

**SEPA DETERMINATION OF NONSIGNIFICANCE (DNS)
SEATTLE DEPARTMENT OF TRANSPORTATION
North Queen Anne Drive Bridge Seismic Retrofit**

Description of Proposal: The City of Seattle proposes to construct a seismic retrofit for the North Queen Anne Drive Bridge. Retrofit measures include replacement of diagonal bracing and connections, providing connections between girders and bridge abutments, strengthening bridge piers, installation of grade beams, and providing a connection between the bridge deck and the arch. The project is located in a steep slope, riparian corridor, and wetland environmentally sensitive area. Access to the construction site will require crossing the wetlands.

Proponent: Seattle Department of Transportation
Key Tower, 700 5th Avenue, Suite 3900
P. O. Box 34996
Seattle, WA 98124-4996

Location of Proposal, including street address, if any:

The Queen Anne Drive Bridge is located along Queen Anne Drive, between 2nd Avenue North and Nob Hill Avenue North, on the east slope of the Queen Anne neighborhood in Seattle. The project is located in the NW Quarter of Section 19, Township 25, Range 4.

Lead Agency: Seattle Department of Transportation (SDOT)

SDOT has determined that the proposed project does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other related documents on file with the lead agency. This information may be examined at SDOT offices by contacting the Project Manager listed above.

This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days from the publication date below. Comments must be submitted by Wednesday, May 12, 2004.

Issue Date: April 28, 2004

SEPA Responsible Official: Grace Crunican, Director, Seattle Department of Transportation

Signature:  Date: 4/23/04
Director, Seattle Department of Transportation

Represented by: Mary Pfender, Project Manager

Telephone: (206) 684-8052

Any interested person may appeal the DNS by filing Notice of Appeal and a \$50.00 filing fee with the Office of the Hearing Examiner, City Hearing Examiner:

1320 Alaska Building
618 Second Avenue,
Seattle, WA 98104

The appeal must be filed no later than 5:00 p.m. on May 19, 2004.

**SEATTLE DEPARTMENT OF TRANSPORTATION
SEPA ENVIRONMENTAL CHECKLIST**

A. BACKGROUND

1. **Name of proposed project:** North Queen Anne Drive Bridge Seismic Retrofit
2. **Name of applicant:** Seattle Department of Transportation (SDOT)
3. **Address and phone number of applicant and contact person:**
City of Seattle
Seattle Department of Transportation
Key Tower, Suite 3900
700 Fifth Avenue
P.O. Box 34996
Seattle, Washington 98124-4996
ATTN: Mary Pfender, Project Manager
(206) 684-8052
4. **Date checklist prepared:** April 13, 2004
5. **Agency requesting checklist:** Seattle Department of Transportation
6. **Proposed timing or schedule (include phasing if applicable):**
Construction is scheduled to start in late June 2004. Anticipated duration is six to eight months.
7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**
No, there are no plans for further activity related to this proposal. This is a repair and maintenance project to strengthen the North Queen Anne Drive bridge to better withstand a design-level earthquake.
8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**
 - ◆ NEPA Record of Environmental Consideration, Level 2 Categorical Exclusion, prepared by FEMA, the funding agency.
 - ◆ Wetland Delineation Report
 - ◆ Wetland Restoration Monitoring Report
 - ◆ Wetland Restoration Planting Plan.
 - ◆ Geotechnical Report
 - ◆ "Slope Stability During Construction Seismic Retrofit Study," a geotechnical letter report.
 - ◆ Temporary Erosion and Sediment Control Plan
 - ◆ Construction Access Plan

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.

There are no known applications for governmental approvals for other proposals affecting the project site.

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

- ◆ City of Seattle Environmentally Critical Areas approval.
- ◆ US Army Corps of Engineers determination, issued March 17, 2004, that a Clean Water Act Section 404 Permit is not required for this project.

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.

This project will provide a seismic retrofit to strengthen the North Queen Anne Drive Bridge to better withstand the forces of a design level earthquake. The design earthquake event used in the seismic modeling and design of the bridge seismic retrofit is a 500-year earthquake, with a gravity factor of 0.30, in accordance with the AASHTO Standard Specifications for Highway Bridges. This design level earthquake has a 10% probability of being exceeded in fifty years. It is expected that the bridge would sustain damage but would not collapse in a design level earthquake.

