Seattle Department of Transportation

Cowen Park Bridge Retrofit Project
Seattle, Washington

SEPA Checklist

December 6, 2018

STATE ENVIRONMENTAL POLICY ACT (SEPA) ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Cowen Park Bridge Retrofit Project

2. Name of applicant:

Seattle Department of Transportation (SDOT)

3. Address and phone number of applicant and contact person:

Vanessa Bacurin, Project Manager
Seattle Department of Transportation
Capital Projects and Roadway Structures Division
700 Fifth Avenue, Suite 3900
P.O. Box 34996
Seattle, WA 98124
206-684-5167

4. Date checklist prepared:

December 6, 2018

5. Agency requesting checklist:

City of Seattle Department of Transportation (SDOT)

6. Proposed timing or schedule (including phasing, if applicable):

Construction is anticipated to begin in spring 2019 with a construction duration of approximately six months pending approvals and permits.

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

There are no future additions, expansions or further activity related to the project.

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

The following environmental information has been prepared for this project:

- HWA Geosciences Inc. 2018. Final Geotechnical Report - Cowen Park Bridge Retrofit Project. September.
- WSP. 2018a. Wetland, Stream and Wildlife Habitat Impact Assessment for the Proposed Cowen Park Bridge Retrofit Project. December.

- WSP. 2018b. Confidential Cultural Resources Report for the Proposed Cowen Park Bridge Retrofit Project. December.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other applications are known to be pending for government approvals that will directly affect the property covered by this proposal.

10. List any government approvals or permits that will be needed for your proposal, if known.

The following governmental approvals or permits are anticipated:

- National Environmental Policy Act Documented Categorical Exclusion
- Section 4(f) and 6(f) Temporary Occupancy Approval of Public Park
- Section 106 Cultural Resources
- Washington Department of Fish and Wildlife Hydraulic Project Approval
- Seattle Department of Neighborhoods Historic Preservation Certificate of Approval
- Seattle Department of Parks and Recreation (Parks) Revocable Use Permit

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

SDOT proposes to retrofit the historic Cowen Park Bridge to meet current seismic standards. The bridge is located over Ravenna Creek and Cowen/Ravenna Parks between NE Ravenna Blvd and NE 62nd St (Figure 1). The proposed retrofitting of the Cowen Park Bridge would involve reinforcing the bridge columns that support the bridge deck, as well as reinforcements of the structural elements where they attach to the bridge deck (Figure 2).

Planned retrofitting activities include the following:

- Apply carbon fiber reinforced polymer (CFRP) jackets to each of the two columns adjacent to the south bridge abutment.
- Partially remove the enclosure walls of the two expansion columns at the end of the arches to install CFRP jackets to the interior columns comprising each of these expansion columns.
- Apply CFRP jackets to several of the spandrel columns (columns between the arch and bridge deck).
- Enlarge the concrete cross beams that run beneath the bridge deck at the points where the columns attach to the bridge deck.
- Construct a concrete infill wall between the two top-most spandrel columns above each of the bridge arch ribs.

- Remove a portion of the bridge deck (9 feet by 14 feet) over each of the columns adjacent to the concrete barriers between the roadway and sidewalks.
- Build transverse restrainers near the expansive columns.
- Strengthen the tops of the spandrel columns by installing dowels from the bridge deck.
- Apply CFRP jackets to the interior cross-beam and concrete bolster to the end cross-beam.
- Repave the bridge deck where construction has occurred and restripe the pavement as needed.

Planned construction activities include the following:

- Partial demolition of column enclosures and bridge deck removal.
- Accessing work areas beneath bridge with the construction zone extending up to 30 feet beyond the bridge footprint.
- Erection of temporary scaffolding.
- Application of CFRP jackets (approximately 1/16-inch thick).
- Construction of concrete forms.
- Pouring concrete.

Construction vehicles would access the area under the bridge using an existing park trail used by Parks maintenance vehicles from Brooklyn Avenue NE. Work beneath the central portion of the bridge would be done from a manlift below the bridge. A temporary bridge across Ravenna Creek could be used to access the northern part of the bridge. Other equipment and supplies will be hand-carried from the existing park trail below the central portion of the bridge up the ravine slope to the two piers adjacent to the south abutment. Additional equipment likely to be required for construction include saw cutting machinery, backhoe with demolition attachment for removal of bridge deck, hydraulic 60-ton crane with rubber tires, forklift, and pickup and concrete truck.

