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

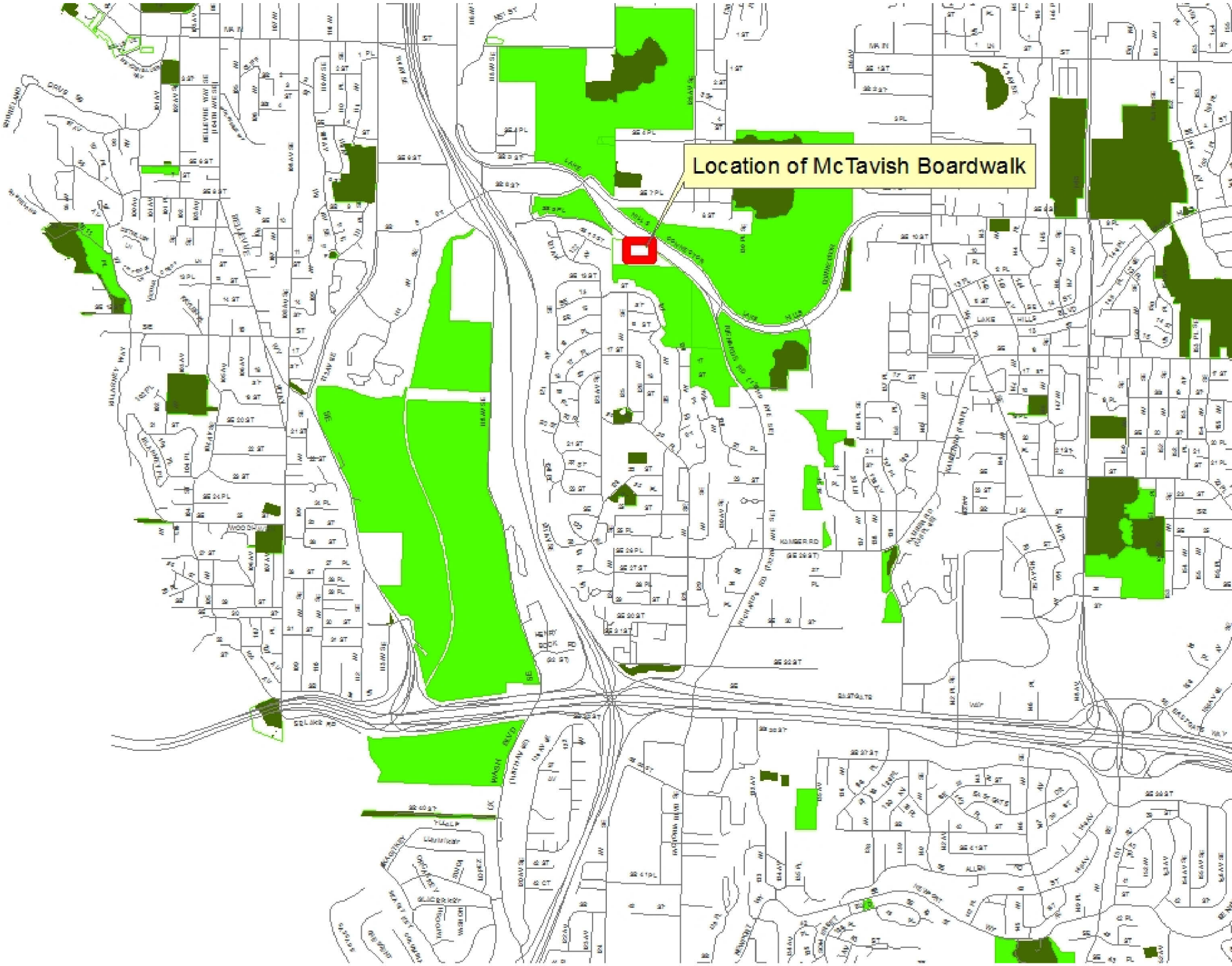
OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

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.	11-120884-LO
Project Name/Address:	McTavish Trail Boardwalk 12409 Richards Rd.
Planner:	Reilly Pittman
Phone Number:	425-452-4350
Minimum Comment Period:	**September 1, 2011**

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☒ Plans
- ☒ Other: Geotech Report


Location of McTavish Boardwalk

Narrative

McTavish Trail Improvements

McTavish Open Space is located between Lake Hills Connecter, Richards Rd. and 127th Ave SE. The legal description of McTavish Open space is Section 4, Township 24 North, Range 5 East, W.M., in King County Washington. The open space consists of 3 parcels and shares the southern property line with Woodridge Open Space. The forest class consists of conifer forest, broadleaf forest, and a mixed forest. The slope magnitude varies from 5% to 60%. Soil type varies between Kitsap Silt Loam (KpD), Arents, Alderwood material (AmC), and Alderwood Sand Loam (AgC).

