Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use “not applicable” or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the supplemental sheet for nonproject actions (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. Name of proposed project, if applicable:

Upper Tokul Creek Bridge #271B Replacement Project #1135999

2. Name of applicant:

King County Department of Local Services (DLS), Road Services Division
3. Address and phone number of applicant and contact person:

   Contact Person:
   Broch Bender, Communications Program Manager
   206-263-1189; bbender@kingcounty.gov
   King Street Center (Mail Stop: KSC-LS-0315)
   201 South Jackson Street
   Seattle, WA  98104-3856


4. Date checklist prepared:  March 2021. The project is presently in the 60% design stage.

5. Agency requesting checklist:  King County DLS, Road Services Division

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

   Construction is scheduled to begin in April 2022 and is expected to take approximately 9 months to complete.

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 plans for additions, expansion, or further activity related to or connected with this proposal.

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

   Environmental information prepared for this project includes the following:
   
   - Preliminary Geotechnical Report – Prepared by King County, October 7, 2019.

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 that are pending government approval for proposals directly affecting the property covered by the proposed project.

10. List any government approvals or permits that will be needed for your proposal, if known.
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. (Lead agencies may modify this form to include additional specific information on project description.)

The existing Upper Tokul Creek Bridge #271B was constructed in 1965 and is 107 feet long and 24 feet wide. The bridge’s three spans are supported by shallow cast-in-place concrete footings and creosote-treated timbers. The bridge’s width and railings do not meet current standards. It is weight limited, preventing its use by some fire department vehicles, trucks transporting construction materials, and garbage trucks. The constricted hydraulic opening beneath the bridge has contributed to scour that has undermined the bridge’s foundations. Additionally, the roadway approaches fail to meet vertical and horizontal curve standards. Consequently, this bridge has a sufficiency rating of 38.63 out of 100. The June 2020 bridge inspection report submitted to the state rates the bridge deck, superstructure, and substructure condition at 5.

The proposed bridge will span over the creek with a single 99-foot-long span (center of bearing to center of bearing). The bridge curb-to-curb width will be 31.5 feet, comprised of two 10-foot-wide travel lanes, two 4-foot-wide shoulders, and two 1.75-foot-wide curbs for mounting a rail system meeting current requirements. All portions of the existing bridge, as well as abandoned footings from a previous crossing and boulder streambank armor, will be removed. The new bridge’s footings will be on new abutments constructed landward of the creek. No portions of the new bridge structure will be below the 100-year flood elevation. The project will also realign the approach roadway leading to and from the bridge to meet the AASHTO horizontal and vertical geometry requirements to the degree possible given the existing natural topography, stream channel location, and limitations within the publicly-owned right-of-way.

Upper Tokul Creek Bridge #271B provides sole access to approximately 50 homes and one access point for logging operations north of Tokul Creek. Daily traffic volumes consists of about 400 vehicles (including 40 trucks) based on 2018 counts. A temporary bridge/work trestle is required to maintain at least one lane open to local traffic for routine and emergency access at all times.

Construction is anticipated to begin in April 2022. The general construction sequence is summarized below:

- Delineate project clearing limits.
- Establish traffic controls.
- Install perimeter protection and temporary erosion and sediment control (TESC) measures.
- Clear, grub, and grade temporary bridge approaches.
- Remove abandoned bridge footings and timber structures.
- Construct temporary access bridge and stabilize temporary traveled roadway surface.
- Transfer traffic onto bypass route.
- Close and demolish existing bridge.
• Construct new bridge and prepare for traffic.
• Return traffic to new bridge.
• Remove temporary access bridge and approaches.
• Restore and stabilize disturbed areas with permanent planting.
• Remove TESC measures.

Anticipated Project Impacts
The total site area is 0.95 acres (41,480 square feet). The existing impervious surface is 0.38 acres (16,610 square feet), which amounts to approximately 40 percent of the site. Replaced impervious area is 0.27 acres (11,560 square feet). The completed project will result in an additional 0.08 acre (3,500 square feet) of new impervious, pollution generating, surface. Construction will require riparian area disturbance and over-water and minor in-water work to complete the following:

• Tree removal, vegetation clearing, concrete bridge footings and boulder armor removal, and upland excavation.
• Temporary roadway and bridge installation and removal for the project detour. The project will require at least one traffic lane with an alternating signal during the construction because this is a sole-access route.
• Construction of new bridge, including abutments and approach roadways, will add approximately 3,500 square feet of new impervious surface area (as indicated above).
• Private property temporary construction easements.

Anticipated Project Mitigation
Mitigation methods will be implemented on-site to the extent possible to avoid, minimize, and compensate for unavoidable project impacts. The following mitigation is anticipated for the project:

• TESC best management practices.
• Removal of the old bridge, concrete bridge footings, boulder armor, and creosote-treated timber structure.
• Streambank restoration and stabilization.

Anticipated Project Benefits
The project will provide the following benefits:

• Elimination of load limit on the bridge.
• Elimination of the hydraulic channel constraint by removing the existing intermediate piers.
• Elimination of a source of water pollutant by removing creosote-treated timber structure.
• Improve aquatic habitat under the bridge.
• Improved safety for the travelling public.

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 project is in unincorporated King County on Tokul Road SE, approximately 300 feet north of its intersection with SE 53rd Street within the NW Quarter of Section 20, Township 24N, Range 08E. The project’s GPS coordinates are N47.5564 and W-121.8188.
B. Environmental Elements

1. Earth

   a. General description of the site:

      (circle one): Flat, rolling, hilly, steep slopes, mountainous, other _______________

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

      The exposed volcanic bedrock unit on the right bank of Tokul Creek at the bridge site maintains stable 50% to 70% slopes. This same unit exhibits near vertical slopes at a set of waterfalls approximately 500 feet downstream (west) of the bridge site.

   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.

      The soils within the project area are comprised of Barneston gravelly ashy coarse loam and Ogarty gravely loam. These soils underlay long-term commercial forestry and mining operations in the project vicinity. There has been no large scale commercial mining of the bedrock unit.

