

## 5.0 Mitigation and Monitoring

### INTRODUCTION

Effects of the action alternatives on individual resources, as presented in Chapter 4.0, are estimated based on the assumption that all design features presented in Chapter 2.0 would be implemented. It should be noted that additional measures intended to reduce adverse impacts have been incorporated into the project design since release of the DEIS. All project design features are presented in Chapter 2.0, Table 2-15. Where differences exist, if any, the mitigation measures and monitoring defined in Chapter 5.0 would prevail.

For those resources where potential moderate to significant impacts are identified in Chapter 4.0, additional mitigation measures beyond project design features were identified to further minimize impacts. Additional best practices, which are intended to avoid impacts from occurring, were also identified to supplement the measures presented in Chapter 2.0. In some cases, measures identified to minimize impacts to one resource would also benefit another resource.

Mitigation measures in this chapter are annotated to indicate the party or parties responsible for implementation. Responsibilities of parties may include implementation, monitoring or enforcement of mitigation measures. In the majority of cases, OTR Corp would be responsible for implementation of a mitigation measure, and the BLM or other governmental agency would be responsible for monitoring and enforcement. However, in some instances there are mitigation measures that would be the responsibility of the BLM or another governmental agency to implement.

The mitigation measures for which BLM or OTR Corp have responsibility would be included in any 2920 permit as terms and conditions of that permit issued to OTR Corp by BLM. BLM anticipates that the mitigation measures identified as the responsibility of another permitting agency, or similar mitigation measures, would be adopted by that agency, as part of their own permitting processes, consistent with those contained later in this chapter.

In the list of mitigation measures that follow, it is assumed that OTR Corp would be responsible for implementation unless specifically identified as being implemented by a responsible agency, whether BLM or other. In some cases, OTR Corp is identified as being responsible for providing funding with implementation by the responsible agency.

It will be important to monitor effects as development progresses over time. It will also be important to assess the effectiveness of the mitigation measures adopted. Monitoring by the BLM would occur during all phases of the project. Monitoring typically begins during project planning as a component of the permitting process. Primary responsibility for project monitoring would rest with the OTR Unified Command as defined in the Event Management Plan (see page 5-4). Within the OTR Unified Command, each regulatory agency would be responsible for monitoring the mitigation measures, terms and conditions that are specific to their individually issued permits. BLM's authorized officer would be responsible for inspecting and monitoring the project for the BLM. Monitoring may also require the use of an independent contractor. Such contracted monitors for BLM applied mitigation measures would be approved by the BLM to meet qualifications for the scope of work they are designated to perform. These monitors would report directly to the BLM and would provide regular reports (as determined by the BLM) on construction activities, including any noncompliance issues and their resolution. OTR Corp would be responsible for funding the monitoring of BLM mitigation measures.

Pursuant to the provisions of 43 CFR 2920.9, the BLM's authorized officer would monitor the project as necessary to assure compliance with approved plans and protection of the resources, the environment and the public health, safety and welfare. If this monitoring identifies non-compliances with applicable law, regulations or terms and conditions of the land use authorization, as well as adverse effects to the public health, safety or welfare or environment, the authorized officer would be authorized to take the steps identified in 43 CFR 2920.9 to terminate or suspend project activities.

While the BLM cannot require the use of mitigation measures on private lands, individual landowners may elect to incorporate BLM mitigation measures as part of their use agreement with OTR Corp.

Unless noted, the mitigation measures presented in this chapter would apply to all alternatives, except for the No Action Alternative. Also unless otherwise noted, all mitigation measures would apply for all phases of the project including construction, exhibition, and removal and reclamation.

The use of warranties and performance bonds by the BLM are intended to ensure that Federal lands and their habitats are returned to pre-project conditions at the conclusion of permitted activities. Where the activities of OTR Corp would result in disturbances to the land and habitats, actions have been proposed to restore them to pre-project conditions. Similarly, measures have been proposed to removal all project materials from Federal lands. These measures will be included as terms and conditions of the requested 2920 Permit. In order to ensure that these measures are successfully implemented, a surety bond would be required from OTR Corp prior to the issuance of a Notice to Proceed. Should OTR Corp fail to successfully implement these removal and restoration measures, either through abandonment or inadequacy, the required bond would be used to do so. Bonding would be required for all activities and resources necessary for the removal of the project and reclamation of the Federal lands. Bonding would not be required for the completion of construction or display. The specific requirements of this bond will be defined in the terms and conditions of the 2920 permit.

### **SITE SPECIFIC EXCEPTION, MODIFICATION, OR WAIVER**

In order to remain responsive to changing conditions or modifications to the planned action, the BLM mitigation measures identified in this Chapter 5.0 are subject to site specific exception, modification or waiver. A site specific exception, modification or waiver may be considered if such action would ensure consistency, reasonableness and appropriateness to the originally approved action, and if the BLM authorized officer determines that the factors leading to the mitigation measure have changed sufficiently to make the protection provided by the measure no longer justified. Site specific exceptions, modifications or waiver would be considered an "Adaptive Management" tool to meet changing circumstances or provide increased flexibility to meet resource protection goals.

- A **site specific exception** is a one-time exemption for a particular site within the project; site specific exceptions are determined on a case-by-case basis; the mitigation measure continues to apply to all other sites within the project. A site specific exception is a limited type of waiver.
- A **modification** is a change to the provisions of a mitigation measure, either temporarily or for the term of the project. Depending on the specific modification, the mitigation measure may or may not apply to all sites within the project area to which the restrictive criteria are applied.
- A **waiver** is a permanent exemption from a mitigation measure. The mitigation measure no longer applies within the project area.

These determinations require approval by the BLM authorized officer.