Our objective is to install a boardwalk approximately 54ft in length over a section of the existing trail in the NE section of the park. This section is located within a critical area. The trail has erosion issues, surface water flowing over it during the winter/spring months, and presents a hazard to hikers. We want to reduce the environmental impact to this area by abandoning the existing trail and installing a boardwalk.

We considered alternatives to installing the boardwalk. A land survey of the adjacent area was conducted to determine if a new trail would be more beneficial to this critical area than the construction of the boardwalk. We determined that due to the steep slopes, upland wetlands, and unstable soils surrounding the proposed construction site, constructing a new trail would create more of an impact as well as future environmental issues (destabilization of slopes, additional surface water, and soil compaction) than installing a boardwalk. The boardwalk will reduce the impact to the critical area by limiting soil compaction, reducing the likelihood of off-trail hiking, and creating suitable habitat for native vegetation establishment.

According to 20.25H.055 Uses and development allowed within critical areas-Performance Standards, this project requires the summary of how the proposal meets each of the criteria and performance standards for: 20.25H.055.C.3.g; New and Expanded City and Public Parks and 20.25H.125; Landslide hazards and steep slopes. Additionally, Land Use Code Section 20.30P.140; Critical Areas Land Use Permit: Decision Criteria) is required.

Each of the above mentioned Land Use Code requirements is summarized below.

20.25H.125 Performance standards – Landslide hazards and steep slopes.

In addition to generally applicable performance standards set forth in LUC 20.25H.055 and 20.25H.065, development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

A. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

The installation of the boardwalk will require minimum alterations to the natural contour of the slope. These areas will be located at transition zones where the existing trial meets the boardwalk and vice versa. The boardwalk will be installed directly over the existing trail. Where the trail increases and/or decreases in elevation, stairs will be installed to account for the change in elevation. Additionally, the entire length of the boardwalk will be elevated to ensure that no obstructions will occur due to the installation of this structure.

B. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

This boardwalk was chosen to be installed over the existing trail to limit the impacts to this critical area. This project is enhancing this critical area and limiting the future impacts which would exist if this boardwalk is not installed. In addition to the installation of the boardwalk, a restoration/enhancement plan will be created to improve and ensure that the critical area impacted by this project will ultimately be enhanced.

C. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

N/A

D. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;

There is no need to install retaining walls for this project.

E. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;

This project will actually decrease the amount of impervious surface that is within the critical area. The present trail is considered a "boot trail" which consists of highly compacted soil. On the section where the boardwalk will be installed, the existing trail will be scarified up to a depth of 4" and a width of 2'. This will improve the permeability of the soil and present more suitable habitat for flora establishment. Also, this will ultimately decrease the amount of surface water present during winter and spring months.

F. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;

This project does not require changing the grade of the slope outside the building footprint.

G. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;

N/A

H. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

This boardwalk will utilize pole-type construction which ensures minimal impact to the existing topography. The boardwalk will also be raised off the ground which will not only extend the life the boardwalk but also not impeded the flow of water from the adjacent hillside.

I. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

N/A

J. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210. (Ord. 5680, 6-26-06, § 3)

During the duration of this project, Environmental Best Management Practices (EBMP's) will be followed and erosion control devices will be installed where necessary. This will ensure that disturbance created by this project will be kept to a minimum and that

adjacent areas will not be impacted. We will be submitting a restoration/enhancement plan with this Critical Areas Land Use Permit.

20.25H.055.C.3g. Performance Standards- New and Expanded City and Public Parks.

i. Trails. New nonmotorized trails within the critical area or critical area buffer must meet following standards:

(A) Trail location and design shall result in the least impacts on the critical area or critical area buffer;

The location and design of this project will result in limiting the impacts on the critical area. A boardwalk was proposed for this section of the trail which is within a critical area.

(B) Trails shall be designed to compliment and enhance the environmental, educational, and social functions and values of the critical area with trail design and construction focused on managing and controlling public access and limiting uncontrolled access;

This trail has already been established. We are installing a boardwalk within a critical area to reduce future impacts. With the construction of the boardwalk, the public will be less likely to venture off trail and impact the surrounding critical area. This boardwalk will also serve as place where the public can observe this critical area environment without directly impacting it.

(C) Trails shall be designed to avoid disturbance of significant trees and to limit disturbance of native understory vegetation;

The construction of the boardwalk will result in the removal of two alder trees (Alnus rubra) with diameters of 4'' and 10''. Because a trail already exists, we are expecting minimal disturbance to native understory vegetation. A restoration plan will be developed to mitigate any impacts that do result in the construction of the boardwalk and well as to enhance this critical area. Additionally, we will salvage any plant that will be directly impacted by the construction of the boardwalk.

