
5.0 Environmental Requirements

The Contractor shall comply with all requirements of all applicable federal, state, and local Environmental Laws, Environmental Approvals, Environmental Permits and Governmental Approvals issued thereunder, whether obtained by CDOT or the Contractor. The Contractor shall prepare an Environmental Compliance Work Plan specifically identifying all of the environmental compliance requirements for the Project and the Contractor's approach for complying with those requirements. For example the plan contents shall include, but not be limited to: a hazardous materials management plan, a noxious weed management plan, storm water management plan, the mitigation tracking table, and contact persons with regards to each plan.

The Draft Environmental Compliance Work Plan shall be submitted to CDOT for Acceptance within 30 Days after NTP1. A Final Environmental Compliance Work Plan shall be submitted to CDOT for Acceptance no later than 30 Days prior to NTP 2. Delivery shall include one electric copy on CD-ROM and 2 paper copies of the Work Plan. Acceptance of this Work Plan will be required as a condition for issuance of NTP 2.

The Environmental Compliance Work Plan shall include:

1. All environmental mitigations and elements of the Book 3, I-25 New Pueblo Freeway Draft Record of Decision (ROD) and , CDOT Mitigation Tracking Form in Book 3
2. Description of means and methods to meet all commitments defined in the FEIS and ROD document.
3. Description of the process for tracking environmental commitments throughout the duration of the Work by the Contractor. The Contractor shall employ and utilize an Environmental Manager on the Project. The Environmental Manager shall lead a field review with CDOT environmental staff to discuss environmental issues at least once a month during active construction periods, and shall have the authority to stop construction if Work activities violate Environmental Laws, regulations or permits, or jeopardize human health and safety.

The Environmental Manager shall update the Environmental Compliance Work Plan every month and document any pertinent discussions that occur during the environmental field reviews. The updated Environmental Compliance Work Plan shall be submitted to CDOT monthly for Acceptance.

A Final Environmental Compliance Work Plan shall be submitted to CDOT for Approval as a condition for Final Acceptance of the Project.

5.1 Environmental Resources Requirements

5.1.1 Air Quality

The Contractor shall obtain an Air Pollution Emission Notice (APEN), including a Fugitive Dust Control Plan and construction and demolition permit from the Colorado Department of Public Health and Environment (CDPHE) Air Pollution Control Division (APCD). The contractor shall also obtain a Pueblo County Demolition Permit to manage fugitive dust control.

Coincident with the Fugitive Dust Control Plan the Contractor shall develop and implement a construction air quality plan for minimizing dust. The plan will be a tool to control activity recognition and deploy BMPs (Best Management Practices) consistent but not limited to:

1. Require construction vehicle engines to be properly tuned and maintained.
2. Use water or wetting agents to control dust.
3. Have a wheel wash station and/or crushed stone apron (tracking pad) at egress/ingress areas to prevent dirt being tracked onto public streets.
4. Use street sweepers to remove dirt tracked onto streets.
5. Use a binding agent for long-term excavated materials.
6. Schedule work outside of normal hours for sensitive receptors; this should be necessary only in extreme circumstances, such as construction immediately adjacent to a church, outdoor playground, or school.

The Contractor shall minimize excessive idling of inactive equipment or vehicles. If construction equipment is creating excessive air quality emissions that have a potential to affect air quality for operators or persons working/living in the area, equipment shall be taken out of operation until fixed or replaced. The Contractor shall also locate stationary emissions equipment with consideration of public health and environment, and minimize excessive idling of inactive equipment or vehicles.

A Construction Air Quality Plan and Fugitive Dust Control Plan shall be submitted to CDOT for Approval 30 days prior to NTP2.

5.1.2 Noise

The Temporary Configuration is defined as all work on I-25 that is required to transition from the 6 through lane configuration to the existing alignment of I-25 through Pueblo as shown in the Book 5 - Reference Drawings. The limits of the Temporary Configuration are from the northern limits of the proposed Structure over Gruma/Future HARP to the southern limits of the bridges over 1st Street

The Contractor shall be responsible for noise analyses and mitigation measures in compliance with the requirements of the Final Environmental Impact Statement (FEIS) and ROD, and the Contract Documents. Noise analysis and mitigation shall be in conformance with CDOT Noise Analysis and Abatement Guidelines. The Contractor shall use the most recent FHWA approved version of TNM modeling software, to perform a noise analysis for the Temporary Configuration. The Contractor shall design and construct the noise wall for the Temporary Configuration to achieve a seven decibel reduction for at least the front row Kelly Street Residences on east side of I-25 for the Temporary Configuration. The Contractor shall design the noise panels that can be reset (re-used) to the final noise wall location as shown in the I-25 New Pueblo Freeway FEIS. Preliminary locations, lengths and heights for noise barriers are provided in Exhibit 3.5-12 of the FEIS. The noise analysis TNM files and final CAD geometry of noise wall shall be submitted to CDOT for Acceptance a minimum of 21 days prior to Released for Construction Documents.

CDOT performed a preliminary noise impact analysis as part of the I-25 New Pueblo Freeway FEIS. The findings of this analysis are included in the Noise Technical Report (Book 3). The noise analysis was completed using the geometry assumptions documented in the I-25 New Pueblo Freeway FEIS. Preliminary TNM2.5 noise analysis models for mitigation measures within the project limits are provided in Book 3. Preliminary locations, lengths and heights for noise barriers are provided in Exhibit 3.5-12 of the FEIS.