      Approximately 40 cubic yards of excavation and placement of 2,000 cubic yards of temporary fill, affecting approximately 8,600 square feet of uplands, is required to construct temporary approach roads to the temporary bridge. All temporary fills will be removed prior to project completion. Affected areas outside the road-safety mandated clear zones will be restored with native vegetation.

      Minor ground disturbance is required to remove the existing footings where they sit on exposed natural rock. This disturbance is limited to the area of each footing with no quantifiable excavation.

      Parcel 202408-9103 is owned by the Weyerhaeuser Company. The portions of this lot affected by staging and the construction and removal of the temporary access route are not within currently utilized portions of the timber plantation.

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

      There is notable scour along the stream banks associated with the hydraulically constricted channel at the bridge footings. The bedrock banks within the project area show no indications of recent instability.

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

<table>
<thead>
<tr>
<th>Purpose of Ground Disturbance</th>
<th>Square Feet</th>
<th>Cubic Yards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grading Area</td>
<td>Excavation/Cut</td>
</tr>
<tr>
<td>Detour Bridge/Work Trestle (Temporary)</td>
<td>8,600</td>
<td>40</td>
</tr>
<tr>
<td>Bridge Demolition</td>
<td>350</td>
<td>0</td>
</tr>
</tbody>
</table>
f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

King County’s web-based geographic database indicates the project site is within a mapped erosion hazard area. Without implementation and maintenance of appropriate best management practices (BMPs), ground disturbing activity could result in erosion and turbidity if exposed soils interact with falling and flowing water or wind.

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

The existing impervious surface on the project site is approximately 0.38 acres (16,610 square feet). Project completion will result in the replacement of 11,560 square feet (0.27 acres) of this surface and add 3,500 square feet (0.08 acres) of new pollution generating impervious surface. This increases the total pollution impervious surface by approximately 21%.

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

The potential for erosion and the discharge of turbid water from the project site can be reduced by timing land disturbing activities to the dry season to the degree possible, use of BMPs to prevent the initial mobilization of sediments, and containment and treatment of affected water prior to release from the site.

The 2016 King County Surface Water Design Manual (Appendix D) specifies the general requirements for erosion and sedimentation controls. These measures include establishment of clearing limits, cover measures, perimeter protection, traffic area stabilization, sediment retention, surface water collection, dewatering control, dust control, and flow control. The County uses all known, available, and reasonable methods of prevention, control, and treatment of potential pollutants associated with discharge from its projects. If, during the course of construction, conditions arise that do not meet state requirements, the County will deploy additional BMPs to correct the situation.

Outside the traveled roadway surface (paved areas and shoulders) and road-safety mandated clear zones, final site stabilization will be achieved through permanent seeding and native plant installation. Plants will be monitored and maintained to ensure their survival. The bridge and roadway will be monitored and maintained.

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.

Greenhouse Gas Emissions: Construction, operations, and maintenance of the roadway will result in greenhouse gas (GHG) emissions that contribute to global warming and related climate-change concerns. Life cycle GHG emissions for the project include embodied, operational, and construction emissions defined as follows:

- Embodied emissions are the emissions released during the extraction, processing, and transportation
of the materials used in construction.

- Construction emissions are released during project construction and primarily come from fuel burned in the equipment used to build the project elements, such as bulldozers, pavers, and rollers.
- Operational and maintenance emissions are released by vehicles at the site and during vehicular roadway travel.

**Fugitive Dust Emissions:** Demolition of concrete, excavation, or placement of imported aggregates may result in sources of fugitive dust that can reduce roadway visibility, cause respiratory health problems in humans/animals, and negatively impact aquatic life, vegetation, and water quality. Using the attached GHC Emissions Calculator, Lifespan Emissions are estimated at 1006 metric tons of carbon dioxide equivalent (MTCO2e).

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

No off-site sources of emissions or odors have been identified that may affect this proposal.

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

During construction, the contractor will implement a Fugitive Dust Control Plan. During construction, operation, and maintenance of the roadway, mitigation measures for project impacts to air quality and GHG emissions could include, but are not limited to, the following:

- Spraying water, when necessary, during construction operations to reduce emissions of fugitive dust.
- Covering dirt, gravel, and debris piles as needed to reduce fugitive dust and wind-blown debris.
- Covering open-bodied trucks in accordance with RCW 46.61.655, wetting materials in trucks, or providing adequate space from the top of the material to the top of the truck to reduce fugitive dust emissions.
- Sweeping public roadways, when necessary, to remove mud and dirt deposits.
- Using biodiesel or ultra-low-sulfur diesel fuels for vehicles and equipment to reduce diesel exhaust emissions.
- Conservation and reuse of construction materials on-site to reduce exhaust emissions and traffic delays.
- Enforcing King County’s no-idling policy for county vehicles.

3. **Water**

a. Surface Water:

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.

The project is on Tokul Creek (WRIA 07.0440). Tokul Creek is a tributary to the Snoqualmie River (WRIA 07.0219). This stream is a Shoreline of the State and provides habitat for resident salmonids and non-salmonids. Accordingly, the stream has a required 165-foot-wide buffer per King County Code (KCC) 21A.24.358.

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, Upper Tokul Creek Bridge #271B spans Tokul Creek and construction will affect both the right and left stream banks.
The bridge replacement requires clearing and grading to construct and remove a temporary bridge and approaches immediately downstream of the existing bridge. This will be accompanied by the installation, maintenance, and eventual removal of BMPs necessary to protect water quality in the stream during these operations. Demolition of the existing bridge will follow completion of the temporary traffic bypass. Abandoned footings from a previous bridge and existing bank armor will also be removed from the streambanks to the edge of the wetted channel.

Following completion of the new bridge and the removal of the temporary traffic bypass, affected areas within the stream buffer will be restored and permanently stabilized by the installation of native trees and shrubs. Non-biodegradable BMPs will be removed once permanent ground cover is established.