(D) Trails shall be designed to avoid disturbance of habitat used for salmonid rearing or spawning or by any species of local importance;

This location of this trail and construction site will not disturb any habitat used for salmonids rearing or spawning or by any species of local importance.

(E) The trail shall be the minimum width necessary to accommodate the intended function or objective;

Stated in the EBMP (Environmental Best Management Practices) Chapter 9.3, "trail width shall be 4 feet". The boardwalk will be the minimum width necessary to accommodate the intended function or objective.

(F) All work shall be consistent with the City of Bellevue's "Environmental Best Management Practices" and all applicable City of Bellevue codes and standards, now or as hereafter amended;

For this project, we are strictly following Bellevue Land Use Code 20.25H and the City of Bellevue's Environmental Best Management Practices. We assure you that all required material under LUC 20.25H will be completed and submitted for approval. We will also establish Environmental Best Management Practices at the construction site to limit the impact and ensure environmental protection in the critical area.

(G) The facility shall not significantly change or diminish overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

The boardwalk was designed to limit the impact to the critical area. It will be built on posts which will create spacing between the structure and the ground. This will allow aquatic flow to function properly without any obstruction.

(H) Where feasible and consistent with any accessibility requirements, any trail shall be constructed of pervious materials;

The existing trail beneath the boardwalk will be scarified which will improve the permeability of the soil as well as create suitable habitat for flora species. The boardwalk contains metal stairs which will allow rain water to permeate the soil with no obstruction. There will also be spacing in between the decking boards which will allow water to permeate the ground over the length of the boardwalk.

(I) Crossings over and penetrations into wetlands and streams shall be generally perpendicular to the critical area, and shall be accomplished by bridging or other technique designed to minimize critical area disturbance considering the entire trail segment and function; and

The location of the boardwalk will not cross nor penetrate any streams or wetlands.

(J) Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

During the duration of this project, Environmental Best Management Practices (EBMP's) will be followed and erosion control devices will be installed where necessary. This will ensure that disturbance created by this project will be kept to a minimum. We will be submitting a restoration/enhancement plan with this Critical Areas Land Use Permit.

ii. Public Use Structures.

(A) New or expanded permanent public use structures, including interpretative centers, community centers, and other structures designed for public use and access are allowed in the critical area or critical area buffer only if no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

(1) The location of existing infrastructure;

This location contains no existing infrastructure.

(2) The function or objective of the proposed new or expanded structure;

The boardwalk has multiple functions and/or objectives associated with it. The main objective is to reduce the environmental impact in the critical area that it's receiving from the existing trail. The boardwalk will also provide a significantly safer section of trail. It will also provide a place where the public can view the surrounding environment and wildlife.

(3) Demonstration that no alternative achieves the stated function or objective;

No alternative achieves the stated function and/or objective. An alternative to the boardwalk would be to construct a new trail within the surrounding critical area. This would create significant impacts and create environmental hazards to this environment which we are trying to eliminate with the installation of the boardwalk.

(4) Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

The disturbance caused by the construction of the boardwalk will be significantly less than leaving the trail in its existing condition. Erosion, surface water runoff, soil compaction, and dangerous trail conditions will be eliminated with the construction of the boardwalk.

(5) The ability of both permanent and temporary disturbance to be mitigated.

This project has been designed to create as little impact as possible. A restoration/enhancement plan will be developed to mitigate and enhance all disturbed areas.

(B) If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the generally applicable performance standards of subsection C.2.b of this section.

i. Location and design shall result in the least impacts on the critical area or critical area buffer;

The location of the boardwalk will be directly over the existing trail. This will avoid all impacts associated with creating a new trail through the critical area. The boardwalk was designed to limit the amount of impact/disturbance to the critical area. The design consists of using Diamond Piers to support the structure and stairs to compensate for the elevation gain/loss. Because of the low impact design, minimal clearing and grading will required.

ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

To minimize the disturbance to the critical area, a work line has been created and will be enforced throughout the length of the project. In addition to the work line, Environmental Best Management Practices will be followed. A straw roll will be installed to impede sediment and water from impacting the adjacent critical areas. Plants that are located within the work line and also impacted by the construction of the boardwalk will be salvaged and transplanted. Finally, a planting plan will be created to mitigate any disturbance caused by this project.

iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

The location of this project does not occur in habitat used for salmonids rearing and spawning or by any species of local importance.

iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;

The boardwalk will not be crossing any wetlands or streams.

v. All work shall be consistent with applicable City of Bellevue codes and standards;

All work will be consistent with applicable City of Bellevue codes and standards.

vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

Not Applicable

vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

Parking for the trailhead will be located at the end of SE 9th Pl. Storage for mechanical equipment and space for maintenance sheds is not applicable for the project.

iii. Other Parks Uses. Other parks uses proposed within the critical area or critical area buffer, including public access drives, public loading areas, and public boat launches and ramps, shall meet the generally applicable performance standards of subsection C.2.b of this section; provided, that active use playfields shall not be allowed in critical area or critical area buffers; and provided, that parking supporting parks uses shall be allowed in a critical area buffer only if no technically feasible alternative, as demonstrated through application of the criteria of subsection C.2.a of this section, exists.