Noise Barriers

CDOT has performed a preliminary noise analysis and determined noise mitigation is required at the following locations for the Project:

1. Kelly Street Residences on east side of I-25

New Noise Mitigation

Any design by the Contractor which triggers a Type 1 action as defined by the CDOT Noise Analysis and Abatement Guidelines (March 2011) shall require the Contractor to complete a new noise analysis and implementation of any required mitigation. CDOT shall review its design to ensure conformance prior to commencement of any construction Activities.

If a new noise analysis is required, a noise analysis and final geometry of noise wall shall be submitted to CDOT for acceptance a minimum of 21 days prior to Released for Construction Documents.

Construction Noise

The Contractor shall be required to prepare and submit to CDOT, for Acceptance with Released for Construction Documents, a Noise Control Plan that outlines allowable daytime and nighttime activities, projected noise levels, and locations and types of noise abatement measures required to meet specific noise limits for the associated construction Activities.

The Contractor shall comply with all applicable City and County of Pueblo noise ordinances and regulations, which require construction between 7AM and 9PM, where possible, unless the Contractor secures a variance from the City and County of Pueblo. If permits are required, they shall be acquired by the Contractor prior to the start of any associated construction Activities and the Contractor shall be solely responsible for compliance with the permit requirements.

5.1.3 Cultural/Historic Resources, Archaeological Resources, and Historic Section 4(f) Resources

The impacts to Cultural/Historic Resources, Archaeological Resources and Historic Section 4(f) uses and specific mitigations have been documented and approved by FHWA as part of the FEIS and ROD These are included in Chapters 3, 4 and 11 of the FEIS and in the Section 4(f) and Section 6(f) Technical Report (in Book 3).

Table 5-1. Impacts to Historic Section 4(f) Resources

Historic 4(f) Resource	Use by the Project
5PE4523, Commercial Building at 125 Hector Place	Total acquisition/demolition resulting from retaining walls required for the entrance and exit ramps of First street
5PE5050, Two Commercial Buildings: 200 South Santa Fe Avenue, and 201 South Santa Fe Avenue	Total of 1.9 acres of impacts identified as a partial acquisition for the southbound I-25 Ramp. Currently SHPO (State Historic Preservation Officer) has concurred with a no adverse effect. However, if more land is to be acquired, Contractor is required to open up the Section 106 historic clearance process and consult with the SHPO
Green Truss Bridge: US 50 Business East bound over Arkansas River (K-18-R)	Rehab Work in accordance with Book 2, Section 15 – Structures and the CAT EX Environmental Clearance
I-25 Southbound Bridge over Arkansas River (K-18-AJ).	This work does not yet have NEPA clearance. No work shall be done to this Structure.

Source: Section 4(f) and 6(f) Technical Report (Book 3)

Construction

The Contractor shall be responsible for notifying CDOT of any unidentified historic, eligible for listing on the National Register of Historic Places, or archaeological resources encountered or unearthed during construction. Upon discovery of any historic or archaeological resources, the Contractor shall immediately cease work in the vicinity of the discovery, fence off the area, and notify the CDOT archaeologist or cultural resource staff by calling the Cultural Resource Program Manager at 303-757-9631. The Contractor shall not resume Work in the area until receiving formal notification from CDOT allowing Work to re-commence. If historic or archaeological resources are discovered, CDOT will determine the resource mitigation requirements that the Contractor shall implement. The Contractor shall provide archival photographic documentation if any historic buildings are to be demolished as part of this Project.

No staging shall be permitted within the limits of the Second Ward Historic District located east of I-25. No staging shall be per permitted within the limits of the Grove Historic District located west of I-25. Maps of the districts are provided in Book 3.

The Contractor shall clearly label environmentally sensitive areas (wetlands areas, Section 4(f), Section 6(f), etc.) with “No Parking and No Staging Area” on final plan sheets.

5.1.4 Paleontology

Upon discovery of any paleontological resources, the Contractor shall immediately cease work in the vicinity of the discovery, fence off the area, and notify the CDOT Project Engineer and the Staff Paleontologists at 303-757-9632. The Contractor shall not resume Work in the area until receiving formal notification from CDOT allowing Work to re-commence. If paleontological resources are discovered, CDOT will determine the resource mitigation requirements that the Contractor shall implement.

5.1.5 Parks and Recreation

Non-Historic Section 4(f) Impacts

The impacts to Non-Historic Section 4(f) Impacts (parks, trails, wildlife refuges, etc.) and specific mitigation which have been documented and approved by FHWA as part of the FEIS (Chapters 3, 4 and 11) and ROD (are included and described in the Section 4(f) and Section 6(f) Technical Report (Book 3) and described in Table 5-2.

Table 5-2. Impacts to Non-Historic Section 4(f) Resources

Park or Recreation Resource	Use by the Project (acres)
Phelps Creek Trail	Temporary closure during construction. Detours will need to be developed in cooperation with Pueblo City Staff.
HARP Trail Extension Near First Street	Temporary closure during construction. Detours will need to be developed in cooperation with Pueblo City Staff.
Runyon Field	Temporary disruption of access during construction

Source: Section 4(f) and Section 6(f) Technical Report (Book 3)

The Contractor shall be responsible for providing all of those mitigations that are required of CDOT as part of the Work for the Project. If the Contractor’s Work results in impacts greater than what is listed to those Non-Historic Section 4(f) resources listed in the FEIS and ROD, including temporary impacts occurring only during construction Activities, the Contractor shall be required to provide CDOT all necessary information for coordination with FHWA including an analysis evaluating avoidance alternatives and measures to minimize harm. The contractor shall be responsible for preparing a new Section 4(f) Evaluation document and figures with regards to these impacts. If CDOT disagrees with the analysis they may ask for a revised analysis. If CDOT agrees with the analysis, they will request FHWA review and approve that there are no feasible and prudent avoidance alternatives and confirm that the analysis includes all possible planning to minimize harm to Non-Historic Section 4(f) properties. If FHWA approves the new impacts to Non-Historic Section 4(f) Impacts and any mitigation, CDOT shall require the Contractor to provide those mitigations as part of the Work for the Project. Construction Activities shall not commence until all associated approvals are complete.