See attached plans for specific locations and construction details.

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.

The County proposes to remove the shallow existing cast-in-place footings from the existing bridge, as well as the abandoned foundations of an older bridge at or immediately above the ordinary highwater mark (OHWM). Individual boulders, at and slightly below the OHWM, used for bank armor along the left bank at the foundation will be pulled. Under typical summer low flows, these areas have little or no interaction with Tokul Creek below its OHWM. Depending on conditions at the time of construction, the County will deploy appropriate BMPs necessary to protect water quality and prevent incidental fallback into Tokul Creek.

The new bridge will fully span Tokul Creek’s 100-year water surface elevation without any interaction with the stream under any flow conditions. The County is not proposing placement of any materials within waters of the United States.

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

No surface water withdrawals or diversions are proposed.

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

The Tokul Creek Bridge is located on the Department of Homeland Security – Federal Emergency Management Agency (FEMA) effective Flood Insurance Rate Map (FIRM) panel 53033C0737G (updated on August 19, 2020), which indicates Tokul Creek does not have a floodplain or floodway mapped by FEMA at the project site.

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 waste materials will be discharged to surface waters. BMPs will be implemented following the King County and Washington State Department of Ecology stormwater manual guidance.

b. Ground Water:

1) Will groundwater 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.
Groundwater will not be withdrawn from a well for drinking water for this project. Water will not be discharged to groundwater for this project.

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.

No waste material will be discharged into the ground from septic tanks or other sources.

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.

The source of runoff is precipitation. Stormwater presently discharges as sheet flow from the impervious roadway surface to the roadway fill prisms and from the bridge deck directly to Tokul Creek. Based on preliminary design, the project adds less than 5,000 square feet of both impervious and pollution generating impervious surfaces; therefore, flow control and water quality will not be required.

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

It is unlikely, but possible, that fuel, hydraulic fluid, or paving material spills could occur from construction machinery. King County and Washington Department of Ecology spill prevention BMPs will be followed to avoid such spills. King County and the contractor are required to implement a Spill Prevention Control and Countermeasures Plan (SPCC) for the project prior to beginning construction.

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

Removal of the existing bridge foundation, creosote-treated timber substructure, abandoned footings, and streambank armor will eliminate the hydraulic channel constriction beneath the bridge, and restore natural flow patterns within the project area.

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

This project requires ground disturbing activities within uplands and at the edge of Tokul Creek to complete the bridge replacement and remove the artificial channel constriction due to the existing bridge structure and streambank armor. Prior to beginning this work, clearing limits will be flagged to ensure these activities are limited to the approved project footprint. TESC measures will be installed prior to clearing and grading. The TESC plan is devised to control surface, ground, and runoff water under anticipated conditions and will be maintained or supplemented as needed to address changing conditions in the field as construction proceeds.

Work required to remove the existing footings will occur immediately above Tokul Creek’s OHWM. The lowest portion of the boulder armor present at the leading edge of the left bank footings will be below the OHWM at the time of removal. Scour in this area, associated with the hydraulic constriction, has largely mobilized and removed the sediments and colloidal particles that contribute to turbidity. While no negative effect is anticipated from their removal, water quality will be monitored while the individual boulders are pulled. This work will be modified or discontinued if discernible turbidity occurs.
The completed project meets the stormwater control, conveyance, and treatment requirements of the King County Surface Water Design Manual (2016).

4. **Plants**

a. Check the 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**
- **Orchards, vineyards or other permanent crops**
- **Wet soil plants**: cattail, buttercup, bullrush, 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?

On-site vegetation consists of upland trees, shrubs, herbaceous vegetation, and grasses. Approximately 0.5 acres (22,000 square feet) of vegetation will be removed or altered for this project to accommodate the temporary access route and staging areas. The clearing limits within staging areas have been devised to protect trees within them. Trees felled within the stream buffer will be retained when allowed by the underlying landowner. Details regarding the affected trees and their numbers within Tokul Creek’s 165-foot-wide buffer is provided in the tree removal schedule below.

### Tree Removal Schedule

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>DBH* inches</th>
<th>Total Removal</th>
<th>Total Felled within 165-foot-wide Aquatic Area Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red alder</td>
<td><em>Alnus Rubra</em></td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Red alder</td>
<td><em>Alnus Rubra</em></td>
<td>10</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Red alder</td>
<td><em>Alnus Rubra</em></td>
<td>12</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Red alder</td>
<td><em>Alnus Rubra</em></td>
<td>16</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Big leaf maple</td>
<td><em>Acer Macrophyllum</em></td>
<td>8</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Big leaf maple</td>
<td><em>Acer Macrophyllum</em></td>
<td>16</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Big leaf maple</td>
<td><em>Acer Macrophyllum</em></td>
<td>20</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Big leaf maple</td>
<td><em>Acer Macrophyllum</em></td>
<td>24</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Douglas fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Douglas fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>12</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Douglas fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>14</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Douglas fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>16</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Douglas fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>18</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Western red cedar</td>
<td><em>Thuja Plicata</em></td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Western red cedar</td>
<td><em>Thuja Plicata</em></td>
<td>16</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cherry</td>
<td><em>Prunus sp.</em></td>
<td>12</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cherry</td>
<td><em>Prunus sp.</em></td>
<td>14</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Tree Totals</strong></td>
<td></td>
<td></td>
<td><strong>27</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>
c. List threatened and endangered species known to be on or near the site.

There are no special status plant species known to occur in the project area.

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

Existing vegetation within the project area will be disturbed or removed during construction. Impacted areas will be planted with native species and soils will be stabilized per the project’s mitigation plan sheets after construction. Native cut trees will be evaluated for retention on-site and repurposed as woody debris habitat features with the permission of the underlying property owner(s).