Not applicable

20.30P.140 Decision criteria.

The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

A. The proposal obtains all other permits required by the Land Use Code; and

All required permits are being submitted for approval.

B. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer; and

A boardwalk is proposed and designed to reduce the impact on this critical area. There is will be minimal clearing and grading associated with the project. The City of Bellevue's Environmental Best Management Practices will be implemented and enforced for further reduce the impact of this project. A restoration/enhancement plan will also be developed to restore and enhance this area.

C. The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable; and

The summary for performance standards 20.25H.055.C.3.g and 20.25H.125 has been created and is located in the narrative.

D. The proposal will be served by adequate public facilities including streets, fire protection, and utilities; and

The trailhead will be located on SE 9th Pl, Bellevue,WA. Additional trails established in McTavish Open Space and Woodridge Open Space will have connections to this trail. Furthermore, these connecting trails will give hikers access to 128th Ave SE, SE 17th St, and Richards Rd.

E. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan; and

A restoration/enhancement plan will be included with the Critical Areas Land Use permit.

F. The proposal complies with other applicable requirements of this code. (Ord. 5683, 6-26-06, § 27)

This proposal complies with all applicable requirements.

SEPA Checklist Annotated by Reilly Pittman on 8/17/2011

City of Bellevue Submittal Requirements | 27a

ENVIRONMENTAL CHECKLIST

4/18/02

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

BACKGROUND INFORMATION

Property Owner: City of Bellevue

Proponent: Jim Bennett

Contact Person: Jim Bennett
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 450 110th Ave NE P.O Box 90012, Bellevue, WA 98009

Phone: (425) 452-4321

Proposal Title: McTavish Trail Improvements

Proposal Location: between SE 9th Pl, Lake Hills Connector, and Richards Rd
(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: Construct a boardwalk over an existing section of trail
2. Acreage of site: .014 acres
3. Number of dwelling units/buildings to be demolished: 0
4. Number of dwelling units/buildings to be constructed: 0
5. Square footage of buildings to be demolished: 0
6. Square footage of buildings to be constructed: 350 sq ft.
7. Quantity of earth movement (in cubic yards): < 3 yds
8. Proposed land use: Park / trail
9. Design features, including building height, number of stories and proposed exterior materials:
   Elevated boardwalk on diamond piers (footings)
10. Other

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

End of 2011, though may be pushed to End of 2012

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

NO

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

- Clear & grade permit
- CSWPPP
- Critical Area Land Use permit
- Environmental checklist
- Vegetation Management Plan

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.

NO

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.

- Clear & grade
- CSWPPP
- building permit
- SEPA
- Critical Area Land Use permit

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)?

50%

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.

Soil type varies between Kitsap Silt loam (KpD), Arents, Alderwood material (AmC) & Alderwood Sand Loam (AgC)

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d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Our site observations indicated no evidence of historic, deep-seated or significant landslide activity in the vicinity of the site.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. Minimal grading is anticipated for this site. Grading will occur at both ends of the boardwalk where a 18"-36" landing will be installed.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes, minimal grading on site & installation of Diamond Piers may cause erosion

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? 0%, The raised boardwalk will allow water to infiltrate the soil below through spaces between the decking & metal stairs

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Construction will take place during the dry months (May - Sept). A straw roll will also be installed to block sediment from entering adjacent areas

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. Emissions for vehicles would result during construction, These emissions will exist mainly in the beginning of the project when delivering supplies to the site, No emissions will be created after project is completed

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

N/A

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

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appropriate, state what stream or river it flows into.

No

(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.

NO

(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.

N/A

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No

(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.

No

b. Ground

(1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No

(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.

N/A

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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.

N/A

(2) Could waste materials enter ground or surface waters? If so, generally describe.

NO

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

A straw roll will be installed to impede water & sediment from entering adjacent areas.

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?

We may remove and transplant any shrub or herb (<10) that will be directly impacted by the construction of the boardwalk

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

N/A

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: We will salvage any and all native plants that are directly impacted by this project. We will also develope a planting prescription to enhance this area after the completion of the boardwalk

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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.

N/A

c. Is the site part of a migration route? If so, explain.