The area for construction staging would be primarily below the bridge, approximately 30 feet around the bridge (i.e., 30 feet east and west of the existing edges of the bridge structure and north and south to the existing bridge abutments). Construction activities on the top of the bridge deck would use about half of the roadway at a time, with the other half open to two-way traffic, buses, bicyclists, and pedestrians. Only the western half of the existing bridge is within the existing roadway right-of-way, so the eastern half of the bridge and the at-grade construction zone would extend into Ravenna Park.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The bridge is located over Ravenna Creek between NE Ravenna Blvd and NE 62nd St in the Roosevelt and Ravenna neighborhoods. Cowen Park is located to west of bridge and Ravenna Park to the east. Township 25N Range 4E, Sections 8 and 9.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: *[Check the applicable boxes]*

☐ Flat ☒ Rolling ☒ Hilly ☒ Steep Slopes ☐ Mountainous
☐ Other: (identify)

b. What is the steepest slope on the site (approximate percent slope)?

Steep slopes greater than 40% are located adjacent on both sides of the bridge. However, there would be no impacts to steep slopes during construction.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Soils in this project area are not identified in the Natural Resources Conservation Service soil survey for King County. The surface geology in the vicinity indicate that soils are generally comprised of silt and sand along Ravenna Creek and till outside of the riparian zone. The sediments at the surface of the project area with the park is artificial fill except the streambed of Ravenna Creek. The Geotechnical Report indicates that the soils underlying the bridge consist of loose colluvial sand over medium dense recessional outwash sands with dense to very dense advance outwash sands to depth (HWA Geosciences Inc. 2018). Agricultural lands are not located near the project. There would be minimal ground disturbance from vehicles but no excavation is planned.

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

The alluvium soils underlying and surrounding the creek are considered to be liquefiable soils. Liquefaction-induced settlement is limited to the base of the ravine and would not affect the seismic response of bridge foundations (HWA Geosciences Inc. 2018). While construction may impact this area from the surface down to 6 inches it is outside the footprint of the bridge foundation and no permanent changes are proposed.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate the source of fill.

The total disturbance area is approximately 13,000 square feet. Soil disturbance is not expected to exceed approximately 6 inches. No ground excavation would be required for the construction activities. Minimal disturbance would occur due to vehicle operation and

storage, materials storage, and erection of the scaffolding and supports. Disturbed areas would be restored following completion of construction.

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

Disturbed portions of the project area could be susceptible to erosion during the bridge retrofit but runoff would be minimized through use of best management practices (BMPs) as described below.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The project is within the right-of-way and would retrofit the existing bridge. The amount of impervious surfaces would remain unchanged from the project.

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

The contractor will be required to follow the 2017 edition of Seattle Standard Plans and Standard Specifications for Road, Bridge and Municipal Construction and the Seattle Stormwater Code to control erosion in the project area. The following general conservation measures and BMPs are applicable at the construction site:

- The contractor will provide a Construction Sediment and Erosion Control Plan (CSECP) for city review and approval before beginning construction activities.
- The contractor will provide a construction BMP plan and a Spill Prevention Plan for city review and approval before beginning construction.
- All paving and utility work will be performed in accordance with city requirements and the requirements of the utilities involved.
- Catch basin filters will be used in catch basins located downgradient of the site if necessary to prevent sediments from entering the storm drainage system during construction.
- Silt fencing will be installed around all wetlands and Ravenna Creek to prevent sediment-laden runoff from entering aquatic areas.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

<u>Construction:</u>
Emissions during construction of the project would include:

- Fugitive dust generated during the excavation, grading and other construction activities.

- Engine exhaust emissions from construction vehicles, work vehicles and construction equipment.
- Increased motor vehicle emissions associated with increased traffic congestion during construction.
- Volatile organic and odorous compounds emitted during paving.

The total emissions and timing of the emissions from these sources would vary depending on the phasing of the project and construction methods.

After Construction:
Once the project is complete, operation of Cowen Park Bridge would continue unchanged, and operation and maintenance of the bridge are not expected to result in increased emissions to air.

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

There are no off-site sources of emissions or odor that would affect the project.

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

During construction, impacts to air quality would be minimized through implementation of standard federal, state and local emission control criteria, in accordance with the 2017 edition of Seattle Standard Plans and Standard Specifications for Road, Bridge, and Municipal Construction. The standard specifications require that contractors maintain air quality to comply with the national emission standards for hazardous air pollutants.

Minimizing air quality impacts during construction may include such measures as spraying areas of exposed soil with water for dust control, periodically cleaning bridge and adjacent streets in the construction zone, and minimizing vehicle and equipment idling to limit exhaust emissions.

