

## **Section 5 – Environmental Requirements**

### **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 2011, CDOT Project Special Revisions developed and Standard Special Revisions.

The Contractor shall prepare an Environmental Compliance Work Plan for the Project, specifically identifying all of the environmental compliance requirements for the Project and the Contractor's approach for complying with the requirements. The Environmental Compliance Work Plan shall include a table to track milestones including Contractor and CDOT roles, due dates, and completion dates. The Environmental Compliance Work Plan (ECWP) shall be submitted to CDOT for Acceptance within 60 Days after Notice to Proceed for Design. The Contractor shall provide an environmental compliance manager. It is acceptable for the environmental compliance manager to serve as the erosion control supervisor. The compliance manager shall lead an environmental review meeting with CDOT environmental staff to discuss environmental issues every two weeks for 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 (including, but not limited to, meeting minutes of environmental review meetings) that occur during the environmental field reviews will be submitted to CDOT for Acceptance every month prior to Approval of progress payment.

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#### **Air Quality/Fugitive Dust**

To minimize air quality impacts, the Contractor shall incorporate dust control techniques such as watering disturbed construction areas or as described in Standard Specification 209 – "Watering and Dust Palliatives".

#### **Construction Noise**

The Contractor shall comply with all applicable local sound control and noise ordinances and regulations, including the use of variances. If permits are required, they shall be acquired prior to construction.

#### **Threatened and Endangered Species**

CDOT completed a Threatened and Endangered Species assessment in July, 2012 and concluded that no threatened and endangered species are likely to be impacted.

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### **Prairie Dog Mitigation**

Prairie dog burrows exist within the Project limits. A field survey conducted with CDOT and the Bureau of Land Management (BLM) in September, 2013 delineated 3 sites in which existing burrows were found. The station limits and action to be taken by the contractor are as follows:

*Site 1: STA 380+00 – 390+00 LT/RT:* Considered inactive colony. The Contractor shall surface roughen to a depth not to exceed 6 inches where the Project footprint covers existing burrows. This work may be in completed concurrently with the clearing and grubbing operations and take place 5 days prior to earthwork activities. The cost for this operation shall be included in the Work.

*Site 2: STA 392+00 – 403+00 LT/RT:* Considered active colony. The Contractor shall surface roughen to a depth not to exceed 6 inches where the Project footprint covers existing burrows. This work may be in completed concurrently with the clearing and grubbing operations and take place 5 days prior to earthwork activities. In the event that prairie dogs do not relocate the Contractor shall humanely euthanize and deliver to a raptor and/or Black footed ferret program as per CDOT's Black tailed Prairie Dog policy. The cost for this operation shall be included in the Work.

*Site 3: STA 409+00 – 413+00 LT:* Considered active colony. The Contractor shall surface roughen to a depth not to exceed 6 inches where the Project footprint covers existing burrows. The Contractor shall also provide silt fence at 50 ft intervals at a 45 degree angle from centerline within the colony to promote relocation. This work may be in completed concurrently with the clearing and grubbing operations and take place 5 days prior to earthwork activities. In the event that prairie dogs do not relocate the Contractor shall humanely euthanize and deliver to a raptor and/or Black footed ferret program as per CDOT's Black tailed Prairie Dog policy. The cost for this operation shall be included in the Work.

Station locations are based on the current alignment as show in the Reference Documents.

### **Western Burrowing Owls**

Prior site surveys conducted by CDOT in July, 2012 have shown no signs of burrowing owls. However, prior to construction and prairie dog euthanization procedures the Contractor's biologist shall conduct a burrowing owl survey within the project disturbance limits. This survey shall be conducted in concurrence with the Protection of Migratory Birds field investigation as outlined in Project Special Revision 240. The reporting requirements shall also follow the requirements as set forth in Project Special Revision 240. The survey will be required for any construction activities occurring between March 15<sup>th</sup> and October 31<sup>st</sup>. The cost for this operation shall be included in the Work.

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If burrowing owls are confirmed to be present the Contractor is directed to:

Monitor the activities of the owls, noting and marking which burrows they are using. When all active burrowing owl burrows have been located and marked, construction activity may proceed within areas greater than 150 ft from the burrows until the owl has moved out, at which time all construction activities may commence.

Delays due to Burrowing Owl activity may result in a non-compensable time extension  
Contract change order issued by CDOT.

### **Wetlands**

A Wetland Delineation Report (dated March 21, 2013) has been completed for the project. It is anticipated that this project will permanently impact approximately 1.08 acres of wetlands. During final design and following construction, the contractor must provide CDOT with information on the actual wetland impacts. If actual wetland impacts exceed these amounts, then the contractor would be responsible for modification of the 404 Permit. Construction activity shall not commence prior to final 404 Permit approval. See References for Wetland Reports.

### **Archaeology and Paleontology**

A review of the project area for archaeological and/or paleontological resources has been completed. There are no known archaeological sites within or near the project areas. Archaeological resource monitoring is not required. However, if any archaeological resources are uncovered during construction the Contractor shall immediately cease work and notify the CDOT Project Engineer.

If archaeological or paleontological resources are uncovered during construction, steps may need to be taken to document, protect, and/or remove the resources as directed by CDOT. The Contractor shall not resume work within the area until receiving written notification from the CDOT Project Engineer.

### **Historic Resources**

A review of the project area for historical resources has been completed. With the exception of the Railroad, there are no known historic sites within or near the project areas.

### **Vegetation**

Vegetation replacement shall follow Section 17.

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### **Environmental Permits**

This work may require several environmental permits from various Federal, State and Local agencies.