Where possible, criteria for considering the granting of a site specific exception, modification or waiver have been included in the individual mitigation measures detailed in the remainder of this Chapter. In instances where such mitigation specific criteria are not reasonably foreseeable or cannot be determined in advance, the following general criteria would be applied:

- An unanticipated circumstance has been identified.
- Circumstances have changed sufficiently to make the mitigation measure no longer justified.
- The mitigation measure in question is no longer necessary for the protection of the resource as described in this EIS
- The proposed site specific exception, modification or waiver would not cause unacceptable impacts and the BLM authorized officer determines that impacts would be acceptable and temporary.
- The proposed site specific exception, modification or waiver would maintain compliance with laws and regulations.
- The proposed site specific exception, modification or waiver would better support existing BLM goals, resource objectives and Best Management Practices.

Process for reviewing and approving a site specific exception, modification or waiver:

- 1.) A need for a site specific exception, modification or waiver may be identified by the BLM, a member of the OTR Unified Command, or the OTR Corp.
- 2.) A written request describing the circumstances surrounding the mitigation measure proposed to be excepted, modified or waived, including justifications for conformance to the above criteria, alternatives to the existing mitigation measure and anticipated impacts of the proposal would be submitted to the BLM authorized officer.
- 3.) The written request would be distributed to the OTR Unified Command and OTR Corp for review and comment to the BLM authorized officer. Coordination with other State, Federal or local agencies may be requested by the BLM authorized officer.
- 4.) The BLM authorized officer would evaluate the available information and make a written decision on the requested site specific exception, modification or waiver in a timely manner. The BLM authorized officer may approve or deny the site specific exception, modification or waiver as requested or with additional terms and conditions. This decision would be issued to the OTR Corp and distributed to the OTR Unified Command.
- 5.) All decisions for site specific exceptions, modifications or waiver would be recorded in the OTR Event Management Plan.
- 6.) The BLM authorized officer would notify the public of any request and decision to except, wave, or modify a mitigation measure through the agency's website.

## EVENT MANAGEMENT

The event management program for the OTR project would include all phases of the OTR project: preconstruction activities, construction, display, dismantling and rehabilitation. Event management for the project would be administered under a “Unified Command” structure (UC), similar to the Incident Command System commonly used by local, state and federal agencies for major fires and other short term emergency situations, as well as longer on-going actions that require the coordination of numerous local, state and federal agencies and organizations to oversee specific events, responses or incidents. The system is designed specifically to allow officials and public safety organizations to adopt an integrated organizational structure equal to the complexity and demands of any single incident or multiple incidents without being hindered by jurisdictional boundaries. In the case of the OTR project, all participating agencies and local governments are all familiar with and supportive of the Unified Command and/or Incident Command System.

The UC is a structure that brings together representatives of all major organizations involved in an event in order to coordinate an effective response, while at the same time carrying out their own jurisdictional responsibilities. The UC links the organizations responding to an incident and provides a forum for these entities to make coordinated decisions. Under the UC, the various jurisdictions, agencies and non-government responders would blend together throughout the project to create an integrated management team. UC members bring their own authorities to the UC, as well as the resources needed to carry out their responsibilities. The agencies in the UC do not relinquish agency authority, responsibility, or accountability. The use of an UC structure enables all agencies and organizations to carry out their own responsibilities while working cooperatively within one integrated management team. Members in a UC, first, have a responsibility to their own agency or organization, but they also have a responsibility to the UC. The use of an UC structure enables all agencies and organizations to carry out their own responsibilities while working cooperatively within one integrated management team. Members of the UC work together cooperatively to develop a common set of project management objectives and strategies, share information, maximize the use of available resources, and enhance the efficiency of the individual organizations. The UC provides a structure to ensure the various responsible agencies are coordinated in their actions as they work with the proponent.

UC members would be expected to have (1) jurisdictional authority or functional responsibility under a law or ordinance related to the incident; and (2) the resources necessary to support participation in the UC. The makeup of a UC may change as the project progresses, to account for changes in the situation. At a minimum, the OTR UC would include local, state and federal governments and agencies with permitting jurisdiction over the project, and may include other organizations as necessary at various times in the evolution of the project, such as fire protection districts, search and rescue agencies, etc. During some portions of the event, such as the display period, the OTR UC could, if appropriate, adopt an organizational structure similar to the type of Incident Command Team (ICT) commonly utilized in wildfire or emergency situations. An ICT utilizes a command staff designed to facilitate communication and planning and allows for rapid and effective response to quickly changing situations or emergencies. The ICT structure establishes a manageable span of control and staffing for specific functions such as Command, Operations, and Planning that are essential for coordinated and rapid response. This type of structure typically is headed by an Incident Commander and staff that are delegated authority and control of the event by members of the Unified Command.

The OTR UC would begin to form immediately with the completion of the BLM Record of Decision. The OTR UC would be responsible for working with the OTR Corp to develop the detailed Event Management

Plan (EMP). The OTR UC would be responsible for ensuring the actions of the various UC members and the OTR Corp are coordinated as the EMP is implemented and the project progresses. Additionally, the UC would be responsible for coordinating agency monitoring responsibilities during the project.

Following is the framework of the EMP to be developed by the OTR Corp and the OTR UC. Some modification of the EMP may occur as it is developed by the UC.