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.

Cowen Park Bridge crosses Ravenna Creek. There are adjacent wetlands to the north of Ravenna Creek under the trail (Figure 3). The wetland contains characteristics of slope and riverine hydrogeomorphic classes and supports palustrine forested and emergent Cowardin vegetation communities (WSP 2018a). Ravenna Creek drains south to Lake Washington.

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.**

   Yes. Work would occur over and adjacent to Ravenna Creek and adjacent wetlands (Figure 3). A temporary bridge over Ravenna Creek may be installed by the contractor to facilitate construction activities, but must be completely in the dry soils, spanning the full width of the stream and associated wetlands.

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.**

   None.

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 from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

   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.**

   None.

c. Water runoff (including stormwater):

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.

Stormwater from the project area generally drains to Ravenna Creek which drains into Lake Washington.

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

During construction, there is the potential that waste materials (e.g. oil and grease) from construction equipment could enter runoff from the site. BMPs will be implemented to minimize the potential for waste materials to affect ground or surface waters. This would especially be important near Ravenna Creek and associated wetlands where the groundwater level is similar to creek.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No. Proposed work would retrofit the existing bridge and not increase impervious surfaces. Stormwater control improvements will be made, if required, per the Seattle Stormwater Code.

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

Prior to project construction, the contractor will be required to develop a CSECP that describes BMPs to be implemented to control stormwater and water materials flowing onto and from the site in accordance with the City's Standard Specifications for Road, Bridge and Municipal Construction, and Seattle Stormwater Code. A debris containment system would be installed under bridge to prevent large and small particles as well as stormwater runoff containing material generated by the project from entering aquatic areas during demolition and construction activities. Aquatic areas will be fenced off prior to construction and avoided.

4. Plants

a. Types of vegetation found on the site: *[Check the applicable boxes]*

☒ Deciduous trees:	☐ Alder	☐ Maple	☐ Aspen	☐ Other: (identify)
☒ Evergreen trees:	☐ Fir	☐ Cedar	☐ Pine	☐ Other: (identify)
☒ Shrubs				
☒ Grass				
☐ Pasture				
☐ Crop or grain				
☐ Orchards, vineyards, or other permanent crops				
☒ Wet soil plants:	☒ Cattail	☐ Buttercup	☐ Bulrush	☒ Skunk cabbage

☐ Other: (identify)
☐ Water plants**:** ☐ water lily ☐ eelgrass ☐ milfoil ☐ Other: (identify)
☐ Other types of vegetation: (identify*)*

Ravenna Park is located in a fish and wildlife habitat conservation area comprised of forest canopy with an understory of shrubs and groundcover. Bigleaf maple is the most common tree species and the understory is dominated by sword fern upslope of the stream/wetland. Common vegetation surrounding the stream/wetlands include red alder, black cottonwood, Pacific and Sitka willow, red-osier dogwood, salmonberry, lady fern, skunk cabbage, giant horsetail, and reed canarygrass (WSP 2018a).

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

Construction would retrofit the existing bridge. Minor clearing and grubbing tree trimming would occur along the project area underneath the bridge. Any damage to existing vegetation will be limited to incidental damage to understory vegetation as heavy equipment is moved within the construction area. Potential damage would likely be attributed to crushing of low-lying vegetation by machinery and vehicles. No significant trees will be removed as part of this project and no ground disturbance will occur within their driplines.

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

There are no known threatened or endangered species 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:

Except for minor trimming of trees in the project site, street trees will likely be protected during construction and left in place. Tree trimming activities will be coordinated with Parks and SDOT's Urban Forestry to ensure compliance with all appropriate rules and regulations regarding trees. A Tree, Vegetation, and Soil Protection Plan will be prepared prior to project construction to ensure that existing street trees are not damaged during construction. All temporarily disturbed vegetated areas (buffers and wildlife habitat corridor) will be revegetated with a typical native planting plan.

e. List all noxious weeds and invasive species known to be on or near the site.

There are no known noxious weeds or invasive species on or near the site.

5. Animals

a. Birds and animals which have been observed on or near the site or are known to be on or near the site: *[Check the applicable boxes]*

Birds: ☐ Hawk ☒ Heron ☒ Eagle ☒ Songbirds
☒ Other: Crows, pigeons, doves, starlings, robins, gulls, and house sparrows are common urban species that could occur in the project area.

Mammals: ☐ Deer ☐ Bear ☐ Elk ☐ Beaver
☒ Other: Rodents, including mice, rats, squirrels, and raccoons are common urban species that could occur in the project area.

