, paint, spray foam, marine grease, roof coatings, fertilizers and adhesives. The retail area, receiving area, and hazardous materials cage appeared to be relatively free of stains and fairly well-maintained. A propane cage was observed in the eastern parking lot. According to site representatives, the propane is used to power the store's three fork lifts. Hazardous materials do not appear to represent a REC or an environmental concern to the subject property at this time.

Hazardous wastes observed on the subject property included a 55-gallon metal drum containing petroleum product and other flammable liquids that were stored in a fireproof cabinet in the hazmat cage. According to site representatives, PCS (Phillips) picks up the drums of used and returned substances as needed for regulated disposal. Waste manifests are maintained on site, but were not provided to URS for review. No staining was observed in the hazardous waste storage areas. Hazardous wastes do not represent a REC or an environmental concern to the subject property at this time.

During the site reconnaissance, URS did not observe evidence of any ASTs or USTs, such as vent pipes or fill ports. However, based on URS' review of the previous reports (further discussed in **Section 3.4**), three USTs were formerly associated with the subject property when it operated as the Vernell's Fine Candies factory. One 1,000-gallon gasoline UST northeast of the factory building was closed in 1987-1988. There is some discrepancy on whether the gasoline UST was removed from the ground or closed in place. In 1992, two 10,000-gallon diesel USTs were removed from an area west of the factory building. Further information on these former USTs is presented below.

No current aboveground hydraulic lift (AHL) or underground hydraulic lift (UHL) systems or evidence indicative of former AHLs or UHLs were observed at the subject property. In addition, the site representatives reported they were unaware of AHLs or UHLs formerly being located at the subject property.

No wells were observed or reported onsite at the time of the site reconnaissance.

Information from the regulatory database search conducted by EDR indicated that the subject property address of 11959 Northup Way was identified as **Lowes HIW 040** in the RCRA-NonGen (EPA ID: WAD173823568), UST, ICR, CSCSL NFA, MANIFEST, FINDS and ALLSITES (Facility/Site IDs: 36286977 and 9131) databases. RCRA-NonGen facilities do not presently generate or store hazardous waste and no violations were identified with the subject property's RCRA listing. The subject property previously maintained three steel USTs which were installed in 1964. Two of the three former tanks were reportedly removed and the third tank was reportedly closed in place in August 1996. The UST that was reportedly closed in place was reported to have been between 111 to 1,100 gallons in capacity. The EDR database did not provide additional details for these three former USTs. The ICR database indicates that petroleum impacted soils were identified and reported to the State of Washington Department of Ecology (DOE) from July to October 1992. The ALLSITES database lists the subject property in DOE HAZWASTE and TOXICS programs. The ALLSITES listing is related to the site's former operations which generated hazardous wastes, and its past use/maintenance of USTs. While the subject property was not listed in the LUST database by EDR, the ALLSITES TOXICS program identifies the site as a LUST facility. URS searched the DOE online Facility/Site database for additional information on the ALLSITES listings. The online listing confirmed the information presented by EDR and showed the subject property's LUST listing with a start date of June 4, 1992, and an end date of October 3, 2011. Prior to the end date listed, it was noted that an Initial Investigation / Federal Preliminary Assessment was completed on August 8, 2011. Subsequently, the Confirmed and Contaminated Site List - No Further Action (CSCSL NFA) listing indicates this facility achieved NFA status as of October 3, 2011. The information provided by EDR and obtained via DOE's online database corresponds to the removal of two former USTs and closure-in-place of the third former UST. A previous facility, **Vernell's Candy/Vernell's Fine Candies**, was also identified at the subject address in the RGA HWS and RGA LUST (Facility IDs: 36286977 and 9131) databases. This former facility was listed in the RGA HWS database in 2011 and in the RGA LUST database from 1995 through 2011. No additional

information was provided by EDR for these listings; however, it is URS' opinion that the referenced database listings are all related to the USTs previously described (and summarized) above in the **Lowe's** database listings.

Based upon site observations, a regulatory database review, a review of historical documents and information provided by AutoNation, URS identified the following RECs and potential vapor encroachment conditions (VECs) in association with current and historic operations at the subject property:

- Three USTs were formerly associated with the subject property when it operated as the Vernell's Fine Candies factory. The three tanks were reportedly installed in 1964. Based on URS' review of the previous investigation reports referenced in **Section 3.4**, two of these former tanks contained diesel and the third tank contained gasoline. The gasoline tank was reportedly located near the northeastern corner of the building and the two diesel tanks were reportedly located near the southwestern corner of the building. Both former diesel USTs were reportedly removed and the former gasoline UST was reportedly closed in place by August 1996. Petroleum impacts were discovered immediately below the two former diesel USTs and the impacted material was reportedly excavated to a final depth that varied between 13 and 15 feet below ground surface (bgs). The impacted material from the tank pit was remediated by land farming and it is unclear if it was re-spread in the area of the current loading docks or removed from site. The DOE granted NFA status as of October 3, 2011, for the related discharge. No documentation was provided to or obtained by URS confirming or denying that potential petroleum impacts remained from the former (closed-in-place) gasoline UST. Although NFA status has been issued for the discharge associated with the two former 10,000-gallon diesel USTs, it is URS' opinion that potential remaining soil impacts from these former USTs represent RECs at the subject property and potential VECs cannot be ruled out at this time.

Based on URS' review of environmental databases and a visual reconnaissance of the subject and adjacent properties, no properties of potential environmental concern were identified adjacent to or in the surrounding areas that could be reasonably expected to create a REC at the subject property at this time. None of the offsite properties are likely to be the source of potential VECs at the subject property, either by releases to the ground surface or through the migration of impacted groundwater.

The following other environmental, safety concerns, and/or recommended best management practices were identified on the subject property.

- Although ACMs are not anticipated to have been used during construction of the current subject building reportedly developed in 1993, it should be noted that additional inspection, including limited exploratory demolition and bulk sampling in accordance with EPA NESHAPS and OSHA requirements is required prior to any future renovation, demolition, and/or construction activities. If any building materials are identified by laboratory analysis to be ACMs, they should be removed by qualified abatement contractors in accordance with local, State and Federal regulations.

URS recommends that as part of the standard operating practices, property management should notify workers of the potential for the presence of ACM in the suspect non-friable materials, and modify the maintenance work procedures should the materials be disrupted due to repair or replacement activities. URS recommends that an asbestos Operations & Maintenance (O&M) Plan be prepared for the site to fulfill these recommendations.

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## 1.0 INTRODUCTION

URS Corporation (URS) was retained by AutoNation, Inc. (AutoNation) to conduct a Phase I Environmental Site Assessment (ESA) of the Lowe's Home Improvement Center located at 11959 Northup Way in Bellevue, King County, Washington (subject property). URS has performed this Phase I ESA of the subject property in general conformance with the scope and limitations of the ASTM International (ASTM) Standard Practice for Environmental Site Assessments (Standard E 1527-13) and the United States Environmental Protection Agency (USEPA) 40 Code of Federal Regulations (CFR) Part 312 Standards and Practices for All Appropriate Inquiries (AAI) – Final Rule updated on December 30, 2013. The Phase I ESA was also performed in accordance with URS' proposal to AutoNation dated September 28, 2015. The Phase I ESA objectives, scope, and limitations are presented in the following sections.

### 1.1 OBJECTIVE

The term “recognized environmental condition,” as defined by the ASTM Standard E 1527-13, means:

The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. Conditions determined to be *de minimis* are not recognized environmental conditions.

The publication of ASTM Standard E 1527-13 also includes the evaluation of environmental conditions as a controlled REC (CREC), a historical REC (HREC), or as a *de minimis* condition.

A CREC is defined as:

A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Conditions determined to be *de minimis* are not CRECs.

An HREC is defined as:

A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

A *de minimis* condition is defined as:

A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of

appropriate governmental agencies. Conditions determined to be *de minimis* are not RECs or CRECs.

## 1.2 SCOPE OF WORK

URS' Scope of Work for the Phase I ESA consisted of an inspection of the subject property and nearby area, a review of historical information on activities at the subject property, a review of readily available regulatory information concerning the subject property and other nearby properties of environmental concern, and preparation of a report detailing URS' results and conclusions. This environmental assessment was prepared in general conformance with URS' proposal to AutoNation dated September 28, 2015, which also references ASTM Standard E 1527-13. A more detailed description of the Scope of Work is presented as **Appendix A**.

## 1.3 LIMITING CONDITIONS

URS' site inspection included a walking inspection of areas that were accessible by foot (interior and exterior), and a drive-by inspection (exterior only) of surrounding and adjacent properties, including those properties identified in the environmental database search. No limiting conditions were encountered during URS' site inspection.

## 1.4 LIMITATIONS OF THE ASSESSMENT

This Phase I ESA report has been prepared pursuant to Article 7 of the executed Agreement for Professional Services (dated 12/27/99) and is for the exclusive use of AutoNation, Inc., and its affiliates. It is intended to provide these parties with an understanding of the potential for environmental contamination at the property assessed.

In assessing the subject property, URS has relied upon representations and information furnished by individuals noted in the report with respect to existing operations, property conditions and the historic uses to the extent that the information obtained has not been contradicted by data obtained from other sources. Accordingly, to the extent that URS should have and did rely solely upon information furnished orally, URS accepts no responsibility for any deficiency, misstatements or inaccuracy contained in this report as a result of misstatements, omissions, misrepresentations or fraudulent information provided by the persons interviewed.

## 1.5 VALIDITY

This Phase I ESA was conducted in general accordance with the recommended guidelines established by ASTM Standard E 1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process". This Phase I ESA is generally consistent with the standards and practices set forth in Title 40 Code of Federal Regulations (CFR) Part 312 for "All Appropriate Inquiry (AAI) - Final Rule, as updated on December 30, 2013. The following components of this report must be updated after one hundred eighty (180) days of the date of this report if the contemplated transaction has not taken place within that period of time:

1. Interviews with owners, operator and occupants;
2. Searches for recorded environmental cleanup liens;
3. Reviews of federal, tribal, state, and local Government records;

4. Visual inspection of the property and of adjoining properties; and
5. The declaration of the environmental professional responsible for the assessment or update.

#### **1.6 USER RELIANCE**

This report is intended to be used in its entirety, and excerpts are not considered representative of the results presented. The report is intended for the sole use of AutoNation, Inc., and its affiliates, and Northwest Financial Group, Inc. The Scope of Services performed during this investigation may not be appropriate for other users, and any use or reuse of this document, or the findings, conclusions, or recommendations presented herein, is at the sole risk of said user.

## 2.0 SITE DESCRIPTION

Information concerning the subject property was obtained from a site inspection conducted by Mr. Al Thatcher of URS on October 15, 2015, interviews with representatives of the property, and a review of the documents referenced in **Section 10.0** of this report. Mr. John Cafiero, Loss Prevention and Safety Manager for Lowes accompanied Mr. Thatcher during URS' site reconnaissance.