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

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>King County Noxious Weed Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Ivy</td>
<td>Hedera helix</td>
<td>Non-regulated, Class C Noxious Weed</td>
</tr>
<tr>
<td>Himalayan Blackberry</td>
<td>Rubus bifrons</td>
<td>Non-regulated, Class C Noxious Weed</td>
</tr>
<tr>
<td>Japanese knotweed</td>
<td>Polygonum cuspidatum</td>
<td>Non-Regulated, Class B Noxious Weed</td>
</tr>
</tbody>
</table>

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:
birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other: ________

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

The U.S. Fish and Wildlife Service-maintained Information for Planning and Consultation list for the area includes the endangered gray wolf (*Canis lupus*), as well as threatened species marbled murrelet (*Brachyramphus marmoratus*) and yellow-billed cuckoo (*Coccyzus americanus*). However, these species are not likely to occur within the project vicinity.

A series of natural downstream barriers approximately 600 feet downstream of the Upper Tokul Creek Bridge #271B prevent all anadromous fish access to the project site. Aquatic threatened or endangered species are not present at the project site.1

Fall Chinook (*Oncorhynchus tshawytscha*) and steelhead trout (*Oncorhynchus mykiss*) have a documented presence within Tokul Creek approximately 3,700 feet downstream of the bridge. Bull Trout (*Salvelinus

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confluentus) are also presumed to be present within Tokul Creek approximately 3,700 feet downstream of the bridge.2

The gray wolf is not present within the Puget Sound lowlands. The nearest occurrence of gray wolf is approximately 75 miles east of the project site.3

Marbled murrelets forage in marine waters and nest within large evergreen trees within 55 miles of the ocean. The closest marbled murrelet occurrence is 7.2 miles east and designated critical habitat is 10.4 miles east of the project area.4

The yellow-billed cuckoo has been extirpated from the state and will not occur at the project site.5

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

The project site is within the Pacific Flyway, which is a major north-south route of travel for migratory birds, extending from Alaska to Patagonia. Every year, migratory birds travel some or all of this distance both in spring and in fall following food sources, heading to breeding grounds, or travelling to overwintering sites. Migrating and nesting birds within the project area will be protected as required under the Migratory Bird Treaty Act.

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

- Avoiding the impact altogether by not taking a certain action or parts of an action.
  - The project was sited to have the minimal footprint possible. Clearing limits will be marked on-site to preserve existing vegetation outside of the project limits.
  - The project will be constructed in compliance with regulations and permit conditions for allowable work windows.

- Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts. The project minimizes impacts by implementing the following:
  - Appropriate BMPs for TESC required by the King County Surface Water Design Manual.
  - Groundwater BMPs: If groundwater is within work areas during construction it will be discharged to a vegetated upland area to infiltrate or hauled off-site. This will prevent turbid water from discharging outside of the project limits.
  - A Fugitive Dust Control Plan.
  - An SPCC Plan.
  - Staging and stockpiling on existing paved areas.

- Rectifying
  - Restoring disturbed vegetation areas and providing cover measures to minimize erosion.
  - Retaining cut trees on-site for habitat as allowed by the underlying landowner.

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

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2 Northwest Indian Fisheries Commission (NWIFC) 2020. Available at https://geo.nwifc.org/SWIFD/
No invasive animal species are anticipated to be 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.

   Gas, diesel, or other fossil fuels will be utilized by heavy equipment during project construction.

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

   The project will not affect the potential use of solar energy by adjacent properties.

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 completed project will not use energy, and no conservation features are included. Measures to reduce energy use during construction will be encouraged (e.g., efficient scheduling, material transport, and staging; implementing the no-idling policy).

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.

   The accidental leakage of petroleum products (e.g., gasoline, diesel fuel, hydraulic fluid, anti-freeze, grease, etc.) from construction equipment could occur, but is not likely. These substances can be toxic to nearby aquatic systems and humans upon prolonged exposure, and can pose a fire hazard. King County inspectors will monitor the site during construction. All King County vehicles are equipped with spill kits. Spill control and cleanup kits will also be provided by the contractor and will be available on-site. Heavy equipment will be inspected on a daily basis for leaks, and necessary repairs will be completed prior to commencing work activities near aquatic areas. Project operations will cease under high-flow conditions that may result in inundation of the construction zone, except for efforts to minimize resource damage.

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

   Based on a review of the Washington State Department of Ecology’s Toxic Cleanup Program website, there is a single active site awaiting cleanup within a half-mile radius of the project location. This site was identified in 2008, but no cleanup activities have been reported at this time. Contaminates of concern include petroleum compounds. However, the site is not immediately adjacent to the project area and should not have any effect on project-generated soils.

   The project area falls outside the predicted arsenic contamination zone, which is based on the modeled Asarco Tacoma plume.

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/conditions at the project site that might affect project...
development and design.

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.

During construction, petroleum products will be used on-site to power construction equipment and as a component of asphalt pavement. At completion of the project, toxic or hazardous chemicals will not be stored, used, or produced at the project site.

4) Describe special emergency services that might be required.

Special emergency services are not anticipated.

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

Excavated areas will be sampled for contaminants prior to construction when such documentation is required for the disposal of excavated materials. Worker health and safety will be addressed as required by Washington state and federal regulations. Waste material generated from construction will be properly managed and disposed of at permitted facilities.

During construction, the project will implement an SPCC plan that provides BMPs to minimize the potential for hazardous spills from fuels and materials. Spill control and cleanup kits will be available on-site to be used in the rare event of a spill.

The contractor will be required to submit a Fugitive Dust Control Plan to King County for approval. The plan will provide BMPs that will be used to minimize the amount of particulate matter (i.e., dust) generated during construction.

b. Noise

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

Existing noise in the area emanates from roadway traffic, surrounding residential parcels along the roadway, and nearby commercial forestry and mineral operations. The existing noise levels in the area will not affect the proposed 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.