The bridge was built in 1935-36, and does not meet current American Association of State Highway Transportation Officials (AASHTO) seismic standard code. To minimize the potential for collapse of the bridge in a design level earthquake, the bridge will be retrofitted and strengthened at the engineer-determined seismically weak points of the bridge.

Retrofit measures recommended as a result of seismic modeling of the bridge determined to be necessary to meet the AASHTO standard code include:

1. Diagonal Bracing and Connections. Replacement of four steel braces and 32 connections (excluding new brace connections) that did not meet the specified R-factors. Replacement of 80 rivets with bolts.
2. Girder Ties. Provide connections between girders and bridge abutments.

3. Pier Strengthening. To prevent overturning of the bridge, grade beams will be installed to tie together the isolated arch piers and the approach piers. Drilled shafts with micro piles will be placed at the arch piers to increase the resistance of net uplift. Unreinforced concrete piers will have a reinforced concrete shell installed around the existing pier.
4. Longitudinal Arch Connection. Provide connections between the deck and arch near the arch pin joint.

Construction of the retrofit measures is located in street right of way under the bridge, covering portions of an area approximately 45 feet wide by 350 feet long (17,500 square feet). In addition, the project area includes portions of an additional 53,000 square feet of private property, to be used for access to the construction site under the bridge, wetland and wetland buffer plant restoration area, and private road access to the underside of the bridge.

Access to the project site will be from beneath the bridge using a private road and down the slope from the roadway, alongside the bridge abutments. The private road access is approximately 10 feet wide. A drill rig, concrete truck, dump truck, back hoe, and excavator would be required to accomplish the construction work. Given the narrow width of the access road, concrete would likely be conveyed to the construction site from the top of the bridge.

Staging of the retrofit measures located on the bridge superstructure may be from the road or the ravine.

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 Queen Anne Drive Bridge is located along Queen Anne Drive on the east slope of the Queen Anne neighborhood of Seattle. The bridge is located between 2nd Avenue North and Nob Hill Avenue North. Vehicle access to the underside of the bridge is by private road, Mayfair Avenue North, which serves a small community of homes. The Queen Anne Drive Bridge is on the route providing access to the Aurora Avenue North (SR99) bridge.

The project is located in the NW Quarter of Section 19, Township 25, Range 4.

B. ENVIRONMENTAL ELEMENTS

1. EARTH

- a. General description of the site (underline one):**
Flat, rolling, hilly, steep slopes, mountainous.
Other _____.

The bridge spans an 80-foot deep ravine with steep side slopes consisting of a 10 to 14-foot layer of very loose to loose colluvium, with a steepness ranging from 55% to 80%. The angle of repose ranges between 58% and 67%, with an average of 62%. Due to the loose nature of the soils and steep slopes, excavation on the slopes will require shoring. Excavation will be needed to install the grade beams. The geotechnical letter report, "Slope Stability during Construction, Seismic Retrofit Study, North Queen Anne Drive Bridge" addresses recommended temporary shoring design criteria, and methods for installation of shoring.

The project area includes a wooded ravine under the bridge with a truncated creek and associated wetlands. The creek, created from seepage in the hillside, originates approximately 150 feet south of the bridge and flows into a combined sewer pipe approximately 100 feet north of the bridge. This stream is not identified by the USGS survey map or by the Catalog of Washington Streams and Salmon Utilization (Washington Department of Fisheries).

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

The steepest slope on the site slopes at an angle of about 80 percent.

- 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 prime farmland.**

A relatively thick mantle of loose colluvium exists at the ground surface on the slopes of the ravine, approximately 10 to 14 feet thick, sloped at angles ranging from 55 percent to 80 percent. The angle of repose ranges between 58 percent and 67 percent, with an average of 62 percent. The stability of the existing slopes is marginal. The colluvium is underlain by glaciolacustrine deposits consisting of medium dense to very dense sandy silt, overlying hard silty clay. Ground water was encountered at depths of 25 and 31 feet below existing ground surface.

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

Evidence of deep-seated slope instability was not observed, nor were there any reported occurrences in the City of Seattle landslide file. The growth positions of many of the trees on the sides of the ravine are indicative of soil creep.

The most likely slope instability hazards are shallow slope movements associated with the relatively thick mantle of loose colluvium on the steep ravine slopes. Based on subsurface conditions encountered in the boring logs, these soils are typically dry.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Excavation is needed to complete the installation of the grade beams and pier strengthening at the arch piers and the approach piers, and for installation of shoring.

