Environmental Requirements

The Contractor shall comply with all environmental laws, regulations, approvals, and conditions required for the project, whether obtained by CDOT or by the Contractor. Actions listed within each environmental resource below are clarifications of, and additions to: CDOT Standard Specifications for Road and Bridge Construction, dated 2017; CDOT Project Special Revisions developed; and Standard Special Revisions.

The Contractor shall prepare an Environmental Compliance Work Plan (ECWP) for the Project, specifically identifying all the environmental compliance requirements for the Project and the Contractor's approach for complying with the requirements. The ECWP shall include a table to track milestones including Contractor and CDOT roles, due dates, and completion dates. The ECWP shall be submitted to CDOT for Acceptance within 60 Days after Notice to Proceed for Design and prior to any construction activities.

The Contractor shall provide an Environmental Compliance Manager. It is acceptable for the Environmental Compliance Manager to serve as the Transportation Erosion Control Supervisor (TECS) if the Manager has completed the required CDOT TECS training and holds a valid CDOT TECS certification. The compliance manager shall lead an environmental review meeting with CDOT environmental staff to discuss environmental issues every two weeks for the first 60 days following Notice to Proceed for Design, and at least monthly thereafter. The compliance manager shall have the authority to stop construction if Work activities jeopardize environmental laws, policy, or human health and safety. The ECWP tracking table and documentation of any pertinent events or discussions that occur during the environmental field reviews (including, but not limited to, meeting minutes of environmental review meetings) will be submitted to CDOT for Acceptance every quarter prior to Approval of progress payment. Please note, all items described in this section will not be paid for separately but will be included in the Work, unless noted otherwise.

Environmental Resources Requirements

Threatened and Endangered Species

IPAC was accessed on 6/23/2018, there are a total of 12 federally threatened or endangered species that may be present in the project area. Of these, only the lynx may have habitat in the project area or may be impacted by project activities. There are many state and USFS sensitive species that may be found to occur in the project area but none are expected to be impacted by repairing the retaining walls. The retaining walls occur within the ROW and essentially adjacent to the interstate and therefore impacts are expected to be minimal. It is possible that some wildlife may be deterred from the area due to increased foot traffic and increase in noise associated with soil nail installation or repairing concrete.

There is one USFS sensitive plant species that is known to occur within the ROW in disturbed habitats. The CDOT Biologist completed surveys on 7/5/2018 for *Botrychium lineare* at the 183555LRA (MP 183.5), 186429MCA (MP 185.5), and 185113RRA (MP 185.113) wall locations since

these are close to a known occurrence. No presence of the species was found at any of the locations on the survey date.

The Contractor shall contact CDOT Region 3 Biologist: Cinnamon Levi-Flinn (970)683-6222, a minimum of 7 days prior to construction staging and work commencing in the referenced wall locations to arrange for a site visit and survey to confirm the absence of the sensitive plant species in these locations.

The Contractor shall include the following conservation measures in the project plan and construction schedule:

1. Work will mostly be conducted during daylight hours when lynx are less active to avoid disrupting this nocturnal species foraging and travel behaviors. However, when night work is needed to complete work, the project will commit to a schedule of working 4 nights immediately followed by 3 nights of no work;
2. Temporary night lighting shall be used with directional shielding to focus the lighting onto the work area and concentrated to as small of an area as possible. Lighting will only be used when necessary and will be monitored to ensure these lighting measures are adhered to;
3. At each work location, construction will be concentrated to as small of an area as possible in order to minimize the amount of habitat affected at one time and keep adjacent habitat areas available for use by the species to forage, hide, or travel. All temporarily impacted areas will be re-contoured and restored on the project site so that they become available for use;
4. Construction will be conducted as to not permanently impede movement of the species and prevent it from accessing habitats necessary for breeding, feeding, sheltering, and dispersal;
5. All disturbed areas will be re-contoured and re-seeded with native vegetation.

Wetlands

Wetlands are not in the immediate work areas and the proposed work can proceed without a permit under Section 404 of the Clean Water Act. Four of the proposed work locations are in the vicinity of Black Gore Creek. No equipment shall be allowed to enter the creek and appropriate BMPs shall be used to prevent construction debris and sediment from entering the waterway.