#### **CDOT and Contractor Obtained Environmental Permits**

##### **CDOT Obtained Permits:**

<b>Permits/Approvals</b>	<b>Permitting Agency</b>
404 Permit	US Army Corps of Engineers
SB 40 Clearance	Colorado Division of Wildlife

#### **404 Permit**

CDOT has completed coordination with the US Army Corps of Engineers (Corps). This project is covered under a nationwide permit. Should the Contractor's design result in an increase in impacts to Waters of the US (wetlands or open waters associated with Big Gulch Creek), then it shall be the Contractor's responsibility to obtain all necessary agency approvals for permit modifications. Modifications of any permits previously obtained by CDOT shall be subject to CDOT Approval prior to submission to the agency responsible for the permit approval. Any additional mitigation associated with these changes will not be paid for separately but shall be included in the Work.

#### **SB 40 Clearance**

CDOT will notify Colorado Parks and Wildlife about this project per Senate Bill 40 (SB 40). A copy of the SB40 requirements and project specific materials is provided in the Reference Documents.

##### *SB 40 Construction Requirements:*

###### Aquatic Invasive Species

Aquatic invasive species may be spread by construction equipment. The following BMPs developed by the CDOW shall be observed to minimize the risk of spreading of New Zealand mud snails, zebra mussels, quagga mussels, whirling disease, and any other aquatic invasive species. If heavy equipment to be used for the project has previously been used in another stream, river, lake, pond, or wetland, then one of the following disinfection practices is necessary prior to construction to prevent the spread. These practices are also necessary after project completion and prior to this equipment

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being used in another stream, river, lake, pond, or wetland. Also, clean any hand tools, boots, or other equipment that will be used in water with one of the below options. The Contractor shall provide Certification of Compliance to the Project Engineer.

1. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment a 1:15 solution of Sparquat institutional cleaner and water. Keep equipment moist for at least 10 minutes.
2. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 140 degrees Fahrenheit for at least 10 minutes.

Should the Contractor’s design necessitate a modification of the SB 40 clearance obtained by CDOT for the project, then it shall be the Contractor’s responsibility to obtain all necessary agency approvals for permit modifications. Modifications of permits previously obtained by CDOT shall be subject to CDOT Approval prior to submission to the agency responsible for the permit approval. Any additional mitigation associated with these changes will not be paid for separately but shall be included in the Work.

**Contractor Obtained Permits:**

The Contractor shall be responsible for obtaining all governmental and agency permits required for the described Work, not otherwise obtained by CDOT, including but not limited to the following environmental permits:

Permits/Approvals	Permitting Agency
Construction Dewatering Permit	CDPHE Water Quality Control Division
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP)	CDPHE Water Quality Control Division

The Contractor shall deliver copies of these permits to the Engineer.

**Colorado Discharge Permit System-Stormwater Construction Permit (CDPS-SCP)**

The Contractor shall be responsible for all stormwater permit requirements until Project Acceptance is obtained. At this point the permit shall be transferred to CDOT for final closure.the permit is closed. This includes the maintenance of all BMPs and seeded areas ~~until final stabilization has been achieved (See Section 17), all temporary BMPs have been removed, and there is no potential for erosion during construction.~~ See Section 17 for a

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complete list of stormwater-sediment and erosion control requirements. The Contractor shall review and incorporate the latest requirements from CDOT for erosion and sediment control.

**Construction Dewatering Permit**

It is anticipated that dewatering will be required during construction at the Big Gulch location. The Contractor shall obtain the Construction Dewatering Permit from the Colorado Department of Public Health and Environment 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.

**Deliverables**

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

	<b>Acceptance or Approval</b>	<b>Schedule</b>
Environmental Compliance Work Plan	Acceptance	Within 60 Days of NTP
Environmental Compliance Work Plan Updates	Acceptance	Quarterly
Manifests/Disposal records	Acceptance	After Demolition
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
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP)	Acceptance	Prior to Construction
Fugitive Dust Permit	Acceptance	Prior to Construction
Construction Dewatering Permit	Acceptance	30 Days Prior to Dewatering

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### **Project Special Provisions**

#### **SECTION 240 PROTECTION OF MIGRATORY BIRDS BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

Section 240 is hereby added to the Standard Specifications for this project as follows:

##### **DESCRIPTION**

**240.01** This work consists of protecting migratory birds during construction.

##### **MATERIALS AND CONSTRUCTION REQUIREMENTS**

**240.02** 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 Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Engineer.

(a) *Vegetation Removal.* When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31. All areas scheduled for clearing and grubbing between April 1 and August 31 shall first be surveyed within the work limits for active migratory bird nests. The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside CDOT right of way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all

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nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

1. *Tree and Shrub Removal or Trimming.* Tree and shrub removal or trimming shall occur before April 1 or after August 31 if possible. If tree and shrub removal or trimming will occur between April 1 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

2. *Grasses and Other Vegetation Management.* Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right of way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

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If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the contractor biologist. This buffer dimension may be changed if determined appropriate by the CDOT biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

The Contractor's Wildlife Biologist will conduct raptor nest surveys within 0.5 mile of the construction site prior to the start of construction and prior to each construction phase. This survey can be done with binoculars. If construction activities are located within the Colorado Division of Wildlife (CDOW) recommended buffer zone for specific raptors, "NO WORK" zones shall be established according to the CDOW standards or by the CDOT Wildlife Biologist in consultation with the CDOW around active sites during construction. The "NO WORK" zone shall be marked with either fencing or signing. Work shall not proceed within a "NO WORK" zone until the CDOT Biologist has determined that the young have fledged or the nest is unoccupied.

3. *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:
  - (1) The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and CDOT has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.
  - (2) During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
  - (3) If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.

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- (4) Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are  $\frac{3}{4}$  inch by  $\frac{3}{4}$  inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

- (c) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.