Excavation for the piers and grade beams would total approximately 340 cubic yards, divided among four locations. Pier strengthening and grade beam excavation depths range from 2 feet to 6 feet. Excavated voids would be filled with concrete during installation of the grade beams and pier strengthening.

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

Erosion could occur as a result of excavation for grade beams and clearing of invasive plants if rainstorms occurred during these activities. However, Best Management Practices will be installed during construction to prevent or minimize the likelihood of erosion.

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

No new impervious surface or new pavement would be created by this project.

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

The Contractor is required to adhere to provisions in the 2003 Edition of the Seattle Standard Specifications for Road, Bridge and Municipal Construction, Temporary Water Pollution, Erosion and Sedimentation Control (1-07.15), and Prevention of Environmental Pollution and Preservation of Public Natural Resources (1.07.5).

In addition, the contractor must apply pertinent Construction Best Management Practices (BMP) to protect the riparian corridor, creek, and wetland areas during construction of the bridge retrofit measures as required by the Regional Road Maintenance Endangered Species Act Program Guidelines (12-15-00).

Construction will also comply with State and Federal requirements related to preparation of erosion control plans, allowable turbidity, and discharge of storm water from construction sites, periodic inspections, and use of clean and well maintained equipment. In addition, to protect the ravine from erosion and to avoid destabilization of the steep ravine slopes, the removal of large trees on the steep slopes would be avoided.

Specific measures to be employed at this project site include the following:

- ◆ High visibility construction fence and filter fabric or other approved filtering material to be placed between the downhill side of the construction and construction staging areas and the wetland boundary.
- ◆ Slope protection to prevent erosion using plastic sheeting or other approved method
- ◆ Temporary mats to be placed over the wetland along the construction access. No earthwork is permitted within the wetlands.
- ◆ Temporary culverts will be placed under the mats to allow continuous flow of the creek. Sandbags will direct creek flow to culverts.
- ◆ Tree protection measures.
- ◆ Streets will be cleaned daily.
- ◆ Concrete slurry or other liquid waste that may be generated will be collected, contained, and disposed off-site at an approved disposal site.
- ◆ Slopes of the ravine adjacent to construction will be monitored throughout the construction period for movements.

Upon completion of construction affected areas of the wetland and wetland boundary will be replanted with native shrubs and groundcover.

2. AIR

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

During construction, there would be exhaust emissions from construction equipment. In addition, lead-based paint removal is required in conjunction with diagonal bracing and connection replacements. Lead dust could become airborne during lead removal. However, lead abatement procedures will be followed to prevent this.

No increase in emissions to the air would result from the completed project.

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

No, there are not any off-site sources of emissions or odor that would affect the proposal.

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

- ◆ Per Seattle Standard Specification 1-07.5(3) for the protection of air quality during construction, the Contractor must not cause or allow the discharge of particulate matter, the emission of any air contaminants or odor bearing gases in excess of limits specified under Regulation 1 of the Puget Sound Air Pollution Control Agency, Article 9 -- Emission Standards.
- ◆ The Contractor must maintain air quality within the National Emission Standards for Hazardous Air Pollutants. Air pollutants are defined as that part of the atmosphere to which no ambient air quality standard is applicable and which, in the judgment of the Administrator of the Environmental Protection Agency Clean Air Act, may cause or contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness.
- ◆ Construction dust will be controlled by keeping paved surfaces swept, and dust-generating surfaces will be wetted as needed to prevent dust becoming airborne.
- ◆ To minimize hydrocarbon emissions to the air, the contractor will be required to keep motorized construction equipment in good repair.
- ◆ Lead-based paint will be removed in a manner that prevents escapement of lead paint debris, such as use of power hand tools equipped with vacuum attachments using HEPA filters. The equipment must be kept in good working condition at all times. Collected lead paint debris will be stored in

metal drums labeled Hazardous Waste and disposed of at an approved site per disposal regulations. The project manual, section 1-07.32, provides more detail.

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.**

Wolf Creek is a small stream that flows through the wetland delineated for the Queen Anne Drive Bridge Seismic Retrofit Project. Wolf Creek is likely the result of storm water run-off and seepage from the steep ravine hillside underneath the east bridge abutment. Approximately 75 feet north of the bridge in the vicinity of Mayfair Avenue North, the stream disappears into a catch basin located in the stream channel. No open channel is visible downstream of this catch basin on either side of Mayfair Avenue North. From this point the stream is piped and conveyed to the West Point wastewater treatment plant for treatment before discharge to Puget Sound.

