

NOTICE OF NSA DECISION

Case File: T2-2021-14521
Permit: Geologic Hazards
Applicant: Terra Lingley,
Oregon Department of Transportation
Owner(s): Union Pacific Railroad
Company
Location: Located within the right-of-way along E. Historic Columbia River Highway between
Milepost 17 and 18.

The project is adjacent to: **Map, Tax Lot:** 1N6E07 -00100
Alternate Account #: R946070050 **Property ID #:** R323233

Zoning: Gorge Special Public Recreation (GSPR)
Gorge Special Open Space (GSO)

Overlays: Geologic Hazard

Key Viewing Areas: Beacon Rock, Cape Horn, Columbia River, Historic Columbia River
Highway, Highway I-84 (including rest stops), Pacific Crest Trail,
Washington State Route 14

Landscape Setting: Coniferous Woodlands

Recreation Intensity: Recreation Class 2 and Recreation Class 4

Proposal Summary: Request a Geologic Hazards permit for the repair and maintenance of two viaducts and
multiple retaining walls that support the East Historic Columbia River Highway. The
project is located on both sides of Multnomah Falls between Milepost 17 and 18.

Decision: **Approved with Conditions**

This decision is final and effective at the close of the appeal period, unless appealed. The deadline
for filing an appeal is **Friday, August 13, 2021, at 4:00 pm.**

Issued By:

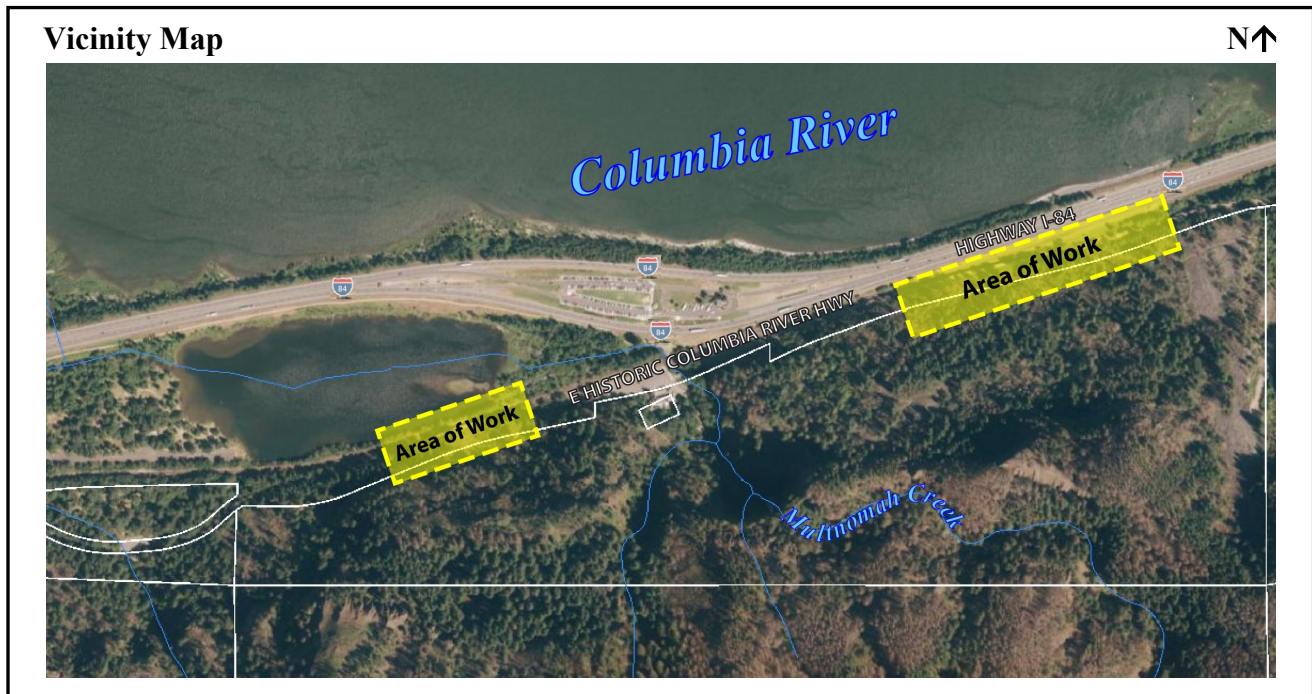
Rithy Khut, Planner

For: Carol Johnson, AICP
Planning Director

Date: Friday, July 30, 2021

Opportunity to Review the Record: The complete case file, including the Planning Director Decision containing Findings, Conclusions, Conditions of Approval, and all evidence associated with this application are available for review by contacting Rithy Khut, Staff Planner at 503-988-0176 or rithy.khut@multco.us. Copies of all documents are available at the rate of \$0.35/per page.

Opportunity to Appeal: An appeal requires a \$250.00 fee and must state the specific legal grounds on which it is based. To obtain appeal forms or information on the procedure, contact the Land Use Planning office at 1600 SE 190th Avenue (Phone: 503-988-3043). This decision is not appealable to the Columbia River Gorge Commission until all local appeals are exhausted.



Applicable Approval Criteria:

For this application to be approved, the proposal will need to meet the applicable approval criteria below:

Multnomah County Code (MCC): General Provisions: MCC 38.0015 Definitions

Administration and Procedures: MCC 38.0560 Code Compliance and Applications

Allowed Uses: MCC 38.1005(B)(1) Repair, maintenance and operation of existing structures

Gorge Special Open Space (GSO): MCC 38.2620 Allowed Uses

Gorge Special Public Recreation (GSPR): MCC 38.2820 Allowed Uses

Geologic Hazards: MCC 38.5503 Definitions, MCC 38.5505 Permits Required, MCC 38.5515 Geologic Hazards Permits Application Information Required, MCC 38.5520 Geologic Hazards Permit Standards

Copies of the referenced Multnomah County Code sections are available by contacting our office at (503) 988-3043 or by visiting our website at <https://multco.us/landuse/zoning-codes/> under the link **Chapter 38: Columbia River Gorge National Scenic Area**

Conditions of Approval

Approval of this land use permit is based on the submitted written narrative(s) and plan(s). No work shall occur under this permit other than that which is specified within these documents. It shall be the responsibility of the property owner(s) to comply with these documents and the limitations of approval described herein. The conditions listed are necessary to ensure that approval criteria for this land use permit are satisfied. Where a condition relates to a specific approval criterion, the code citation for that criterion follows in brackets.

1. Permit Expiration – This land use permit shall expire as follows:
 - a. Within two (2) years of the date of the final decision, when construction has not commenced. [MCC 38.0690(B)(1)]
 - i. For purposes of Condition #1.a., commencement of construction shall mean actual construction of the foundation or frame of the approved structure. For utilities and developments without a frame or foundation, commencement of construction shall mean actual construction of support structures for an approved development, or actual excavation for an approved development.
 - ii. Notification of commencement of construction will be given to Multnomah County Land Use Planning Division a minimum of seven (7) days prior to date of commencement. Work may commence once notice is completed. [MCC 38.0690(B)(3)]
 - b. When the structure has not been completed within two (2) years of the date of commencement of construction. [MCC 37.0690(B)(2)]
 - i. For purposes of Condition #1.b, completion of the structure shall mean completion of the exterior surface(s) of the structure and compliance with all conditions of approval in the land use approval. [MCC 38.0690(B)(4)]

Note: Expiration of the permit is automatic. Failure to give notice of expiration shall not affect the expiration of this approval. The property owner may request one (1) 12-month extension to the timeframe within which this permit is valid, as provided under MCC 38.0700, as applicable. The request for a permit extension must be submitted **prior to** the expiration of the approval period. [MCC 38.0700]

2. Prior to construction, Oregon Department of Transportation or their representative(s) shall:
 - a. Provide a cash deposit in the amount of \$1,000.00 to assure that a post-construction report and as-built plans both stamped and certified by an Oregon Professional Engineer that the physical improvements are consistent with this Geologic Hazards permit is submitted. The cash deposit shall be released upon submittal of a post-construction report as outlined in Requirement #8.b and as-built plans showing compliance with the development standards specified in MCC 38.5520(C), MCC 38.5520(D), MCC 39.5520(J), unless utilized to obtain compliance. [MCC 38.0660(A) and MCC 39.6210(F)(1)]