Archaeology and Paleontology

Based on the scope of work for the project referenced that does not include any ground disturbance, there are no known or anticipated Archaeology or Paleontology issues. Clearance to proceed is recommended without further actions.

Section 5 – Environmental

History

The Contractor shall comply with the Secretary of the Interior Standards for Preservation for all work on the project wall locations.

Standards for Preservation:

1. A property will be used as it was historically or be given a new use that maximizes the retention of distinctive materials, features, spaces and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Work needed to stabilize, consolidate and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

The Contractor shall follow the approved General Aesthetic Requirements as shown in the plans. If the contractor should elect to deviate from the approved aesthetic plans, the revised plans must be reviewed by the CDOT historian who will consult with the State Historic Preservation Office (SHPO) and interested consulting parties to ensure compliance with Section 106 of the National Historic Preservation Act of 1966 (Section 106) and the implementing regulations set forth in 36 CFR Part 800. The plan approval process will require a minimum of eight to ten weeks beginning when a CDOT Historian receives the revised plans. All communication with the SHPO and consulting parties must be conducted through the CDOT Historian. The contractor shall not have any direct contact with the SHPO or the consulting parties.

The CDOT Historian will require 30-45 calendar days to review the proposed plans and compile appropriate materials for consultation with the SHPO and the consulting parties. The CDOT Historian may request changes to the plans to ensure that they follow the Secretary of the Interior Standards for Preservation (SOIS) and will not adversely affect the Vail Pass Interstate Resource (Resource).

Section 5 – Environmental

Once received, SHPO and the consulting parties will require 30 calendar days to review the materials. If the consulting parties do not have any comments and SHPO concurs that the project results in no adverse effect, the project can move forward as designed. If, in consultation with SHPO and the consulting parties, the CDOT Historian determines the project will result in an adverse effect to the Resource, changes to the proposed plans may be requested to avoid or minimize effects and ensure the proposed work follows SOIS. If, after further consultation with SHPO, CDOT determines that the proposed work will result in an adverse effect to the Resource, steps must be taken to ensure compliance with both Section 106 and Section 4(f) of the Department of Transportation Act of 1966. These steps include, but are not limited to, notifying the Advisory Council on Historic Preservation of the adverse effect, taking measures to avoid or minimize the impacts to the Resource, and completing a Memorandum of Agreement to outline mitigation for the adverse effect to the Resource. The process for determination and resolution of an adverse effect could require from 285 to 320 calendar days.

Section 4(f)

Contractor shall have flaggers in place at locations where construction equipment and activities will be along the Vail Pass Recreation Trail to allow for continual use of the trail. Contractor shall coordinate with CDOT and the United States Forest Service - Holy Cross Ranger District with final timeline for construction and the anticipated duration of the work prior to starting work in that area.

See Section 16, Maintenance of Traffic, for additional trail requirements.

Section 5 – Environmental

Stormwater Management Plan (SWMP)

The Contractor shall follow the requirements of the latest CDOT Stormwater Management Plan (SWMP) template and appropriate specifications.

The SWMP work shall include the CDOT SWMP template and a SWMP Site Map that documents the detailed erosion/sediment control BMPs and their locations. The Contractor shall submit a SWMP and SWMP Site Map for Acceptance by CDOT. The Contractor shall fill out the current CDOT SWMP template, including BMP narratives. The SWMP shall clearly describe the relationship between the phases of construction and the implementation and maintenance of the stormwater management controls. Any major modifications (i.e., change modification orders or minor changes revisions) to the CDOT SWMP template shall be submitted to CDOT for Acceptance. The Contractor shall revise the SWMP Site Map as necessary based on actual construction activities.

Transportation Erosion Control Supervisor

The Contractor shall assign to the project an individual to serve in the capacity of SWMP Administrator. These duties may be assumed by the Superintendent. The SWMP Administrator shall have working knowledge and experience in construction and have satisfactorily completed the Transportation Erosion Control Supervisor Certification (TECS) training provided by the Department. Proof that this requirement has been met shall be submitted to the Engineer prior to start of work. The SWMP Administrator shall:

1. Ensure the Method Statement for Containing Pollutant Byproducts is implemented.
2. Review the construction site for compliance with CDOT specifications and the SWMP.
3. Follow all stormwater requirements and inspections for other applicable State and local agencies unless a waiver or other agreement has been made.
4. Immediately report to the Contractor and Engineer the following instances of noncompliance:
    a. Noncompliance which may endanger health or the environment.
    b. Spills or discharge of hazardous substance or oil which may cause pollution of waters of the State.
    c. Discharge of stormwater which may cause an exceedance of a water quality standard.
    d. Discharge of pollutants that have occurred on site.