On a short-term basis, noise will be generated from the construction equipment (e.g., truck traffic hauling materials to and from the site; backhoe, bulldozer, crane, excavator, and asphalt-paving operations). According to KCC 12.94.020, Part B-1, the following sounds are exempt from the provisions of the noise ordinance, "Sounds created by construction equipment, including special construction vehicles, and emanating from temporary construction-sites, if the receiving property is located in a rural or residential district of King County."
Construction will occur in accordance with KCC 12.86, which allows typical construction equipment operation between 7 a.m. and 7 p.m. on weekdays and 9 a.m. and 7 p.m. on weekends. If work outside these hours is needed, a variance will be requested from the King County Permitting Division.

Following construction, noise is expected to return to existing conditions. The project will not generate ongoing noise.

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

Standard mufflers will be used on all construction equipment. The construction crew will work during daytime hours in accordance with the requirements of King County Code and permit conditions. If work outside normal construction hours is needed, a variance will be requested from the King County Permitting Division.

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 current use of the site is as King County roadway infrastructure and utility corridor. Four privately owned parcels are adjacent to the bridge site. The proposal will not alter existing land uses. The zoning, size, current use, and relative position to the site are summarized below:

- 2024089103: Multiple zonings. RA-10 zoning adjacent to project site, also includes M (mining) and RA-5 (rural area with one dwelling unit per 5 acres); 95 total acres; undeveloped forest, surface gravel mining, and rural residential uses; in project vicinity, all property west of Tokul Road SE (bisected by 20248HYDR) and 5.8 acres northeast of the Upper Tokul Creek Bridge #271B (bisected by Tokul Road SE).
- 2024089045: Multiple zonings. RA-10 zoning southern 3.5 acres, F zoning (Forestry) northern 0.3 acres; 3.8 acres total size; rural residential and forest production (currently converted to lawn); immediately north and east of Upper Tokul Creek Bridge #271B.
- 2024089067: RA-10 zoning, 0.7 acres, rural residential, 130 feet north and east of Upper Tokul Creek Bridge #271B.

The project will not affect current land uses on nearby or adjacent parcels and does not require the conversion of any privately held property to road right-of-way.

b. Has the project 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 nonforest use?

The project vicinity has historically been used by resource industries including forest production and surface mining. The existing bridge currently provides access to working forest lands within the forest production district north of Tokul Creek. Due to its deteriorated condition, the bridge is currently load restricted to 23 tons, which prevents its use by certain forestry equipment and trucks. The new bridge will not be load restricted.

The project will not result in the conversion of agricultural or forest lands to other uses. No new road right-of-way is being obtained. All permanent improvements associated with this bridge replacement project will be contained within the King County road right-of-way. Affected areas outside of the permanently owned
public right-of-way will be restored.

A portion of the work occurs on undeveloped private properties that, while not zoned for forestry (F), could be used as working forest lands to produce merchantable timber. The proposed project will not affect existing or potential future use of these areas. A temporary bridge and approach roadways are required to maintain access to the parcels north of the existing bridge. This temporary impact, summarized above in Section 4b, requires the removal of seven potentially merchantable evergreen trees over 12 inches in diameter on a RA-10 zoned property. Ultimate disposition of any trees removed in the course of construction is determined by the property owner (Weyerhaeuser Company).

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:

The existing weight limited bridge provides sole public access to F zoned properties within the forest district north of the bridge. Vehicular use of the existing bridge, temporary bridge, or the new bridge will be periodically interrupted or otherwise affected during project construction and phasing.

c. Describe any structures on the site.

On-site structures within the transportation corridor include the bridge, overhead utilities, roadway fill prism, and paved traveled roadway surface.

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

The existing bridge structure will be demolished in the course of construction for this project.

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

King County’s public road rights-of-way are not subject to zoning. The project area is adjacent to an area zoned as RA-10 (rural area with 10 dwelling units per acre). F-zoned are located north of these parcels.

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

According to the King County Comprehensive Plan (2020), the project is within a rural area.

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

The site is located in two King County Shoreline Master Program areas: Aquatic and Conservancy.

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 were identified by the County within or adjacent to the site:
- Tokul Creek is a Type S Aquatic Area that is a Shoreline of the State. The creek has a Critical Area buffer that is a minimum of 165 feet wide. The Shoreline jurisdiction extends 200 feet landward of the stream’s OHWM.
- Erosion Hazard Area.
- Steep Slope Hazard Area on the left bank of Tokul Creek.
- Critical Aquifer Recharge Area, which includes a Wellhead Protection Area.
i. Approximately how many people would reside or work in the completed project?
   
   No people will reside or work in the completed project.

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

   No people will be permanently displaced by the project.

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

   No measures will be implemented to avoid or reduce displaced people because no one will be displaced.

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

   The proposed project is consistent with existing and projected land uses in the areas potentially affected by the project. The project requires land use permits from the King County DLS Permitting Division to further ensure the project is compatible with existing and projected land uses and plans.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

   This project proposes to provide a safe bridge structure for a sole access roadway that serves residents/homeowners and forest lands, as well as provide drainage improvements that are compatible with adjacent uses. Forest land activities of long-term commercial significance near the project site are anticipated to benefit from the proposal that removes the load restriction for crossing the creek at this location.

9. Housing

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

      No housing units are being provided by the project.

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

      No housing units are being eliminated by the project.

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

      The project will not result in adverse impacts to housing units; therefore, no measures are proposed to reduce or control impacts.

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 tallest proposed structure will be the new Oregon 3-Tube Curb Mount bridge rail on both sides of the bridge. The maximum height of the bridge railing will be 42 inches including the concrete curb.

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

In the immediate vicinity of the project, views will be altered by removal of vegetation/tree clearing to accommodate the temporary bypass road and bridge.

While it will be within the same alignment as the existing bridge, the new bridge will be wider with improved guardrails, and the approach roads will conform with current roadway design requirements to degree possible given the existing topography and proximity of off-right-of-way improvements.

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

The project proposes to minimize aesthetic impacts to the view shed by choosing a bridge type, roadway improvements, and native plantings consistent with the existing rural character of the landscape. The new bridge will be in approximately the same alignment as the existing bridge. It’s possible the bridge could use weathered steel components or be painted a color that blends with the existing landscape.