Fish: ☐ Bass ☐ Salmon ☒ Trout ☐ Herring
☐ Shellfish ☐ Other: (identify)

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

There are no known threatened or endangered species on or near the site. There are fish barriers that preclude any anadromous fish from being present in the project area.

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

The site is part of the Pacific Flyway. Migratory birds may benefit from street trees, parks and waterbodies.

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

No impacts to wildlife are anticipated so no measures are proposed.

e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to occur on or near the site.

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 needs? Describe whether it will be used for heating, manufacturing, etc.

After the project is completed, electricity would be required to continue operation of the street lighting and traffic signals located on and adjacent to the bridge. Gasoline and diesel would be needed to operate maintenance vehicles and equipment. Use of such energy would not represent a change from current conditions.

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 this proposal? List other proposed measures to reduce or control energy impacts, if any:

The project is not anticipated to have any significant adverse energy or natural resource impacts. Therefore, no energy conservation features are included in the plans of this project. However, during construction activities workers will avoid leaving equipment and vehicles idling when not in use which would reduce fuel use.

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 any known or possible contamination at the site from present or past uses.

There is no known contamination within the right-of-way from present or past uses. No adjacent or nearby properties have been documented by the Washington Department of Ecology Facility/Site Database with a status as either Awaiting Cleanup, Cleanup Started or No Further Action. There is no evidence of soil or groundwater contamination within the right-of-way that would affect the project. Any ground disturbance in the project area would be limited to about 6 inches. Based on depth and location of excavation, and groundwater depth and gradient, SDOT does not expect to encounter contaminated soil or groundwater during construction.

If contaminated soils or groundwater are disturbed during construction or paint exposed from the bridge, there could be potential exposure to construction workers and the general public in the vicinity through blowing dust, stormwater runoff, or vapors.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known existing hazardous chemicals or conditions that might affect project construction. No known underground storage tanks are located within the right-of-way. Public and private utilities will be identified and avoided during construction.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Potentially hazardous materials likely to be present during construction from vehicles and equipment may include gasoline, diesel, hydraulic fluid, lubricants, solvents, paints, sealants, cement and asphalt. As with any construction project, there is a risk that such materials could be spilled or leaked during construction. This risk would be well within the range for typical construction projects.

4) Describe special emergency services that might be required.

None.

5) Proposed measures to reduce or control environmental health hazards, if any:

A Health and Safety Plan will be developed by the construction contractor before work commences. This plan will provide information on any hazardous materials that may

be associated with project construction and will outline safety procedures for handling any of these substances.

BMPs and a Spill Prevention Plan would minimize the potential for spills during construction. The contractor will follow the City's Standard Specifications for Road, Bridge, and Municipal Construction, which give protocols for responding to an unexpected discovery of contaminated material during project construction. However, this is not anticipated since there would be minimal ground disturbance during construction and no known contamination is located within the right-of-way.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Existing noise sources in the vicinity include vehicular traffic along Cowen Park Bridge and adjacent streets. These sources of noise would not affect project construction.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise levels in the vicinity of construction would temporarily increase during construction activities. Noise levels within 50 feet of construction equipment may exceed 90 decibels (dB) for short periods of time. However, short-term noise from construction equipment will be limited to the allowable maximum levels specified in the City of Seattle's Noise Control Ordinance (SMC 25.08).

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

The project will comply with the City of Seattle's Noise Control Ordinance. Noise from construction equipment will occur between the hours of 7 AM and 10 PM weekdays, and 9 AM to 10 PM on the weekends during construction. If there is a need for work outside these times to minimize traffic impacts, SDOT will request a noise variance permit to allow some construction work at night.

The following measures may be used to minimize noise impacts during construction:

- Effective mufflers will be installed and maintained on equipment.
- Equipment and vehicle staging areas will be located as far from residential areas as possible.
- Idling of power equipment will be minimized.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The project area consists of the bridge, sidewalks, parklands and existing stormwater infrastucture and utilities. There are utility poles, street trees and other landscaping in some areas of the right-of-way. Adjacent land uses include single and multi-family residential and park areas. The bridge crosses Ravenna Creek and several park trails.

The project consists of repairs and modifications within existing right-of-way and parklands that may result in temporary effects to adjacent land uses during construction. These temporary effects may include air and noise pollution, visual impacts, traffic delays and detours, and impacts to park users. The completed project is expected to be beneficial to surrounding land uses by improving the safety conditions of the bridge.

b. Has the site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or non-forest use?