The average channel width of Wolf Creek is 3.93 feet, while the average wetted width is 3.57 feet. The average wetted depth of the stream within the delineated wetland is 1.8 inches. Within the delineated wetland, Wolf Creek is dominated by a low gradient riffle. No pools are present in the stream. The dominant substrate types in the stream are silt and sand, intermixed with areas of silt and cobble. Large woody debris (LWD) is not present in this stream. However, several pieces of small woody debris are located throughout the stream channel and the wetland.

A small groundwater and stormwater fed perennial tributary flows in a rock and concrete-armored channel downslope into Wolf Creek. This tributary is approximately 2 feet wide and water depth is 2 to 4 inches. Substrate in the tributary is predominantly sand and mud.

Overall, Wolf Creek and its tributary have poor habitat conditions, but likely provide habitat for wildlife and bird species that may be present in the urban environment of the Queen Anne neighborhood of Seattle. The streams do not provide suitable fish habitat because they are shallow, narrow, and truncated, and are conveyed to a wastewater treatment plant.

Wetland A is located underneath the Queen Anne Drive Bridge within a deep ravine between steep slopes that support the bridge abutments. Wolf Creek runs through the center of the ravine and the wetland. The wetland and ravine are bounded on all sides by urban residential development in the City of Seattle neighborhood of north Queen Anne. The ravine is heavily shaded by the bridge, deciduous conifer trees, and shrubs. The main sources of hydrology are precipitation, ground water discharge, discharge of stormwater from surrounding developments and roads, and Wolf Creek. A small seep that flows into the wetland from the west combines with Wolf Creek, then flows north into a culvert at the northern end of the project area.

2) Will the project require any work over, in, adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. The proposed project would involve work under the bridge deck, at the bridge pier foundations, arch ribs, approach pier columns, and at the bridge abutments. These abutments and bridge pier foundations are located on the slope of the ravine, about 100 feet from the base of the ravine. The bridge has no footings or other support structure within the wetlands and stream at the bottom of the ravine.

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.

At two locations, temporary fill, such as timber, or other approved material, mats over geotextile fabric would be placed on the access road where it crosses over the wetland. The mats would be placed to protect the wetland from compaction. The mats will cover two areas of approximately 860 and 1,540 square feet, respectively. The mats will be about 8-inches thick and 14 feet wide.

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

No, the proposal will not require surface water withdrawals or diversions.

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

No, the proposal does not lie within a 100-year flood plain.

- 6) **Does the proposal involve discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No, the proposal does not involve discharges of waste materials to surface waters.

b. Ground

- 1) **Will ground water be withdrawn, or discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No ground water will be withdrawn or discharged to ground water.

- 2) **Describe waste material that will be discharged in to the ground from septic tanks and 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 houses to be served (if applicable), or the number of animals or humans the system(s) is/are expected to serve.**

No waste material will be discharged to the ground.

c. Runoff (including storm water):

- 1) **Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow into other waters? If so, describe.**

Run-off from rainfall will continue to flow to the creek and wetland areas. The majority of construction takes place under the bridge and is not affected by stormwater runoff. The project will not result in any changes to volume or flow patterns of storm water runoff.

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

Construction debris could enter the wetlands or creek unless precautions to prevent this are utilized. Construction Best Management Practices will be installed to prevent sediment and construction debris from reaching the creek and wetlands.

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

The Contractor must comply with the Seattle Standard Specifications for Prevention of Environmental Pollution and Preservation of Public Natural Resources (1.07.5), and Temporary Water Pollution/Erosion Control (1.07.15). The Contractor must also comply with the Stormwater, Grading, and Drainage Control Code (S.M.C. 22.800), the accompanying Director's Rule, and the Seattle "Construction Best Management Practices Manual." Erosion and sedimentation control measures, such as filter fences and straw bales, will be installed during construction to prevent sediments from leaving the construction site. Silt fencing and high visibility plastic fencing will be placed between the construction areas and the wetland boundaries and creek to protect the creek and wetlands from contamination by construction debris and sedimentation. After construction, disturbed areas will be replanted to provide vegetative cover for erosion control.