## 1. INTRODUCTION

### 1.1 Project Description

- Primary Visitor Facilities and Fabric Panel Areas (including 1/2 mile panel area access restriction limits)
- Traffic Management (Existing and Proposed VMS Locations, Temporary Signals, Flagger Controlled Intersections, Traffic Management Devices, U-Turn Location)
- Recreation Sites (All Sites, Boating Put In/Take Out Locations)
- Visitor Management: Facilities, Services and Staffing, i.e. Details about Locations for Information Water, Portasans, etc. and Law Enforcement, First Aid, Emergency Vehicles and Emergency Personnel Staging Areas (Law Enforcement, Private Security, Monitors, Tow Trucks, Fire Trucks, Ambulance, Medical Helicopter (staging and landing locations), Local Hospitals, etc.)
- Incident Management (Regional Detour Routes and Potential US 50 Lane Closure Points and Turnaround Points, Evacuation Routes, Incident Investigation Sites (selected pullouts), Stockpile Locations for Traffic Management Devices)

### 1.2 EIS and Post-EIS Project Phases

### 1.3 Purpose, Objectives, and Organizations of the Event Management Plan

- Set forth the roles and responsibilities of key agencies
- Define commitments and requirements during four phases of the post-EIS process
- Clarify and secure incident management requirements and protocol
- Set forth financial management and controls
- Develop a set of schedule for the four post-EIS phases

## 2. SUMMARY OF ROLES AND RESPONSIBILITIES

### 2.1 OVER THE RIVER™ Corporation

### 2.2 Bureau of Land Management

### 2.3 Colorado Department of Natural Resources, Division of Wildlife and Colorado State Parks

### 2.4 Colorado Department of Transportation

### 2.5 Colorado State Patrol

### 2.6 Fremont County

### 2.7 Chaffee County

### 2.8 Other

## 3. MANAGEMENT PRIOR TO INSTALLATION PHASE

### 3.1 Permits and Clearances

### 3.2 Additional Planning: Technical Issues to be Resolved

#### 3.2.1 Permit Resolution

- CDOT Special Use Permit (Form 1233) and Temporary Speed Reduction Permit (Form 568)
- Colorado State Patrol: Special Event Permit

- Colorado State Parks – Arkansas Headwaters Recreation Area (AHRA)
- CDPHE: Hazardous Materials
- State Land Board: Land Lease Agreements
- Union Pacific Railroad: Right of Access Contract

#### 4. MANAGEMENT DURING INSTALLATION PHASE

##### 4.1 General

- Leadership and Administration
- Staffing
- Communications

##### 4.2 Traffic Management

###### 4.2.1 Transportation and Traffic

- Responsibilities
- Performance Monitoring and Reporting
- Responsibilities and Reporting Requirements

###### 4.2.2 Traffic Management Operations and Protocol

- Construction Parking and Equipment and Materials Storage
- Local and Recreation Access
- Lane Closures

Lane Closure

Lane Shift With Continued Two-Way Traffic

Temporary Lane Delay

###### 4.2.3 Prohibited Uses and Restricted Areas

###### 4.2.4 Signage and Traffic Information

###### 4.2.5 Highway Use and Speed Limits

###### 4.2.6 Traffic Monitors, Patrols and Controls

##### 4.3 Public Health and Safety

- Security
- Fire
- Hazardous Materials
- Incident Management

##### 4.4 Visitor Management

###### 4.4.1 River Recreation

- Rationing
- Access, Parking, and Circulation
- River Safety
  - River Spotters
  - River Rescue

###### 4.4.2 Upland Recreation

- Developed Campgrounds
- Dispersed Camping
- Access and Parking
- Management of AHRA sites
- Pedestrian Traffic

###### 4.2.3 Restricted Activities

## 5. MANAGEMENT DURING EXHIBITION PHASE

### 5.1 General

- Leadership and Administration
- Staffing
- Communications and Information Centers

### 5.2 Traffic Management

- General
  - Transit Services
  - Transportation Demand Management
  - Water Traffic Management
  - Traffic Management Operations and Protocol
    - Lane Closures
    - Cone Zones
    - Local and Recreation Access
    - Managing Traffic Flows and Traffic Performance Standards
  - Prohibited Uses and Restricted Areas
    - Bicycles
    - Pedestrians
    - Aircraft
    - Camping
    - Pullouts
    - CR 45
    - Private Roads and Driveways
  - Signage and Traffic Information
    - Highway Use and Speed Limits
    - Traffic Monitors, Patrols and Controls
    - Traffic Counts and Reporting
    - Signal Timing
    - Temporary Signals
    - Uniformed Traffic Control Officers
    - Temporary Traffic Control Devices
  - Infrastructure Improvements: Visitor Information Centers and Visitor Facilities
    - Event Visitor Information Centers and Visitor Facilities
      - Fremont Road Information Center
      - Salida Information Center
      - Texas Creek Limited Rest Stop
      - Vallie Bridge Limited Rest Stop
      - Visitor Facilities - U-Turn
    - Parking – General
- ### 5.3 Public Health and Safety Support
- Vehicle Assistance and Towing
  - First Aid and Emergency Medical Services
  - River rescue
  - Security and Law Enforcement
  - Fire Protection
  - Hazardous Materials Management and Spill Response

- Incident Management
- 5.4 Visitor Management
  - Visitor Centers
    - Fremont Road Information Center
    - Texas Creek Limited Rest Stop
    - Vallie Bridge Limited Rest Stop
    - Salida Information Center
  - Visitor Services
    - Public Information and Communication
    - Towing
    - Water Supply and Facilities
    - Sanitation
    - Trash and Recycling
    - Food
  - River Recreation
    - OTR Private Boat Permitting System / Rationed Commercial Boat Plan
    - Access, Parking, and Circulation
      - River Access
      - Parking
      - Circulation
    - River Safety
      - River Spotters
      - River Traffic Management
      - River Rescue
  - Upland Recreation
    - Developed Campgrounds
    - Dispersed Camping
    - Access and Parking
      - Parking
      - Hunting Access
      - Travel Management Area Access
    - Management of AHRA sites
    - Pedestrian Traffic and Trespass
    - Alcohol Restrictions