No.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

No.

c. Describe any structures on the site.

The project area consists of the bridge and roadway used for vehicular traffic, bicyclists, and pedestrians. Sidewalks exist on both sides of the bridge and trails cross underneath. Numerous structures are located adjacent to the project right-of-way including residential homes, park amenities, utility poles with street lights, and underground structures for drainage, electric, water and other utilities.

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

None.

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

The project area is designated Residential Single Family 5000 and adjacent to the south Multi-Family Lowrise 3.

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

The project area is designated City-Owned Open Space with Residential Urban Village to the north and Multi-Family Residential Areas to the south.

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

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The following critical areas are located under the bridge: steep slopes, riparian zone, wetlands, and fish and wildlife habitat conservation areas.

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

None.

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

None.

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

Not applicable.

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

The project is consistent with the Transportation Element of the Comprehensive Plan as part of operating and maintaining the transportation system:

> *Thoughtful operation and maintenance of the transportation system promotes safety, efficiency, infrastructure preservation, and a high quality environment. Money spent on maintaining and preserving the system today can prevent spending more dollars for replacement later. This is particularly true for the more expensive and vital transportation assets, such as bridges. Maintenance of these facilities also enhances safety and efficiency, for instance in managing high volume traffic corridors.*

The project would continue to include bicycle and pedestrian access consistent with the Pedestrian and Bicycle Master Plans. The current bicycle designation of in street, minor separation would remain.

m. Proposed measures to ensure that the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Not applicable.

9. Housing

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

None.

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

None.

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

Not applicable.

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?

The project would retrofit the bridge and improve the roadway and sidewalk on the bridge. The project would not construct any new structures.

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

None.

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

No impacts are anticipated so no measures are proposed.

11. Light and glare

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

If any construction work were to occur after daylight hours, the contractor might use downward facing portable lighting to illuminate work areas. The completed project would not generally produce any light or glare not currently produced in the project area.

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

No.

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

None.

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

No impacts are anticipated so no measures are proposed.

12. Recreation

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

Cowen Park is located to the west of the bridge and Ravenna Park to the east. Several trails are located underneath the bridge connecting the two parks. Cowen Park Bridge contains sidewalks and pedestrian and bicycle paths that receive frequent users.

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

The project would require temporary occupancy of parkland underneath the bridge during construction. Access to the construction area under the bridge would use existing gravel pathways in the park from Brooklyn Ave NE. The construction staging area under the bridge would extend up to about 30 feet to the east and west of the bridge footprint. This area would be fenced where needed to keep park pedestrians and bicyclists safe and to secure construction materials, vegetation, and aquatic areas. Temporary detour paths would be signed for pedestrians and bicyclists in coordination with Parks.

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

SDOT is coordinating with Parks to allow construction access and staging through the approval of a Revocable Use Permit. Parks must also concur that there are no adverse effects during temporary occupancy of the parks for Section 4(f) and 6(f) federal funding documentation. SDOT will follow recommendations provided by Parks to minimize temporary impacts to park users during construction. Measures may include signed detour routes, providing openings on alternate access routes under the bridge, minimizing construction activities during certain times, and restoring any disturbed vegetated areas.

13. Historic and cultural preservation

a. **Are there any buildings, structures, or sites located on or near the project site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

Cowen Park Bridge is a Department of Archaeology and Historic Preservation (DAHP) Registered Property (Listing # 82004233) and a City Landmark under Ordinance 110344. The bridge was constructed in 1936. The vicinity north and west of the project area beginning along NE 62nd St and Brooklyn Ave NE has been identified as the Ravenna-Cowen North Historic District. In total, 15 historic-period architectural resources over 45 years of age are located within the Area of Potential Effects. Eight of the residences are in the historic district and have been evaluated regarding whether or not they are

contributing resources to the historic district. Other historic resources include Cowen and Ravenna Parks and surrounding apartments (WSP 2018b).

b. Are there any landmarks, features, or other evidence of Indian or historic use of occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No previously recorded archaeological sites are within the Area of Potential Effects. DAHP has generated a predictive model for the likelihood of encountering archaeological sites, based on statewide information and large-scale factors. The predictive model map indicates a high probability of encountering archaeological resources for the majority of the APE and a very high probability of encountering archaeological resources directly below and adjacent to the bridge. However, the ground disturbance proposed for the project is within sediment described as artificial fill that has been previously disturbed and would only be up to 6 inches deep (WSP 2018b).

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, etc.