Non-Historic Section 4(f) Construction

Mitigation by the Contractor during construction for the temporary use of the Phelps Creek Trail by the Project shall include providing detours, minimizing closure times, and providing public notices in advance of any closures.

The following restrictions shall apply to existing trail systems in the vicinity of the Project:

1. No trail closures shall be allowed from 5:00 a.m. to 8:00 p.m. any Day of the week.
2. Temporary trail detours will be allowed under the following conditions:
 - A. Public information requirements shall be identified and appropriate public notifications provided.
 - B. The Contractor shall comply with the CDOT Construction Detour Standards for Multi-Use Trails.

The Contractor shall repair any construction impacts to the trail so that it is replaced in a condition as good as or better than it was prior to construction Activities. Vegetation impacted along the trail shall be replaced and the detour route shall be returned to its original condition.

Section 6(f) Impacts

The Land and Water Conservation Fund Act Section 6(f) impacts and specific mitigation are included and described in the ROD and Section 4(f) and Section 6(f) Technical Report (Book 3). The specific Section 6(f) resources and the amount of impact to each are described in the ROD and Section 6(f) Technical Report (Book 3)..

5.1.6 Vegetation

The Contractor shall minimize tree removal and disturbance to vegetation. In riparian areas adjacent to Phelps Creek that are subject to Colorado Senate Bill 40 (SB 40) all trees equal to or greater than 2 inches diameter at breast height (DBH) that are removed shall be replaced with native trees at a 1:1 ratio and shrubs that are removed shall be replaced with native shrubs at a 1:1 ratio based on total aerial coverage determined through the SB-40 Wildlife Certification required in Section 5.4.6. The Contractor shall supply this data to CDOT. The Contractor shall prepare a letter and mapping for the Senate Bill 40 Wildlife Certification for CDOT review and for CDOT submittal to the Colorado Division of Parks and Wildlife. The Contractor shall follow the SB-40 mitigation plan approved by Colorado Parks and Wildlife after submittal of an application for an SB-40 Wildlife Certification. In all other areas (non SB-40 areas), the Contractor shall comply with CDOT's tree replacement policy by replacing all trees equal to or greater than 2 inches DBH with native trees at a 1:1 ratio. Removal of additional trees and the substitution of one tree or shrub species with another must be accepted by the Regional CDOT Biologist or by a CDOT Landscape Architect. See Book 2, Section 17 – Landscaping, for additional conditions related to vegetation.

The Contractor shall enhance and incorporate impacted landscape areas (irrigated or otherwise) to optimize the longevity and maintainability of the existing vegetation. The contractor shall supply a native seed mix recommendation for CDOT review and Acceptance. The Contractor shall reseed and protect temporary disturbance areas with CDOT Approved BMPs to avoid disturbance to existing vegetation. All seed, mulch and mulch tackifier shall be applied in accordance with requirements of the Contract. The Contractor shall implement the Noxious Weed Management Plan which is provided in the Biological Resources Report (Book 3).

5.1.7 Visual

The Contractor shall comply with the aesthetic element requirements of the Contract Documents. The Contractor shall also apply the aesthetic guidance identified in the Ilex Architectural Design Requirements, the Ilex to 1st Street Architectural Design Requirements (Book 4), and in the I-25 New Pueblo Freeway Aesthetic Guidelines which are found in Appendix C of the FEIS document.

Staging areas that are to remain in place longer than 90 days shall be fenced and screened. Temporary construction lighting shall be shielded and directed at work areas to minimize glare and ambient light conditions in nearby areas.

5.1.8 Wildlife

Fish, Reptiles and Amphibians

Habitat for sensitive species was not identified in the project area. However, Thomas Phelps Creek does provide habitat for other common species. Impacts to Thomas Phelps Creek and the surrounding wetland/riparian habitat shall be minimized as much as possible. Required mitigation per SB-40 Certification (see Section 5.4.4 SB-40 Wildlife Certification) shall be implemented as part of this project.

Migratory Bird Treaty Act

The Contractor shall comply with the Migratory Bird Treaty Act (MBTA) at all times. The Contractor shall schedule clearing and grubbing operations and Work on Structures to avoid taking (pursue, hunt, take, capture or kill, attempt to take, capture, kill or possess) migratory birds protected by the MBTA. Project Special Specification 240 “Protection of Migratory Birds” is included in Book 2, Section 19 – Modification to Standard Specifications. Bird nests have been observed on the US 50 bridge over the Arkansas River and on the Ilex bridges. The contractor is advised to also prevent migratory birds from nesting by implementing techniques such as netting following the nest removal. The Migratory bird nest survey shall be submitted to CDOT acceptance prior to impacting existing structures that may contain active bird nests.

5.1.9 Recognized Hazardous Materials

Recognized Hazardous Materials (RHM) are defined as the presence or suspected presence of hazardous substances which may require management and/or disposal. Hazardous substances may exist on the surface or subsurface, in groundwater or surface water, or on structures to be demolished or modified as part of the work; and may be mixed with soil, water, building matrices, and/or other waste materials.