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Best Management Practices (BMPs)

The Contractor shall install and maintain the construction BMPs for the Project in accordance with the CDOT *Erosion Control and Stormwater Quality Guide* and Sections 101, 107, and 208 of the *Standard Specifications*. Construction BMPs for the Project shall include, but are not limited to, those listed in the *Standard Specifications*, as well as, preservation of existing vegetation, surface roughening, spray-on mulch blanket, soil retention blankets, temporary clean water diversions, storm drain and basin protection, protection of existing trees and established vegetation, hazardous waste and spill containment and saw water disposal, and vehicle tracking control at the Project areas. The Contractor shall add a BMP narrative to the SWMP on how it is being used, and shall supply the manufacturer details to be placed in the SWMP Notebook. The Contractor shall have a complete supply of all necessary construction BMP Materials on Site at all times in preparation for construction water quality control emergencies.

Seeding operations shall be completed in accordance with Section 212 of the Standard Specifications. Where permanent seeding operations are not feasible because of seasonal constraints (e.g., summer and winter months), the Contractor shall have spray-on mulch blanket applied to disturbed areas as interim stabilization to prevent erosion until seeding is allowed for permanent stabilization of the site. Any seeding requested by the Contractor and performed outside the time periods listed, will not be paid for by CDOT. The Contractor is responsible to re-seed and mulch any seeding performed outside of seeding season that fails to produce species indicated in the contract, at their own cost.

The Contractor shall use spray-on mulch blanket on newly seeded slopes to control erosion, and to promote the establishment of vegetation.

Slopes shall be roughened at the end of each day. Concrete washout shall be contained.

Non-structural BMPs include, but are not limited to, litter and debris control, street sweeping, and landscaping and vegetative practices.

Spill Prevention Control and Countermeasures Plan (SPCC Plan)

The Contractor shall prepare a SPCC Plan for Acceptance by CDOT and submitted 21 Days prior to Construction will be in accordance with *Standard Specifications Section 208*. The SPCC shall establish operating procedures for handling pollutants and preventing spills. Pollutant sources include, but are not limited to, exposed and stored soils, paints, solvents, fertilizers or chemicals, vehicle tracking, management of contaminated soils, loading and unloading operations, outdoor storage activities, vehicle/equipment maintenance and fueling, significant dust or particulate generating processes, on-site waste management practices, concrete truck/equipment washing, dedicated asphalt and concrete batch plants, and non-industrial waste sources that may be significant such as trash and portable toilets.

Drainage

Section 5 – Environmental

Throughout the duration of construction, the Contractor shall continually protect inlets from sediment and pollutants and, if needed, shall remove any material deposited in the systems as a result of the Contractor's activities. All inlets shall be identified on the SWMP Site Map and shall follow the requirements of Section 208 of CDOT *Standard Specifications*.

Construction Dewatering Permit

. If required, the Contractor shall obtain the Construction Dewatering Permit from CDPHE for any dewatering of ground water during construction. The Contractor shall obtain this permit at least 30 days prior to the start of discharge. The Contractor shall assume all responsibilities of the permit. If groundwater contamination is encountered during construction activities, work will stop immediately at that location and the procedures outlined in Specification 250 shall be followed.

Deliverables

At a minimum, the Contractor shall submit the following to CDOT for review, Approval and/or Acceptance as part of this Work:

Deliverable	Acceptance or Approval	Schedule
Environmental Compliance Work Plan	Acceptance	Within 60 Days of NTP-Design
Environmental Compliance Work Plan Updates	Acceptance	Quarterly
Stormwater Management Plan (SWMP) and Site Map	Acceptance	Prior to Construction
Stormwater Management Plan Notebook	Acceptance	Prior to Construction
Spill Prevention, Control, and Countermeasure Plan (SPCC)	Acceptance	Prior to Construction
Environmental permits (See Environmental Permits above)	Acceptance	Per the requirements of the permit and the Contract Documents)