DAHP's Washington Information System for Architectural and Archaeological Records Data (WISAARD) was searched for National Register of Historic Places listed or eligible properties and districts. The City of Seattle's online list of landmarks and nominations was also consulted to determine if any current or nominated city landmarks are located within the project area. Field reconnaissance was performed to verify listings and determine if any additional potential historic or cultural resources were present in the project area. This documentation is included in the Confidential Cultural Resources Report (WSP 2018b).

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance of resources. Please include plans for the above and any permits that may be required.

DAHP recommended that a pedestrian survey be conducted for archaeological sites within the project area and no additional concerns were identified. No shovel probes were excavated because the area has been disturbed by previous construction and ground disturbance is anticipated to be very minimal. An Unanticipated Discovery Plan will be developed and maintained on site during construction for use in the unlikely event that archaeological materials are found during construction. The plan will outline procedures to follow, in accordance with state and federal laws, if archaeological materials or human remains are discovered.

The architectural resources findings determined that planned construction activities and the method of accessing the work area are not likely to adversely affect nearby historic properties, including Cowen or Ravenna Parks and the historic district. It also found that the proposed seismic retrofit work on the bridge will not likely have adverse effects on

character-defining features. Coordination with DAHP and the Landmarks Preservation Board is ongoing, and any recommendations proposed will be incorporated into project design and specifications as feasible.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

The project is located on the Cowen Park Bridge which is 15th Ave NE. Several arterials connect to the project area in the vicinity including NE Ravenna Blvd to the south and NE 65th St to the north.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Metro Route 71 travels over Cowen Park Bridge on 15th Ave NE with the nearest stops of NE Ravenna Blvd to the south and NE 65th St to the north. Any potential temporary relocations of bus routes, though unlikely, will be coordinated with Metro during construction.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or non-project proposal eliminate?

Parking removal for the bridge retrofit would not occur. There may be temporary on-street parking restrictions on 15th Ave NE, depending on detours and where staging equipment is located.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Yes. The purpose of the project is to retrofit Cowen Park Bridge to improve safety. See Section A.11 for additional information.

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

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

The number of vehicular trips and peak volumes would not change as a result of the project. Construction-related traffic (i.e., large trucks and materials hauling) would occur

temporarily during the construction period and may require delays at the bridge but one lane would remain open at all times. There may also be minor delays on Brooklyn Ave NE where construction vehicles would access staging areas underneath the bridge.

g. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

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

The following measures may be used to reduce or control transportation impacts during construction:

- All traffic control will be in accordance with the City of Seattle Traffic Control Manual for In-Street Work (2012).
- SDOT will work to minimize disruptions and maintain adequate access during the construction phases.
- SDOT will inform adjacent property owners including Parks of work progress.
- SDOT will conduct public outreach before and during project construction to notify residents, businesses, local agencies, transit agencies and other stakeholders of expected disruptions or changes in traffic flow.
- Temporary road closures will be minimized, and detour routes will have proper signage.
- The construction contractor will be required to submit a traffic control plan for approval by the City. The contractor will enforce the traffic control plan during construction.
- Where required, alternative routes for pedestrians, bicyclists and those with disabilities will be identified and marked clearly.
- Any proposed temporary effects to transit stops will be coordinated with Metro in advance.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

During construction there may be traffic detours that could delay vehicular traffic but this is not anticipated to affect emergency vehicles due to surrounding road network. SDOT will coordinate potential effects to the emergency access route under the bridge with Parks. The project would improve safety and access to the bridge.

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

There would be no impacts so no measures are proposed.

16. Utilities

a. Utilities currently available at the site, if any: *[Check the applicable boxes]*

☐ None
☒ Electricity ☒ Natural gas ☒ Water ☒ Refuse service
☒ Telephone ☒ Sanitary sewer ☐ Septic system
☐ Other (identify)

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.

No drainage improvements are proposed for the project. If required, public and private utilities will be identified and avoided during construction.