Phase I and Phase II Environmental Site Assessments and a Voluntary Clean Up Application (VCUP)/Materials Management Plan (MPP) have been prepared for seven parcels generally referred to as the Ilex segment of the project (Book 5). Based on the findings in these reports, there is a potential to encounter contaminated soil and groundwater throughout the Ilex segment of the project. The Colorado Department of Public Health and Environment has reviewed and approved the VCUP/MMP for the Ilex segment of work. The contractor is advised to thoroughly read and understand the findings and requirements in the Ilex Phase I, Ilex Phase II, VCUP, and MMP documents. The purpose of the MMP is to provide comprehensive, but flexible, procedures for managing the removal, reuse, relocation, transportation and/or disposal of materials that are expected to be encountered during the Ilex segment of the Project. The contractor is required to amend the MMP and obtain approval of the amended MMP from CDOT and CDPHE as needed to adapt to the contractor’s project design as well as incorporate additional area as described in the following paragraph. The MMP shall include a Sampling and Analysis Plan (SAP) for areas that may not have been adequately characterized for disturbance.

The Ilex Segment described in the previous paragraphs has been expanded to include the area north of the Rockwool / CDOT Westhill properties to 1st Avenue. A limited Phase I Environmental investigation is in process of being completed and will be included in Book-5 Reference Documents when completed. A Limited Phase II investigation has been performed for this area and is included in Book 5-Reference Documents. The contractor is required to expand the VCUP/MMP to include the area north of Rockwool / Westhill north to 1st Avenue. This effort includes submitting an addendum to CDPHE to expand the area of the VCUP and obtain approval of the expanded VCUP/MMP from CDPHE. The addendum to the amended VCUP/MMP shall be submitted to CDOT for Approval prior to Release for Construction Documents in contaminated areas. CDOT will submit to CDPHE for approval. Soil and

groundwater encountered on the Ilex and Rockwool / Westhill to 1st segments of the project will be managed in accordance with the amended VCUP and MMP.

In addition to the MMP and SAP, the Contractor shall develop a Health and Safety Plan (HASP), and a Spill Prevention Control and Countermeasures (SPCC) Plan for each segment of work, as required by Section 250.03 of the 2011 CDOT Standard Specifications for Road and Bridge Construction, CDOT VCUP/MMP, and the CDOT Asbestos-Contaminated Soil Management SOP as appropriate. The draft plans of the HASP and SPCC shall be submitted to CDOT for review within 30 Days after NTP1. The final plans of the HASP and SPCC shall be submitted to CDOT for review no later than 30 Days prior to NTP 2. Acceptance of these plans will be required as a condition for issuance of NTP 2.

The Contractor shall schedule a review meeting with CDOT prior to submittal of the MMP, SAP, HASP, and SPCC to discuss. The Contractor's Environmental Manager and the Contractor's Safety Manager shall be present at the meeting. The Contractor shall incorporate modifications into the submitted MMP, SAP, HASP, and SPCC agreed to during this meeting.

The Contractor shall comply with all provisions set forth within the reviewed MMP, SAP, HASP, and SPCC and shall maintain documentation of all pertinent certifications of all Subcontractors which shall be available upon request by CDOT. The Contractor shall comply with all applicable requirements, including, but not limited to, all federal, state, and local environmental laws and regulations and the Standard Specifications for Road and Bridge Construction, Section 250, Environmental, Health and Safety Management and any project special revisions for the management and disposal of the RHMs.

Prior to demolition activities on any acquired Right of Way of any structures, or removal of utility lines, the Contractor shall determine the presence or absence of asbestos containing materials. If asbestos is present, the Contractor shall conduct abatement in accordance with Section 250, Environmental, Health, and Safety Management, of the 2011 CDOT Standard Specifications for Road and Bridge Construction, the CDOT Asbestos-Contaminated Soil Management Standard Operating procedure (CDOT 2011), the revised Section 250 Specification and relevant Occupational Safety and Health Administration (OSHA), and other State and Federal Requirements.

Monitoring Wells have been installed at the Acorn and Cliff Brice properties. Monitoring well locations are included on a map in Book 5 – Reference Documents. The Contractor shall coordinate with CDOT and their Contractor for access to and the work at the monitoring well locations. CDOT is currently removing free product from the monitoring wells on the Cliff Brice property. The Contractor shall replace any monitoring well that is damaged or needs to be relocated as part of the Work.~~from its work.~~

The Contractor shall coordinate all Work with CDOT and shall not discuss or negotiate with any regulatory agencies or third parties on behalf of CDOT. The Contractor shall notify CDOT within 24 hours if contacted by any regulatory agencies or third parties concerning RHMs associated or potentially associated with the Contract requirements.

Payment for removal and disposal of Hazardous Materials from the Project site will be paid for by Force Account. Time associated with hazardous materials removal and disposal shall be considered excusable but non-compensable.

Monthly Statement of Regulated Hazardous Materials Management

The Contractor shall submit RHM reports to CDOT for monthly review on all activities associated with the contract. The Contractor shall coordinate with CDOT to determine the format of the report prior to the associated construction activities.

Quarterly Summary of Hazardous Materials Management

The Contractor shall submit quarterly reports to CDOT for review and then subsequent submittal to CDPHE. The reports shall contain “Tasks/Activities Completed”, “Tasks Expected for Next Reporting Quarter”, “Percent Complete”, and “Issues to be Resolved”. A draft and outline of a previously submitted report is in Book 5.