11. Light and Glare

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

The project will not produce light or glare; there is no lighting proposed for the project.

No nighttime construction is proposed.

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

The finished project will not produce any additional light or glare that will be a safety hazard or interfere with views.

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

No off-site sources of light or glare have been identified that will affect the proposed project.

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

No measures are needed to prevent or minimize light and glare impacts.

12. Recreation

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

Within the immediate vicinity of the project, informal activities include fishing, walking/hiking, and biking.

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

No recreational uses will be displaced by the project. However, travel across Tokul Creek may be periodically interrupted or otherwise affected by construction activities or project phasing.
c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Traffic controls will be in place to allow for safe access through the construction site during construction.

13. **Historic and cultural preservation**

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

King County retained the services of Cardno consultants to complete the cultural resources survey in support of this project.

One historic resource is present within the surveyed Area of Potential Affects (APE). Built c.1930, the mock log cabin (Property ID 360645) at 4824 Tokul Road SE embodies the distinctive characteristics of a recreational cabin from this period and was determined eligible for listing in the National Register of Historic Places (NRHP) with local-level significance under Criteria A and C.

The Tokul Creek Bridge Site (45KI01472) consists of ruined reinforced concrete footings, a retaining wall, and concrete fragments from a previous bridge spanning Tokul Creek immediately downstream of the existing bridge. This feature is comprised of common materials and provides no insights into local history or prehistory, is not associated with significant people and events, and does not embody a distinctive construction method. It was determined not eligible for listing in the NRHP.

b. Are there any landmarks, features, or other evidence of Indian or historic use or 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.

The cultural resources screening identified other cultural resources within a mile of the project. The Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD) database lists a possible precontact camp site (45-KI-19) approximately 0.88 miles southwest of the project site.

The Tokul Creek Trestle (property/resource number 537660/484968), is a historic structure built in 1911. It was previously determined to be eligible for listing in the NRHP and is located about 0.5 miles southwest of the project site.

The WISAARD database does not identify the presence of cemeteries or other previously recorded traditional cultural properties within one mile of the site.

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 archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The project began with an initial project screening using the King County Cultural Resource Protection Project and DAHP WISAARD databases. These GIS-based databases utilize historic maps, ethno-historic accounts, and professional site records. A Section 106 exemption for geotechnical borings was obtained from the Washington State Department of Transportation (WSDOT) for this project.
The cultural resources survey was completed in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 US Code [USC] 470 et seq.) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800). This project is subject to review and consultation with WSDOT, DAHP, and affected Indian tribes to determine if the project is likely to impact historic properties.

Fieldwork of the APE for historical and archæological resources was undertaken in December 2019, employing both pedestrian and subsurface shovel probe methods.

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

The historic cabin located at 4824 Tokul Road is immediately off the roadway within the project APE. Cardno recommends an exclusionary fence be installed at the edge of the existing paved roadway to protect the NRHP-eligible cabin. Temporary auditory, atmospheric (i.e. dust), and visual changes to the cabin and its setting during construction are not permanent and are considered non-adverse.

If resources are identified during construction, work in the vicinity of the identified resources will immediately cease and the King County Road Services Division Archaeologist, WSDOT, DAHP, the King County Historic Preservation Program, consulting Tribes and other appropriate agencies will be notified. Work will not resume in the vicinity of the identified resources until appropriate archaeological investigations are complete.

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.

Tokul Road SE is the public roadway that provides the sole public access to locations north of the project area. No new permanent roadway accesses to the site are proposed. Project plans are appended to this document as a reference.

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?

The site is not presently served by public transit. The nearest public transit stop is located on State Route 202 north of 37501 SE Fall City-Snoqualmie Road, approximately 2.4 miles to the southwest.

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

The completed project will not include parking spaces, nor eliminate any existing parking spaces.

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).

The proposal requires an improved public bridge to meet current load-rating standards. In addition, the surrounding roadway within the project limits will be improved to meet current King County Road Design and Construction Standards. No other local roadway improvements are proposed.
e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water, rail, or air transportation and is not in the immediate vicinity of rail and air transportation.

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 nonpassenger vehicles). What data or transportation models were used to make these estimates?

The project replaces an existing weight limited bridge that provides the sole public access across Tokul Creek to forest lands. The completed project could generate increased vehicular trips to and from F-zoned properties once the weight limitation is removed.

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.

A short detour/bypass next to the bridge is proposed, which will not interfere with, affect, or be affected by the movement of agricultural and forest products on roads in the area.

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

**Short term:** A detour/bypass road and temporary bridge immediately downstream of the existing bridge, with necessary traffic controls (i.e., barricades, signs, signals, flaggers), provided to minimize the time needed to construct the new bridge and permit traffic through the working site. Construction of the new bridge will be phased to minimize impacts to local and emergency traffic.

In addition, a variety of notifications will be provided to the traveling public by the King County Public Communications Team in advance of traffic disruptions. A Temporary Traffic Control Plan will be prepared by the contractor for review and approval before construction starts.

**Long term:** The bridge will be maintained and regularly inspected.

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.

No increased needs for public services are anticipated as a result of the proposed project.

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

There will be no direct impacts on public services. No reduction or control measures are necessary or proposed.

16. Utilities

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

Tokul Road SE and the Upper Tokul Bridge #271B provide a public corridor for communication and power utilities. There are no occupied structures within the public right-of-way. Therefore, while utilities pass through the project area, they do not serve and are not normally 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.

No utilities are proposed for the project. Project construction will not interrupt or alter the utilities currently available in the area.

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:   ___________________________________________________

Name of signee Tricia Davis

Position and Agency/Organization:  Road Services Division Director, Department of Local Services

Date Submitted: _______________ ........................................................ ..........................................................
GENERAL NOTES

1. Temporary roadway alignment and profile shown provided for Contractor. Temporary wall layout is for Contractor's reference. Contractor may propose alternative for Engineer's review. Temporary wall and bridge design shall be submitted to the Engineer for approval prior to installation.