3. When ground-disturbing activities authorized by this permit are ready to commence, Oregon Department of Transportation or their representative(s) shall:
 - a. E-mail Staff Planner, Rithy Khut at rithy.khut@multco.us for issuance of the Erosion Control Permit notice card.
 - i. The permit notice card is to be posted at the driveway entrance in a clearly visible location.
 - ii. This notice is to remain posted until such time as the ground disturbing work is completed. In the event the notice is lost, destroyed, or otherwise removed prior to completion of the grading work, the applicant shall immediately contact the Land Use Planning office to obtain a replacement. [MCC 38.0660(A)]
 - b. Install erosion control measures consistent with the approved erosion control plan. Flag, fence, or otherwise mark the project area as described in the Exhibit A.11: Sheet E.1-8. These measures shall remain in place and in good working order. Such flagging, fencing, and/or markings shall be maintained until construction is complete. [MCC 38.5520(K), MCC 38.5520(L), MCC 38.5520(M), MCC 38.5520(P) and MCC 39.6210(F)(2)]
 - i. For the purposes of 3.b above, upon completion of the installation of flagging, fencing and other markings, photographs of the flagging, fencing and other marking shall be sent to Staff Planner, Rithy Khut at rithy.khut@multco.us to ensure that Best Management Practices are occurring. [MCC 39.6210(F)(2)]
4. During construction, Oregon Department of Transportation or their representative(s) shall be limited to the following ground disturbing activities:
 - a. No more than 22,680 square feet of ground disturbance area is to be disturbed as shown in Exhibit A.11: Sheet D.1-6, E.1-8, I-18, and I-24. [MCC 38.5515(B), and MCC 38.5515(C)]
 - b. No more than three (3) cubic yards of excavation. All structural fill and any other fill used in this project will be composed of earth materials as defined in MCC 38.0015. Any excess soil not used as fill within the ground disturbance area shall be removed from the subject property and taken to a location approved for the disposal of such material by applicable Federal, State and local authorities. [MCC 38.5515(B), and MCC 38.5515(C)]
 - c. 240 cubic yards of fill, one (1) cubic yard of class 10 riprap and 1,960 tons of class 1 riprap is permitted to be imported to the project site. All fill and riprap shall be composed of earth materials as defined in MCC 38.0015. Fill and riprap shall not contain putrescible wastes, construction and demolition wastes, hazardous waste and/or industrial solid wastes. [MCC 38.5515(B), MCC 38.5520(B), and MCC 38.5515(C)]
5. During construction, Oregon Department of Transportation or their representative(s) shall be ensure the following:
 - a. Maintain best erosion control practices through all phases of development. Erosion control measures are to include the installation of sediment fences/barriers at the toe of all disturbed areas and post construction re-establishment of ground cover. Straw mulch, erosion blankets, or 6-mil plastic sheeting shall be used as a wet weather measure to provide erosion protection for exposed soils. All erosion control measures are to be implemented as prescribed in the current edition of the City of Portland's

Erosion Control Manual, copies of which are available through the City of Portland. [MCC 38.5520(K), MCC 38.5520(L), MCC 38.5520(M), MCC 38.5520(P) and MCC 39.6210(F)(2)]

- b. Remove any sedimentation caused by development activities from all neighboring surfaces and/or drainage systems. If any features within adjacent public right-of-way are disturbed, the property owner shall be responsible for returning such features to their original condition or a condition of equal quality. [MCC 39.6210(E)(1) and MCC 39.6210(E)(2)]
 - c. Ensure that any stockpiled soil is located more than 100 feet from any waterbody and utilize Best Management Practices for the covering of stockpiled soil. [MCC 38.5520(Q)]
 - d. Non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring, and clean-up activities. [MCC 38.5520(R)]
 - e. Fill trucks shall be constructed, loaded, covered, or otherwise managed to prevent any of their load from dropping, sifting, leaking, or otherwise escaping from the vehicle. No fill shall be tracked or discharged in any manner onto any public right-of-way. [MCC 38.5520(U)]
 - f. Seed with native grasses and mulch all disturbed soils left exposed overnight to prevent erosion and sedimentation as listed in Exhibit A.11: Sheet E.1-8. Monitor daily to ensure vegetation is sprouting and that no erosion or sedimentation is occurring. Monitoring may cease when vegetation on the disturbed soils have stabilized the disturbed soils. [MCC 38.5520(H)]
6. The County may supplement described erosion control techniques if turbidity or other down slope erosion impacts results from on-site grading work. The Portland Building Bureau (Special Inspections Section), the local Soil and Water Conservation District, or the U.S. Soil Conservation Service can also advise or recommend measures to respond to unanticipated erosion effects. [MCC 39.6210(F)(2)]
7. At the conclusion of construction, Oregon Department of Transportation or their representative(s) shall:
- a. Seed with native grasses all disturbed areas within five (5) days of the date ground disturbing activities are concluded as shown in Exhibit A.11: Sheet E.1-8. [MCC 38.5520(J)]
 - b. Provide Multnomah County Land Use Planning a post-construction report and as-built plans stamped and certified by an Oregon Professional Engineer that the physical improvements are consistent with this Geologic Hazards permit. The post-construction report and as-built plans shall be submitted within 90 days of completion of the project. The post-construction report shall confirm the project has been completed in compliance with approved designs and all conditions of this land use permit. Any variation from approved designs or conditions of approval shall be clearly indicated and specify how the variation is in compliance with the Geologic Hazards codes. The post-construction report shall include:
 - i. Dated pre- and post-ground disturbing photos taken of the areas of disturbance.

- ii. A narrative that describes any deviation from the approved plans.
- iii. Remedial action needed to bring the completed project into compliance with the Geologic Hazards regulations, if applicable. [MCC 39.6210(F)(1) and [MCC 39.6210(F)(2)]

Note: Once this decision is final, the applicant shall compete the following steps:

1. Read your land use decision, the conditions of approval and modify your plans, if necessary, to meet any condition that states, “Prior to construction...” Be ready to demonstrate compliance with the conditions.

Notice to Mortgagee, Lien Holder, Vendor, or Seller:

ORS Chapter 215 requires that if you receive this notice it must be promptly forwarded to the purchaser.

Findings of Fact

FINDINGS: Written findings are contained herein. The Multnomah County Code (MCC) criteria and Comprehensive Plan Policies are in **bold** font. Staff analysis and comments are identified as ‘**Staff:**’ and address the applicable criteria. Staff comments may include a conclusionary statement in *italic*.

1.0 Project Description:

Staff: The applicant is requesting a Geologic Hazards (GH) permit for the repair and maintenance of two viaducts and multiple retaining walls that support the East Historic Columbia River Highway.

Land Use Planning finds that the proposed physical improvements are considered as repair and maintenance of an existing structure and is an Allowed Use pursuant to MCC 38.1005(B)(1) in the National Scenic Area. While the repair and maintenance does not require a National Scenic Area site review, the development is located on land that has an average slope of 25% or more. Therefore, the applicant is required to obtain a Geologic Hazards permit pursuant to MCC 38.5505 Permits Required.

2.0 Property Description & History:

Staff: The subject application is located within the right of way of East Historic Columbia River Highway adjacent to property owned by the Union Pacific Railroad Company. The project areas are located within the Gorge Special Public Recreation (GSPR) and Gorge Special Open Space (GSO) zoning districts in the Columbia River Gorge National Scenic Area (CRGNSA). Built on each side of the Multnomah Falls parking area, the viaducts were constructed in 1914 to support the highway. The West Viaduct is approximately 400 feet long and East Viaduct is 860 feet long.

3.0 Public Comment:

Staff: Staff mailed a notice of application and invitation to comment on the proposed application to the required parties pursuant to MCC 38.0530 as Exhibited in C.3 and C.4. Staff did receive any public comments during the 14-day comment period.

3.1 Chris Donnermeyer, Heritage Resources Program Manager for the USDA Forest Service Columbia River Gorge National Scenic Area provided a Cultural Resource Survey Determination on June 24, 2021 (Exhibit D.1)

Staff: The Cultural Resource Survey Determination written by Chris Donnermeyer on behalf of the United States Department of Agriculture: Forest Service (“USFS”) stated that, “A Cultural Resource Survey is: Not Required” and “A Historic Survey is: Not Required”.

3.2 Nathan Baker, Senior Staff Attorney, Friends of the Columbia River Gorge on July 2, 2021 (Exhibit D.2)

Staff: A letter written by Nathan Baker on behalf of the Friends of the Columbia River Gorge contained comments intended to identify application requirements, resource protection standards, and provide recommendations to the County and the public regarding legal requirements.

4.0 Administrative Procedures Criteria:

4.1 § 38.0560 CODE COMPLIANCE AND APPLICATIONS.

Except as provided in subsection (A), the County shall not make a land use decision approving development, including land divisions and property line adjustments, or issue a building permit for any property that is not in full compliance with all applicable provisions of the Multnomah County Land Use Code and/or any permit approvals previously issued by the County.

(A) A permit or other approval, including building permit applications, may be authorized if:

- (1) It results in the property coming into full compliance with all applicable provisions of the Multnomah County Code. This includes sequencing of permits or other approvals as part of a voluntary compliance agreement; or**
- (2) It is necessary to protect public safety; or**
- (3) It is for work related to and within a valid easement over, on or under an affected property.**

(B) For the purposes of this section, Public Safety means the actions authorized by the permit would cause abatement of conditions found to exist on the property that endanger the life, health, personal property, or safety of the residents or public. Examples of that situation include but are not limited to issuance of permits to replace faulty electrical wiring; repair or install furnace equipment; roof repairs; replace or repair compromised utility infrastructure for water, sewer, fuel, or power; and actions necessary to stop earth slope failures.

Staff: This standard provides that the County shall not make a land use decision approving development for a property that is not in full compliance with County Code or previously issued County approvals, except in the following instances: approval will result in the property coming into full compliance, approval is necessary to protect public safety, or the approval is for work related to or within a valid easement.

This standard was originally codified in the chapter related to land use application procedures and, by its terms, expressly applies to the application review process. Although now codified in the administration and procedures part of the Columbia River Gorge National Scenic Area Code this standard remains applicable to the application review process and not to the post-permit-approval enforcement process.

Importantly, a finding of satisfaction of this standard does not mean that a property is in full compliance with the Columbia River Gorge National Scenic Area Code and all prior permit approvals (and, accordingly, does not preclude future enforcement actions relating to uses and structures existing at the time the finding is made). Instead, a finding of satisfaction of this standard simply means that there is not substantial evidence in the record affirmatively establishing one or more specific instances of noncompliance. As such, an applicant has no initial burden to establish that all elements of the subject property are in full compliance with the Columbia River Gorge National Scenic Area Code and all previously approved permits; instead, in the event of evidence indicating or establishing one or more specific instances of noncompliance on the subject property, the applicant bears the burden to either rebut that evidence or demonstrate satisfaction of one of the exceptions in MCC 38.0560.