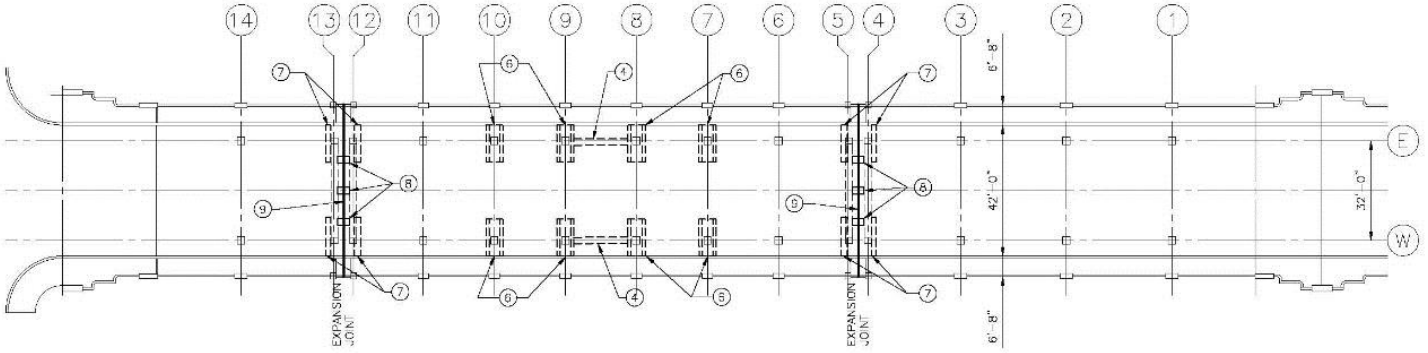
C. SIGNATURE

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.

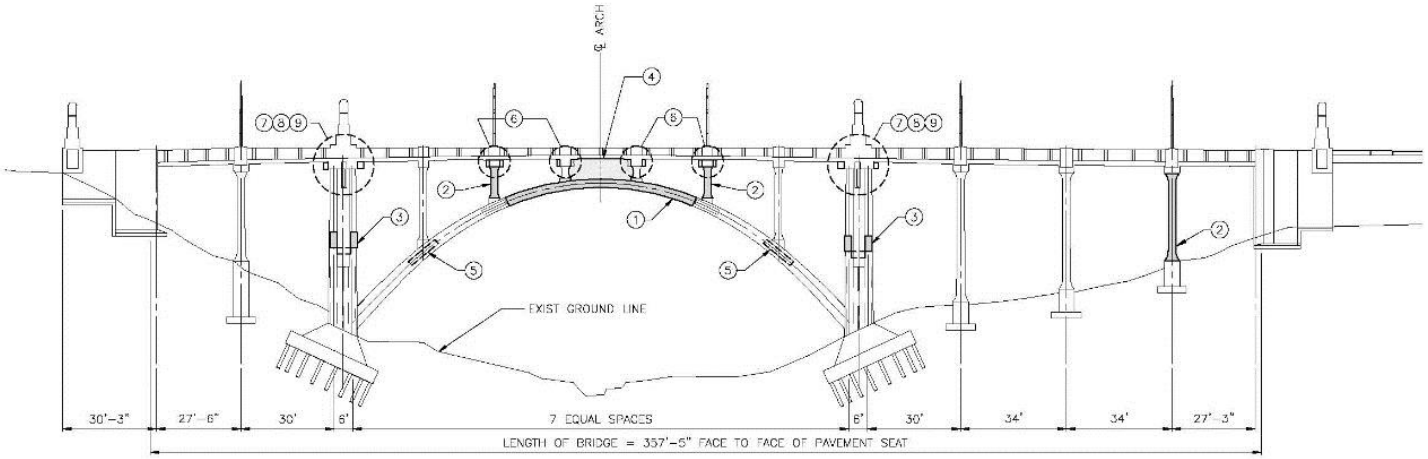
Signature: .....

Date Submitted: 12/17/18

Figure 1. Vicinity.



PLAN
SCALE: 1"=20'



KEY PLAN & ELEVATION FOR SEISMIC RETROFIT
SCALE: 1"=20'

LEGEND:

1. ARCH RIB RETROFIT WITH CFRP (SHEET S204)
2. COLUMN RETROFIT WITH CFRP (SHEET S202)
3. PIER COLUMN RETROFIT (SHEET S203)
4. CONCRETE INFILL WALL (SHEET S206)
5. STRUT RETROFIT WITH CFRP (SHEET S205)
6. INTERMEDIATE CROSS-BEAM STRENGTHENING (SHEET S207)
7. END CROSS-BEAM STRENGTHENING (SHEET S208)
8. TRANSVERSE RESTRAINER (SHEETS S208 AND S209)
9. EXPANSION JOINT REPLACEMENT (SHEET S209)

20 10 0 20 40
SCALE IN FEET

60% SUBMITTAL

RETROFIT KEY INDEX

wsp

60% DRAFT
NOT FOR CONSTRUCTION

APPROVED FOR ADVERTISING
LIZ ALZEER
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
CITY PURCHASING & CONTRACTING SERVICES DIRECTOR

INITIALS AND DATE	INITIALS AND DATE
DESIGNED YP	REVIEWED: DES. CONST. SDOT PROJ. MGR.
CHECKED JDB	RECEIVED
DRAWN DKO	REVISED AS BUILT
CHECKED YP	

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL

Seattle Department of Transportation
ORD NAME NO. PW NO.
SCALE: 1"=20'

COWEN PARK BRIDGE SEISMIC RETROFIT

JOB PC CO
VOL #
S201
SHEET 16 OF 25

Figure 2. Proposed Retrofit Activities.