No

d. Proposed measures to preserve or enhance wildlife, if any:

NO

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.

N/A

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

NO

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:

N/A

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.

No

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

N/A

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

N/A

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b. Noise

(1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)? The project location is near a 2 lane rd (Lake Hills Connector) which you can hear traffic from site location.

(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.

The noise that would be created comes from the construction of the boardwalk (power tools, equipment) and would be present in the short-term basis. The construction noise will be present from 8am - 4pm

(3) Proposed measures to reduce or control noise impacts, if any:

Noise regulated by BCC 9.18

N/A

8. Land and Shoreline Use

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

Current use of the site is a trail & adjacent property is City Park

b. Has the site been used for agriculture? If so, describe.

No

c. Describe any structures on the site.

N/A

d. Will any structures be demolished? If so, what?

NO

e. What is the current zoning classification of the site?

R-3.5

f. What is the current comprehensive plan designation of the site?

City Park

g. If applicable, what is the current shoreline master program designation of the site?

This site is not w/in a shoreline management area

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Yes, this site is w/in a Critical Area,

I. Approximately how many people would reside or work in the completed project?

0

j. Approximately how many people would the completed project displace?

0

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

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i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: All required permits are being submitted for approval for project commencement

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? 5 ft, wood

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

NONE

c. Proposed measures to reduce or control aesthetic impacts, if any:

The construction of the boardwalk is increasing the aesthetics of this area

11. Light and Glare

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

N/A

b. Could light or glare from the finished project be a safety hazard or interfere with views?

N/A

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c. What existing off-site sources of light or glare may affect your proposal?

N/A

d. Proposed measures to reduce or control light or glare impacts, if any:

N/A

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Multiple trails are located throughout the city park

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The boardwalk will create a safer section of trail for hikers

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.

NO

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.

N/A

c. Proposed measures to reduce or control impacts, if any:

N/A

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.

SE 9th pl, Lake Hills Connector, Richards Rd

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No, N/A

c. How many parking spaces would be completed project have? How many would the project eliminate?

N/A

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).

NO

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

NO

RP

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

N/A

g. Proposed measures to reduce or control transportation impacts, if any:

N/A

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.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

N/A

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.

N/A

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 Christopher S. Muse

Date Submitted 7/25/2011

RP

McTavish Boardwalk Planting Plan

The McTavish Boardwalk is located within a Critical Land Use Area. The site is located near the bottom of a steep hillside. This area is well saturated with surface water visible. The south side of the trail has a steep cut bank while the north side has a gradual slope toward Lake Hills Connector Rd.

The McTavish boardwalk work area is approximately 600 sq. ft. The boardwalk structure has a total area of approximately 350 sq. ft. leaving 250 sq. ft. of plantable space. With an average spacing of 2ft x 2ft, we will plant approximately 65 plants at this site. We will purchase 1gal sized plants if available. Below is a table with our species list and quantity of each.

Species	Quantity	Size (Gallon)
Vine Maple (Acer circinatum)	5	1
Salmonberry (Rubus spectabilis)	20	1
Sword Fern (Polystichum munitum)	20	1
Red Huckleberry (Vaccinium parvifolium)	10	1
Indian Plum (Oemleria cerasiformis)	10	1

We will monitor the establishment of these plants over the next three years which includes the planting year. Because the soil is well saturated, a watering schedule is not recommended. If it is determined the plants need additional water, this site will be included in our water schedule.

December 10, 2010

City of Bellevue
Mr. Jim Bennett
Natural Resource Division
Parks & Community Services Department
450 – 110th Avenue Northeast
Bellevue, Washington 98009

RE: LIMITED BRIDGE FOUNDATION INVESTIGATION
Proposed Bridge – McTavish Trail
East of the end of SE 9th Place near Lake Hills Connector Road
Portions of Parcel No.'s 0424059002, 0424059003, and 0424059114
Bellevue, Washington

Dear Mr. Bennett:

This report presents the results of our Limited Bridge/Boardwalk Foundation Investigation for a specific portion of the proposed McTavish trail within the referenced properties. The scope of our study was limited to hand borings in the area of the bridge/boardwalk foundations to determine soil parameters for use in design of the foundation elements by others. Detailed geologic hazard analysis, such as slope stability analyses, was not part of our study.

Proposed Construction

The proposed construction includes a wood framed bridge or boardwalk to be constructed over a low area along the proposed trail alignment. The site plan and survey being prepared by LSA may be used to locate the site. We have not been provided a site plan to date: however, we visited the site with the City of Bellevue and Landscape Architect prior to commencement. We can provide specific hand excavation locations upon receipt of the site survey.