For purposes of the current application, staff is not aware of any open compliance cases on the subject property, and there is no evidence in the record of any specific instances of noncompliance on the subject property. Further, the current application is necessary to protect public safety as the applicant; the Oregon Department of Transportation (ODOT) is repairing and maintaining utility infrastructure (road) and is located within a valid easement over, on or under an affected property. The property owner, Union Pacific Railroad (formerly Oregon-Washington Railroad & Navigation Company) granted the County an easement for the construction of Columbia River Highway, which is now known as the Historic Columbia River Highway in 1913 (Exhibit A.8). Subsequently, the highway was transferred from the County to the current owner, ODOT. *This criterion is met.*

5.0 Allowed Uses Criteria:

5.1 § 38.1005 ALLOWED USES

(B) The following uses may be allowed without review in all zone districts:

(1) Repair, maintenance and operation of existing structures, including, but not limited to, dwellings, agricultural structures, trails, roads, railroads, and utility facilities.

Staff: The applicant is requesting a permit to repair and maintain two viaducts that support the East Historic Columbia River Highway. Parts of the project are located in the Gorge Special Open Space (GSO) zoning district and Gorge Special Public Recreation (GSPR) zoning district. MCC 38.2620 and MCC 38.2820 require that MCC 38.1005 above to be met.

The viaducts consist of footings and retaining walls that support the public road. As allowed by MCC 38.1005, repair and maintenance of structures is permitted, if the structures are found to be “existing structures.” The viaducts that support the road were constructed in the 1913 (Exhibit A.3 and A.8). The viaducts continue to operate in the same manner and purpose today, as when they were constructed in 1913. *This criterion is met.*

6.0 Geologic Hazards Criteria:

6.1 § 38.5505 PERMITS REQUIRED

Unless exempt under this code; no development, or ground disturbing activity shall occur (1) on land located in hazard areas as identified on the Geologic Hazards Overlay map, or (2) where the disturbed area or the land on which the development will occur has average slopes of 25 percent or more, except pursuant to a Geologic Hazards permit (GH).

Staff: The applicant is requesting a permit to repair and maintain two viaducts that support the East Historic Columbia River Highway. The development is not located on land identified on the Geologic Hazards Overlay map, but is located on land that has an average slope of 25% or more. Therefore, the applicant is required to obtain a Geologic Hazards permit, which is discussed below.

6.2 § 38.5515 GEOLOGIC HAZARDS PERMIT APPLICATION INFORMATION REQUIRED

An application for a Geologic Hazards permit shall include two copies of each of the following:

- (A) A scaled site plan showing the following, both existing and proposed;**
- (1) Property lines;**
 - (2) Buildings, structures, driveways, roads and right-of-way boundaries;**
 - (3) Location of wells, utility lines, site drainage provisions, stormwater disposal system, sanitary tanks and drainfields (primary and reserve);**
 - (4) Trees and vegetation proposed for removal and planting and an outline of wooded areas;**
 - (5) Water bodies;**
 - (6) Boundaries of ground disturbing activities;**
 - (7) Location and height of unsupported finished slopes;**
 - (8) Location for washout and cleanup of concrete equipment;**
 - (9) Storage location and proposed handling and disposal methods for potential sources of non-erosion pollution including pesticides, fertilizers, petrochemicals, solid waste, construction chemicals, and wastewaters;**
 - (10) Soil types;**
 - (11) Ground topography contours (contour intervals no greater than 10-feet); and**
 - (12) Erosion and sediment control measures.**
- (B) Calculations of the total area of proposed ground disturbance (square feet), volume of proposed cut and fill (cubic yards), and existing and proposed slopes in areas to be disturbed (percent slope);**
- (C) Written findings, together with any supplemental plans, maps, reports, or other information necessary to demonstrate compliance of the proposal with all applicable provisions of the Geologic Hazards standards in MCC 38.5520 (A). Necessary reports, certifications, or plans may pertain to: engineering, soil characteristics, stormwater drainage control, stream protection, erosion and sediment control, and replanting. The written findings and supplemental information shall include:**
- (1) With respect to fill:**
 - (a) Description of fill materials, compaction methods, and density specifications (with calculations). The planning director may require additional studies or information or work regarding fill materials and compaction.**
 - (b) Statement of the total daily number of fill haul truck trips, travel timing, loaded haul truck weight, and haul truck travel route(s) to be used from any fill source(s) to the fill deposit site.**
 - (2) A description of the use that the ground disturbing activity will support or help facilitate.**
 - (3) One of the following:**
 - (a) Additional topographic information showing that the proposed development to be on land with average slopes less than 25 percent, and located more than 200 feet from a known landslide, and that no cuts or fills in excess of 6 feet in depth are planned. High groundwater conditions shall be assumed unless documentation is available, demonstrating otherwise; or**
 - (b) A geological report prepared by a Certified Engineering Geologist or Geotechnical Engineer certifying that the site is suitable for the proposed development; or,**
 - (c) An GHP Form– 1 completed, signed and certified by a Certified Engineering Geologist or Geotechnical Engineer with their stamp and signature affixed indicating that the site is suitable for the proposed development.**
 - (i) If the GHP Form– 1 indicates a need for further investigation, or if the Director requires further study based upon information**

contained in the GHP Form– 1, a geotechnical report as specified by the director shall be prepared and submitted.

[a] A geotechnical investigation in preparation of a geotechnical report shall be conducted at the applicant's expense by a Certified Engineering Geologist or Geotechnical Engineer. The report shall include specific investigations required by the director and recommendations for any further work or changes in proposed work which may be necessary to ensure reasonable safety from landslide hazards.

[b] Any development related manipulation of the site prior to issuance of a permit shall be subject to corrections as recommended by the geotechnical report to ensure safety of the proposed development.

[c] Observation of work required by an approved geotechnical report shall be conducted by a Certified Engineering Geologist or Geotechnical Engineer at the applicant's expense; the geologist's or engineer's name shall be submitted to the director prior to issuance of the permit.

[d] The director, at the applicant's expense, may require an evaluation of GHP Form– 1 or the geotechnical report by another Certified Engineering Geologist or Geotechnical Engineer.

(4) Documentation of approval by each governing agency having authority over the matter of any new stormwater discharges into public right-of-way.

(5) Documentation of approval by the City of Portland Sanitarian and any other agency having authority over the matter of any new stormwater surcharges to sanitary drainfields.

Staff: As required, the applicant has provided all the applicable application information materials listed above. The applicant's site plan is found in Exhibit A.11. Calculations of the total area of proposed ground disturbance (square feet), volume of proposed cut and fill (cubic yards and tons), and existing and proposed slopes in areas to be disturbed (percent slope) is found in Exhibit A.2, A.3, and A.11. The applicant is proposing 22,680 square feet of ground disturbance. A total of 3 cubic yards will be excavated, which will result in the removal of soil and rock debris below the viaduct footings. A total of twenty-three (23) footings under the East Viaduct, four (4) footing under the West Viaduct and various existing retaining walls will be repaired and the excavated soil will be returned to stabilize the footings. Additionally, the applicant is proposing to place 1 cubic yard of class 10 riprap and 1,960 tons of class 1 riprap at the toe of the slopes to ensure stabilization of the soil.

A GHP Form-1 ("HDP Form-1") was prepared George Freitag, Certified Engineering Geologist certifying that the site is suitable for the proposed development (Exhibit A.3). A geological report was prepared by George Freitag, Certified Engineering Geologist and Keith S. Martin, Registered Professional Engineer and Geotechnical Engineer (Exhibit A.3). The HDP Form-1 and report also contain written findings that demonstrate compliance of the proposal with all applicable provisions of the Geologic Hazards standards. The applicant also included a contour map with additional topographic information (Exhibit A.3). *These criteria are met.*

(A) A Geologic Hazards (GH) permit shall not be issued unless the application for such permit establishes compliance with MCC 39.6210 and satisfaction of the following standards:

Staff: As required, a GH permit shall not be issued unless the application for such permit establishes compliance with MCC 39.6210. The standards in MCC 39.6210 state:

§ 39.6210 PERMITS REQUIRED.

(A) Unless exempt under this Code, whether under MCC 39.6215, 39.5080, 38.5510 or otherwise, no ground disturbing activity shall occur except pursuant to one of the following permits: a Minimal Impact Project (MIP) permit, an Erosion and Sediment Control permit (ESC), an Agricultural Fill permit (AF), a Geologic Hazards permit (GH), or a Large Fill permit (LF).

(B) The permits referenced in subsection (A) are required in addition to and not in lieu of any other local, state or federal permit, including but not limited to permits required for ground disturbing activities within a water body regulated by the Oregon Department of State Lands, the U.S. Army Corps of Engineers or the Oregon Department of Fish and Wildlife.

(C) No ground disturbing activity shall occur except in support of a lawfully established use or in support of the lawful establishment of a use.

(D) No permit identified in subsection (A) shall be issued in any case where the planning director or a building official determines that the proposed ground disturbing activity will be hazardous by reason of flood, geological hazard, seismic hazard, or unstable soils; or is liable to endanger any other adjacent property; or result in the deposition of debris on any public right of-way or property or water body; or otherwise create a nuisance.