Sampling and Analysis Plan (SAP)

The Contractor shall develop a Sampling and Analysis Plan (SAP) to identify and characterize potential RHMs that may be encountered during the Work that have not been adequately characterized in existing reports based on the contractor’s construction design. The SAP shall also provide for monitoring/screening during construction activities to provide safety controls in areas previously not identified. In addition to complying with Section 250 of the Standard Specifications, the SAP shall include:

1. Data quality objectives
2. Sample collection procedures (field screening, borehole drilling, monitoring well construction, soil sampling and/or groundwater sampling methods, and decontamination)
3. Quality control
4. Field equipment calibration procedures/frequency
5. Quality assurance objectives (data)
6. Provisions for corrective action, if needed

Health and Safety Plan (HASP)

The Contractor shall distribute the HASP to all employees that could be potentially exposed to RHMs. The HASP shall be displayed or made available on-site at all times. The Contractor shall develop and maintain on-site all industrial hygiene information, including “right-to-know” information. In addition to meeting the requirements of Section 250 of the Standard Specifications, the HASP shall include the following provision:

“The Contractor shall maintain documentation and provide information to CDOT, as requested, regarding potential or actual exposure to the public. The Contractor shall maintain records of all related incidents and notify CDOT and appropriate State authorities immediately.”

Materials Management Plan (MMP)

The MMP shall identify potential RHMs, their locations, the extent of impact, proposed Remediation Work, waste management procedures (including waste manifests), avoidance measures, investigation measures, and a contingency plan for addressing unforeseen conditions. The plan shall identify the Contractor’s representative responsible for environmental compliance (Environmental Manager), the proposed design and construction staff, and the approach to implementing the MMP. In addition to meeting the requirements of Section 250 of the Standard Specifications, the MMP shall include the following provision:

“The Contractor shall manage all RHMs, including soils, groundwater, surface water, and other contaminated substances to prevent exposure to the environment, Project personnel and the public, and to prevent any contamination of non-contaminated areas”.

| The Contractor shall test and classify such wastes according to one of the following categories:

1. Hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) requiring off-Site disposal and/or treatment
2. Contaminated soils requiring off-Site disposal
3. Soils to be stockpiled for further characterization
4. Soils with concentrations of waste constituents below regulatory concern that can be reused without restriction
5. Wastewater requiring off-Site disposal and/or treatment
6. Impacted water to be held for further characterization
7. Asbestos containing material (ACM) discovered during construction or demolition
8. Lead-based paint associated with Structures, signage, light posts, etc.
9. Waste material to be contained for further characterization
10. Contaminated groundwater requiring on-Site treatment or off- Site disposal

No-Action Determination Documentation (NAD)

At the conclusion of the implementation of the MMP and VCUP activities, a No Further Action Determination (NAD) petition for each of the properties where residual or unknown contamination is encountered within the Project, shall be prepared by the Contractor, submitted to the CDOT for review and acceptance, and then submitted to CDPHE for review and Approval. If no residual or unknown contamination is encountered a NAD will not be required. The NAD Petition shall include the following sections and appendices:

1. Project Background
2. Waste Management During Demolition
3. Characterization Sampling Data
 - A. Soil Management and Disposal Data
 - B. Waste Streams Disposed Offsite
4. Wastes Managed On Site
5. Right Of Way Maps
6. Groundwater Management and Disposal Data
7. Property Use Restrictions, Restrictions on Groundwater Use
8. Summary of Variances of Regulatory Standards
9. Qualified Environmental Professional Certification
10. Appendices
 - A. Photographs, Figures, and Tables
 - B. Analytical Results
 - C. VCUP addendums and copies of correspondence with CDPHE and Colorado OPS
 - D. Waste manifests

A scope of work shall be submitted to CDOT for Approval prior to commencing any remediation work activities. The Contractor shall utilize the most cost-effective approach in the performance of any remedial action deemed necessary. Remediation work shall not include sampling, characterization, stockpiling, or disposal of materials that are determined not to require off-site disposal and/or treatment.

The Contractor shall not allow hazardous substances to be spilled or tracked off-site at any time during the Work. If hazardous substances are spilled or tracked off-site the Contractor is responsible for clean up and disposal of the substances and mitigation of all persons exposed.

The Contractor shall be responsible for locating storage facilities and disposal sites for RHMs that are to be removed from the work site.

The Contractor shall maintain documentation of completed waste profiles, manifest forms, and bill-of-lading forms for proper transportation and disposal of materials off-site. This information shall be available at all times for review by CDOT. The Contractor shall be held responsible for ensuring that all requirements of the transporter and the receiving disposal facility and the federal, state, and local statutes, rules, regulations, and ordinances are complied with and are properly documented.

Required Personnel

The Contractor shall designate a Health and Safety Officer (HSO) in accordance with subsection 250.03 of the Standard Specifications. The HSO shall have a thorough knowledge of all applicable OSHA, EPA, State, including but not limited to the CDPHE – Colorado Department of Public Health and Environment and CDOPS – Colorado Department of Oil and Public Safety, and local regulations as they pertain to the protection of the environment and the safety and health of the workers.

The Contractor shall designate a monitoring technician as per Subsection 250.03. The monitoring technician will be responsible for the monitoring of hazardous substances during work on the project. For areas with suspected or known asbestos contamination, the field monitoring technician will be a Certified Asbestos Building Inspector (CABI).

The Contractor shall provide certification indicating that the procedures, protection and work described in the method statement are in accordance with the OSHA and EPA standards and applicable federal, state and local regulations.

Asbestos Survey on Structures

The Asbestos Surveys for the replacement and rehabilitation structures are available in Book 5 - Reference Documents.

If Asbestos is present, the Contractor shall conduct abatement in accordance with Section 250, Environmental, Health, and Safety Management, of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 2011), the revised Section 250 Specification and relevant Occupational Safety and Health Administration (OSHA) and other State and Federal Requirements.