## 6. MANAGEMENT DURING DEMOBILIZATION PHASE

### 6.1 General

- Timing
- Leadership and Administration
- Staffing
- Communications

### 6.2 Traffic Management

- General
  - Responsibilities
  - Performance Monitoring and Reporting
  - Plan Review Responsibilities and Reporting Requirements
- Traffic Management Operations and Protocol

- Construction Parking and Equipment and Materials Storage
  - Local and Recreation Access
  - Lane Closures
- Prohibited Uses and Restricted Areas
- Signage and Traffic Information
- Highway Use and Speed Limits Traffic Monitors, Patrols and Controls
- 6.3 Public Health and Safety
- Security, Fire Protection and Hazardous Materials
- 6.4 Incident Management
- River Recreation
  - Rationing
  - Access, Parking, and Circulation
    - River Access
    - Parking
    - Circulation
  - River Safety
    - River Spotters
    - River Rescue
    - Restricted Activities
- Upland Recreation
  - Developed Campgrounds
  - Dispersed Camping
  - Access and Parking
    - Parking
    - Hunting Access
    - Travel Management Area Access
  - Management of AHRA sites
  - Pedestrian Traffic

## 7. INCIDENT MANAGEMENT

### 7.1 TYPES OF INCIDENTS AND THEIR EFFECTS

- Traffic Incidents
- Unanticipated Traffic Volumes
- Natural Events
- Criminal Activity
- Medical Emergencies
- Hazardous Materials Spill/Release

### 7.2 INCIDENT RESPONSE

- Standard Procedures vs. Special Procedures
  - National Incident Management System
  - Colorado Division of Emergency Management
  - Existing Interagency Agreements and Supporting Organizations
  - Application of Special Procedures
- Special Procedures - General
  - General Incident Management Procedures
  - Detection

- Dispatch, Verification, Notification
- Response
  - Incident Thresholds, Incident Declaration, and Action Plan
  - Incident Scene Response Objectives and First Responder Requirements
  - Incident Management and Situation Control
  - Incident Wrap Up and Review
  - Major Incident Simulation: Exercise and Testing
- Special Procedures - Specific
  - Traffic Management
  - Measures to Provide Emergency Service Access and Minimize Response Times
  - Detours, Alternative Routes, Staged Road Closure, Corridor-Wide Evacuation, and Event Closure
    - Incident between SH 9 and SH 69
    - Incident between SH 69 and CR 1A
    - Incident between CR 1A and Salida
  - Measures to Address More Traffic Than Anticipated
  - Incident – Specific Measures
    - Roadway Debris Removal
    - Fabric Panel or Cable Damage
    - Hazardous Materials/Spills
    - Natural Events and Criminal Activities
  - Reporting: Issue Identification and Resolution

## 8. SUMMARY OF FINANCIAL REQUIREMENTS AND CONTROLS

### 8.1 Insurance

### 8.2 Bonding

## 9. SCHEDULE

### 9.1 Pre-Installation, Installation, Exhibition and Demobilization Schedules

### 9.2 Plan Amendment Schedule and Process

## MITIGATION MEASURES

### GENERAL

**GENERAL-1: Notice to Proceed.** No project activities would occur until specific permission to begin has been granted through the issuance of a Notice to Proceed by the BLM authorized officer. Project specific activities or phases may be granted an individual Notice to Proceed.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**GENERAL-2: Project Staff Training.** Train construction personnel on importance of minimizing amount of disturbed area and avoiding identified sensitive areas. Train project monitors to advise public against climbing on canyon walls on either side for any reason, and to notify law enforcement personnel under conditions to be identified by enforcement agencies in advance. OTR would be responsible for providing this training. Workers and staff would be made aware of sensitive environmental issues, what they

need to do to avoid impacts to sensitive resources, and in general follow and maintain a tread lightly work ethic.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**GENERAL-3: Warranty.** A performance bond would be required prior to issuance of the 2920 permit to assure compliance with the terms and conditions of the permit, including reclamation of disturbed lands in accordance with 43 C.F.R. 2920.7(3)(g). Once an acceptable bond is in place a Notice to Proceed may be approved by the authorized officer.

Bonding would be required for all activities and resources necessary for the removal and reclamation of the project. Bonding would not be required for the completion of construction or display. OTR Corp would furnish a report to the BLM estimating all project costs broken into project categories and stages. This estimate report would be prepared by an independent Professional Engineer licensed in the State of Colorado and approved in advance by the authorized officer. The report would include cost for removal and disposal of OTR Corp. materials, structures and facilities, rehabilitation and reclamation of all disturbed public lands or surface waters within the permit area. Also included in the estimate would be a 5% inflation rate for the term of the project (3 year minimum), an indirect administration cost of 17.1% (or as determined by the BLM Budget Officer's most current Indirect Cost Rate Instruction Memorandum), the cost to prepare and administer contracts and such information including but not limited to Davis Bacon wages potentially incurred by the BLM.