(E) Responsibility. For any ground disturbing activity authorized under a permit listed in subsection (A):

(1) Whenever sedimentation is caused by ground disturbing activity, the person, corporation or other entity shall be responsible to remove that sedimentation from all adjoining surfaces and drainage systems prior to issuance of occupancy or final approvals for the project.

(2) It is the responsibility of any person, corporation or other entity doing ground disturbing activity on, in, under or around a water body, or the floodplain or right-of-way, to maintain as nearly as possible in its present state the water body, floodplain, or right-of-way during such activity, and to return the same to a functional condition equal to or better than the condition existing immediately prior to the ground disturbing activity.

As discussed in Section 5.0 and as required by subsection (A) & (B) above, the applicant is repairing and maintaining two viaducts that are supporting a public road. To repair and maintain the viaducts, the applicant will conduct ground-disturbing activities that consist of a maximum 22,680 square feet of ground disturbance. A total of 3 cubic yards will be excavated, which will result in the removal of soil and rock debris below the viaduct footings. A total of twenty-three (23) footings under the East Viaduct, four (4) footing under the West Viaduct and various existing retaining walls will be repaired and the excavated soil will be returned to stabilize the footings. Additionally, the applicant is proposing to place 1 cubic yard of class 10 riprap and 1,960 tons of class 1 riprap at the toe of the slopes to ensure stabilization of the soil. This ground disturbing activity will occur on lands that have an average slopes of 25 percent or

more. Typical sections have an existing slope of 45% (Exhibit A.11 – East Viaduct Plan and Elevation: Sheet 1 of 4). As such, a Geologic Hazards (GH) permit is required.

The ground disturbing activities are not exempt under MCC 39.6215, 39.5080, 38.5510, or otherwise; therefore the applicant is required to obtain a Geologic Hazards permit.

As required by subsection (C), the viaducts and retaining walls that support the public road. As discussed previously, the viaducts and retaining walls that support the public road was established as early as 1913 and the repair and maintenance is reviewed as an Allowed Use under MCC 39.1005(B)(1). Therefore, the ground disturbing activity is occurring in support of a lawfully established use.

This criterion is met.

As required by subsection (D), the applicant has provided a Geotechnical Report reviewing the ground disturbing activities. The report, written by George Freitag, Certified Engineering Geologist and Keith S. Martin, Registered Professional Engineer and Geotechnical Engineer did not find the ground disturbing activity to be hazardous by reason of flood, geological hazard, seismic hazard or unstable soils (Exhibit A.3)

This criterion is met.

As required by subsection (E), for any ground disturbing activity authorized under this permit, the person, corporation or other entity shall be responsible to remove that sedimentation from all adjoining surfaces and drainage systems prior to issuance of occupancy or final approvals for the project. The person, corporation or other entity is also responsible to maintain as nearly as possible in its present state the water body, floodplain, or right-of-way during such activity, and to return the same to a functional condition equal to or better than the condition existing immediately prior to the ground disturbing activity, if activities occurred in those areas. As the work has yet to begin, a condition of approval will be required to ensure that this criterion is met.

As conditioned, these criteria are met.

(B) Fill shall be composed of earth materials only.

Staff: As discussed in the Geotechnical Report, a reconnaissance of the site occurred in 2014. The ground-level observation found, “numerous spread footings, primarily under the East Viaduct, that were undermined; short retaining walls along the base of the slope under the East Viaduct in poor condition or partially collapsed; and an outward lean of the dry, stacked rockery wall at the west end of the East Viaduct along the north side of the road (Exhibit A.3). As such, the recommended course of action will be, “[that the] bearing will be restored beneath 23 spread footings under the East Viaduct and four footings under the West Viaduct.”

To repair and maintain the viaducts, the applicant will excavate a three (3) cubic yards, which will be returned to stabilize the footings. Additionally, the applicant is proposing to place 1 cubic yard of class 10 riprap and 1,960 tons of class 1 riprap at the toe of the slopes to ensure stabilization of the soil. All of the excavation and riprap will be comprised of earth only materials.

To ensure that this criterion is met, a condition of approval will be required that structural fill and any other fill used in this project will be composed of earth materials as defined in MCC 38.0015. *As conditioned, this criterion is met.*

(C) Cut and fill slopes shall not exceed 33 percent grade (3 Horizontal: 1 Vertical), unless a Certified Engineering Geologist or Geotechnical Engineer certifies in writing that a grade in excess of 33 percent is safe (including, but not limited to, not endangering or disturbing adjoining property) and suitable for the proposed development.

Staff: As shown in the site plan and discussed in the Geotechnical Report cut and fill slopes will exceed 33 percent grade. The report did not see any concerns about the repair. As stated on page 2, "In our opinion, the planned repair is a reasonable approach to restore uniform bearing beneath the footings" (Exhibit A.3). However, the report did note that, "If, during construction, subsurface conditions are different than assumed...we should be advised at once, so we can observe and review these conditions and reconsider our recommendations." Additionally, a condition will be required that a post-construction report that is stamped and certified by an Oregon Certified Engineering Geologist or Geotechnical Engineer be submitted to the County demonstrating that the physical improvements that were constructed are safe. *As conditioned, this criterion is met.*

(D) Unsupported finished cuts and fills greater than 1 foot in height and less than or equal to 4 feet in height at any point shall meet a setback from any property boundary of a distance at least twice the height of the cut or fill, unless a Certified Engineering Geologist or Geotechnical Engineer certifies in writing that the cuts or fills will not endanger or disturb adjoining property. All unsupported finished cuts and fills greater than 4 feet in height at any point shall require a Certified Engineering Geologist or Geotechnical Engineer to certify in writing that the cuts or fills will not endanger or disturb adjoining property.

Staff: The applicant is proposing unsupported finished cuts and fills. As shown in the site plan that was reviewed by Keith Martin, PE, GE, and George Freitag, CEG, fill be placed underneath the viaduct to support and stabilize the slope (Exhibit A.2, A.3, and A.11). Structural fill will also be used to restore the bearing underneath the existing footings. As discussed in HDP Form-1, they indicated that the cuts or fills will not create stability problems for adjacent properties that will endanger or disturb those properties. *This criterion is met.*

(E) Fills shall not encroach on any water body unless an Oregon licensed Professional Engineer certifies that the altered portion of the water body will continue to provide equal or greater flood carrying capacity for a storm of 10-year design frequency.

Staff: The applicant has provided a site plan that shows the location of the fill that will be placed as part of this project. The fill will be placed beneath the viaduct to support the pillars that provide structural support to the public road (Exhibit A.11: I.13, I.18). The Erosion Control Plan also shows that silt fencing will be installed on the northern extent of the project area to protect the railroad tracks owned by Union Pacific Rail Road Company (Exhibit A.11: E.2-4 – Erosion Control Plans). No streams or water bodies exist in the immediate area of the project. As shown on the plans, no fill will encroach on any waterbody. *This criterion is met.*

(F) Stripping of vegetation, ground disturbing activities, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction.

Staff: The applicant has provided a site plan that shows the location ground disturbing activities and other soil disturbances. The Erosion Control Plan shows that silt fencing will be installed on the northern extent of the project area to protect the railroad tracks owned by Union Pacific Rail Road Company (Exhibit A.11: E.2-4 – Erosion Control Plans). The applicant also has a plan for the sequencing of the repair actions, which will ensure that ground disturbance will be minimized and soil will be stabilized as quickly as practical at any one time. Lastly, as shown in a picture from October 2018, much of the areas beneath the viaducts are devoid of vegetation so very little stripping of vegetation will occur (Exhibit B.4). *This criterion is met.*

(G) Development Plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff.

Staff: The applicant has provided a site plan that shows the location of the cut and fill operations that will be a part of this project. The cut and fill operations will occur beneath the viaduct as the applicant seeks to shore the pillars that provide structural support to the public road (Exhibit A.11: I.13, I.18). As the cut and fill operations are occurring beneath the public road, surface runoff will not impact the cut and fill operations as the soil is sheltered under the viaduct. Lastly, riprap will be installed at the toe of the slope to ensure the cut and fill operations are stabilized. *This criterion is met.*

(H) Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

Staff: The applicant has indicated that vegetation and mulching will be used as part of the project. A total of 2,288 square yards of seeding, 2,288 square yards of turf, and 2,288 of mulch will be utilized as part of the project to protect exposed critical areas. However, to ensure that exposed critical areas are protected, a condition of approval will be required that temporary vegetation and/or mulching be used on a daily basis to protect those exposed critical areas during development. The criteria areas are primarily located in the East Viaduct as shown in Exhibit A.11: E.3. *As conditioned, this criterion is met.*

(I) Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

- (1) A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100-feet of a wetland;**
- (2) The buffer required in (I)(1) may only be disturbed upon the approval of a mitigation plan which utilizes erosion, sediment and stormwater control measures designed to perform as effectively as those prescribed in the most recent edition of the City of Portland Erosion and Sediment Control Manual and the City of Portland Stormwater Management Manual and which is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340-041-0345(4).**

Staff: The Erosion Control plan shown in Exhibit A.11: E1-4 indicates that the project area will be located between the public road and the railroad tracks. There is one area in the project, which is located near a waterbody. That waterbody, Benson Lake is located on the opposite

side of the railroad tracks, 30 feet from the project boundary. The applicant's erosion control plan was designed as their mitigation plan. The ground disturbance is not permitted to encroach on the Union Pacific Railroad, which is 10 feet from the outer extent of the project boundary. North of the railroad there is a buffer of natural vegetation that will also not be disturbed (Exhibit A.11: Sheet E.1-4). *This criterion is met.*

(J) Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical.