The Contractor shall coordinate all Work with CDOT and shall not discuss or negotiate with any regulatory agencies or third parties on behalf of CDOT. The Contractor shall notify CDOT within 24 hours if contacted by any regulatory agencies or third parties concerning RHMs associated or potentially associated with the Contract requirements.

Lead – Based Paint Survey on Structures

The Lead-Based Paint Surveys for the replacement and rehabilitation structures are available in Book 5 – Reference Documents.

Construction Requirements for Structures (Lead – Based Painted Elements)

The Contractor shall provide a method for abating the lead paint from all structures containing lead to CDOT for Acceptance.

The Contractor shall comply with all requirements for containing flaked off paint material and other residue and waste materials that may be generated during removal and transportation of painted structures. Any encapsulate used to treat the lead-based paint shall render the coated paint non-leachable by not exceeding the threshold of 5 milligrams per liter Toxicity

Characteristic Leaching Procedure (TCLP) for lead. The Contractor shall properly manage and dispose of solvents, paints, and waste.

5.2 NEPA Reevaluation

If the Contractor proposes or creates the need for any environmentally significant project change (scope, design, realignment of project beyond NEPA project study limits, construction technique, acquisition of additional right of way, or schedule, etc.) as defined by each resource's policies, procedures, guidelines or regulatory requirements (including the election to include any Additional Requested Elements (AREs) which are listed in Book 2, Section 1 – General and otherwise included as part of the Contract Documents that results in a potential change to the environmental impact or for need for environmental permitting, the Contractor shall provide the engineering plans and a technical memorandum to CDOT indicating the area of change that was not approved as part of the Work outlined in the ROD. This technical memorandum shall describe the change, reference the engineering plans, and describe the benefits to the project by incorporating this change. If the New Environmental Approval is associated with a VECP or Negotiated Change, the costs of obtaining and complying with the terms of the New Environmental Approval shall be considered in determining the Contract Price adjustment under Book 1 - Section 12.

CDOT shall be responsible for documenting that change consistent with the requirements and conditions of CDOT NEPA Reevaluation Form #1399. CDOT may also request supporting documentation from the Contractor. The aforementioned engineering plans and technical memorandum shall be included as attachments to Form #1399. As another example, the Contractor may be requested to provide technical memorandum documenting the change to traffic analysis and Level of Service. Or the Contractor may be requested to provide visual aid materials for a public information meeting, if the change is significantly different to the Preferred Alternative and work outlined in the ROD. The Reevaluation Form #1399 shall be reviewed by both staff at the CDOT Environmental Programs Branch and subsequently the FHWA. The documentation and review process typically requires a minimum of six months. A maximum of two Reevaluations may be submitted for the Project. No addendums to Reevaluations will be allowed. The Contractor shall not prepare the NEPA Reevaluation or be responsible for any decisions with respect to the NEPA reevaluation. Any re-evaluation taking longer than 1 year shall be considered by the Contractor and CDOT as unexpected. Any time beyond 1 year for the completion of any individual re-evaluation shall be considered excusable but non-compensable.

The FHWA review and approval by signature must occur prior to CDOT's Approval and before the Work proposed in the Reevaluation Form #1399 can be performed. In addition, the Contractor shall be responsible for additional environmental documentation, permits, and mitigation resulting from impacts associated with any project change. The Contractor shall implement these potential changes to the environmental impacts at the Contractors expense and accept responsibility for any additional schedule impacts required for the associated approvals and regulatory clearances.

5.3 Environmental Commitments and Mitigation

The Contractor shall be responsible for implementing required mitigation measures to minimize environmental harm from the Project. The Contractor shall minimize both environmental impacts

and impacts to adjacent property owners as detailed design decisions are made. Relevant mitigation requirements shall be included in the final Design Documents or other required deliverables for the Project. The Contractor shall maintain information on the implementation to provide to CDOT upon request to inform the public and/or interested commenting agencies of the progress in carrying out the adopted mitigation measures. The Contractor's public outreach meetings and materials shall include a summary of all environmental impacts and mitigations.

Mitigation measures for each resource addressed in the ROD have been identified and are listed in Book 3 – Applicable Standards, Data and Reports - CDOT Mitigation Commitment Tracking Form.

5.4 Environmental Permits

The Contractor shall be responsible for obtaining all governmental and agency permits required for the Work, not otherwise obtained by CDOT, including, but not limited to, the environmental permits in Table 5-3.

Table 5-3. Required Environmental Permits

Permits/Approvals	Permitting Agency
Clean Water Act Section 404 Nationwide Permit	U.S. Army Corps of Engineers (USACE)
Municipal Separate Storm Sewer System (MS4) Discharge Permit (City and County of Pueblo and CDOT MS4 discharge requirements)	Colorado Department of Public Health and Environment – Water Quality Control Division
CDPHE Colorado Discharge Permit System (CDPS) storm water permit associated with construction activity	Colorado Department of Public Health and Environment – Water Quality Control Division
Clean Water Act Section 402 Construction Dewatering Permit, or Individual Construction Dewatering Permit if contaminated groundwater is expected to be encountered	Colorado Department of Public Health and Environment – Water Quality Control Division
Construction waste material and transportation of solid wastes	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Generation of contaminated materials during construction	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Notification as Resource Conservation and Recovery Act (RCRA) hazardous waste generator	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Air Pollution Emission Notice (APEN) and Construction Permit	Colorado Department of Health and Environment – Air Pollution Control Division
Stationary Source Air Quality Permit (Emissions from portable units, such as rock crushers, generators, asphalt plants, and cement plants, used during construction)	Colorado Department of Health and Environment – Air Pollution Control Division
Fugitive Dust Permit (Bridge Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Asbestos Abatement Permit (Bridge Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Demolition Permit (Bridge/structure Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Demolition Permit (Bridge/structure Demolition)	Pueblo County