### 2.1 PHYSICAL LOCATION AND DESCRIPTION OF PROPERTY

The subject property is developed as a Lowe's Home Improvement Center (Lowe's) located at 11959 Northup Way in Bellevue, King County, Washington. The subject property consists of two parcels. According to the King County Property Assessor (KCPA), the main eastern parcel (Parcel #: 282505-9047) is 8.59 acres and houses the 136,952 square foot Lowe's building which was constructed in 1993. The western auxiliary parcel is a portion of the Burlington Northern Railroad parcel (#282505-9038) and is developed with additional parking for Lowe's. The exterior of the subject property is developed with asphalt-paved parking surfaces and landscaping. A stormwater retention swale and pond are located along the southern property boundary.

Puget Sound Energy provides electrical service to the subject property. Water and sanitary sewer services are provided by the City of Bellevue. Natural gas service is provided to the building by an unknown service provider.

Selected photographs of the subject property are attached as **Appendix B**. The general location of the subject property is shown on the Site Vicinity Map, **Figure 1**. A Site Map is presented as **Figure 2**.

### 2.2 ENVIRONMENTAL SETTING

Environmental characteristics including topography, geology, and hydrogeology were evaluated based on site observations, published literature, and available maps.

#### 2.2.1 Topography

Topographic map coverage of the subject property is provided by the United States Geological Survey (USGS) "*Mercer Island, Washington*" 7.5-minute quadrangle map (reference year 2014). Topographic relief across the subject property is relatively flat, with an elevation of approximately 161 feet above mean sea level; local topographic relief slopes down toward the west.

#### 2.2.2 Soils and Geology

Based on information from the United States Department of Agriculture (USDA), Soil Conservation Service as provided to Environmental Data Resources, Inc. (EDR), the natural soils in the vicinity of the subject property are classified as Urban Land. This soil series consists of clayey soils that have very slow infiltration rates. Based on the urban (developed) nature of the subject property vicinity, the specific soils underlying the subject property are likely to have been modified through cutting, grading, filling, and shaping for urban development. The soil series does not meet the requirements to be considered a hydric soil.

### **2.2.3 Hydrogeologic Conditions**

It is difficult to predict groundwater movement, particularly on a small scale. Groundwater flow direction generally mimics the topography of the land. Based on the US Geological Survey (USGS), 7.5-minute series Topographic Map, Mercer Island, dated 2014, site observations, and investigations at nearby sites, the anticipated ground water flow direction is to the west-southwest near the subject property. Site specific groundwater conditions can only be determined by a subsurface investigation.

### **2.2.4 Surface Water**

A stormwater retention swale and pond are located along the southern property boundary behind the store. In addition, a concrete-lined stormwater detention vault is located on the leased railroad parcel in the southwest corner of the subject property. Surface drainage at the subject property is engineered to sheet flow to stormwater drains located throughout the paved areas of the subject property. The nearest surface water body is mapped as Goff Creek on the USGS topographic maps and lies immediately west of the railroad line and the subject property.

### **2.2.5 Wetlands**

URS reviewed a United States Department of Interior, United States Fish & Wildlife Service National Wetlands Inventory (NWI) map provided in the Environmental Data Resources, Inc. (EDR) Radius Map Report. According to the NWI map, no wetland areas are identified onsite and the subject property is not located within the 100 or 500-year floodplains. A wetland is present immediately south of the subject property. A wetland delineation was not performed as part of this assessment.

### 3.0 USER PROVIDED INFORMATION

As required by AAI, additional inquiries are required to be conducted by the property purchaser. These inquiries include:

1. Identification of environmental cleanup liens against the subject property;
2. Specialized knowledge or experience regarding the subject property;
3. Relationship of the purchase price to the fair market value if the subject property was not contaminated;
4. Commonly known or reasonably ascertainable information regarding the subject property; and
5. Degree of obviousness of the presence or likely presence of contamination at the subject property.

These inquiries were presented to AutoNation (the “Client”) in the Information Transmittal Form (ITF) by URS. A copy of the ITF as completed by Mr. Harry C. Brumley, AutoNation’s National Director of Real Estate, is attached as **Appendix C**.

### 3.1 TITLE RECORDS

Procurement and review of a 50 Year Chain-of-Title was not included in the scope of services for this project. According to the deeds for the subject property, obtained from the King County Recorder, WPC REIT Merger Sub Inc., a Maryland corporation, successor by merger to Keystone Capital Comp, Inc. a Washington corporation, formerly known as Vernell’s Fine Candies, Inc. granted the property with a Quit Claim Deed to WPC REIT Merger Sub Inc., a Maryland corporation on July 9, 2015. This 2015 Quit Claim Deed included an amended legal description to the October 24, 2012 Quit Claim Deed between the same parties. The deed was for parcel numbers 282505-9047 and 282505-9038. No additional information concerning previous owners of the subject property was available.

### 3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

URS contracted with Nationwide Environmental Title Research, LLC (NETR) to provide an environmental lien search report for the subject property (**Appendix D**). According to NETR, no environmental liens or activity and use limitations (AULs) were identified for the subject property.

### 3.3 DATA GAPS

A data gap was identified between 1897 and 1944 as there was no readily available historical information on the past uses of the subject property. This data gap is not expected to alter the conclusions of this report. No other data gaps were identified by URS during the Phase I ESA project.

### 3.4 PREVIOUS INVESTIGATIONS

The following previous environmental investigations for the subject property were provided for URS’ review: GCI, 1991 Geotech Consultants, Inc. (GCI), Phase I Environmental Audit (*text only*), Vernell’s Candy Manufacturing Facility, 11959 Northup Way, Bellevue, WA. September 13, 1991.

The subject property was developed with a 154,600 square foot candy manufacturing factory and a vacant single-family residence on the northeast side of the property. A rail road spur and wetland are present to the

south, and a railroad right-of-way is present to the west. Fuel for the building's boilers was from natural gas with emergency fuel provided via two 10,000-gallon diesel underground storage tanks (USTs) located west of the building. All off-peak disposal of sewage and production wastewater from the building is stored in a tank at the southeast corner of the building. Stormwater runoff is directed to the wetland along the south property boundary. The two 10,000-gallon diesel USTs were not registered with the Washington Department of Ecology as they were an emergency fuel source. An additional UST was located near the northeastern corner of the building. According to site representatives, the UST was removed in 1987-1988. GCI recommended that an assessment be conducted to determine if a release was associated with the two current diesel USTs and previously removed UST.

BENWI, 1992. Bison Environmental Northwest, Inc. (BENWI), Underground Storage Tank Removal Site Assessment Report, Keystone Capital Company, Inc. 11959 Northup Way, Bellevue, WA., July 9, 1992.

Two 10,000-gallon diesel USTs and approximately 750 cubic yards (CY) of impacted soil were removed from the tank pit by Lee Morse General Contractors (Lee Morse). During the tank removal, the decision was made not to sample the underlying soil because of the excessive amount of contamination. The depth of the excavation varied between 12 and 15 feet below ground surface (bgs) with a hard pan layer encountered at 15 feet bgs. Groundwater encountered during the early part of the excavation was tested for total petroleum hydrocarbons (TPH) and the laboratory reported a concentration of 18 parts per million (ppm). The maximum allowable TPH concentration in groundwater is 1 ppm. During the excavation, 11 grab soil samples, two composite soil samples and two groundwater samples were collected. The composite samples were used to profile the soils for remediation. Soils samples were taken throughout the excavation pit, along the sidewalls, and confirmation sampling was performed. TPH in composite soil samples ranged from less than 25 ppm to 490 ppm. TPH grab samples from the bottom the tank excavation (13-15' bgs) ranged from less than 10 ppm to 18 ppm. BENWI concluded that sample results and visual observations showed that, after the removal of the 750 CY of impacted soils, the contamination in the vicinity of the USTs "had been lowered to acceptable limits." BENWI stated that "additional actions were not recommended for this site" beyond the removal of the contaminated soils in the lower lot". The report does not include documentation that the impacted soils were removed from the site. A crude diagram shows the location of the UST excavation to be 42 feet west of the building and immediately north of the rail spur.

DEA, 1998. David Evans and Associates, Inc. (DEA), Phase I ESA (*text only*), Eagle Hardware Site, 11959 Northup Way, Bellevue, WA. April, 1998.

At the time of DEA's assessment, the subject property was comprised of 8.15 acre parcel developed as an Eagle Hardware and Garden, Inc. retail facility. Historical use of the property included a single-family residence that was utilized as a restaurant and office space in the northeast corner of the property from 1916 through 1992. The remainder and majority of the property appeared to be first developed in the 1960s and operated as American Wholesale Grocers from 1961-1970, was vacant until 1974, then was redeveloped as a candy factory operated by the Societe Candy Company and later Vernell's Fine Candies, Inc. The candy factory was razed in 1991 and the Eagle Hardware building was constructed.

During the site's operation as a candy factory, two 10,000-gallon diesel USTs were used as an emergency fuel source to fire the plant's boilers. A City of Bellevue Fire Department Tank removal Permit was issued on

May 20, 1992 and approximately 750 cubic yards (CY) of impacted soil was remediated. According to GCI, a third gasoline UST with a capacity listed as between 111 and 1,100-gallons was removed from the site in 1987-1988. However, EDR lists the third UST as being abandoned in place. Based on information from the regulatory agencies, EDR, and previous reports, DEA concluded that there was no documentation confirming or denying that remnant petroleum impacts remained from the USTs. DEA noted that no soil samples for laboratory analysis appeared to have been collected in the former UST area(s). Interviews with Mr. Edwin Tucker, during DEA's assessment, indicated that the impacted soils from the two 10,000-gallon diesel fuel tank pit were staged on site and land farmed to allow for volatilization of petroleum hydrocarbons until acceptable concentrations were obtained. Mr. Tucker of Keystone Capital indicated that copious amounts of fill were used to grade the property for construction of the Eagle Hardware building and the remediated (land farmed) soils were used as structural fill in the western portion of the Eagle Hardware structure, specifically in the area of the loading dock. DEA concurred with GCI that "based on substantiating evidence in the public domain", soil samples for laboratory analysis should be collected in the vicinity of the gasoline UST.

DEA, 1998. David Evans and Associates, Inc. (DEA), Phase I ESA, Eagle Hardware Site, 11959 Northup Way, Bellevue, WA. April, 1998, Revised September 1998.