Staff: The applicant has indicated that vegetation will be used as part of the project. A total of 2,288 square yards of seeding and 2,288 square yards of turf will be utilized as part of the project to protect exposed critical areas as shown on Exhibit A.11: Sheet E.1-4. However, the area beneath the viaducts where the bulk of the work is occurring will not be vegetated, as the plantings could compromise the integrity of the footings. *This criterion is met.*

(K) Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary.

Staff: The applicant has provided a site plan that shows the location ground disturbing activities and other soil disturbances. The Erosion Control Plan shows that provisions like silt fencing and wattles will be installed on the northern extent of the project area to protect the railroad tracks owned by Union Pacific Rail Road Company (Exhibit A.11: E.2-4 – Erosion Control Plans). The project is slated to be done during the summer season to minimize potential runoff from rain and the added erosion control measures will ensure that the rate of runoff will be structurally retarded. *This criterion is met.*

(L) Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized.

Staff: As just discussed above, the applicant has provided a site plan that shows the location ground disturbing activities and other soil disturbances. The Erosion Control Plan shows that provisions like silt fencing and wattles will be installed on the northern extent of the project area to protect the railroad tracks owned by Union Pacific Rail Road Company (Exhibit A.11: E.2-4 – Erosion Control Plans). These measures will ensure that sediment be trapped until the disturbed areas are stabilized. *This criterion is met.*

(M) Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding.

Staff: The cut operations will occur beneath the east and west viaducts, as the applicant seeks to shore the pillars that provide structural support to the public road (Exhibit A.11: I.13, I.18). As the cut operations are occurring beneath the public road, surface water from the roadway will be prevented from damaging the cut of excavations by having the work occur during the dry season. Additionally, riprap will be installed at the toe of the slope to ensure the cut stabilized. *This criterion is met.*

(N) All drainage measures shall be designed to avoid erosion and adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural water bodies, drainage swales, or an approved drywell system.

Staff: The site plans have addressed the stormwater drainage that could potentially occur during the project. Rain that falls on the southern portion of the road will be directed into the existing drainage ditches. For rain that falls on the northern portion of the road, the surface runoff will fall past the area of work as the work will occur underneath the viaduct (Exhibit A.2-4, A.11: I.13, I.18). This area will remain vegetated so that the stormwater will be dispersed back into a natural sheet flow. *This criterion is met.*

(O) Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion.

Staff: The site plans indicate that no drainage swales will be used as part of this project (Exhibit A.2-4). *This criterion is not applicable.*

(P) Erosion and sediment control measures must be utilized such that no visible or measurable erosion shall occur on-site and no visible or measurable sediment shall exit the site, enter the public right-of-way or be deposited into any water body or storm drainage system. Control measures which may be required include, but are not limited to:

- (1) Energy absorbing devices to reduce runoff water velocity;**
- (2) Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;**
- (3) Dispersal of water runoff from developed areas over large undisturbed areas.**

Staff: The applicant has provided a site plan that shows erosion and sediment control measures that will be utilized. The Erosion Control Plan shows that provisions like silt fencing, wattles, check dams, and inset protection will be installed throughout the project area (Exhibit A.11: E.2-4 – Erosion Control Plans). All of these measures will ensure that no visible or measureable erosion will occur on-site and no visible or measureable sediment shall exit the project area. *This criterion is met.*

(Q) Disposed spoil material or stockpiled topsoil shall be prevented from eroding into water bodies by applying mulch or other protective covering; or by location at a sufficient distance from water bodies; or by other sediment reduction measures.

Staff: The applicant is not proposing to dispose spoil materials. The Geotechnical Report recommends that use of spoil material be used as part of backfilling (Exhibit A.3). However, the applicant is also requesting 240 yards of fill that will be used as part of this project, in addition to one (1) cubic yard of class 10 riprap (5 lbs. to 50 lbs. or 4.92” - 10.56” sized rock) and 1,960 tons of class 1 riprap (50 lbs. to 150 lbs. or 12”- 18” sized rock). As previously discussed above, provisions like silt fencing, wattles, check dams, and inset protection will be installed throughout the project area to ensure that the soil will be prevented from eroding into water bodies (Exhibit A.11: E.2-4 – Erosion Control Plans). The plans do not indicate the location of stockpiled soil. Therefore, conditions of approval will be required to ensure that any stockpiled soil is located more than 100 feet from any waterbody and the applicant or their agents utilize Best Management Practices for the covering of stockpiled soil. Additionally, if any spoil materials or stockpiled topsoil does erode into a water body, the applicant or their agents will be required to remove any sedimentation caused by development activities from all neighboring surfaces and/or drainage systems. *As conditioned, this criterion is met.*

(R) Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities.

Staff: To ensure that non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters are prevented from leaving the construction site, a condition of approval will be required that non-erosion pollution be handled properly, disposed of properly, and continuous site monitoring occur. If non-erosion pollution occurs, the pollution will be required to be cleaned-up. *As conditioned, this criterion is met.*

(S) Ground disturbing activities within a water body shall use instream best management practices designed to perform as prescribed in the City of Portland Erosion and Sediment Control Manual. To the extent that there is a conflict between the Manual and the requirements of the National Scenic Area (NSA) Permit, the requirements in the NSA will apply; and

Staff: The applicant is not proposing any ground disturbing activities within a water body. *This criterion is not applicable.*

(T) The total daily number of fill haul truck trips shall not cause a transportation impact (as defined in the Multnomah County Road Rules) to the transportation system or fill haul truck travel routes, unless mitigated as approved by the County Transportation Division.

Staff: The East Historic Columbia River Highway is not part of the Multnomah County transportation system. Both routes, E. Historic Columbia River Highway or Interstate I-84 that could be potentially used for fill haul trips are not part of the Multnomah County transportation system. Further, Multnomah County Transportation Division did not provide comment that they had concerns about the proposed project. Therefore, this criterion is not applicable. *This criterion is not applicable.*

(U) Fill trucks shall be constructed, loaded, covered, or otherwise managed to prevent any of their load from dropping, sifting, leaking, or otherwise escaping from the vehicle. No fill shall be tracked or discharged in any manner onto any public right-of-way.

Staff: To ensure that fill used for this project does not escape from a vehicle, a condition of approval will be required fill trucks will be constructed, loaded, covered, and otherwise managed to prevent any of their load from dropping, sifting, leaking, or otherwise escaping from the vehicle. Additionally, at no time will fill from vehicles be tracked or discharged in any manner onto any public right-of-way. *As conditioned, this criterion is met.*

(V) No compensation, monetary or otherwise, shall be received by the property owner for the receipt or placement of fill.

Staff: To ensure no compensation, monetary or otherwise, will be received by the property owner for the receipt or placement of fill, a condition of approval will be required. *As conditioned, this criterion is met.*

7.0 Conclusion

Based on the findings and other information provided above, the applicant has carried the burden necessary for the Geologic Hazards (GH) to authorize the repair and maintenance of two viaducts and various retaining walls in the Gorge Special Public Recreation (GSPR) and Gorge Special Open Space (GSO) zone. This approval is subject to the conditions of approval established in this report.

8.0 Exhibits

- 'A' Applicant's Exhibits
- 'B' Staff Exhibits
- 'C' Procedural Exhibits
- 'D' Comments Received

Exhibits with a “*” after the exhibit # have been included as part of the mailed decision. Those exhibits have been reduced to a size of 8.5” x 11” for mailing purposes. All other exhibits are available for review in Case File T2-2021-14521 at the Land Use Planning office.

Exhibit #	# of Pages	Description of Exhibit	Date Received / Submitted
A.1	1	NSA General Application Form	04/06/2021
A.2	6	Geologic Hazards Permit (GHP) Form 1: Geotechnical Reconnaissance and Stability Preliminary Study	04/06/2021
A.3	25	Geotechnical Report: Geotechnical Design Recommendations written by Keith Martin, Registered Professional Engineer and Geotechnical Engineer and George Freitag, Certified Engineering Geologist on May 13, 2019	04/06/2021
A.4	7	Site Plans (reduced to 11” x 17”) <ul style="list-style-type: none">• I.1 - East Viaduct Plan and Elevation (Sheet 1 of 4)• I.2 - East Viaduct Plan and Elevation (Sheet 2 of 4)• I.3 - East Viaduct Plan and Elevation (Sheet 3 of 4)• I.4 - East Viaduct Plan and Elevation (Sheet 4 of 4)• I.5 - West Viaduct Plan and Elevation (Sheet 1 of 2)• I.6 - West Viaduct Plan and Elevation (Sheet 1 of 2)	04/06/2021
A.5	1	Letter from Oregon Department of Transportation (ODOT) to Union Pacific Railroad (UPRR): Notice to Proceed with Project Development	04/06/2021
A.6	6	Reimbursement agreement between Union Pacific Railroad (UPRR) and Oregon Department of Transportation (ODOT)	04/06/2021
A.7	10	Email correspondence between Matthew Miller, Federal Highway Administration (FHWA), Joshua Brooking, Oregon Department of Transportation (ODOT), and Kevin Bracy, DEA Inc. concerning 30% Design Plans	04/06/2021
A.8	23	Railroad Companies File No. 311 – Contract between Oregon-Washington Railroad and Navigation Company and County of Multnomah	04/06/2021
A.9	26	Research Request from Carol Toland, Right of Way Agency, Milwaukie concerning whether the State owns the parcel	04/06/2021