4. PLANTS

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

- deciduous tree: red alder,**
- evergreen tree: fir, cedar, pine, other**
- shrubs: Himalyan blackberry**
- grasses**
- pasture**
- crop or grain**
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, giant horse tail, water parsley**
- water plants: water lily, eel grass, milfoil, other**
- other types of vegetation: Herbaceous Plants: wild morning glory, bracken fern, creeping buttercup, English ivy, stinging nettle.**

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

Some herbaceous plants and shrubs will be affected by construction activities. Plants damaged or removed due to construction activities will be replaced with native species.

- c. List threatened or endangered species known to be on or near the site.**
There are no threatened or endangered species known to be on or near the site.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**
Upon completion of the retrofit measures any plants damaged or destroyed due to construction activities will be replaced with native plant species. In addition, existing invasive shrubs and herbaceous plants will be removed for a distance of 25 feet from the new native plantings. The area will be monitored for a period of five years after planting to protect the newly planted native species from the invasive plant species.

5. ANIMALS

- a. Underline 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: raccoon, possum

fish: bass, salmon, trout herring, shellfish, other: _____

The project spans a ravine which contains a truncated creek fed by hill-side seeps and storm water runoff. No fish habitat exists because of the creek's shallow truncated condition.

- b. List any threatened or endangered species known to be on or near the site.**
There are no endangered species known to be on or near the site.

- c. Is the site part of a migration route? If so, explain.**
No, the site is not known to be part of a migration route.

- d. Proposed measures to preserve or enhance wildlife, if any:**
Planting native species plants in the wetland and wetland buffer will enhance the wildlife habitat.

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

No energy sources will be needed to for the completed project.

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

The bridge structure height, width, and length will not be changed by the project and therefore the project would not affect the potential use of solar energy.

7. ENVIRONMENTAL HEALTH

- a. Health Hazards**

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.

There could be a risk of accidental oil or fuel spill from construction vehicles. The site is inhabited by a homeless person, who lives under the bridge, and who could be injured if he remained at the site during construction. The debris and waste at the encampment pose a health hazard to workers at the site. However, these hazards will be mitigated.

- 1) Describe special emergency services that might be required.**

No special emergency services are expected to be needed.

- 2) Proposed measures to reduce or control environmental health hazards, if any:**

- ◆ The contractor would be required to develop and implement a Spill Prevention, Control and Countermeasures Plan.
- ◆ The person living at the site will be given notice to vacate the site prior to start of construction. Notice will include the phone number for obtaining temporary shelter.
- ◆ To protect construction workers at the site, prior to start of construction the site will be cleaned of hazardous material such as needles and waste and fenced off for the duration of construction.

b. Noise

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

Traffic is the main source of noise in the project area. The traffic noise will not affect the project.

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.

The completed project will not result in a change to the existing types and levels of noise in the project area.

During construction, noise would be generated by construction equipment, such as backhoes, dump trucks, front loaders, concrete trucks, and other support vehicles and equipment. In addition, the drilling activity will generate noise during construction.

The Seattle Noise Code (SMC 25.08) limits construction noise to the hours of 7:30 a.m. to 10 p.m. on non-holiday weekdays and 9 a.m. to 10 p.m. on weekends. Hours of construction will be further restricted to the hours of 7:30 a.m. to 6 p.m. to reduce noise impacts on adjacent residential properties.

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

The 2003 Edition of the Seattle Standard Specifications(1-07.5(4) requires that the Contractor take all reasonable measures for suppression of noise resulting from work operations.

Per Seattle Standard Specification 1-07.5(4), motorized construction equipment must be equipped with exhaust and air intake silencers designed for the maximum degree of silencing, such a silencers used in critical noise problem locations. The type of silencer required is that for use in critical noise problem locations such as high density residential, hotel, and hospital areas.

The Contractor must comply with noise standards specified in the Seattle Noise Code (S.M.C. 25.08).

8. LAND AND SHORELINE USE

- a. What is the current use of the site and adjacent properties?**
The project site, located in street right of way, is improved with a bridge spanning a deep ravine. Residential properties are located adjacent to the project site.
- b. Has the site been used for agriculture? If so, describe.**
No, the site has not been used for agriculture.
- c. Describe any structures on the site.**
A historic arch bridge, built in 1935, carries traffic across the ravine.
- d. Will any structures be demolished? If so, what?**
No structures will be demolished by the bridge retrofit project.
- e. What is the current zoning classification of the site?**
The bridge retrofit project site is located in street right of way, which does not carry a zoning designation. Adjacent properties are zoned residential.
- f. What is the current comprehensive plan designation of the site?**
City-owned open space and single family residential.
- 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 an "environmentally sensitive" area? If so, specify.**
Yes, the project site includes steep slope, wetland, and riparian corridor sensitive areas. The project will comply with the Seattle Environmentally Critical Areas regulation (SMC 25.09).