2. See Sheet #4 for diversion roadway and bridge plan and sections.

STAGING LEGEND

- Temporary Fill

Call before you dig.

UPPER TOKUL CREEK BRIDGE #271B
BRIDGE REPLACEMENT PROJECT
DIVERSION ROADWAY PLAN AND PROFILE

KING COUNTY DEPT. OF LOCAL SERVICES

JULIET G. LEE, PROJECT MANAGER
DOTTIE ALDRICH, PROJECT MANAGER

FED. MGR No. 1127699 SURVEY No. 180

KING COUNTY DEPT. OF LOCAL SERVICES
320-90 (SP02)
### TREE REMOVAL SCHEDULE

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<td>Acer macrophyllum</td>
<td>BIG LEAF MAPLE</td>
<td>8&quot;</td>
<td>35'</td>
<td>2215</td>
</tr>
<tr>
<td>27</td>
<td>Acer macrophyllum</td>
<td>BIG LEAF MAPLE</td>
<td>8&quot;</td>
<td>35'</td>
<td>2215</td>
</tr>
</tbody>
</table>
EROSION CONTROL NOTES

1. CONSTRUCTION SEQUENCE TO BE APPROVED:
   A. FOUNDATION TEC MEASURES
   B. SUBGRADE BAGGING/COVERING
   C. FILTER BAGGING/COVERING
   D. EROSION CONTROL CURTAIN

2. KNOW WHAT'S BELOW:
   A. KNOW THE LOCATION OF ALL UTILITIES WITHIN 100 FT OF THE WORK AREA.
   B. CALL BEFORE YOU DIG.

3. UPPER TOKUL CREEK BRIDGE #271B BRIDGE REPLACEMENT PROJECT
   A. CALL BEFORE YOU DIG.

4. TURBIDITY CURTAIN
   A. INSTALL TURBIDITY CURTAIN PERSONNEL:
   B. SAFETY EQUIPMENT:
   C. MECHANICAL EQUIPMENT:

5. TOGGLE PIN
   A. INSTALL TOGGLE PIN PERSONNEL:
   B. SAFETY EQUIPMENT:
   C. MECHANICAL EQUIPMENT:

6. MISTY CURTAIN
   A. INSTALL MISTY CURTAIN PERSONNEL:
   B. SAFETY EQUIPMENT:
   C. MECHANICAL EQUIPMENT:

7. KNOW WHAT'S BELOW:
   A. KNOW THE LOCATION OF ALL UTILITIES WITHIN 100 FT OF THE WORK AREA.
   B. CALL BEFORE YOU DIG.
knowledgeable about the processes involved.

Call before you dig.

UPPER TOKUL CREEK BRIDGE #271B
BRIDGE REPLACEMENT PROJECT

RESTORATION PLANS

KING COUNTY DEPT. OF LOCAL SERVICES

320-90 (RP01)
RESTORATION NOTES
1. INSTALL BIODEGRADABLE EROSION CONTROL
   BLANKET PER 2020 WSDOT STANDARD PLAN WSDOT-20-01.
2. BIODEGRADABLE EROSION CONTROL BLANKET PER
   2020 WSDOT STANDARD SPECIFICATIONS CHAP 14.6.02I.
3. ANCHOR BLANKET WITH WOOD STAKES AT 6" O.C.
   (100% WASTE). OVERLAY BLANKET 18" MINIMUM IN
   WATER FLOW DIRECTION. WOOD STAKES SHALL BE
   3"X4"X8' (STAPLED OR NAILED).
4. PASTER BLANKET AT TOP AND BOTTOM OF SLOPE
   WITH ANCHOR TRENCH PER DETAIL 2 (NOT SCALE).
5. BANK PROTECTION MATERIAL SHALL CONSIST OF 100% 12"
   COBBLE PER 2020 WSDOT STANDARD
   SPECIFICATIONS SECTION 6-10.1.1(2).
6. SOIL AMENDMENT SHALL CONSIST OF THE COMPOST
   PER 2020 WSDOT STANDARD SPECIFICATIONS SECTION
   6-10.2(5).

UNDER BRIDGE BANK STABILIZATION - TYPICAL SECTION
NOT TO SCALE

BLANKET ANCHOR TRENCH DETAIL
NOT TO SCALE

STREAMBED COBBLE PLACEMENT
NOT TO SCALE

BANK STABILIZATION - DETAIL
NOT TO SCALE

BLANKET WRAP DETAIL
NOT TO SCALE
PLANTING NOTES

1. PLANT SHRUBS IN SINGLE SPECIES GROUPINGS CLUSTERS OF 3-7.
2. SET SHRUB SETBACK CHART SHEET 4, DETAIL 3 FOR TREE AND SHRUB.
3. COMPARE PROJECT EXISTING DETAIL VEGETATION PER SECTION.
4. SPECIFIED IN SECTION 4-5 OF THE STANDARD SPECIFICATIONS ANY VEGETATION THAT WAS NOT ADEQUATELY GROWING SHOWN ON 4-5 OR DISTRACTIVE SPECIES AND PLANTING AT Ptrees AND PLANTING VEGETATION CAN OCCUR DURING THE NEXT APPROVED DATE.
5. CONTRACTOR SHALL REMOVE ALL TREATED CONSTRUCTION DISTURBED.
6. PERMANENT ACCESS ROADS ARE DE-CONTACT SOLES TO AN 18" DEPTH IN PLANTING AREAS. RESTORE THESE TEMPORARILY ORITURD.
7. INSTALL PLANT MATERIALS ON PLANTING VEGETATION IN A VEGETABLE SETBACK.
8. PLANT MATERIALS DURING 30-60 DAYS. CONTRACTOR SHALL REMOVE SHOWN ON THESE PLANTS.
9. INSTALL PLANT MATERIALS ON PLANTING VEGETATION IN A VEGETABLE SETBACK.
10. PLANT MATERIALS DURING 30-60 DAYS. CONTRACTOR SHALL REMOVE SHOWN ON THESE PLANTS.
SEC. 17, T.24 N., R.08 E., W.M.