The bridge/boardwalk will likely be constructed on a foundation system consisting of Diamond Piers™ placed and driven into the existing soils at each end of the bridge. If other options for foundation support are selected, we should be notified in order to provide alternative recommendations. Foundation loads are presumed to be light and grading will be very limited.

Site Conditions

The area where the bridge will be constructed generally slopes downward toward the west and northwest. Slope magnitudes range from 20 to 60 percent. The area is vegetated with Cedar, Maple, Fir, Hemlock, and Alder trees; as well as undergrowth consisting of ferns, vines, grasses, holly, and other bushes/plants. The bridge will be constructed in a low sloping valley feature with areas of standing water. The area does not appear to have characteristics consistent with seasonal stream activity. Many trees in the surrounding areas have slightly to moderately curving trunks, indicating some level of soil creep activity. Spring activity was observed on areas adjacent and below the site of the bridge.

Geologic Setting

The site lies within the eastern portion of the Puget Lowland. The lowland is part of a regional north-south trending trough that extends from southwestern British Columbia to near Eugene, Oregon. North of Olympia, Washington, this lowland is glacially carved, with a depositional and erosional history including at least four separate glacial advances/retreats. The Puget Lowland is bounded to the west by the Olympic Mountains and to the east by the Cascade Range. The lowland is filled with glacial and nonglacial sediments consisting of interbedded gravel, sand, silt, till, and peat lenses.

The Geologic Map of King County, indicates that the site area is located near the contacts of Pre-Fraser Deposits and Vashon Advance Outwash. Vashon Advance Outwash consists of sand and gravel with local interbeds of silt and clay deposited in front of the advancing glacier. These materials are generally dense to very dense and typically have a high rate of permeability. Pre-Vashon Deposits generally consist of sand, silt, gravel, and mudstone of fluvial, lacustrine, and glacial origin. These materials are commonly interbedded with springs present between layers of sand and silt or clay. In many areas, thick layers of silt and clay are prominent.

Soil Profile

A limited field investigation consisting of four hand excavations was performed to evaluate the near surface soil and groundwater conditions within the site area. The soils encountered in the hand excavations were continuously examined and visually classified in accordance with the Unified Soil Classification System (USCS). In general, we encountered 6 to 12 inches of vegetation and topsoil underlain by soft to stiff silt, silt with sand, and sandy silt with variable amounts of gravel (Pre-Fraser Deposits).

Upslope from the proposed bridge location, we observed local areas of poorly graded sand in shallow excavations, consistent with weathered outwash. As discussed above, groundwater seepage observed as springs were observed near the base and just above the slope cuts along the roadways.

Slope Evaluation/Landslide Hazard

We traversed the areas along the roadway where accessible. We did not observe head scarps, hummocky terrain, back rotated benches, sloughing soils, groundwater seepage emanating from slope faces and/or discontinuous vegetation patterns. We observed no tension cracks near the tops of the site slopes.

Our site observations indicated no evidence of historic, deep-seated, or significant landslide activity or slope movement directly adjacent to the roadways. We did observe some younger trees with curved tree trunks, indicating some level of soil creep or other movement. These trees were observed along the steep slope and/or at the top of the steep slope areas.

It is likely that surficial sloughing and landslide activity has occurred on the manmade cuts above the Lake Hills Connector (below the bridge area) in the past; however, there was no evidence of slide activity in the area of the site. Commonly, landslide activity occurs within soil units above and below the groundwater table, especially when granular soils overlie impermeable silt and clay.

Erosion Hazard

The Natural Resources Conservation Services (NRCS) maps for King County indicate that the area of the bridge/boardwalk is underlain by Kitsap silt loam (15 to 30 percent slopes). These soils have a "Severe" erosion potential in a disturbed state.

It has been our experience that soil erosion potential can be minimized through landscaping and surface water runoff control. Typically erosion of exposed soils will be most noticeable during periods of rainfall and may be controlled by the use of normal temporary erosion control measures, i.e., silt fences, hay bales, mulching, control ditches or diversion trenching, and contour furrowing. Erosion control measures should be in place before the onset of wet weather. Under no circumstances should surface water be allowed to flow over any slope areas.

Seismic Hazard

The native soils encountered in the hand borings were generally medium dense/stiff below a highly weathered zone. The overall soil profile corresponds to a soil profile Site Class *D* as defined by Table 1613.5.2 of the 2009 International Building Code (2009 IBC). A Site Class *D* applies to a profile consisting of medium dense/stiff to very dense soils within the upper 100 feet.