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

No people would reside or work in the completed project site, except the homeless person currently living under the bridge could return following completion of construction.

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

The homeless person living under the bridge will be temporarily displaced during construction.

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

The site will be posted for three days before it must be vacated by the person living under the bridge. The posting will include the phone number for temporary shelter services.

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

The existing transportation use of the project site will not change. The roadway bridge will continue to carry vehicles across the ravine.

9. HOUSING

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

No additional housing units would be provided by the project.

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

No existing housing units would be eliminated.

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

No measures to reduce or control housing impacts are needed.

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?

This bridge seismic retrofit project will not add any additional structures to the project site.

- b. What views in the immediate vicinity would be altered or obstructed?**
No views in the immediate vicinity would be altered or obstructed by the bridge seismic retrofit project.
- c. Proposed measures to reduce or control aesthetic impacts, if any:**
No measures are needed to reduce or control aesthetic impacts.

11. LIGHT AND GLARE

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**
No light or glare will be produced by the completed project.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?**
Not applicable.
- c. What existing off-site sources of light or glare may affect your proposal?**
The project would not be affected by offsite sources of light or glare.
- d. Proposed measures to reduce or control light and glare impacts, if any:**
No measures are needed to reduce or control light or glare.

12. RECREATION

- a. What designated and informal recreational opportunities are in the immediate vicinity?**
The open space of the ravine provides opportunity for informal recreational activities, such as walking and bird watching. Except for the portion of the ravine under the bridge right of way, the ravine property adjacent to the project is privately owned.
- b. Would the proposed project displace any existing recreational uses? If so, describe.**
The proposed project would not displace any existing recreational uses.

- c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**
Project construction is expected to last four to six months. No measures to reduce the short term impacts on informal recreation are being provided.

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.**

The bridge being retrofitted, constructed in 1935-1936, is an Official City of Seattle Landmark and is also eligible for listing on the National Register of Historic Places.

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

The Queen Anne Drive bridge is an excellent intact example of a steel compression arch design.

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

The Washington State Historic Preservation Officer has indicated that there would be no adverse effect on the historic character of the bridge, provided that the following measures are taken:

- ◆ Proposed pier shells are shaped to match the geometry of the historic piers
- ◆ The exposed arch pier grade beams will be painted blend into the surrounding native habitat.

The project design includes these measures.

14. TRANSPORTATION

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

The site is served by Queen Anne Drive, which connects the Queen Anne business district with Aurora Avenue (SR 99).

Access to the construction site under the bridge is by private road. Temporary construction easements have been obtained from property owners for use of the road during construction.

- b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**
Queen Anne Drive and the Queen Anne Drive Bridge carry the number 45 and 82 buses.
- c. How many parking spaces would the completed project have? How many would the project eliminate?**
The project would not provide or delete any parking spaces.
- 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).**
The private asphalt roadway providing access to the construction site will be repaired following construction.
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**
The project will not use (or occur in the immediate vicinity of) water, rail, or air transportation.
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur?**
The completed bridge seismic retrofit project would not result in any changes to the number of vehicle trips per day on the bridge.
- g. Proposed measures to reduce or control transportation impacts, if any:**
No measures are needed to reduce or control transportation impacts.

15. PUBLIC SERVICES

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**
The project would not result in an increased need for public services.
- b. Proposed measures to reduce or control direct impacts on public services, if any.**
No measures are needed to reduce or control transportation impacts.

16. UTILITIES

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

No utilities are available at the project site.

- 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.**

Water needed for drilling, if any, may be requested from the adjacent residents or trucked in. Electricity, if needed, would be provided by a temporary feed from an existing power pole.

C. SIGNATURES

The responses given above 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: L. May Pender

Date: 4/22/04

This checklist was reviewed by Laudra Gurkewitz of Seattle Department of Transportation. The reviewer's comments and suggested modifications have been incorporated in the body of the text.

Signature of Reviewer: Laudra Gurkewitz

Date: 4/22/04