This estimate report would be the basis of the project bond. The project bond would remain in effect until such time that the authorized officer determines that conditions warrant a review of the bond. This bond may be periodically adjusted by the authorized officer, in his/her sole determination, as conditions warrant. The specific types of acceptable bonds and the criteria for these bonds would be more specially defined in the 2920 permit.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**GENERAL-4: Engineering Design Review.** Final engineering drawings for all structural project elements would be provided by OTR Corp prior to BLM issuance of a notice to proceed. Engineering drawings would include a certification by a State of Colorado licensed structural engineer that the project has been designed to withstand anticipated adverse weather conditions and other environmental factors.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**GENERAL-5: Other Permits and Approvals.** In order for the preferred alternative to move forward a variety of Cooperating Agency and other agency permits and approvals would be necessary beyond the BLM's 2920 permit. OTR Corp would be required to secure each of those permits and approvals prior to proceeding with the project if approved. If any one of those permits or approvals is not granted, then BLM's issuance of a Notice To Proceed would be withheld and the project would not proceed.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**GENERAL-6: Additional Mitigation.** The BLM authorized officer reserves the right to apply additional mitigation measures or alter the terms and conditions of the 2920 permit at any time for reasons such as policy changes, administrative procedure changes, stipulation changes, user conflicts, land and habitat protection, public health and safety. Instances where such additional mitigation measures, altered terms or conditions would be applied are:

- An unanticipated circumstance has been identified which threaten lands, habitats, public health or safety.
- Circumstances have changed sufficiently to require additional mitigation measures, terms or conditions.
- The existing mitigation measures permit terms or conditions have been found to not be effective and the newly proposed measures are the minimum necessary for the protection of the lands, habitats, public health or safety.
- The proposed additional mitigation measure, altered term or condition would maintain compliance with laws and regulations.
- The proposed additional mitigation measure, altered term or condition would better support existing BLM goals, resource objectives and Best Management Practices.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

## 5.1 TERRESTRIAL WILDLIFE AND HABITAT

Refer to Table 2-15 for additional design features intended to reduce impacts to bighorn sheep and other wildlife species. Refer to Section 5.27, Monitoring for additional wildlife monitoring requirements.

**WILDLIFE-1: Wildlife Collision Hazards.** Colorado Department of Transportation, as a cooperating agency, would install additional signage between MM 233.5 and 235.5 and between MM 241 and 242 to alert drivers of potential wildlife crossings prior to the beginning of construction. These areas were described by NDIS (2006) as being particularly problematic, and the additional signage on US 50 would bring awareness to drivers potentially distracted by the installation, exhibition and deconstruction of OTR. OTR Corp is ultimately responsible for ensuring signs are in place prior to construction per the Event Management Plan. Signs would be purchased and installed at the expense of OTR Corp.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – Other.

**WILDLIFE-2: Bear-proof Waste Receptacles.** OTR Corp would be responsible for the purchase, installation, and maintenance of trash and recycling receptacles. Trash and recycling receptacles would be such that they prohibit the entry by a bear or other wildlife species (bear-proof). Informational signage about “Bear-Aware” practices would be erected at visitor centers, recreation sites, and camping areas within the Project Area to discourage human-bear interactions.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**WILDLIFE-3: Rail Side Speed Limit.** Restrict rail-side traffic to maximum travel speed of 20 mph.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**WILDLIFE-4: Timing of Project Activities.** Project activities throughout the canyon would begin no earlier than one hour after sunrise and conclude no later than one hour before sunset.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WILDLIFE-5: Wildlife Protection Training.** Train OTR Corp project monitors on the importance of limiting visitor activities in sensitive wildlife areas, including the importance of allowing bighorn sheep and other wildlife to reach the river at panel breaks.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WILDLIFE-6: Bighorn Sheep Habitat Treatment.** As set out in the CDOW Bighorn Sheep Mitigation Prospectus (Appendix G), a bighorn sheep habitat treatment site in the Parkdale area has been identified by CDOW for its potential to allow sheep to access suitable habitat currently unavailable to sheep. Habitat treatment would also include up to three water developments within the uplands of the treatment site by installing new water guzzler(s) and restoring an existing guzzler. Guzzlers are to be purchased by OTR and installed and maintained by BLM. OTR would fund the habitat treatment project. Implementation of this mitigation may be subject to site-specific NEPA review prior to construction.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**WILDLIFE-7: Public Access to the North Side of the River.** Restrict public access to the north side of the river in the areas where bighorn sheep may be impacted, including the area between Texas Creek and Parkdale and the County Line panel area during the period including blossoming, exhibition, and fabric panel removal. OTR Corp is ultimately responsible for the monitoring and compliance of this mitigation measure per the Event Management Plan with assistance from BLM, state, and county law enforcement officers.

**Responsible agency:** Implementation, Monitoring & Enforcement – OTR Corp, BLM and other.

**WILDLIFE-8: Bighorn Sheep Adaptive Management Fund.** An adaptive management fund would be established (to be funded by OTR Corp) against which CDOW, BLM, and/or OTR Corp (with authorization by BLM) could draw for future mitigation work as determined by CDOW and BLM in accordance with its CDOW Bighorn Sheep Prospectus to prevent or offset impacts to sheep documented by the monitoring program (Appendix G).

**Responsible agency:** Implementation, Monitoring & Enforcement – OTR Corp, BLM and other.

## 5.2 AVIAN WILDLIFE AND HABITAT

Refer to Table 2-15 for additional design features intended to reduce impacts to avian wildlife.

Refer to Section 5.5, Vegetation and Plant Communities, for additional mitigation requirements relating to protection of trees. Refer to Section 5.27, Monitoring, for additional avian monitoring requirements.

**AVIAN -1: Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act Compliance.** OTR Corp would be responsible for ensuring that all Project related activities comply with the provisions of both the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). The U.S. Fish and Wildlife Service (USFWS) has provided OTR Corp and the BLM with specific project guidance and recommendations for avian mitigation measures in the Memoranda “Comments on BLM’s issuance of a special use permit for the Over the River Project, Chaffee and Fremont Counties, Colorado” dated June 2, 2011 and “Modification of Recommendations for Avoidance and Minimization of Migratory Birds for the Over The River Project” dated June 28, 2011. These Memoranda can be found in Appendix I of this document.