On September 11, 1998, DEA added Addendum Letter B to the Phase I ESA further addressing the enhanced wetland observed along the south property boundary; the western portion of the property identified by the Burlington Northern Santa Fe (BNSF) railroad company Lease # 88499; and, the 750 tons of impacted soil removed from the tank pit of the two 10,000-gallon USTs. The enhanced wetland area at the south end of the property is located in a previous drainage channel and has two concrete culverts at each end. Water in the channel flows to the west toward the BNSF right-of-way. Surface water from the property is directed to the channel/wetland and appears to flow eventually to Lake Washington located northwest of the subject property. No evidence of contamination, impacts or improper runoff was observed in the channel/wetland. DEA confirmed that the western portion of the subject property identified by BNSF Lease # 88499 was included in the original Phase I ESA, dated April 1998. No evidence of "hazardous or problem materials" was identified on this western parcel and no further environmental investigation of the parcel was deemed warranted. DEA reiterated in the addendum letter that no other information was available on the final disposal, land farming or re-spreading of the 750 CY of impacted soil removed from the tank pit containing the two former diesel USTs. DEA had reviewed and/or requested records from the Washington State Department of Ecology (DOE), Bison Environmental Northwest, who oversaw the removal of the tanks and impacted soil, and Lee Morse who performed the excavation and tank removal activities. DEA amended its recommendations from the April 1998 Phase I ESA to also include the installation of soil borings in the vicinity of the two 10,000-gallon diesel USTs.

EMG, 2005. EMG, Phase I ESA, Lowe's Home Improvement Center, 11959 Northup Way, Bellevue, WA 98005. EMG Project # 71926.05R-001.050, July 27, 2005.

At the time of EMG's site assessment, the subject property was a Lowe's Home Improvement Center on an 8.59-acre parcel. Site history was similar to that described in the previous reports with the current Lowe's building being developed in 1992/1993. The regulatory database indicated that the 1,000-gallon gasoline UST was closed-in-place, which contradicts previous reports that it was removed. EMG concluded that if the additional information pertaining to the closure of the gasoline UST was not available, then a subsurface investigation should be conducted in this area. Likewise, if additional information is not available on whether

or not the 750 CY of impacted soils from the diesel UST tank pit was removed from the site or re-spread during development of the building then a subsurface investigation may be warranted in the area where the soils were reportedly spread (west of the building near the loading dock).

Copies of the referenced reports, as provided to URS, are included as **Appendix E**.

## 4.0 SITE INSPECTION

URS inspected the subject property on October 15, 2015. Weather conditions at the time of the inspection were partly cloudy with a temperature of approximately 55 degrees Fahrenheit. URS' site inspection included a walking inspection of the subject property. A windshield survey was also completed of adjoining properties and nearby properties listed in the search radii. Photographs taken during URS' site inspection are provided in **Appendix B**.

### 4.1 CURRENT USES OF THE PROPERTY

The subject property is currently utilized as a Lowe's Home Improvement Center retail store.

### 4.2 PAST USES OF THE PROPERTY

Historical information was reviewed for the subject property dating back to 1895; however, the topographic maps from 1895 and 1897 did not depict individual site features on the subject property due to the map scales of 1:125,000. One small structure was depicted on the northeastern portion of the subject property on the 1950 topographic map and, based on the previous investigations reviewed by URS (further discussed in **Section 3.4**), this structure was reportedly used as a residence, restaurant, and office from 1916 through 1992. The remainder of the site was undeveloped land prior to the 1960s. A large rectangular structure was developed near the center of the site in the early 1960s and reportedly operated as a grocery store until the early 1970s. The site was then redeveloped and operated as a candy factory, Vernell's Fine Candies, Inc., until the building was reportedly razed in 1991. The current subject building was reportedly constructed in 1993 and originally operated as Eagle Hardware & Garden. Since the early 2000s, the building has operated as Lowe's Home Improvement.

Further information on the historical use of the property is presented in **Sections 3.4** and **6.0**.

### 4.3 EXTERIOR AND INTERIOR SITE OBSERVATIONS

The subject property consists of two contiguous parcels that total approximately 8.59 acres of land. The main eastern parcel (Parcel #: 282505-9047) houses the 136,952 square foot Lowe's building which was constructed in 1993. The western auxiliary parcel is a portion of the Burlington Northern Railroad parcel (#282505-9038) and is developed with additional parking for Lowe's. The remainder of the subject property is developed with asphalt-paved parking surfaces and landscaping. A stormwater swale and a small retention pond are located along the south property boundary. The building is constructed of concrete tilt up and concrete masonry unit walls, concrete slab floor, and flat roof with metal trusses. Interior finishes vary across the site and typically include concrete and drywall walls, exposed and drop ceilings with acoustical tiles, and floor finishes including carpet, concrete, and tiles.

A Site Map is presented as **Figure 2**.

#### 4.3.1 Hazardous Substances

Hazardous substances observed included retail-sized containers of paints, fertilizers, pesticides, household cleaners, fuel additives, and other building maintenance and construction compounds located in various departments across the retail portion of the store as well as in the receiving area located in the southwest

corner of the building. In addition, a hazardous material cage is located in the northwest corner of the building. The cage was observed to contain several 55-gallon polyethylene drums staged on wood pallets containing mold remover, spackle, insecticide, paint, spray foam, marine grease, roof coatings, fertilizers and adhesives. The retail, receiving and hazardous materials cage appeared to be relatively free of stains and fairly-well maintained. A propane cage was observed in the eastern parking lot. According to site representatives, the propane is used to power the store's three fork lifts. Hazardous materials do not appear to represent a REC or an environmental concern to the subject property at this time.

#### **4.3.2 Hazardous Wastes**

Hazardous wastes observed on the subject property included a 55-gallon metal drum containing petroleum product and other flammable liquids that were stored in a fireproof cabinet in the hazmat cage. According to site representatives, PCS (Phillips) picks up and properly disposes of the drums of used and returned substances on an as needed basis. Waste manifests are maintained onsite but were not provided to URS for review. No staining was observed in the hazardous waste storage areas. Hazardous wastes do not represent a REC or an environmental concern to the subject property at this time.

#### **4.3.3 Underground/Aboveground Storage Tanks**

During the site reconnaissance, URS did not observe evidence of any ASTs or USTs, such as vent pipes or fill ports. However, based on URS' review of the previous reports (further discussed in **Section 3.4**), three USTs were formerly associated with the subject property when it operated as the Vernell's Fine Candies factory. One 1,000-gallon gasoline UST, northeast of the factory building, was closed in 1987-1988. There is some discrepancy on whether the gasoline UST was removed from the ground or closed in place. In 1992, two 10,000-gallon diesel USTs were removed from an area west of the factory building. Petroleum impacts were discovered immediately below the two USTs. The impacted material was excavated and removed to a final depth that varied between 13 and 15 feet bgs. The impacted material from the tank pit was remediated by land farming and it is unclear if it was re-spread in the area of the current loading dock or removed from the site. The DOE granted NFA status in 2011 for the related discharge. Further information on the discharge and tanks are presented in **Section 7.2**.

#### **4.3.4 Odors/Air Emissions**

No current operations at the subject property were observed that would generate regulated air emissions.

#### **4.3.5 Drums and Containers**

A listing of drums and containers observed at the subject property is described in **Sections 4.3.1** and **4.3.2**.

#### **4.3.6 PCB-Containing Equipment**

URS observed three pad-mounted electrical transformers located in the southeast corner of the subject property along the right-of-way of 120<sup>th</sup> Avenue Northeast. No staining or discoloration was noted on or in the general vicinity of the transformers and two of the three transformers had "Non-PCB" labels. Any impacts from the transformers would be the responsibility of the local power company.

Fluorescent light ballasts are located throughout the subject buildings. These light ballasts were not readily accessible for evaluation regarding the potential PCB content. A hydraulic cardboard bailer and three

propane-powered forklifts are located in the receiving area of the store. A Republic Services hydraulic compactor was observed adjacent to the loading docks on the west side of the building. No staining was observed in the vicinity of the above-referenced units.

No elevators or other potential PCB-containing equipment was observed at the subject property.

#### **4.3.7 Hydraulic Lifts**

No current aboveground hydraulic lift (AHL) or underground hydraulic lift (UHL) systems or evidence indicative of former AHLs or UHLs were observed at the subject property. In addition, the site representatives reported they were unaware of AHLs or UHLs formerly being located at the subject property.

#### **4.3.8 Drains and Sumps**

Floor drains are present in the building's restrooms and janitor's closet in the southwest corner of the building. A trench drain is located in the outside garden center that is reportedly connected to the stormwater sewer system. URS observed an approximate one foot by two foot rectangular metal hatch in the floor of the indoor garden center located in the northeast corner of the building. URS attempted to open the hatch; however, upon pulling on the handle it broke. Site representatives were unaware of the potential sump; although it was surmised that it may be related to access to plumbing infrastructure. No other sumps are located at the subject property.

#### **4.3.9 Pits, Ponds, and Lagoons**

No pits, ponds or lagoons were observed on the subject property at the time of the site inspection.

#### **4.3.10 Solid Waste**

Solid waste consists of general packaging, paper, and household-type wastes. Cardboard is consolidated in its own designated dumpster for recycling and the other referenced solid waste materials are consolidated in a hydraulic compactor. These units are serviced by Republic Services. Cardboard is also bailed for recycling and stored outside the southwest corner of the building. A compost bin and appliances waiting to be recycled are also staged west of the building. Solid waste appears to be appropriately managed at this time.

#### **4.3.11 Wastewater**

Wastewater currently generated at the subject property is from the restrooms and sinks in the buildings and discharge directly to the sanitary sewer system. The City of Bellevue provides sanitary sewage services for the subject property.

#### **4.3.12 Water Supply**

According to the site representative, potable water is supplied to the subject property by the City of Bellevue.

#### **4.3.13 Wells**

No wells were observed or reported onsite at the time of the site reconnaissance.

#### **4.3.14 Stormwater**

A stormwater retention swale and pond are located along the south property boundary, behind the store. In

addition, a concrete-lined stormwater detention vault is located on the leased railroad parcel in the southwest corner of the subject property. Surface drainage at the subject property is engineered to sheet flow to stormwater drains located throughout the paved areas of the subject property.

#### **4.3.15 Radon**

A radon gas survey was not conducted nor included in the authorized scope of services.

URS reviewed the United States Environmental Protection Agency's (USEPA) Map of Radon Zones for King County, Washington. The USEPA Radon Zone for King County is 3: indoor air average is less than 2 picoCuries per liter (pCi/L). According to the state radon database, three sites in the subject property's zip code (98005) have been tested for radon, with an average radon concentration of 0.733 pCi/L in 1<sup>st</sup> floor living areas and 0.350 pCi/L in basement areas. It is URS' opinion that radon levels do not represent a significant environmental concern for the subject property because the subject property is utilized for non-residential purposes.