Permits/Approvals	Permitting Agency
Development of Materials Management Plan with approval by the Regional Planning and Environmental Manager	Colorado Department of Transportation
Senate Bill 40 Certification	Colorado Parks and Wildlife
Noise Variance	City and County of Pueblo
Coordination and approval for contaminated materials handling and management plan	City and County of Pueblo
Wastewater Discharge Permit	City and County of Pueblo

5.4.1 Colorado Discharge Permit System – Storm water Construction Permit (CDPS-SCP)

The Contractor shall be responsible for all storm water permit requirements in the CDPS-SCP including preparation and maintenance of the Stormwater Management Plan. CDOT has obtained a CDPS-SCP for the demolition/soil work at the Ilex segment of the Project. This permit will be transferred to the Contractor at NTP1 and shall be transferred back to CDOT upon completion of Landscape Establishment. The permit will need to be amended to include all project work. This includes the maintenance of all BMPs and seeded / landscaped areas until final acceptance of Water Quality features has been achieved, all temporary BMPs have been removed, and there is no potential for erosion. The Contractor shall review and incorporate the latest requirements from CDOT for erosion and sediment control and according to other requirements in the Contract.

5.4.2 Municipal Separate Storm Sewer System (MS4) Permit

CDOT has obtained an MS4 Permit for the storm drainage systems that it owns and maintains from CDPHE. The Contractor shall be responsible for complying with the terms and conditions of the CDOT MS4 Permit that pertain to the Project. The MS4 Permit is available on the web page at <http://www.coloradodot.info/programs/environmental/water-quality/documents>

The Contractor shall construct permanent water quality BMPs for the Project as necessary to comply with the requirements of the CDOT MS4 Permit. Permanent water quality BMPs for the Project shall include, but are not limited to, such components as sediment basins and proprietary vaults, water quality ponds, grass roadside ditches, and grass buffer strips.

The Contractor shall immediately notify CDOT of any suspected illicit or improper connections or discharges into any storm sewer system discovered during construction of the Project.

CDOT will be responsible for investigation of the suspected illicit connection and implementation of corrective action. The Contractor shall not maintain, reconnect, or otherwise allow discharge of improperly disposed materials into the storm sewer system within the limits of the Project.

5.4.3 Wetlands/Waters of the U.S. and Section 404 Permit

Permit Application

The Contractor shall be responsible for preparing a Clean Water Act, Section 404 Permit Application for impacts to wetlands and waters of the U.S. if necessary. The Application shall be submitted to CDOT for review and in advance of a subsequent submittal to CDOT for Approval and submittal to ACOE at least 45 Days before the start of construction Activity which would impact wetlands or other waters of the U.S. The Contractor shall be responsible for submitting a Wetland Finding Report if impacts exceed the thresholds identified in the 2006 “Memorandum of Agreement Between FHWA and CDOT Regarding the Programmatic Approval of Wetland Findings”. A CDOT Functional Assessment of Colorado Wetlands (FACWet) shall be performed if a Wetland Finding is required. The Contractor shall comply with the requirements and special conditions outlined in the Section 404 Permit (see Book 3).

Wetlands Field Investigation and Identification

The Contractor shall have a qualified wetland biologist investigate the project area for wetlands. If wetlands are present within the project limits, a wetland delineation following the ACOE 1987 Corps of Engineers Wetland Delineation Manual and the March 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) shall be performed. A wetland delineation report shall be delivered to CDOT for review and Acceptance.

Wetland and Waters of the U.S. Mitigation

The wetland delineation report shall identify both temporary and permanent impacts to wetlands within the Project area. All impacted wetlands shall be mitigated at a 1:1 ratio. The contractor shall minimize wetland impacts as much as possible. Any required wetland mitigation shall be the responsibility of the Contractor. The Contractor shall contact the ACOE to determine how to obtain the appropriate Section 404 permit(s) for impacts to Wetlands and Waters of the US from the project. Any additional mitigation beyond the 1:1 wetland replacement as required by the ACOE shall be done in accordance with the Section 404 permit(s).

Wetlands Inspection, Establishment ~~Period, and~~ Acceptance, ~~and Warranty Period~~

Inspection, ~~Landscape~~-Establishment Period, and Acceptance ~~and the Landscape Warranty Period~~ for wetland areas shall be subject to the applicable requirements of the Landscape Section.

Substantial ~~Landscape~~-Completion, ~~Landscape~~-Establishment Periods, and Acceptance for wetlands areas shall be subject to compliance of the requirements of all applicable permits.

The ~~Landscape-Wetland~~ Establishment Period for wetlands areas shall commence upon receipt of a written “Notice of Substantial ~~Landscape-Wetland~~ Completion” for wetlands areas from CDOT and is not subject to prior Final Acceptance of the Project.

The ~~Landscape-Wetland~~ Establishment Period for wetlands areas will last for 24 months and will begin the following spring if Substantial ~~Landscape-Wetland~~ Completion for the wetlands areas is issued in the fall.

The Contractor shall provide CDOT with annual mitigation progress reports. The reports shall be submitted to CDOT before December 31st of each year, and shall include the following:

1. Project number, Section 404-permit number, and county where project is located.
2. Summary of the status of the wetlands.
3. Percent of ground surface area that is vegetated.

4. Percent of the vegetated area that contains wetland vegetation.
5. List of prevalent plant species and their wetland establishment status.
6. Location map.
7. Drawings as needed for illustration.
8. Photographs of mitigation area for each report.
9. Percent cover of noxious weeds.
10. Acreage determination of successful mitigation sites.