		known as the E. Historic Columbia River Highway (formerly known as Crown Point Secondary State Highway No. 125)	
A.10	4	Multnomah Falls Viaduct Repair Project Coordination Meeting Slides	04/06/2021
A.11*	81	<p>Site Plans (reduced to 11" x 17")</p> <ul style="list-style-type: none"> • *A.1 – Title Sheet • A.2 – Plan Symbols and Abbreviations (Std. W101-1) • A.3 – Vicinity Map • B.1-4 – Summary of Quantities • C.1-3 – Typical Sections • D.1 – Tabulation of Plan Quantities • D.2-4 – Plans • D.5-6 – Roadway Profile Details • *E.1 – Tabulation of Soil Erosion Quantities • *E.2-4 – Erosion Control Plans • *E.5-8 – Erosion Control Details • G.1 – Tabulation of Temporary Traffic Control Quantities • G.2-6 – Temporary Traffic Control Details • G.7-12 – Temporary Traffic Control Details Detour Plan • G.13-15 – Temporary Traffic Control Full Closure West Viaduct • G.16-19 – Temporary Traffic Control Full Closure East Viaduct • H.1 – Tabulation of Permanent Traffic Control Quantities • H.2 – Permanent Traffic Control Details • H.3-5 – Permanent Traffic Control Plan • I.1 – East Viaduct Plan and Elevation (Sheet 1 of 4) • I.2 – East Viaduct Plan and Elevation (Sheet 2 of 4) • I.3 – East Viaduct Plan and Elevation (Sheet 3 of 4) • I.4 – East Viaduct Plan and Elevation (Sheet 4 of 4) • I.5 – West Viaduct Plan and Elevation (Sheet 1 of 2) • I.6 – West Viaduct Plan and Elevation (Sheet 2 of 2) • I.7 – General Notes • I.8 – Existing Typical Sections • I.9 – East Viaduct Repair Sequence (Sheet 1 of 5) • I.10 – East Viaduct Repair Sequence (Sheet 2 of 5) • I.11 – East Viaduct Repair Sequence (Sheet 3 of 5) • I.12 – East Viaduct Repair Sequence (Sheet 4 of 5) • I.13 – East Viaduct Repair Sequence (Sheet 5 of 5) • I.14 – West Viaduct Repair Sequence (Sheet 1 of 3) • I.15 – West Viaduct Repair Sequence (Sheet 2 of 3) • I.16 – West Viaduct Repair Sequence (Sheet 3 of 3) • I.17 – East Viaduct Deck Overlay Details • *I.18 – East Viaduct Slope Protection Details • I.19 – West Viaduct Deck Overlay Details • I.20 – West Viaduct Shear Strengthen Details • *I.21 Concrete Repair Details (1 of 2) 	06/07/2021

		<ul style="list-style-type: none"> • *I.22 Concrete Repair Details (2 of 2) • I.23 Cathodic Protection Details • *I.24 Footing Repair Details • J.1-8 Railroad Coordination 	
‘B’	#	Staff Exhibits	Date
B.1	2	Division of Assessment, Recording, and Taxation (DART): Property Information for 1N6E07 -00100 (Alt Acct #R946070050)	04/06/2021
B.2	1	Division of Assessment, Recording, and Taxation (DART): Map with 1N6E07 -00100 (Alt Acct #R946070050) highlighted	04/06/2021
B.3	1	Pre-File Meeting Notes for PF-2020-13920	04/06/2021
B.4	1	Google Streetview Photo taken in October 2018 of the East Viaduct	06/30/2021
‘C’	#	Administration & Procedures	Date
C.1	48	Agency Review, mailing list, and enclosures	04/14/2021
C.2	1	Complete Letter (Day 1)	05/06/2021
C.3	11	Opportunity to Comment and mailing list	06/09/2021
C.4	11	Corrected Opportunity to Comment and mailing list	06/18/2021
C.5	34	Administrative Decision and mailing list	07/30/2021
‘D’	#	Comments Received	Date
D.1	3	Cultural Resource Survey Determination from Chris Donnermeyer, Heritage Resources Program Manager for the USDA Forest Service Columbia River Gorge National Scenic Area	06/24/2021
D.2	7	Nathan Baker, Senior Staff Attorney, Friends of the Columbia River Gorge (“Friends”)	07/02/2021

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

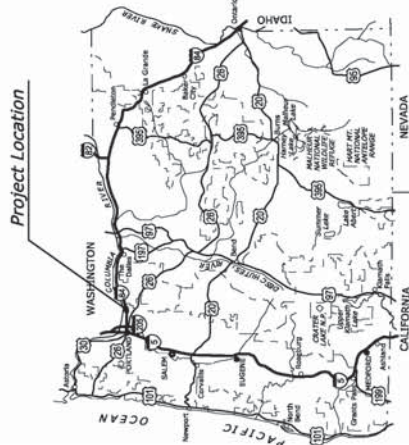
PRELIMINARY
NOT FOR CONSTRUCTION

PLANS-IN-HAND



REGISTERED PROFESSIONAL
ENGINEER
12485PE
OREGON
PRELIMINARY
NOVEMBER 22, 2019
AMANDA MARIE BLANKENSHIP

RENEW: 12-31-2019



OREGON KEY MAP

**MULTNOMAH FALLS VIADUCTS
REPAIR PROJECT**

PLANS FOR PROPOSED PROJECT
OR PFH 163(21)

COLUMBIA RIVER GORGE NATIONAL SCENIC AREA
MULTNOMAH COUNTY
OREGON

LENGTH 2.61 MILES

APPROVED:

DATE _____
Director, Project Delivery,
Western Federal Lands Highway Division

TYPE OF CONSTRUCTION:
Structures and paving

DESIGN DESIGNATION:

ADT (2012) 1,210
ADT (2032) 1,815
V 40 MPH
e (max) N/A

SPECIFICATION:

Standard Specifications for Construction
of Roads and Bridges on Federal Highway
Projects, PP-14 US Customary Units



PLANS PREPARED FOR
**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**
WESTERN FEDERAL LANDS HIGHWAY DIVISION
VANCOUVER, WASHINGTON

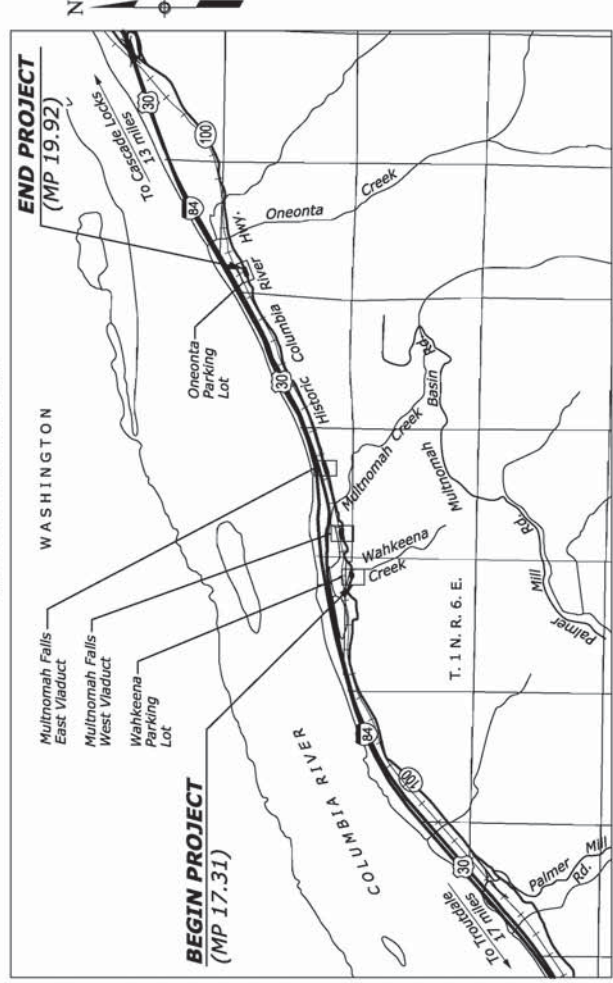


**DAVID EVANS
AND ASSOCIATES, INC.**

PROJECT MANAGER
M. Odom

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 - A.2 PLAN SYMBOLS AND ABBREVIATIONS (STD. W101-1)
 - A.3 VICINITY MAP
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 - B.1-4 SUMMARY OF QUANTITIES
- C. TYPICAL SECTIONS**
 - C.1-3 TYPICAL SECTIONS
 - C.4 ROADWAY DETAILS
- D. PLAN**
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 - J.1-8 RAILROAD COORDINATION