SENSITIVE AREA SOIL PREPARATION SEQUENCE OF WORK

ROADSIDE EMBANKMENT SOIL PREPARATION SEQUENCE OF WORK

PLANT MATERIAL SETBACK CHART

THE CHART ELEVATION MASK, TO INCLUDE THE SOIL PREPARATION DETAILS FOR THE PLANT MATERIAL INSTALLATION.

GROUNDING GROUNDING MASK, TO INCLUDE THE SOIL PREPARATION DETAILS FOR THE PLANT MATERIAL INSTALLATION.

SMALL TREE TALL TREE

*** SMALL TREES GROW NO TALLER THAN 5 FEET AT Maturity.
*** SMALL TREES GROW NO TALLER THAN 10 FEET AT Maturity.
*** SMALL TREES GROW NO TALLER THAN 15 FEET AT Maturity.
SEQUENCE 1
SET ORDERS IN PLACE
INSTALL TEMPORARY BRIDGES FOR ELEVATION IN ACCORDANCE WITH STD. SPEC. SECTION 6-03.3(17) T.

SEQUENCE 2
PLACE BRIDGE DECK REINFORCEMENT
INSTALL TEMPORARY BRIDGES FOR DECK REINFORCEMENT AND DECK PLACEMENT IN ACCORDANCE WITH STD. SPEC. SECTION 6-03.3(17) T.

SEQUENCE 3
CAST BRIDGE DECK
CAST BRIDGE DECK WHEN COMPRESSIVE STRENGTH HAS REACHED 3000 PSI (MPa).

SEQUENCE 4
CAST CURB
CURB SHALL NOT BE CAST UNTIL THE BRIDGE DECK COMPRESSIVE STRENGTH HAS REACHED 3000 PSI (MPa).

CONSTRUCTION SEQUENCE - SUPERSTRUCTURE (NEW BRIDGE)

TIME EQUATION
1. PLACE AND BRACE ORDERS.
2. JUST PRIOR TO CUTTING THE TEMPORARY STRANDS, REMOVE EXPANDED POST-TENSIONING IN BLOCKOUTS IN TOP PLANCE OF ORDERS. SINCE THE EXPANDED POST-TENSIONING HAS BEEN REMOVED FROM THE STRAND, DETERMINING BLOCKOUTS REQUIRES MEASUREMENT FROM ENDING OF BLOCKOUTS UNTIL THE TEMPORARY TOP STRAND IS CUT AND THE BLOCKOUTS FILLED WITH CEMENT.
3. CUT STRANDS IN BLOCKOUTS. STRANDS MAY BE CUT BY USING A CUTOFF TOOL AND MOVING THE TIME, SUCH AND PATTERN INSIDE THE LENGTH OF EXPOSED STRAND TO LET INDIVIDUAL STRANDS BREAK ONE AT A TIME TO LEAVE THE SAND TO THE CURTAIN. STRANDS SHALL BE RELEASED IN A SYMMETRICAL MANNER ABOUT THE ORDER CENTERLINE.
4. WITHIN 24 HOURS OF CUTTING THE TEMPORARY STRANDS, FULL BLOCKOUTS WITH A GROUT COMPARABLE TO STD. SPEC. 6-03.3(9), REMOVE ALL MOISTURE IN BLOCKOUTS PRIOR TO FILLING THEM WITH CEMENT.
TEMPORARY BRIDGE NOTES

1. THE CONTRACTOR SHALL DESIGN, FURNISH, ERECT, MAINTAIN, AND REMOVE THE TEMPORARY BRIDGE AND APPROACH WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND DETAILS SHOWN IN THE PLANS.

2. SEE SPECIAL PROVISIONS FOR TEMPORARY BRIDGE DESIGN REQUIREMENTS.

3. WALLS FOR TEMPORARY APPROACH SHALL BE GEOSYNTHETIC WALL IN ACCORDANCE WITH STANDARD PLAN 0-309 OR APPROVED EQUAL.
FOUNDATION PLAN

BEARING OF ABUTMENTS ARE NORMAL TO TOKUL RD CONSTRUCTION E
Upper Tokul Creek Bridge #271B
Bridge Replacement Project

Framing Plan
Bearings of piles are normal to pile. 1st. Construction E

Know what's below. Call before you dig.

King County DEPT. OF LOCAL SERVICES
311 Design
Construction

320-90 (EB09)
BRIDGE TYPICAL SECTION
SHOWN NEAR MIDSPAN
SEPA Greenhouse Gas (GHG) Emissions Worksheet

Introduction

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

Emissions created by development

GHG emissions associated with development come from multiple sources:

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

GHG emissions worksheet

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

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

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

The SEPA GHG Emissions worksheet should not be used to estimate GHG emissions from large, complex projects, such as urban planned developments, major infrastructure projects, or projects that require an Environmental Impact Statement (EIS).
Using the Worksheet

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

2. For paving, estimate the total amount of paving (in thousands of square feet) of the project.

3. The Worksheet will calculate the amount of GHG emissions associated with the project and display the amount in the "Total Emissions" column on the worksheet. The applicant should use this information when completing the SEPA checklist.

4. The last three worksheets in the Excel file provide the background information that is used to calculate the total GHG emissions.

5. The methodology of creating the estimates is transparent; if there is reason to believe that a better estimate can be obtained by changing specific values, this can and should be done. Changes to the values should be documented with an explanation of why and the sources relied upon.

6. Print out the “Total Emissions” worksheet (page 1) and attach it to the SEPA checklist. If the applicant has made changes to the calculations or the values, the documentation supporting those changes should also be attached to the SEPA checklist.

Resources

Department of Local Services, Permitting Division

Permit application forms listed by packet

See the SEPA packet

Greenhouse Gas (GHG) worksheet

Hours and location