#### **4.3.16 Asbestos**

An asbestos survey was not conducted nor included in the authorized scope of services. Asbestos testing of building materials is the only way to assess for the presence or absence of asbestos. Based on the reported date of building construction onsite (1993), it is unlikely that asbestos-containing materials (ACMs) were utilized during construction.

Although ACMs are not anticipated to have been used during construction of the current subject building reportedly developed in 1993, it should be noted that additional inspection, including limited exploratory demolition and bulk sampling in accordance with EPA NESHAPS and OSHA requirements is required prior to any future renovation, demolition, and/or construction activities. If any building materials are identified by laboratory analysis to be ACMs, they should be removed by qualified abatement contractors in accordance with local, State and Federal regulations.

URS recommends that as part of the standard operating practices, property management should notify workers of the potential for the presence of ACM in the suspect non-friable materials, and modify the maintenance work procedures should the materials be disrupted due to repair or replacement activities. URS recommends that an asbestos Operations & Maintenance (O&M) Plan be prepared for the site to fulfill these recommendations.

#### **4.3.17 Mold Conditions**

The URS representative did not observe mold or evidence of mold on the building materials during the site reconnaissance.

#### **4.3.18 Other Physical Evidence of Contamination**

No unusual odors, pools of waste liquids, runoff patterns, or berms were observed on the subject property during the site inspection.

## 5.0 ADJOINING AND SURROUNDING LAND USE

URS performed a visual inspection of readily visible areas of adjacent properties. The following description of the current uses of adjoining properties and surrounding properties of potential environmental concern is based on URS' observations on the date of the inspection, and onsite and telephone interviews with owner's representatives, managers, and other site employees.

### 5.1 CURRENT USES OF ADJACENT PROPERTIES

The subject property is located within an area that consisted of commercial land uses. In general, adjoining land and nearby uses are as follows:

- North: The subject property is bordered to the north by an elevated portion of State Road (SR) 520 followed by a retention pond and Northup Way.
- South: The subject property is bordered to the south by undeveloped woodland and by Grainger Supply (2221 120<sup>th</sup> Avenue Northeast) to the southeast.
- East: The subject property is bordered to the east by 120<sup>th</sup> Avenue Northeast followed by a multi-tenant business park (12031, 12021, and 12121 Northup Way) that includes McDonald Miller HVAC, Group 1 Security, Werth and More clothing store, an athletic training facility, and a window tinting facility. Northup Way is located to the northeast of the subject property.
- West: The subject property is bordered to the west by a set of rail road tracks followed by Krekow Contractory (2246 116<sup>th</sup> Avenue Northeast), Echodyne (2380 116<sup>th</sup> Avenue Northeast) and a multi-tenant medical office building (2110 116<sup>th</sup> Avenue Northeast)

### 5.2 SURROUNDING PROPERTIES OF POTENTIAL ENVIRONMENTAL CONCERN

Based on URS' review of the regulatory databases (presented in **Section 7.0**), several adjacent property addresses were identified in the databases searched by EDR. However, based on their current regulatory statuses and/or absence of reported discharges that required further cleanup/remediation, these adjacent facilities do not represent potential environmental concerns to the subject property at this time.

## 6.0 HISTORIC SITE AND SURROUNDING PROPERTY CONDITIONS

The history of land use on and near the subject property was evaluated from interviews, review of historical information and other documents referenced in **Section 10.0**.

### 6.1 CURRENT AND PRIOR OWNERSHIP

Procurement and review of a 50 Year Chain-of-Title was not included in the scope of services for this project. According to the deeds for the subject property, obtained from the King County Recorder, WPC REIT Merger Sub Inc., a Maryland corporation, successor by merger to Keystone Capital Comp, Inc. a Washington corporation, formerly known as Vernell's Fine Candies, Inc. granted the property with a Quit Claim Deed to WPC REIT Merger Sub Inc., a Maryland corporation on July 9, 2015. This 2015 Quit Claim Deed included an amended legal description to the October 24, 2012 Quit Claim Deed between the same parties. The deed was for parcel numbers 282505-9047 and 282505-9038. No additional information concerning previous owners of the subject property was available.

### 6.2 INTERVIEWS

Mr. John Cafiero, Loss Prevention Manager, and other Lowe's representatives provided information regarding the past and present activities on the subject property. That information has been incorporated into the appropriate sections of this report.

### 6.3 AERIAL PHOTOGRAPHS

Information regarding past site land use was obtained by a monoscopic review of historical aerial photographs obtained from EDR for the years 1944, 1965, 1968, 1971, 1973, 1980, 1985, 1990, 2005, 2006, 2009, and 2011. Copies of the historic aerial photographs are presented at a scale of 1 inch = 500 feet in **Appendix F**. Because of the relative scale of these photographs, the identification of individual site features is limited.

**1944** The subject property consisted of undeveloped, partially-wooded land. It should be noted that a possible structure may have been present on the northeastern portion of the property; however, the reproduction of this photograph was blurred and specific site features in this area were indiscernible. An apparent railroad line was present immediately west of the subject property and State Road 520 was located further north. Surrounding properties to the south and west were undeveloped and neighboring properties to the north and east were partially-developed.

**1965 – 1973** A large rectangular commercial structure is developed on the central portion of the site and two small (likely residential) structures are developed on the eastern portion of the site. Loading docks and parking/driving areas are evident on the north side of the large commercial building onsite. A railroad spur that connects with the western adjacent rail line is present along the southern side of this building. State Road 520 followed by Northup Way is located to the north and an unfinished roadway (configured similar to present day 120<sup>th</sup> Avenue NE) is located immediately to the east of the site. The adjacent properties to the east, west, and north became increasingly developed and the northern adjacent roadways were reconfigured several times. It should be noted that the commercial building appeared to have been vacant at the time of the 1971 and 1973 photographs, as no rail cars are evident along the onsite rail spur and no vehicles or trailers are present on the loading dock,

parking, and driving areas onsite. It should also be noted that at the time of the 1973 photograph the adjacent roadways to the north and east appeared to have been developed similar to their current configurations.

**1980 – 1990** The subject buildings remained similar to their previous configurations as noted on earlier photographs; however, additional areas on the northern and western portions of the property appeared to have been redeveloped as parking/driving areas. Three rectangular scars, two located immediately west of the southwest corner and one located immediately east of the northeast corner of the subject commercial building, were faintly visible on the 1980 and 1985 photographs. Based on URS' review of the previous investigation documents discussed in **Section 3.4**, it is URS' opinion that these scars are the respective locations of three former USTs previously maintained onsite.

**2005 – 2011** The current subject building on the central portion of the site and surrounding asphalt-paved parking areas are visible on these photographs. According to the previous investigation documents (discussed in **Section 3.4**), the former commercial structure and two smaller structures shown in the previous photographs were reportedly razed in 1991. Based on URS' review of these photographs, the current subject building footprint generally corresponds to the former building's footprint. However, the current subject building's north-south trending perimeter walls appear to be approximately 60-70 feet shorter in length as compared to the former commercial building. The southern portion of the site, previously occupied by the southern extent of the former commercial building, was redeveloped as the site's current stormwater swale and pond. The former building's loading docks were located on the northern portion and the current building's loading docks are located on the west side of the building's southwest corner. Additional parking and driveway areas as well as landscaping were also developed onsite. Except for the southern adjacent wooded property, the surrounding properties in all directions were developed with various structures.

#### **6.4 SANBORN FIRE INSURANCE MAPS**

URS contacted EDR for information regarding Sanborn™ Fire Insurance Maps for the subject property. Sanborn™ Maps are published detailed city maps which were originally designed to meet the requirements of the fire insurance industry. Fire insurance maps provide detailed property information by outlining all buildings in applicable areas, showing construction types, building heights, building numbers, use by occupancy, as well as the location and content of USTs/ ASTs.

Sanborn™ Fire Insurance Rate Maps were not available for the subject property and its vicinity. A copy of the Certified Sanborn™ Map Report is included in **Appendix F**.

#### **6.5 TOPOGRAPHIC MAPS**

URS obtained USGS topographic maps of the vicinity of the subject property for the years 1895, 1897, 1950, 1968, 1973, and 1982 from EDR (**Appendix F**). A summary of the findings from the review of the topographic maps is provided below. Except for the 1895 and 1897 topographic maps (provided at a scale of 1:125,000), the historical topographic maps were provided at a 1:24,000 scale.

**1895 – 1897** Due to the scale, individual features are not discernable. However, no structures appear to be depicted onsite or in the immediate site vicinity.

**1950** One small (likely residential) structure is depicted on the northeastern portion of the subject property on this map. The majority of the subject property is depicted as vegetated and undeveloped land located immediately east of the Northern Pacific Rail Line and south of State Road 520. Several additional small structures are depicted further east and north of the subject property.

**1968 – 1982** The subject property is depicted with the large, centrally located rectangular commercial structure, the rail spur immediately to the south, and the smaller structure on the northeastern portion of the site on each of these maps. One additional small (likely residential) structure is depicted on the southeastern portion of the site on the 1982 map only. Several commercial and residential structures are depicted in the site vicinity.

## **6.6 CITY DIRECTORIES**

Information from city directories regarding past property ownership and the inferred land use was obtained from EDR for the years 1971 to 2013 from various city directory sources. Directories were searched in approximately five (5) to ten (10) year intervals. The subject property address at 11959 Northup Way was identified as follows (year of directory is shown in parentheses): Vernell's Fine Candies (1980 - 1992), Vantage Advertising (1987), Eagle Hardware & Garden (1995 - 1999), Espresso Magnifico (1999), K. Young's Hot Dogs and M&J Café (2003), S&S Hot Dog (2008), and Lowe's Home Improvement Warehouse (2008 – 2013). It should be noted that no additional addresses were provided by site representatives and none were identified during URS' review of the previous investigations referenced in **Section 3.4**, for the two former (likely residential) properties previously located on the eastern portion of the subject property.

Nearby and adjacent addresses along Northup Way and 120<sup>th</sup> Avenue NE were identified with multiple commercial and residential listings in the city directories searched by EDR. Additional information concerning neighboring facilities is discussed further in the appropriate portions of **Section 7.0** and the EDR-City Directory Image Report is included in **Appendix F**.

Based on URS' review of the regulatory databases (presented in **Section 7.0**), Vernell's Fine Candies' previous use of USTs onsite represents a REC at the subject property. None of the adjacent facilities appear to represent potential environmental concerns to the subject property at this time.

## 7.0 REGULATORY AGENCY REVIEW

During the performance of the Phase I ESA, URS reviewed and obtained information from State and local regulatory agencies having jurisdiction over the subject property, as well as several environmental databases compiled by EDR.

### 7.1 DATABASE SEARCH

URS reviewed information gathered from EDR in order to evaluate, to the extent possible, whether activities on or near the subject property have the potential to create adverse environmental impacts on the subject property. EDR reviews databases compiled by Federal, state, and local Government agencies. The EDR Radius Map Report with GeoCheck and its complete list of databases is provided in **Appendix G**.