Scale in miles
0.5 0 0.5 1

ITEM 15706-1600 SOIL EROSION CONTROL, STABILIZED CONSTRUCTION ENTRANCE		
STATION	SIDE	EACH
13+67	N	1
49+24	N	1
TOTALS		2

ITEM 25101-1000 PLACED RIPRAP, CLASS 1			
STATION	SIDE	CUYD	
50+52	N	0.6	
TOTALS		0.6	

ITEM 30112-0000 AGGREGATE SURFACE COURSE, 6" MINUS		
STA. TO STA.	SIDE	CUYD
19+88 to 19+94	N	1.6
TOTALS		1.6

ITEM 62511-1000 SEEDING, DRY METHOD		
STA. TO STA.	SIDE	SQYD
44+47 to 51+63	N	2,288
TOTALS		2,288

ITEM 62502-0000 TURF ESTABLISHMENT		
STA. TO STA.	SIDE	SQYD
44+47 to 51+63	N	2,288
TOTALS		2,288

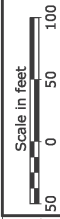
ITEM 62516-1000 MULCHING, DRY METHOD			
STA.	TO STA.	SIDE	SQYD
44+47	TO 51+63	N	2,288
TOTALS			2,288

NOTE:

REGISTERED
785
PRELIMINARY
BRYNN A.R. GUTHRIE
OREGON
11/09/12
LANDSCAPE ARCHITECT

TABULATION OF EROSION CONTROL QUANTITIES

STATE	PROJECT	SHEET
OR	OR PFH 163(21)	NUMBER
		E.2

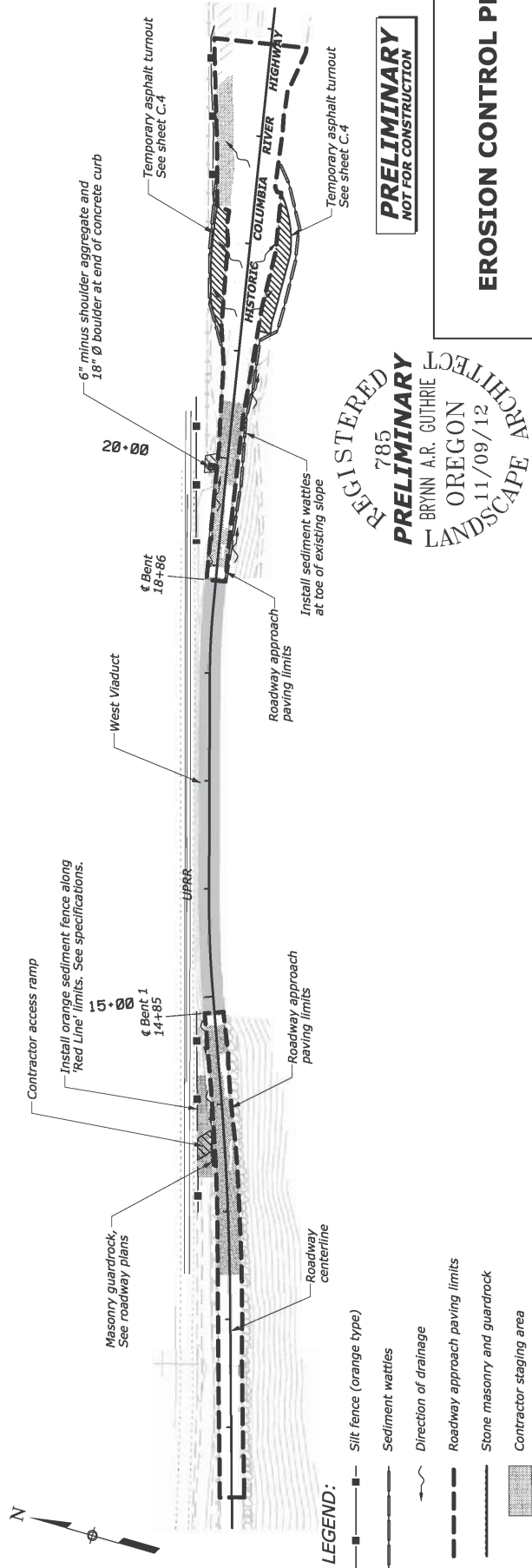


BEGIN PROJECT
(MP 17.31)

Wahkeena falls
parking lot



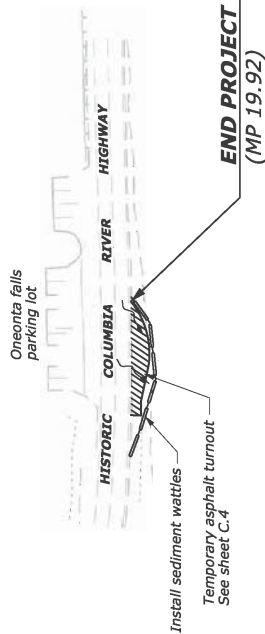
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PRELIMINARY
NOT FOR CONSTRUCTION

EROSION CONTROL PLAN

STATE	PROJECT	SHEET
OR	OR PFH 163(21)	NUMBER
		E-4



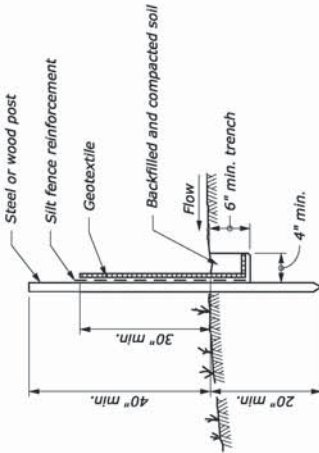
- LEGEND:**
- Sediment wattles
 - Direction of drainage



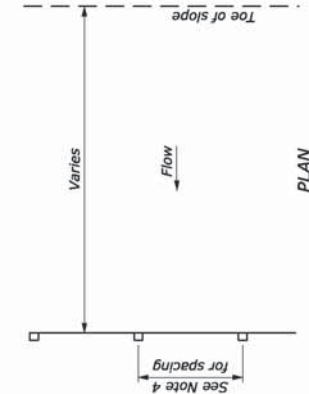
PRELIMINARY
NOT FOR CONSTRUCTION

EROSION CONTROL PLAN

STATE	PROJECT	SHEET
OR	OR PPH 163(21)	NUMBER
		E.5

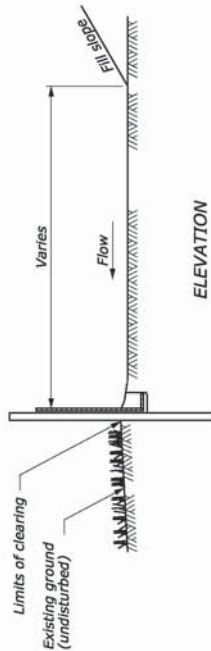
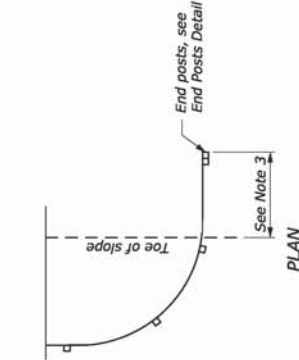


POST AND GEOTEXTILE INSTALLATION DETAIL

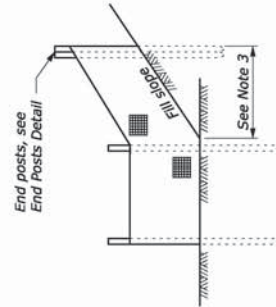


NOTE:

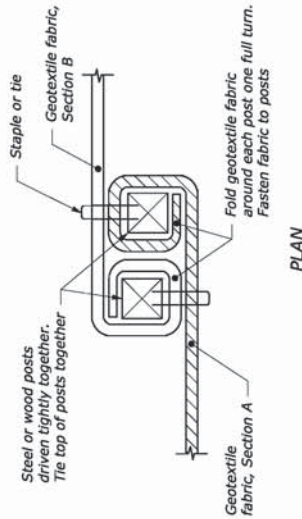
1. Alternate preassembled silt fence options will be allowed as long as specified dimensions are satisfied. Follow manufacturer's recommendations for installation procedures. All types must ensure silt fence remains attached to, and does not slide down, supporting posts.
2. Install silt fence to follow the ground contours as closely as possible.
3. Curve ends of silt fence upgrade to prevent water from running around the ends.
4. 10-foot (max.) spacing with silt fence reinforcement. 6-foot (max.) spacing without silt fence reinforcement.



SILT FENCE INSTALLATION AT TOE OF FILL

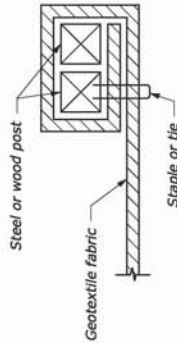


END DETAIL



POSTS AT JOINTS

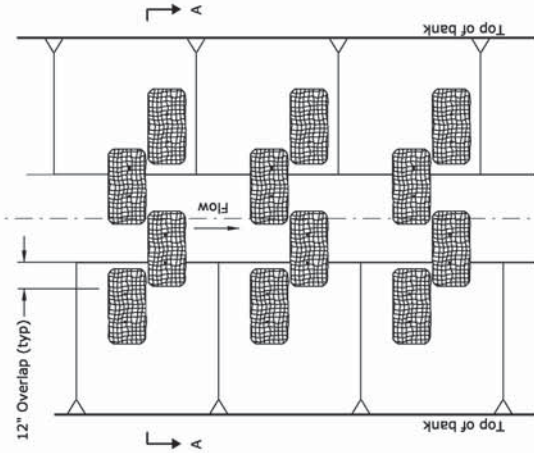
END POSTS DETAIL



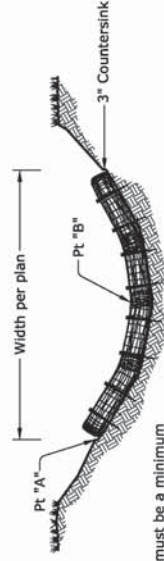
DETAIL	W157-1
REVISION	7/2016
DETAIL APPROVED FOR USE	—