**Responsible agency:** Implementation – OTR Corp, Monitoring & Enforcement – BLM and other.

**AVIAN-2: Seasonal Restrictions.** There would be no OTR Corp project activities allowed during the primary migratory bird nesting season (April 15 – July 15). OTR Corp would be responsible to conduct all efforts necessary to “avoid or minimize take” of protected birds.

**Exceptions:**

- A. Land Surveying  
Land survey work would be allowed by OTR Corp crews during the primary migratory bird nesting season (April 15 – July 15). Similarly, there would be no spatial/temporal buffers for active raptor nests for the land surveying work.
- B. Exhibition Year  
During the exhibition year, with the exception of the golden eagle nest buffer, there would be no migratory bird nesting seasonal restrictions imposed upon OTR Corp. The imposition of such restrictions would significantly increase the duration of time that cables are suspended, thereby substantially increasing the possibility of mortality/injury due to cable collisions. This is based upon the understanding that there will be no drilling activities during the primary migratory bird nesting season the year of the exhibition period.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM.

**AVIAN-3: Seasonal Restrictions Alternative.** As an alternative to the restrictions on Project activities during the nesting season (April 15 to July 15), OTR Corp could elect to survey project work areas for nesting migratory birds. OTR Corp would present for approval by the authorized officer an acceptable nesting migratory bird survey protocol. Surveying of the specific project activity site would occur no more than 7 days prior to project activities. Surveying would be conducted by OTR Corp utilizing a BLM approved qualified biologist. If surveying identifies nesting activities, OTR Corp’s biologist would recommend to OTR Corp, and OTR Corp would implement, appropriate conservation measures to avoid and minimize the “take” of nesting birds, up to and including cessation of activities. Only in the unusual case where such minimization methods could not be implemented would further discussions between BLM, FWS and OTR Corp be necessary.

**Responsible agency:** Implementation - OTR Corp, Monitoring – BLM, Enforcement - BLM and others.

**AVIAN-4: Cable Marking In Pre and Post Exhibition Periods.** All bare cables would be marked with avian diverters, such as a FireFly Diverter, modified for maximum visibility as approved by the authorized officer. Cables would be marked from the time the first cable goes up until the time when the last cable is taken down. FireFly Diverters would be spaced every 20 feet on every bare cable, with diverters offset/staggered on adjacent cables to maximize visibility.

**Modification:**

Additional measures to minimize mortality, including the placement of additional diverters onto the bare cables, may be required if bird mortality monitoring identifies dead or injured birds – specifically more than 5 birds per night at any 100-yard sampled stratum discovered during each of the 3 weekly mortality assessments; more than 5 birds discovered immediately following any inclement weather event under all of the cables that are assessed following the weather event (e.g., thunderstorm, tornado, or wind storm); or more than 5 birds collectively discovered during any single-day beach-bird survey.

**Responsible agency:** Implementation - OTR Corp, Monitoring – BLM, Enforcement – BLM and others.

**AVIAN-5: Cable Marking in Exhibition Period.** During the actual Exhibition, bare cables would be marked with WindowAlert™ decal diverters. The WindowAlert decals would be pre-applied with adhesive to clear,

plastic tubing. Tubing used for marking the bare portions of the cross-river cables would be approximately one-quarter inch in thickness. Tubing would be applied to the bare portions of the cross-river cables as soon as the FireFly diverters have been removed and the fabric has blossomed. The tubing used for marking the diagonal cables would be approximately one-eighth inch in thickness. Tubing would be applied to the diagonal cables immediately after those cables are erected. The tubing will increase the diameter of the bare cables, which would maximize visibility and may also soften any collision blows that birds may experience upon cable impact. OTR Corp would monitor a representative subset of these tubing diverters to ensure that the decals remain attached to the tubing.

On those portions of the cross-river cables that are not covered with fabric, i.e. the end segments between the fabric and the ATF's, WindowAlert-marked tubing would be installed. The tubing would consist of 12 inch sections spaced every 10 feet on the bare cables.

For the diagonal cables, OTR Corp would provide continuous coverage of all diagonal cables to the maximum degree technically feasible. At a minimum, at least 80% of all cables (on a cumulative average) and at least 65% of each individual diagonal cable would be covered with the WindowAlert-marked tubing. Full coverage would be provided on the diagonal cables except in situations where cables are unreachable due to technical limitations or human health and safety considerations

**Modification:**

Additional measures to minimize bird mortality may be required if mortality monitoring indicates that WindowAlert is not effective. If mortality monitoring identifies dead or injured birds – specifically more than 5 birds per night at any 100-yard sampled stratum discovered during each of the 2 weekly mortality assessments; more than 5 birds discovered immediately following any inclement weather event under all of the cables that are assessed following the weather event (e.g., thunderstorm, tornado, or wind storm); or more than 5 birds collectively discovered during any single-day beach-bird survey, additional measures will be considered.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM.

**AVIAN-6: Raptor Nest Buffer.** OTR Corp would implement the Colorado Division of Wildlife (CDOW)'s 2008 Guidance, *Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors*, for known active raptor nests. For raptors not addressed by the CDOW 2008 Guidance, OTR Corp would implement the FWS *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (2002).

**Responsible agency:** Implementation - OTR Corp, Monitoring – BLM, Enforcement – BLM and others.

**AVIAN-7: Bald Eagle Winter Roost Seasonal Restrictions.** No human encroachment would be allowed from November 15 through March 15 within ¼ mile radius of an active bald eagle winter night roost if there is no direct line of sight between the roost and the encroachment activities. No human encroachment would be allowed from November 15 through March 15 within ½ mile radius of an active bald eagle winter night roost if there is a direct line of sight between the roost and the encroachment activities.

For the purpose of this mitigation, a winter night roost is defined as a site in use on a daily or regular basis by at least one bald eagle. In addition, this mitigation is for “known” winter roosts documented to exist in the Project Area as of May 2011.