It should be noted that this information is reported as URS received it from EDR, which in turn reports information as it is provided in various Government databases. It is not possible for either URS or EDR to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence. A description of the pertinent databases searched and the information obtained is summarized below:

Type of Database	Description of Database/Effective Date	Radius Searched	Number of Sites Identified
<b>FEDERAL ASTM STANDARD RECORDS</b>			
NPL	The National Priorities List identifies uncontrolled or abandoned hazardous waste sites. To appear on the NPL, sites must have met or surpassed a predetermined hazard ranking system score, been chosen as a state's top priority site, pose a significant health or environmental threat, or be a site where the EPA has determined that remedial action is more cost-effective than removal action.	1 mile	0
CERCLIS	The Comprehensive Environmental Response, Compensation, and Liability Information System -Active (CERCLA) database identifies hazardous waste sites that require investigation and possible remedial action to mitigate potential negative impacts on human health or the environment.	½ mile	0
CERCLIS-NFRAP	CERCLA sites that have been designated as No Further Remedial Action Planned (NFRAP). These sites have been removed from the CERCLIS list, archived, and EPA has determined that no further action will be taken to list the site on the NPL list.	½ mile	0
CORRACTS	The Corrective Action Report identifies hazardous waste handlers with RCRA corrective action activity.	1 mile	0
RCRA TSDFs	Resource Conservation & Recovery Act Treatment, Storage, or Disposal Facilities.	½ mile	0
RCRA Generators	RCRA-regulated hazardous waste generator notifiers list; Large, Small, and Conditionally Exempt Small Quantity Generators (LQGs, SQGs, & CESQGs), and Non Generators (NonGen) are included.	¼ mile	1 SQG 1 CESQG 6 NonGen
ERNS	EPA's Emergency Response Notification System (ERNS) list contains reported spill records of oil and hazardous substances.	Target Property	0
DOD	Department of Defense (DOD) list consists of federally owned or administered lands that have an area equal to or greater than 640	1 mile	0

Type of Database	Description of Database/Effective Date	Radius Searched	Number of Sites Identified
	acres.		
TRIS	Toxic Chemical Release Inventory System. TRIS identifies facilities which release toxic chemicals into the air, water, and land in reportable quantities under SARA title III Section 313.	Target Property	0
ROD	Records of Decision (ROD) documents mandate a permanent remedy at an NPL site containing technical and health information to aid in the cleanup.	1 mile	0
SWF/LF	Solid Waste / Land Fill disposal facilities (SWF/LF) listings.	½ mile	0
FINDS	Facility Index System/Facility Registry System	Target Property	1
<b>STATE ASTM STANDARD RECORDS</b>			
HSL	State Hazardous Site List (HSL).	1 mile	2
CSCSL	State Confirmed and Contaminated Site List (CSCSL)	1 mile	17
LUST	State inventory of leaking underground storage tanks (LUST).	½ mile	2
UST	State inventory of registered underground storage tank sites (UST).	¼ mile	5
AST	State inventory of registered aboveground storage tank sites (AST).	¼ mile	0
INST CONTROL	State Institutional Control List (INSTITUTIONAL CONTROL)	½ mile	0
ICR	State Independent Cleanup Reports (ICR)		10
VCP	State Voluntary Cleanup Program Sites (VCP)	½ mile	4
<b>STATE OR LOCAL SUPPLEMENTAL RECORDS</b>			
DRY CLEANERS	Drycleaning facilities.	¼ mile	0
INACTIVE DRYCLEAN -ERS	Inactive Drycleaning facilities	¼ mile	0
ALLSITES	State Facility/Site Identification System (ALLSITES)- Facilities of interest to the Department of Ecology	½ mile	43
CSCSL NFA	State Confirmed and Contaminated Site-No Further Action List (CSCSL NFA)	½ mile	10
SWRCY	List of recycling center locations (SWRCY)	½ mile	1
MANIFEST	State Hazardous Waste Manifest Data (MANIFEST)	¼ mile	3
<b>EDR PROPRIETARY RECORDS</b>			
EDR MGP	Manufactured Gas Plants.	1 mile	0
EDR Hist. Auto Stations	EDR US Historical Auto Stations	¼ mile	2
EDR Hist. Cleaners	EDR US Historical Cleaners	¼ mile	1
RGA HWS	EDR Recovered Government Archives (RGA) Hazardous Waste facilities (HWS)	Target Property	1
RGA LF	EDR RGA Solid Waste (LF) facilities	Target Property	0
RGA LUST	EDR RGA LUST facilities	Target Property	4

## 7.2 SUBJECT PROPERTY

The subject property address of 11959 Northup Way was identified as **Lowes HIW 040** in the RCRA-NonGen (EPA ID: WAD173823568), UST, ICR, CSCSL NFA, MANIFEST, FINDS and ALLSITES (Facility/Site IDs: 36286977 and 9131) databases. RCRA-NonGen facilities do not presently generate or store

hazardous waste and no violations were identified with the subject property's RCRA listing. The subject property previously maintained three steel USTs which were installed in 1964. Two of the three former tanks were reportedly removed and the third tank was reportedly closed in place in August 1996. The UST that was reportedly closed in place was reported to have been approximately 111 to 1,100 gallons in capacity; however, no additional details were provided for these three former USTs. These former tanks' are further discussed in the previous investigations referenced in **Section 3.4**. The ICR database indicates that petroleum-impacted soils were identified and reported to the State of Washington Department of Ecology (DOE) from July to October 1992. The ALLSITES database lists the subject property in the DOE HAZWASTE and TOXICS programs. The ALLSITES listing is related to the site's former operations which generated hazardous wastes, and its past use/maintenance of USTs. While the subject property was not listed in the LUST database by EDR, the ALLSITES TOXICS program identifies the site as a LUST facility. URS searched the DOE on-line Facility/Site database for additional information on the ALLSITES listings. The online listing confirmed the information presented by EDR and showed the subject property's LUST listing with a start date of June 4, 1992, and its end date of October 3, 2011. Prior to the end date listed, it was noted that an Initial Investigation / Federal Preliminary Assessment was completed on August 8, 2011. Subsequently, the Confirmed and Contaminated Site List - No Further Action (CSCSL NFA) listing indicates this facility achieved NFA status as of October 3, 2011. The information provided by EDR and obtained via DOE's online database corresponds to the removal of two former USTs and closure-in-place of the third former UST. Although NFA status has been issued for the discharge associated with the two former 10,000-gallon diesel USTs, it is URS' opinion (based on review of the previous investigations referenced in **Section 3.4**) that potential remaining soil impacts from the former USTs represent RECs at the subject property.

A previous facility, **Vernell's Candy/Vernell's Fine Candies**, was also identified at the subject address in the RGA HWS and RGA LUST (Facility IDs: 36286977 and 9131) databases. This former facility was listed in the RGA HWS database in 2011 and in the RGA LUST database from 1995 through 2011. No additional information was provided by EDR for these listings; however, based on the previous investigations discussed in **Section 3.4** and those obtained from the agencies referenced in **Section 7.6**, it is URS' opinion that the referenced database listings are all related to the USTs previously described (and summarized) above in the **Lowes** database listings.

### 7.3 ADJACENT PROPERTIES

The following adjacent properties were identified in the databases searched by EDR:

The property located at 12031 NE Northup Way was identified as **Trane Part Center of the NW** in the RCRA-NonGen (EPA ID: WAD988495537), ALLSITES (Facility ID: 68451854), and FINDS databases. This facility is located immediately east-southeast of the subject property across 120<sup>th</sup> Avenue NE in an estimated up-gradient topographic position relative to the subject property. RCRA-NonGen sites do not presently generate or store hazardous waste and no RCRA violations were reported. The ALLSITES and FINDS listings are related to the facilities former RCRA status as a hazardous waste generator. According to the EDR report, this facility was not identified in other environmental regulatory databases indicating releases or discharges of hazardous substances or petroleum products. Based on the absence of reported releases of hazardous substances and petroleum products, it is URS' opinion that this facility does not represent a significant environmental concern to the subject property at this time.

The property located at 2426 116<sup>th</sup> NE was identified as **ICOM Former Cedarmark Home Corporation** in the ALLSITES, UST and CSCSL NFA (Facility ID: 69498138) databases. This former facility appeared to have been historically located immediately west of the subject property across the railroad lines in an estimated down-gradient topographic position relative to the subject property. This facility previously maintained two USTs that were installed in 1964 and had capacities listed as ranging from 111 to 1,110 gallons; however, these former tanks' construction materials and contents were not identified. Both USTs were removed as of August 9, 2010. The ALLSITES listing indicates this facility was in the DOE's TOXICS program because it was an independent cleanup site and was also a LUST facility; however, no additional information was provided. The CSCSL NFA listing indicates this facility achieved NFA status as of February 10, 2011. Based on the removal of former USTs, issuance of NFA status, and down-gradient topographic position, it is URS' opinion that this facility does not represent a significant environmental concern to the subject property at this time.

#### 7.4 SITE VICINITY

URS reviewed the EDR database report to identify off-site facilities with suspected or documented environmental concerns or RECs that may negatively impact the subject property. URS' criteria for further evaluating the potential impact of a listed off-site facility are summarized below:

- The listed off-site facility is documented or assumed to be hydrogeologically upgradient and a likely pathway exists for environmentally mobile contaminants to reach the subject property; or, contaminants from the listed off-site facility can reach the subject property through other pathways (i.e., surface runoff); and,
- The off-site facility is listed on one (1) of the following databases: Federal NPL, Federal CORRACTS, Federal CERCLIS, Federal ERNS, State SPL, State SCL, State LUST, State Deed Restrictions, State Toxic Pits, Landfill (excluding transfer stations), and is not listed in the database as "closed" or "no further action" (including NFRAP); or,
- The facility adjoins the subject property and is listed as a RCRA large-quantity hazardous waste generator, a CERCLIS NFRAP site, or an UST operator; or
- The facility is a known or suspected concern based on URS' experience or observations made during the site reconnaissance (i.e., Dry-cleaning operations that may or may not be listed as RCRA-SQG or a non-adjacent UST site that appears to have a remediation system in place).

Using the criteria discussed above, none of the offsite facilities identified in the databases searched by EDR appeared to represent a potential environmental concern to the subject property at this time.

#### 7.5 UNMAPPED SITES

URS reviewed EDR's Orphan Summary, which is a listing of sites that have not been geocoded based on lack of sufficient data regarding their exact location within the general area. The subject property was not identified as an Unmapped Site. No additional Unmapped Sites identified on the Orphan Summary appear to be located within the ASTM-designated radii of the subject property therefore URS has no reason to believe that these sites could have impacted the subject property.