We referenced the U.S. Geological Survey (USGS) Earthquake Hazards Program Website to obtain values for S_S, S_1, F_a, and F_v if they are needed for the design of the bridges. The USGS website includes the most updated published data on seismic conditions. The site specific seismic design parameters and adjusted maximum spectral response acceleration parameters are as follows:

PGA (Peak Ground Acceleration, in percent of g)

31.64 (10% Probability of Exceedence in 50 years)

61.63 (2% Probability of Exceedence in 50 years)

S_S 139.40% of g

S_1 47.10% of g

F_A 1.00

F_V 1.53

Additional seismic considerations include liquefaction potential and amplification of ground motions by soft soil deposits. The liquefaction potential is highest for loose sand with a high groundwater table. Our scope of work did not include liquefaction analyses; however, based on our hand borings and knowledge of the area geology, we do not expect significant settlement or effects from liquefaction.

CONCLUSIONS AND RECOMMENDATIONS

General

Based on our observations and limited investigation, it is our opinion that the proposed bridge/boardwalk construction is suitable at the proposed location. The shallow soils are generally stiff and there was no evidence of a significant landslide hazard in the surrounding areas. The site soils are highly moisture sensitive and care should be taken during any grading or excavation work. These materials will be easily disturbed and will not be suitable for use as structural fill.

We recommend that a Kane Environmental geologist or engineer observe the placement of the foundation systems to ensure proper refusal criteria is achieved and to verify that the soil conditions are as anticipated by this investigation.

Soil Parameters

The observed soils in our hand borings were typical of pre-Fraser silt and clay desposits. Based on our experience with these materials and the observed conditions in our hand borings, the following average soil parameters may be used in foundation design at the three locations:

East End

Unit Weight – 100 pounds per cubic foot (pcf); Friction Angle – 22 degrees; Cohesion – 50 pounds per square foot (psf)

Middle Location

Unit Weight – 100 pcf; Friction Angle – 22 degrees; Cohesion – 50 psf

West End

Unit Weight – 100 pcf; Friction Angle – 22 degrees; Cohesion – 50 psf

Erosion Control

Erosion and sediment control (ESC) is used to minimize the transportation of sediment to wetlands, streams, lakes, drainage systems, and adjacent properties. Erosion and sediment control measures should be taken and these measures should be in general accordance with local regulations. As a minimum, the following basic recommendations should be incorporated into the design of the erosion and sediment control features of the site:

1) Phase the soil, grading, utility, and other work, requiring excavation or the disturbance of the site soils, to take place during the dry season (generally May through September). However, provided precautions are taken using Best Management Practices (BMP's), limited grading activities can be undertaken during the wet season (generally October through April). It should be noted that this typically increases the overall cost of the project.

2) All site work should be completed and stabilized as quickly as possible.

3) Additional perimeter erosion and sediment control features may be required to reduce the possibility of sediment entering the surface water. This may include additional silt fences, silt fences with a higher Apparent Opening Size (AOS), construction of a berm, or other filtration systems.

4) Any runoff generated by dewatering discharge should be treated through construction of a sediment trap if there is sufficient space. If space is limited other filtration methods will need to be incorporated.

5) Vegetation should be re-established in landscaped and slope areas prior to the onset of wet weather (typically October through April).

Limitations

Earthwork construction is characterized by the presence of a calculated risk that soil and groundwater conditions have been fully revealed by the original foundation investigation. This risk is derived from the practical necessity of basing interpretations and design conclusions on limited sampling of the earth. The recommendations made in this report are based on the assumption that soil conditions do not vary significantly from those disclosed during our field investigation. If any variations or undesirable conditions are encountered during construction, the Kane Environmental should be notified so that supplemental recommendations can be made.

The conclusions of this report are based on the information provided regarding the proposed construction. If the proposed construction is relocated or redesigned, the conclusions in this report may not be valid. Kane Environmental should be notified of any changes so that the recommendations can be reviewed and reevaluated.

This report is a limited soils investigation report with the purpose of evaluating the soil conditions with regard to soil parameters for use in bridge design by others. The scope of our services did not include any environmental site assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater or atmosphere, geotechnical analyses, detailed geologic analyses, or the presence of wetlands. Any statements, or absence of statements, in this report or on any hand boring log, regarding odors, unusual or suspicious items, or conditions observed are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessments.

The information presented herein is based upon professional interpretation utilizing standard practices and a degree of conservatism deemed proper for this project. We emphasize that this report is valid for this project as outlined above, and should not be used for any other site.

We hope that this report provides the information required at this time. If you have any questions with this information, please contact our office at (206) 691-0476.

Respectfully submitted,

KANE ENVIRONMENTAL, INC.