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION WESTERN REGIONAL OFFICE	U.S. CUSTOMARY DETAIL
SILT FENCE	



PLAN



NOTE:
Pt. "A" must be a minimum
of 6" higher than Pt. "B"

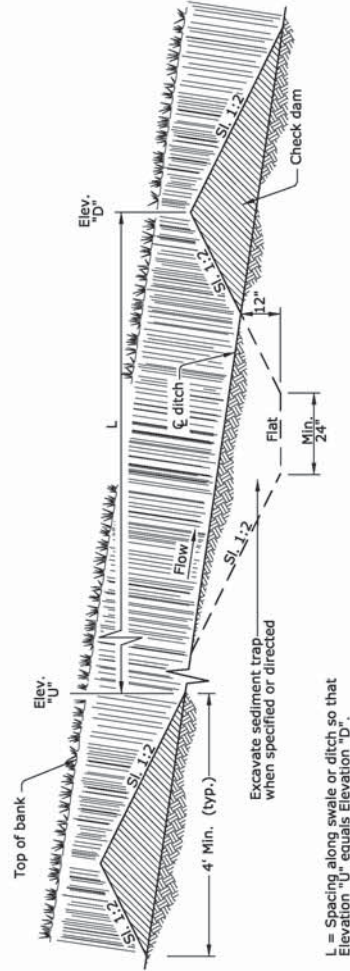
SECTION A-A

BIOFILTER BAG CHECK DAM

PRELIMINARY
NOT FOR CONSTRUCTION

**TEMPORARY
CHECK DAMS**

REGISTERED
785
PRELIMINARY
BRYNN A.R. GUTHRIE
OREGON
11/09/12
LANDSCAPE ARCHITECT



TYPICAL PROFILE SECTION CHECK DAMS
(SHOWN WITH AGGREGATE)

- NOTES:
1. Stake biofilter bags with two 2" X 2" X 18" (min) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 6" min at each joint.
 2. Spacing between check dams for biofilter bag type shall comply with the typical profile section shown above.

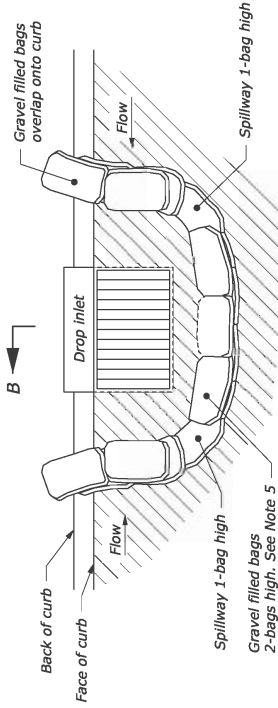
MAXIMUM CHECK DAM SPACING - "L"			
Ditch Grade	H=6"	H=12"	H=18"
6%	15'	25'	30'
5%	20'	30'	40'
4%	25'	35'	50'
3%	30'	40'	60'
2%	35'	50'	80'

* * Not Allowed
H = Min dam height

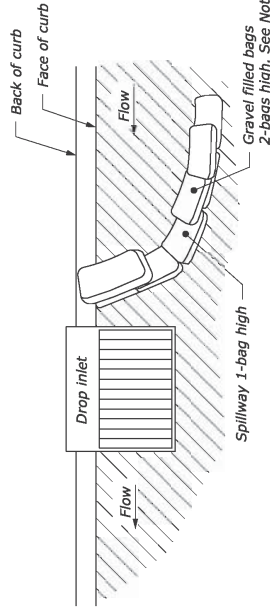
**DAVID EVANS
AND ASSOCIATES INC.**

NOTE:

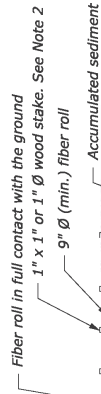
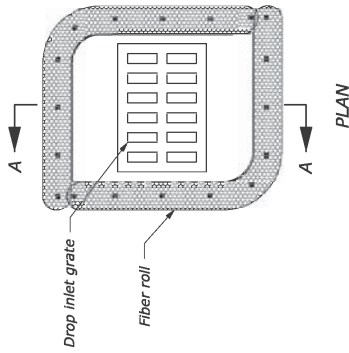
1. Select the inlet protection device to fit field conditions as approved by the CO.
2. Install fiber rolls with stakes spaced no more than 24-inches on center. Drive stakes 12-inches (min.) in undisturbed soil.
3. Approximate finished dimension of gravel bags is 12-inches x 18-inches.
4. Maximum top of gravel bag spillway elevation =
Top of curve minus 1-inch.
5. Pack gravel filled bags tightly together end to end to ensure no sediment flows between or underneath the bags. Where tight fit is unachievable, install geotextile filter, class 2, type C along the upstream face of the bags. Place fabric over the top of the bags to the spillway elevation. Anchor the fabric by placing the next layer of bags on top of it. Extend the geotextile fabric a minimum of 18-inches upstream of the bags. Cover geotextile fabric to the top of the fabric with clean, silt-free coarse aggregate between 2-inches and 3-inches in diameter.
6. Size the prefabricated filter insert (Type C) to fit the drop inlet and allow collected material removal without spillage. Include a high-flow bypass in the insert.



PLAN VIEW - INLET AT SAG

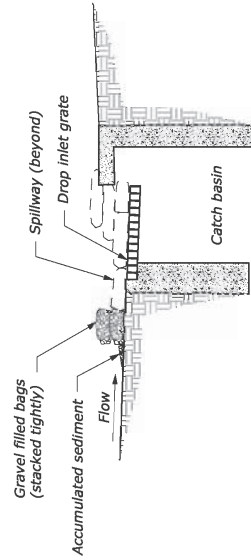


PLAN VIEW - INLET ON GRADE



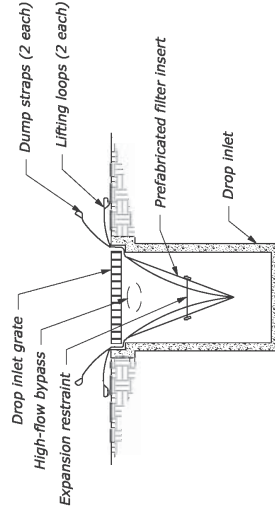
SECTION A-A

FIBER ROLL
DROP INLET PROTECTION (TYPE A)



SECTION B-B

GRAVEL BAG BERM
DROP INLET PROTECTION (TYPE B)



PREFABRICATED FILTER INSERT
DROP INLET PROTECTION (TYPE C)

See Note 6

PRELIMINARY
NOT FOR CONSTRUCTION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY STANDARD

TEMPORARY INLET
PROTECTION

STANDARD APPROVED FOR USE: / /
REVISION: / /
DATE: 7/2016
STANDARD
W157-2

**EAST VIADUCT
STONE MASONRY WALL DETAIL**

Scale: $\frac{3}{8}" = 1'-0"$
(East end of viaduct)

**DAVID EVANS
AND ASSOCIATES INC.**

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

MULTNOMAH FALLS VIADUCTS REPAIR PROJECT

COLUMBIA RIVER GORGE
NATIONAL SCENIC AREA

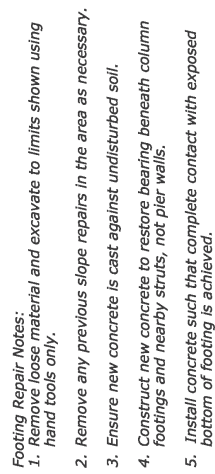
OREGON

**EAST VIADUCT
SLOPE PROTECTION DETAILS**

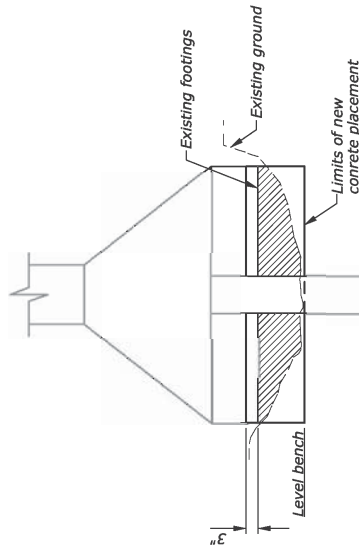
REVISIONS: 12-31-2019

NO.	DATE	BY	REVISIONS

DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	PROJECT TEAM LEADER	BRIDGE DRAWING	DATE	DRAWING NO.
A. WALKER	D. ALTENBURG	E. FERUGA	AS SHOWN ON PLANS	A. BLANKENSHIP		February 2019	RG3040-G-R



VIEW A-A
Scale: $\frac{3}{4}'' = 1'-0''$



Footings Repair Notes:

1. Remove loose material and excavate to limits shown using hand tools only.
2. Remove any previous slope repairs in the area as necessary.
3. Ensure new concrete is cast against undisturbed soil.
4. Construct new concrete to restore bearing beneath column footings and nearby struts, not pier walls.
5. Install concrete such that complete contact with exposed bottom of footing is achieved.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

MULTNOMAH FALLS VIADUCTS REPAIR PROJECT

COLUMBIA RIVER GORGE
NATIONAL SCENIC AREA

OREGON

FOOTING REPAIR DETAILS

NO.		DATE		BY		REVISIONS		DESIGNED BY		DRAWN BY		CHECKED BY		SCALE		PROJECT TEAM LEADER		BRIDGE DRAWING		DATE		DRAWING NO.	