## 7.6 REGULATORY AGENCY CONTACTS/INTERVIEWS

During the performance of an environmental assessment, State and local regulatory agencies having jurisdiction over the subject property are contacted to evaluate the following information: the status of relevant environmental permits; whether there has been violations, or other similar correspondence from such agencies; whether corrective action or remediation is planned, currently taking place, or has been completed at the subject property; whether there have been reported violations or complaints that the subject property is not in compliance with environmental laws, regulations, or standards, and whether the subject property is under investigation for such non-compliance; whether the subject property is listed on the regulatory databases; and whether there is other pertinent documentation on file with such regulatory agencies regarding the subject property or surrounding sites of concern.

URS reviewed US Environmental Protection Agency's (EPA) Envirofacts Warehouse and the State of Washington DOE Facility/Site online databases for additional information on nearby facilities listed in various government databases. On October 9, 2015, URS made a freedom of information act (FOIA) request for public records to the DOE's Northwest Regional Office to review its files regarding the former USTs previously maintained at the subject property. At the time of this report, these files have not been reviewed; however, URS is in the process of scheduling a file review with DOE. Ms. Cherie Gritsch with DOE responded to the request on October 15, 2015. Ms. Gritsch indicated the DOE estimated the responsive records will be available by November 12, 2015, and at that time the DOE will contact URS to set up an appointment to review the records or provide the estimated costs to reproduce the records. If additional information that alters the conclusions or recommendations presented in this report is identified in the subsequent review of DOE files, an addendum summarizing that information will be provided under separate cover. Information obtained from the aforementioned sources has been included in the previous sections of this report. A summary of the relevant documents are provided in **Section 7.2** and copies of applicable documents are provided in **Appendix H**.

## 7.7 VAPOR MIGRATION

Based upon site observations, a regulatory database review, a review of historical documents and information provided by AutoNation, URS evaluated the potential for migration of hazardous substances or petroleum products in vapor at the subject property. The purpose is to determine if a Vapor Encroachment Condition (VEC) exists, likely exists, cannot be ruled out, or can be ruled out because a VEC does not or is not likely to exist. URS's evaluation is not an exhaustive screening and is intended to reduce, but not eliminate, uncertainty regarding whether or not a VEC exists in connection with a property.

The sites located within an approximate minimum search distance of 1/3 mile for hazardous substances or 1/10 mile for petroleum contaminated sites, were evaluated to determine if a VEC exists for the subject property.

### 7.7.1 Subject Property

Three former USTs were previously maintained onsite and it is URS' opinion (based on review of the previous investigations referenced in **Section 3.4**) that potential remaining soil impacts from these former USTs represent RECs at the subject property and potential VECs cannot be ruled out at this time.

### **7.7.2 Surrounding Sites**

Several adjacent and surrounding offsite properties (as discussed in **Sections 7.3 and 7.4**) were identified within 1/10 mile (528 feet) of the subject property, which would be likely to have petroleum hydrocarbons as the chemicals of concern (i.e. gasoline fuel associated with gas stations). Because of the long history of development in the site vicinity, it is likely that the quality of groundwater beneath the City of Bellevue has been degraded. However, it is the opinion of URS that none of the offsite properties listed in the regulatory databases are likely to be the source of potential VECs at the subject property, either by releases to the ground surface or through the migration of impacted groundwater.

### **7.8 COMPLIANCE RECORDS**

Compliance records were not available for review because the subject property was not operating as an automobile facility and is currently used for commercial purposes at the time of URS' site reconnaissance.

## 8.0 CONCLUSIONS

URS has performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312 *Standards and Practices for All Appropriate Inquiries; Final Rule* for the property identified as the Lowe's Home Improvement Center located at 11959 Northup Way in Bellevue, King County, Washington (subject property). Any exceptions to, or deletions from, this practice are described in the limitations sections of this report.

### 8.1 FINDINGS AND RECOMMENDATIONS

Based upon site observations, a regulatory database review, a review of historical documents and information provided by AutoNation, URS identified the following RECs and potential VECs in association with current and historic operations at the subject property:

- Three USTs were formerly associated with the subject property when it operated as the Vernell's Fine Candies factory. The three tanks were reportedly installed in 1964. Based on URS' review of the previous investigation reports referenced in **Section 3.4**, two of these former tanks contained diesel and the third tank contained gasoline. The gasoline tank was reportedly located near the northeastern corner of the building and the two diesel tanks were reportedly located near the southwestern corner of the building. Both former diesel USTs were reportedly removed and the former gasoline UST was reportedly closed in place by August 1996. Petroleum impacts were discovered immediately below the two former diesel USTs and the impacted material was reportedly excavated and removed to a final depth that varied between 13 and 15 feet bgs. The impacted material from the tank pit was remediated by land farming and it is unclear if it was re-spread in the area of the current loading docks or removed from the site. The DOE granted NFA status as of October 3, 2011, for the related discharge. No documentation was provided to or obtained by URS confirming or denying that potential petroleum impacts remained from the former (closed-in-place) gasoline UST. Although NFA status has been issued for the discharge associated with the two former 10,000-gallon diesel USTs, it is URS' opinion that potential remaining soil impacts from these former USTs represent RECs at the subject property and potential VECs cannot be ruled out at this time.

Based on URS' review of environmental databases and a visual reconnaissance of the subject and adjacent properties, no properties of potential environmental concern were identified adjacent to or in the surrounding areas that could be reasonably expected to create a REC at the subject property at this time. None of the offsite properties are likely to be the source of potential VECs at the subject property, either by releases to the ground surface or through the migration of impacted groundwater.

The following other environmental, safety concerns, and/or recommended best management practices were identified on the subject property.

- Although ACMs are not anticipated to have been used during construction of the current subject building reportedly developed in 1993, it should be noted that additional inspection, including limited exploratory demolition and bulk sampling in accordance with EPA NESHAPS and OSHA requirements is required prior to any future renovation, demolition, and/or construction activities. If any building materials are identified by laboratory analysis to be ACMs, they should be removed by qualified abatement contractors in accordance with local, State and Federal regulations.

URS recommends that as part of the standard operating practices, property management should notify workers of the potential for the presence of ACM in the suspect non-friable materials, and modify the maintenance work procedures should the materials be disrupted due to repair or replacement activities. URS recommends that an asbestos Operations & Maintenance (O&M) Plan be prepared for the site to fulfill these recommendations.

## 8.2 DEVIATIONS

A data gap was identified between 1897 and 1944 as there was no readily available historical information on the past uses of the subject property. This data gap is not expected to alter the conclusions of this report. No other data gaps were identified by URS during the Phase I ESA project. During preparation of this report, no deletions or deviations occurred from the *ASTM Standard Practice for Environmental Site Assessments* standard (E 1527-13).

## 8.3 USER OBLIGATION

To receive/maintain liability protections established under the Brownfields Amendments, in addition to conducting AAI, the purchaser has the continued obligation of:

- Complying with land use restrictions and not impeding the effectiveness or integrity of institutional controls;
- Taking steps to prevent releases with respect to hazardous substances affecting a landowner's property;
- Providing cooperation, assistance and access to EPA, a state, or other party conducting response actions or natural resource restoration at the property;
- Complying with CERCLA information requests and administrative subpoenas; and,
- Providing legally required notices.

## 9.0 QUALIFICATIONS AND SIGNATURES

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Copies of the resumes of those involved in the preparation of this report are provided in **Appendix I**.

*This report was prepared by:*

**URS Corporation**



Michael Emilio  
Project Manager  
URS-Jacksonville, FL



Graham Hayes  
Environmental Scientist  
URS-Jacksonville, FL

## 10.0 REFERENCES

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***APPENDIX E***

**Transportation Analysis**

To be provided

***APPENDIX F***

**Lighting Analysis**

To be provided

AREA 3- SERVICE AND EMPLOYEE

Illuminance (Fc)

Average = 4.74

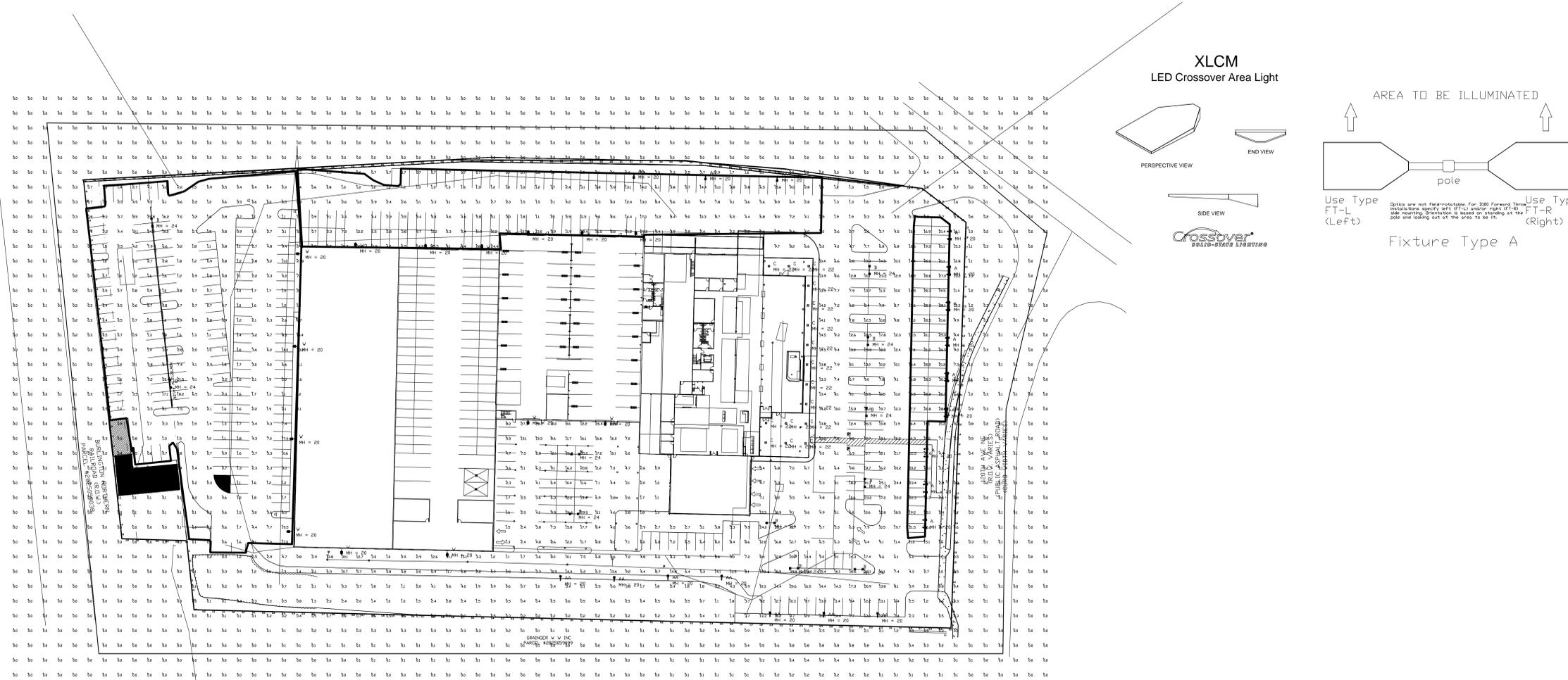
Symbol	Qty	Label	Arrangement	Description
☐	0	A	D180° 2RTD	XLCM-(1)FT-L(1)FT-R-LED-HO-CW-HSS-D180RTD-20' MH
☐	0	AA	SINGLE	XLCM-FT-LED-HO-CW-HSS-SINGLE-20' MH
☐	4	B	D180	XLCM-5-LED-HO-CW-D180-24' MH
☐	12	W	SINGLE	XLCM-FT-LED-HO-CW-WALL MOUNT @ 18'
☐	0	C	SINGLE	CIRUS-SC-LED-SS-CW-DFL-30' MH