**Exception:**

Periodic visits may be allowed within the buffer zone, between 10:00am and 2:00pm from November 15 to March 15. CDOW Raptor Guidelines are intended to allow periodic visits for minor activities (such as surveying) that would not be expected to cause disturbance to roosting bald eagles. Major ground disturbing activities (such as construction) would require that OTR Corp observe the spatial buffers when bald eagles are present on roosts within ½ mile of project activities. Authorization for periodic visits would be dependent upon the presence of eagles on the roost and require pre-approval by the authorized officer.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM.

**AVIAN-8: Golden Eagle Nest Seasonal Restrictions.** Seasonal restrictions to human encroachment would be applied to all active golden eagle nests (for all activities associated with the project) within ½ mile radius of active nests from December 15 through July 15. An active nest is defined as any nest that is occupied by a raptor during the breeding season, or which has been active in any of the five previous breeding seasons. Many raptors use alternative nests in various years. Thus, a nest may be active even if it is not occupied in a given year. A slight variation could occur where known golden eagle nests and alternative nest sites are surveyed and seasonal restrictions are placed only on those sites where eagles are nesting. Once a nest is initiated, the buffer zone could be modified to protect the specific nest location while allowing for encroachment into other parts of the territory which may house unoccupied alternative nest sites.

**Exceptions:**

- An exception for OTR Corp activities within a nest buffer zone may be granted by the authorized officer if the nest remains inactive after May 20<sup>th</sup> or the eagle pair is known to be nesting in an alternative nest site.
- An exception for OTR Corp activities within a nest buffer zone may be granted by the authorized officer after May 20<sup>th</sup> if the nest is determined to have failed and/or been abandoned. A BLM or CDOW wildlife biologist would make a recommendation to the authorized officer after making a site investigation to determine if the following conditions have been met:
  - Adults eagles have vacated the area (re-nesting is not occurring).
  - Eggs/hatchlings are missing or have been destroyed.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM

**AVIAN-9: Engine Mufflers.** All equipment with combustion engines used in connection with construction activity would be fitted with an approved muffler and spark arrester.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM

**AVIAN-10: Acoustical Screens.** Acoustical shrouds would be used for all construction equipment with combustion engines to the greatest extent feasible.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM

**AVIAN-11: Drilling Noise Reduction.** To reduce noise effects, anchor holes would be drilled vertically whenever design constraints allow.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM

**AVIAN-12: Bird Diverter Replacement.** OTR Corp would conduct weekly monitoring of a representative subset of diverters to identify damaged or missing diverters. This monitoring would occur in conjunction with the cable mortality monitoring discussed below. OTR Corp would immediately replace any fallen or broken diverters.

**Responsible agency:** Implementation - OTR Corp, Monitoring & Enforcement – BLM

**AVIAN-13: Possession of Birds.** If OTR Corp finds any dead eagle or federally listed migratory bird, or injured eagle or federally listed migratory bird, then the FWS Colorado Office of Law Enforcement should be notified immediately (720-982-2777). If other injured migratory birds are located, OTR Corp would notify the FWS Region 6 Migratory Bird Permits Office (303-236-8171) immediately for advice on how to proceed with the injury. If OTR Corp desires to actually possess any dead migratory birds protected under the MBTA, this would require a permit from FWS. Possession of live injured birds would similarly require a permit from the FWS. The FWS Region 6 Migratory Bird Permits Office would need to be contacted to obtain the appropriate permit.

**Responsible agency:** Implementation – OTR Corp, Enforcement and Monitoring – BLM and others.

**AVIAN-14: Project Staff Training.** OTR Corp would train Project personnel on the importance of avoiding and minimizing disturbance to bird habitat.

**Responsible agency:** Implementation - OTR Corp, Enforcement and Monitoring – BLM.

**AVIAN-15: Minimize Trampling.** OTR Corp would be responsible to take measures to minimize trampling by visitor traffic. During exhibition, all pullouts on US 50 within 0.5 miles of any fabric panel site would be closed and vehicles would not be allowed to stop on US 50 within these limits.

**Responsible agency:** Implementation - OTR Corp, Enforcement and Monitoring – BLM.

**AVIAN-16: Preserve Riparian Habitat.** OTR Corp would minimize removal of riparian vegetation within 50 feet of the water's edge on both sides of the river and would reclaim all disturbed areas as soon as practical.

**Responsible agency:** Implementation - OTR Corp, Enforcement and Monitoring – BLM.

**AVIAN-17: No Tree or Snag Removal.** The applicant has committed to no tree removal for the project. Both live and dead (snags) trees are important habitat for birds. All tree damage would be reported immediately to the BLM authorized official. Accidentally damaged or removed trees would be evaluated by a qualified and BLM approved biologist for bird use. Refer to Section 5.5, Vegetation and Plant Communities for additional mitigation measures relating to the protection of trees.

**Responsible agency:** Implementation - OTR Corp, Enforcement and Monitoring – BLM.

### 5.3 AQUATIC WILDLIFE AND HABITAT

Additional design features (Table 2-15) and mitigation recommended for water resources (Section 5.10) and soils (Section 5.11) to reduce sediment levels in the river also would apply to minimizing sediment effects on aquatic species and their habitat.

**AQ-1: Removal of Riparian Vegetation.** No removal of woody riparian vegetation would occur without approval of the authorized officer.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.4 WETLANDS, FLOODPLAINS, AND RIPARIAN HABITAT

Refer to Table 2-15 for additional design features intended to reduce impacts to wetlands and riparian areas.