Upon completion of the Landscape Establishment period for wetlands areas, at the Contractor's request, CDOT will inspect the wetlands to determine compliance to the requirements of the Contract Documents. Wetlands areas will not be accepted until a minimum of 70 percent of the mitigation site consists of wetland species and noxious weeds comprise of less than 5% of the total cover.

Acceptance of the wetlands areas will initiate the one (1) year wetlands Landscape warranty period and maintenance period. Throughout the wetlands landscape warranty and maintenance period the Contractor shall be responsible for remedial action and restoration of created wetlands.

Remedial action is defined action taken to correct failed wetland construction. This can include but is not limited to:

1. Re-evaluation of hydrology source.
2. Groundwater monitoring to identify and correct improper grade elevations.
3. Additional excavation or fill.
4. Replanting vegetation.

Restoration of created wetlands is defined as actions taken to improve the conditions of an existing wetland that has limited functions. Techniques can include, but are not limited to:

1. Replanting vegetation.
2. Re-configuration of improper ground elevation
3. Enhancing hydrology.

5.4.4 Construction Dewatering Permit

The Contractor shall obtain a Construction Dewatering Permit from the CDPHE for any dewatering of groundwater during construction in accordance with Water Quality Control Division (WQCD) requirements. The Contractor shall apply for this permit at least 30 Days prior to the start of discharge Activities. A Dewatering Plan shall be submitted to CDOT for Acceptance a minimum of 10 days prior to Released for Construction Documents.

The Contractor shall provide all information needed to assist the WQCD in their evaluation and setting of a water quality standard for this permit (monthly discharge monitoring report), which may include monitoring of the discharged water.

The Contractor shall monitor for any settlement caused by dewatering. The Contractor shall conduct a preliminary survey of any private property or buildings that may be affected by dewatering to establish existing conditions. The Contractor shall repair any damage caused by dewatering operations.

The Contractor shall construct settling ponds for effluent from dewatering operations, as required by the Construction Dewatering Permit.

All costs for dewatering Work shall be the obligation of the Contractor.

5.4.5 Senate Bill 40 (SB-40) Wildlife Certification

The Contractor shall comply with the General and Special Conditions provided in the April 2013 “Guidelines for Senate Bill 40 Wildlife Certification” developed and agreed upon by the Colorado Division of Wildlife and the Colorado Department of Transportation. The Contractor shall prepare an application for a formal Wildlife Certification to Colorado Parks and Wildlife (CPW) for activities in riparian areas adjacent to the Phelps Creek and Arkansas River that are subject to Colorado Senate Bill-40 (SB-40). After CDOT’s Approval, CDOT will submit the application to CPW at least 60 days prior to planned construction or maintenance Activities to allow 30 days for CPW review of the submitted documents and 30 days for follow-up coordination, if required. CPW will complete its review of the application and issue SB-40 Certification or request additional information or mitigation commitments within 30 days of final submittal. The Contractor shall submit its application so as to allow CDOT sufficient time to complete these activities.

5.4.6 Miscellaneous

The Contractor shall be responsible for contacting the CDPHE if groundwater monitoring wells will be disturbed. Refer to information about drainage and groundwater testing for specific monitoring well site locations in Book 3.

5.5 Deliverables

At a minimum, the Contractor shall submit the following to CDOT for review, Approval and/or Acceptance:

Deliverable	review, Acceptance or Approval	Schedule
Draft Environmental Compliance Work Plan	Acceptance	Within 30 Days after NTP1
Final Environmental Compliance Work Plan	Acceptance	No later than 30 Days prior to NTP2
Environmental Compliance Work Plan updates	Acceptance	Monthly
Final Environmental Compliance Work Plan	Approval	As a condition for Final Acceptance
Fugitive Dust and Air Quality Plan	Approval	No later than 30 Days prior to NTP2.
No Action Determination	Approval	As a condition for Final Acceptance
Construction Air Quality Plan and Fugitive Dust Control Plan	Approval	No later than 30 Days prior to NTP2
Noise Control Plan	Acceptance	With Released for Construction Documents
Noise Analysis TNM files and Final CAD Geometry of Noise Wall for Temporary Configuration	Acceptance	Minimum 21 Days prior to Released for Construction Documents

Environmental permits (Section 5.4 above)	Acceptance	Per the requirements of the permit and the Contract Documents
Migratory bird nest survey	review	Prior to impacting existing structures that may contain active bird nests
Noise analyses, final geometry, and architectural details of noise barriers (if necessary)	Acceptance	Minimum 21 Days prior to Released for Construction Documents
Draft Materials Management Plan (MMP)	review	Within than 30 Days after NTP1
Final Materials Management Plan (MMP)	Acceptance	No later than 30 Days prior to NTP 2
Monthly Recognized Hazardous Materials (RHM) reports	review	Monthly
Draft Health and Safety Management Plan (HASP)	review	No later than 30 Days after NTP1
Final Health and Safety Management Plan (HASP)	review	No later than 30 Days prior to NTP2
Draft Spill Prevention Control and Countermeasures (SPCC) Plan	review	No later than 30 Days after NTP1
Final Spill Prevention Control and Countermeasures (SPCC) Plan	Acceptance	No later than 30 Days prior to NTP2
CDOT NEPA Reevaluation Form #1399	Approval	Prior to conducting work that has not been approved under the ROD
Amended VCUP/MMP	review	Prior to Release of Construction Documents in contaminated area.
Monthly Discharge Monitoring Report	Review	Monthly
Dewatering Plan	Acceptance	Minimum 10 Days prior to Released for Construction Documents

All deliverables shall also conform to the requirements of Section 3 - Quality Management.