AREA 1- DISPLAY AND CUSTOMER

Illuminance (Fc)

Average = 11.79

Symbol	Qty	Label	Arrangement	Description
☐	9	A	D180° 2RTD	XLCM-(1)FT-L(1)FT-R-LED-HO-CW-HSS-D180RTD-20' MH
☐	10	AA	SINGLE	XLCM-FT-LED-HO-CW-HSS-SINGLE-20' MH
☐	7	B	D180	XLCM-5-LED-HO-CW-D180-24' MH
☐	2	W	SINGLE	XLCM-FT-LED-HO-CW-WALL MOUNT @ 18'
☐	16	C	SINGLE	CIRUS-SC-LED-SS-CW-DFL-30' MH



Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALCS @ GRADE	Illuminance	Fc	3.46	41.3	0.0	N.A.	N.A.
deck 1_1_Top	Illuminance	Fc	26.28	45.8	6.4	4.11	7.16
PROPERTY LINE @ 4' ABOVE GRADE	Illuminance	Fc	0.59	5.1	0.0	N.A.	N.A.
22' DISPLAY LEVEL	Illuminance	Fc	27.46	45.8	6.4	4.29	7.16
AREA 1- DISPLAY AND CUSTOMER	Illuminance	Fc	11.79	41.3	1.0	11.79	41.30
AREA 2	Illuminance	Fc	26.28	45.8	6.4	4.11	7.16
AREA 3- SERVICE AND EMPLOYEE	Illuminance	Fc	4.74	35.2	0.1	47.40	352.00
BACK LOT	Illuminance	Fc	3.32	30.0	0.1	33.20	300.00
FRONT LINE	Illuminance	Fc	23.08	37.6	16.3	1.42	2.31
SIDE LOT TYPICAL	Illuminance	Fc	6.27	30.6	0.4	15.68	76.50

Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum. Lumens	Arr. Watts
☐	9	A	D180° 2RTD	XLCM-(1)FT-L(1)FT-R-LED-HO-CW-HSS-D180RTD-20' MH	1.000	N.A.	45414	549.4
☐	10	AA	SINGLE	XLCM-FT-LED-HO-CW-HSS-SINGLE-20' MH	1.000	N.A.	22707	274.7
☐	11	B	D180	XLCM-5-LED-HO-CW-D180-24' MH	1.000	N.A.	62284	552.8
☐	14	W	SINGLE	XLCM-FT-LED-HO-CW-WALL MOUNT @ 18'	1.000	N.A.	30937	275.6
☐	23	C	SINGLE	CIRUS-SC-LED-SS-CW-DFL-30' MH	1.000	N.A.	11709	113.6

Total Project Watts\_1  
 Total Watts = 202436

LIGHTING PROPOSAL LD-130409-2  
 BRW BELLEVUE

DATE: 11/23/15 REV: 12/1/2015 SHEET 1 OF 1  
 SCALE: 1"=50'

Revision	By	Appd.	YY.MM.DD
CRITICAL LANDUSE PERMIT APPLICATION	RS	LT	15.12.10
2nd PRE-APPLICATION MEETING	BP	LT	15.10.20
PRE-APPLICATION MEETING	BP	LT	15.09.02
AUTONATION REVIEW	RS	RV	15.08.27
	By	Appd.	YY.MM.DD

File Name: \_\_\_\_\_  
 Permit-Scale: \_\_\_\_\_  
 Den. Chkd. Dsgn. YY.MM.DD

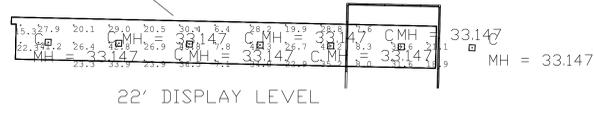
Project: **BMW OF BELLEVUE**  
 1959 NORTHUP WAY  
 BELLEVUE, WA 98005

Title: **GRADE LEVEL PHOTOMETRIC PLAN**

Project No. 2007105007 Scale AS NOTED  
 Drawing No. \_\_\_\_\_ Sheet \_\_\_\_\_ Revision \_\_\_\_\_  
 A601 of 0

AREA 2  
Illuminance (Fc)  
Average = 26.28

Symbol	Qty	Label	Arrangement	Description
□	0	A	D180° 2RTD	XLCM-D1FT-L1K1FT-R-LED-HD-CW-HSS-D180RT-20° MH
■	0	AA	SINGLE	XLCM-FT-LED-HD-CW-HSS-SINGLE-20° MH
■	0	B	D180	XLCM-5-LED-HD-CW-D180-24° MH
■	0	W	SINGLE	XLCM-FT-LED-HD-CW-WALL MDUNT @ 18°
□	7	C	SINGLE	CIRUS-SC-LED-SS-CW-DFL-30° MH



## MEMORANDUM

**DATE:** December 9, 2015

**TO:** Carol Hamlin, Senior Planner  
City of Bellevue

**FROM:** Chris Forster, P.E.  
TENW

**SUBJECT:** Parking Study  
BMW of Bellevue  
TENW Project No. 5138

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This parking study was conducted to support the development application for the proposed BMW of Bellevue project located at 11959 Northup Way in Bellevue, Washington. A vicinity map showing the location of the project site is provided in Attachment A.

Preliminary plans for the project include the development of an auto dealership of 128,094 sf not including covered parking, ramp, and service drive. The existing site includes a 143,352 sf Lowe's home improvement store that would be removed (a portion of the shell of the existing building would remain and would be used as part of the proposed auto dealership). Upon completion, the project site would contain 703 parking stalls, which includes 332 parking stalls for daily use (employees, customers, service, etc.) and 371 parking stalls for inventory/display.

Access to/from the site is proposed to be consistent with existing conditions via a restricted right-in, right-out only driveway on Northup Way and a full access driveway on 120<sup>th</sup> Avenue NE. The anticipated year of opening is 2018. A preliminary site plan including the layout and designation of all parking stalls is included in Attachment B.

The City of Bellevue land use code does not specify parking requirements for auto dealerships. Therefore, according to code, the minimum number of parking spaces shall be established by the Director of the Development Services Department. To aid in this determination, we have conducted a parking study that compares the proposed parking supply to the minimum parking stall requirements for auto dealerships in comparable jurisdictions, and to the minimum number of parking stalls that are required by BMW for this project.

### Key Findings

- For comparison purposes, a review of code requirements for parking in other jurisdictions in Puget Sound and in the Western US showed that, if built within these jurisdictions, the same BMW dealership would require an average of 283 parking stalls for daily use (resulting parking ratios averaged 2.21 stalls per 1,000 sf and ranged between 1.24 and 3.26). The proposed ratio for BMW of Bellevue of 2.59 stalls per 1,000 sf falls within the range and is higher than average.
- BMW corporate/dealership parking requirements mandate at least 322 parking stalls available for daily use by customers, employees, in service vehicles, loaners, and demonstrators (2.51 parking stalls per 1,000 sf). Based on current plans, 332 total stalls are proposed to be provided for these uses (2.59 parking stalls per 1,000 sf).

- In addition to stalls required for daily use, BMW requires this dealership to provide at least 302 stalls for inventory/display purposes. Based on the current plans, 371 stalls are proposed to be provided for inventory/display, therefore exceeding the company’s requirements. Should the demand for daily use stalls increase in the future, some of these inventory/display stalls could easily be converted to daily use stalls.
- Based on our parking study, we believe that the proposed parking supply at the BMW of Bellevue development will be sufficient to accommodate demand.

## Parking Requirements in Comparable Jurisdictions

Because the City of Bellevue does not have its own code parking requirements for an auto dealership, TENW and Stantec Architecture researched various municipal codes in other jurisdictions and found a number of locations in Puget Sound and in the Western US with established code parking requirements for auto dealerships. TENW compiled these code requirements and applied them to the proposed BMW of Bellevue project as points of comparison to the proposed parking ratio.

The parking ratios that are used in other municipalities vary widely. For example, some agencies specify minimum parking ratios based on square footage of sales/showroom/parts, number of employees, number of service stalls, and/or a combination of these and other metrics. TENW evaluated and applied the code requirements in each jurisdiction as if the BMW project were being permitted in that location. For this evaluation, the jurisdictional parking ratios are assumed to only include those parking stalls designated for daily uses (i.e. employees, customers, service vehicles, etc.). Stalls to be used for inventory and display purposes are assumed to be above and beyond those required for daily use, which likely varies significantly depending on how many vehicles a dealership chooses to put on display or store on-site vs off-site.

A detailed table summarizing our evaluation is provided in Attachment C. Table 1 summarizes the resulting minimum parking stalls/ratios for daily use stalls in the various jurisdictions as applied to the BMW of Bellevue development.

**Table 1**  
**Effective Code Parking Ratios in Comparable Jurisdictions**

Jurisdiction	BMW of Bellevue Parking Stalls Required for Daily Use <sup>1</sup>	BMW of Bellevue Effective Parking Stall Ratio Per 1,000 sf <sup>1</sup>
Santa Clarita, CA	405	3.16
Clark County, Las Vegas, NV	278	2.17
Montgomery Co/Woodlands, TX	224	1.75
Harris Co, TX	224	1.75
Irvine, CA	328	2.56
Issaquah, WA	312	2.44
Redmond, WA	418	3.26
Renton, WA	199	1.55
Lynnwood, WA	158	1.23
<b>AVERAGE</b>	<b>283</b>	<b>2.21</b>

<sup>1</sup> Based on applying the aggregate code requirements in each jurisdiction to BMW of Bellevue (128,094 square feet).