State of Washington
Engineering Geologist
2513
Licensed Geologist
PHILLIP HABERMAN

12/10/10

Phil Haberman, P.G., P.E.G.
Senior Engineering Geologist

PH/jk

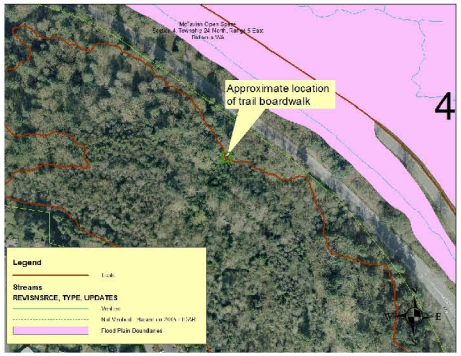
References

King County Imap
"Geologic Map of King County (2007)", Derek Booth, et. al.

Location

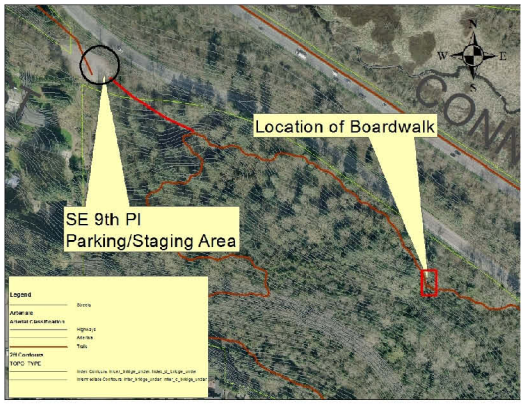
The approximate center of McTavish Open Space legal description is Township 24N, Range 5E, of Section 4. The main project area is located between Lake Hills Connector and SE 14th ST.

Vicinity Map

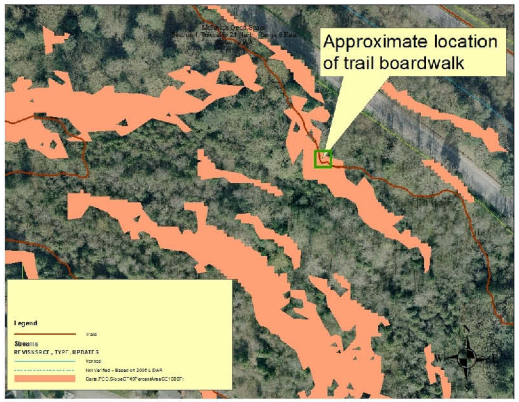


Plain Base Flood Elevation

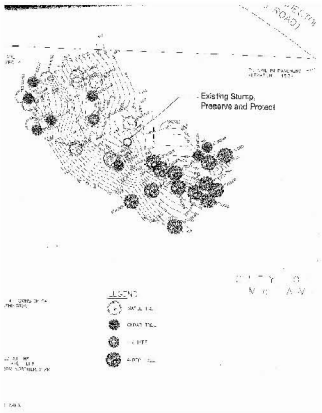
Streets



Topographic Layer



Critical Area and Buffer



Tree Inventory

McTavish Boardwalk

Site Plan B
Page 1 of 2

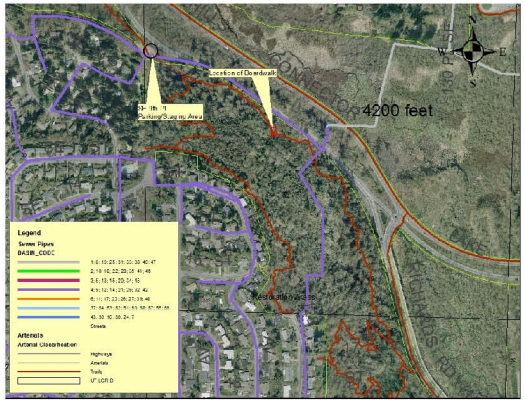
CITY OF BELLEVUE WASHINGTON

Sheet No. 1

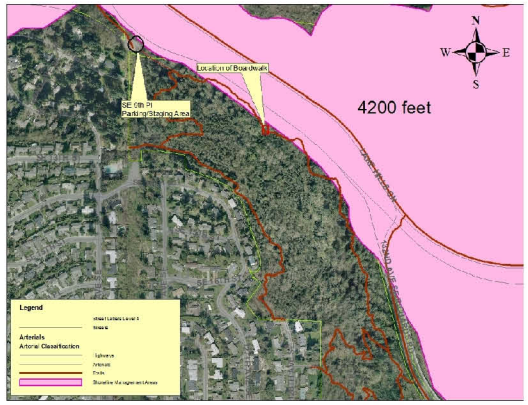
Drawn By: Chris Morse 425/766-2187
450 110th Ave NE

Checked by:

Date: 07/25/2011



Utilities



Setbacks

McTavish Boardwalk

Site Plan B
Page 2 of 2

CITY OF BELLEVUE WASHINGTON

Sheet No. 1

Drawn By: Chris Morse 425/766-2187
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