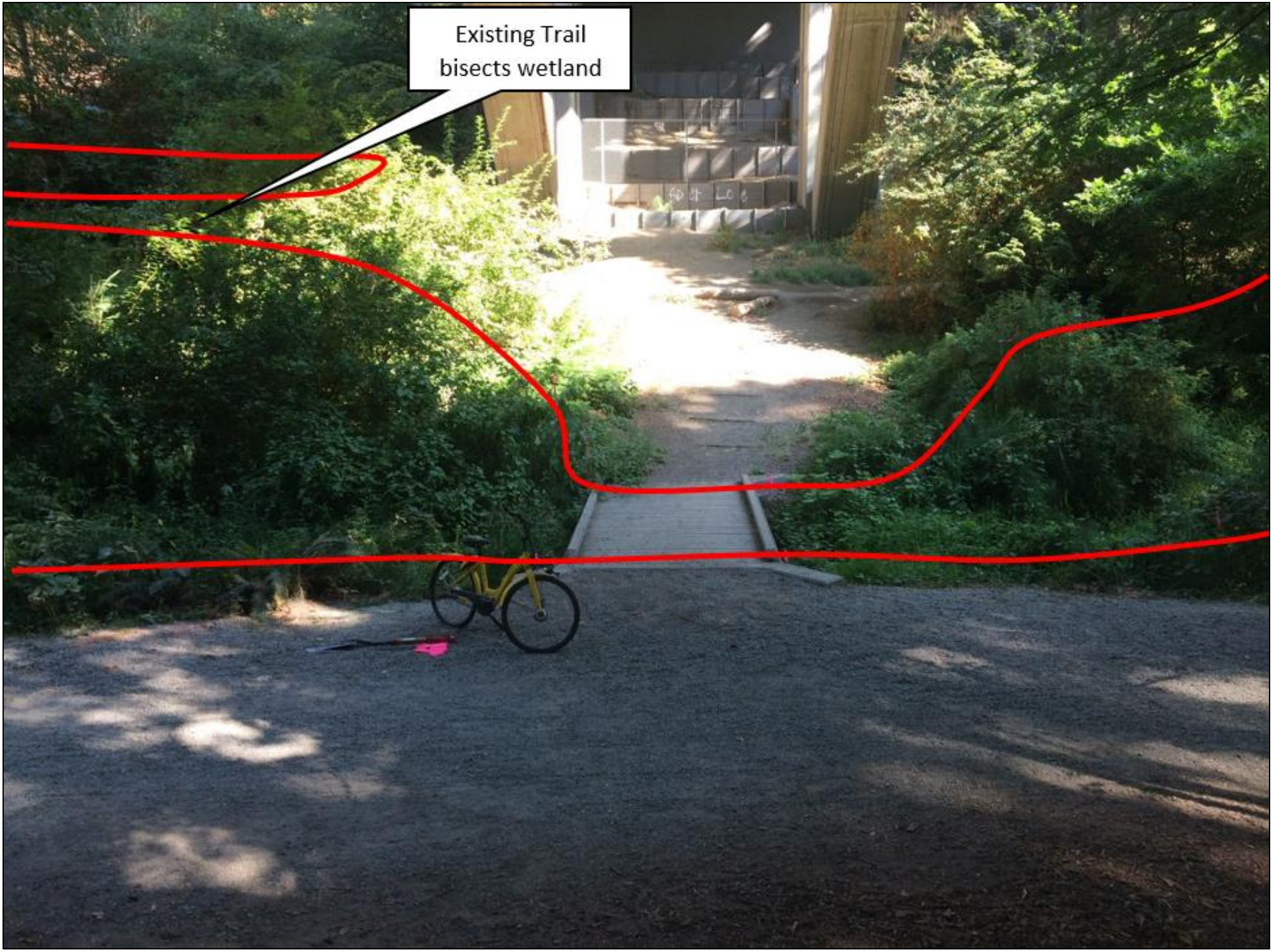


Figure 3. Ravenna Creek and Approximate Location of Wetlands.