As shown in Table 1, if built within these jurisdictions, the same BMW dealership would require an average of 283 parking stalls for daily use (resulting code parking ratios averaged 2.21 stalls per 1,000 sf and ranged between 1.23 and 3.26). The proposed ratio for BMW of Bellevue of 2.59 stalls per 1,000 sf falls within the range and is higher than average.

## BMW Parking Requirements

Both BMW corporate and the local dealership have their own set of minimum parking stall requirements that they utilize to ensure a successful and efficient operation. Their requirements include minimum number of parking stalls for daily uses such as customer parking, employee parking, service vehicle parking, loaner vehicles, and demonstrator vehicles. In addition to daily use stalls, BMW also requires a certain number of spaces allocated to accommodate both inventory and display vehicles.

BMW's minimum requirements for each parking stall category and number of parking stalls proposed to be provided are summarized in Table 2.

**Table 2**  
**BMW of Bellevue – Required vs Proposed Parking Supply**

<b>Daily Use Parking Stalls</b>	<b>Parking Stalls Required by BMW<sup>1</sup></b>	<b>Parking Stalls to be Provided</b>
Customers (Sales + Parts)	56	57
Employee Parking (BMW)	88	88
Employee Parking (Collision Center)	23	23
In Service Parking	135	143
Loaners	10	11
Demonstrators	10	10
<b>Total Stalls for Daily Use</b>	<b>322</b>	<b>332</b>
<b>Parking Ratio (stalls per 1,000 sf GFA) <sup>2</sup></b>	<b>2.51</b>	<b>2.59</b>

<b>Inventory/Display Parking Stalls</b>	<b>Parking Stalls Required by BMW<sup>1</sup></b>	<b>Parking Stalls to be Provided</b>
Pre-Owned Inventory/Display	92	97
New Car Inventory/Display	210	274
Subtotal Inventory/Display	302	371
<b>Total On-Site Parking (Daily + Inventory)</b>	<b>624</b>	<b>703</b>
<b>Overall Ratio (stalls per 1,000 sf GFA) <sup>2</sup></b>	<b>4.87</b>	<b>5.49</b>

<sup>1</sup> BMW requirements as provided by Stantec Architecture.

<sup>2</sup> Parking ratios based on proposed 128,094 sf BMW of Bellevue dealership.

As shown in Table 2, BMW corporate/dealership parking requirements mandate at least 322 parking stalls available for daily use by customers, employees, in service vehicles, loaners, and demonstrators (2.51 parking stalls per 1,000 sf). Based on current plans, 332 total stalls are proposed to be provided for these uses (2.59 parking stalls per 1,000 sf).

In addition to stalls required for daily use, BMW requires this dealership to provide at least 302 stalls for inventory/display purposes. Based on the current plans, 371 stalls are proposed to be provided for inventory/display, therefore exceeding the company's requirements. Should the demand for daily use stalls increase in the future, some of these inventory/display stalls could easily be converted to daily use stalls.

## Conclusion

Based on our parking study, we believe that the proposed parking supply at the BMW of Bellevue development will be sufficient to accommodate demand.

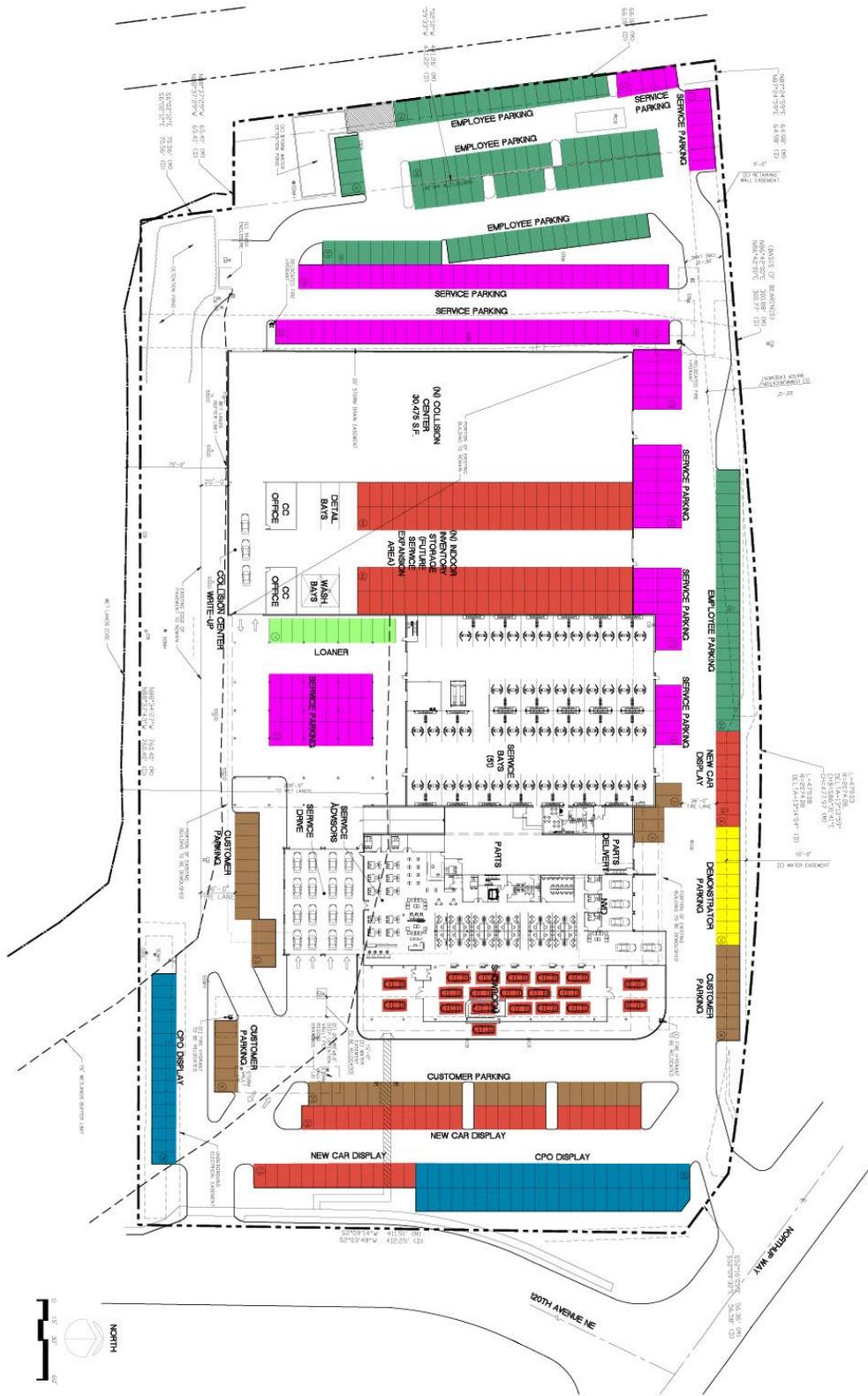
Please contact me at 206-498-5897 or [forster@tenw.com](mailto:forster@tenw.com) with any questions.

cc: Larry Tidball, Stantec Architecture

Attachments



**Attachment A:** Project Site Vicinity



Attachment B: Preliminary Site Plan

ATTACHMENT C  
Parking Study Calculations

# BMW of Bellevue Parking Study

## Sample Parking Requirements in other Jurisdictions

Jurisdiction	Parking Minimums (Daily Use Stalls)	BMW of Bellevue Sizes	Parking Stalls Required for Daily Use	Effective Stall Ratio per 1,000 sf GFA
Santa Clarita, CA	1/250 sf auto sales	56,300	225.2	3.16
	1/400 sf parts & repair	71,794	179.5	
	<b>TOTAL</b>		<b>405</b>	
Clark County, Las Vegas, NV	3 per service bay	67	201.0	2.17
	1/250 sf auto sales accessory use	1,200	4.8	
	1/500 sf vehicle sales	21,629	43.3	
	1/20 display vehicles	289	14.5	
	1/250 sf offices	3,677	14.7	
	<b>TOTAL</b>		<b>278</b>	
Montgomery Co/Woodlands, TX	3 per service bay	67	201.0	1.75
	1/1,000 sf showroom	21,629	21.6	
	1/7,000 sf parts	9,682	1.4	
	<b>TOTAL</b>		<b>224</b>	
Harris Co, TX	3 per service bay	67	201.0	1.75
	1/1,000 sf showroom	21,629	21.6	
	1/7,000 sf parts	9,682	1.4	
	<b>TOTAL</b>		<b>224</b>	
Irvine, CA	2.5 per car wash stall	3	7.5	2.56
	1/400 sf vehicle repair and sales	128,094	320.2	
	<b>TOTAL</b>		<b>328</b>	
Issaquah, WA	1/500 sf including indoor showrooms	56,300	112.6	2.44
	2.5 per service bay	67	167.5	
	1/300 sf for parts	9,682	32.3	
	<b>TOTAL</b>		<b>312</b>	
Redmond, WA	3 per service bay	67	201.0	3.26
	1 per employee on maximum shift	111	111.0	
	1/600 sf enclosed sales area	52,623	87.7	
	1/2,500 sf open sales/display area	45,198	18.1	
	<b>TOTAL</b>		<b>418</b>	
Renton, WA	1/5,000 sf vehicle sales (indoor + outdoor)	97,821	19.6	1.55
	1/400 sf for service/repair	71,794	179.5	
	<b>TOTAL</b>		<b>199</b>	
Lynnwood, WA	1/1,000 sf building area	128,094	128.1	1.23
	1/1,500 sf outdoor sales area	45,198	30.1	
	<b>TOTAL</b>		<b>158</b>	
		<b>AVERAGE</b>	<b>283</b>	<b>2.21</b>
		<b>MINIMUM</b>	<b>158</b>	<b>1.23</b>
		<b>MAXIMUM</b>	<b>418</b>	<b>3.26</b>

## BMW of Bellevue - Required vs. Proposed Parking Supply

Required / Proposed Daily Use Parking Stalls by Use	Parking Stalls Required by BMW	Parking Stalls Provided
Customers (sales + parts)	56	57
Employee Parking BMW	88	88
Employee Parking Collision Center	23	23
In Service Parking	135	143
Loaners	10	11
Demonstrators	10	10
<b>Total Daily Use Parking Required / Proposed</b>	<b>322</b>	<b>332</b>
<b>Ratio (stalls per 1,000 sf GFA)</b>	<b>2.51</b>	<b>2.59</b>
<b>Inventory / Display Parking Stalls</b>		
Pre-Owned Inventory/Display	92	97
New Car Inventory/Display	210	274
Subtotal Inventory/Display	302	371
<b>Total On-Site Parking (Daily Uses + Inventory/Display)</b>	<b>624</b>	<b>703</b>
<b>Overall Ratio (stalls per 1,000 sf GFA)</b>	<b>4.87</b>	<b>5.49</b>