**WETLAND-1: Environmental Training.** OTR Corp would develop and provide a level and type of environmental training or instructional material appropriate to the job duties of all staff working on all phases of the project: effects of wetland, floodplain, riparian, and native vegetation trampling; cost of restoration; basic weed identification; weed seed transport and life cycle; effects of soil compaction; effects of human waste on plants and water quality; and dust control.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WETLAND-2: Removal of Habitat and Native Vegetation.** Ensure that wetland, floodplain, and riparian habitat and native vegetation clearing occur only on the aboveground portions of the wetland, floodplain, and riparian habitat and native vegetation. Roots and soil would be allowed to remain intact where possible.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WETLAND-3: CDOT Right-of-Way Reclamation.** Reclaim any disturbed areas within the CDOT right-of-way (ROW) in accordance with CDOT standards and CDPHE and CDOT permits.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

## 5.5 VEGETATION AND PLANT COMMUNITIES

The mitigation measures described under Section 5.4, Wetlands, Floodplains, and Riparian Habitat also apply to Vegetation and Plant Communities. Refer to Table 2-15 for additional design features intended to reduce impacts to vegetation. Refer to Section 5.27, Monitoring for additional vegetation monitoring requirements.

**VEG-1: Tree Removal and Avoidance.** The applicant has committed to no tree removal for the project. All tree damage would be reported immediately to the BLM authorized official. Damaged or removed trees will be evaluated by a qualified and BLM approved biologist for bird usage. If excessive tree damage is occurring then it may result in a modification to the approved action or result in a modification to the panel location. If a tree is accidentally removed then replacement tree(s) would be planted at the site or at a nearby suitable location. The species, number, size and location would be determined by the BLM authorized official. Any accidentally removed tree would be disposed of in a method determined by the BLM authorized official. The most likely methods of disposal are transport off site which may require a fuelwood permit, lop and scatter, or chip and scatter. Refer to Section 5.2, Avian Wildlife and Habitat for additional mitigation relating to trees.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VEG-2: Pruning Trees.** After an evaluation by a BLM approved qualified biologist for bird usage, a certified arborist may be allowed to trim tree branches where necessary. Digital photographs would be taken of each tree before and after pruning to monitor the survivability of the affected trees. These photographs would be labeled by their location and provided to the BLM authorized official. If pruning is done in a way that may result in mortality, then a replacement tree(s) would be planted at the site or

at a nearby suitable location. The species, number, size and location would be determined by the BLM authorized official.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VEG-3: Anchors within 15 Feet of Trees.** Anchors would be at least 15 feet from the main trunk or bole of all trees 6 inches and greater in diameter at breast height (DBH), or 8 inches at root collar (DRC) in the case of pinyon pine and juniper, unless an exception is granted by the BLM authorized official. In situations where a 15-foot separation cannot be maintained, a certified arborist would devise appropriate alternative mitigation in the field that maximizes separation and also takes into consideration the age of tree, availability of water, terrain, nature of the soil, and other relevant factors. If this situation arises the BLM authorized official would be notified at least two weeks in advance of any construction or removal activities. No activity requiring mitigation would occur prior to BLM’s review and approval of the arborist’s proposed mitigation.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VEG-4: Cables near Tree Boles or Trunks.** Cables would be kept from touching or bruising the main trunk or bole. If cables are within 5 feet of a bole or trunk, a certified arborist would devise appropriate mitigation in the field to protect the tree from bole or trunk damage (e.g., ¾-inch plywood, Alturnamat® or similar product). If a cable is located within 6 inches of a tree trunk, a product such as an Outrigger Pad would be installed under the supervision of a certified arborist prior to cable installation and left in place until the cables are removed. These tree protection devices would be checked monthly once installed to ensure that they are functioning properly and the results reported to the authorized BLM official. Where trunk or bole protection devices are required, digital photographs would be taken of each tree prior to construction and following removal to monitor the survivability of the affected trees. These photographs would be labeled by their location and provided to the BLM authorized official. If trunk damage has occurred that may result in mortality, then a replacement tree(s) would be planted at the site or at a nearby suitable location. The species, number, size and location would be determined by the BLM authorized official.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**Exceptions.** Any of the above vegetation mitigation (VEG-1 thru 4) may be waived, modified or excepted by the BLM authorized officer if it has been determined that there are no negative impacts to forest health, or recreation, visual, and wildlife resources.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**VEG-5: Seeding.**

A. The seed species mix would be specified by the BLM. The seed mixture and rate would be:

Western Wheatgrass	<i>Pascopyrum smithii</i>	4 lbs/ac
Blue Grama	<i>Bouteloua gracilis</i>	1 lbs/ac
Sideoats Grama	<i>Bouteloua curtipendula</i>	3 lbs/ac
Indian Ricegrass	<i>Achnatherum hymenoides</i>	4 lbs/ac
Sand Dropseed	<i>Sporobolus cryptandrus</i>	1 lbs/ac
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	2 lbs/ac
Columbia Needlegrass	<i>Achnatherum nelsonii spp</i>	<u>2 lbs/ac</u>
		17 lbs/ac

Mountain Mahogany	<i>Cercocarpus montanus</i>	0.5 lbs/ac
Wax Current	<i>Ribes cereum</i>	0.25 lbs/ac

- B. All seed must be noxious weed free and meet certified seed quality. Seed must have a valid seed test, within one year of acceptance date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts). The seed lab results would show no more than 0.5% weed seed for all types of seed, must not contain more than 0.1% *Bromus Tectorum* (cheat grass) seed and the seed lot would contain no noxious, prohibited, or restricted weed seeds according to State seed laws in Colorado.
- C. The seed used would meet Federal Seed Act criteria. Seed may contain up to 2.0 percent of “other crop seed” by weight which includes the seed of other agronomic crops and native plants; however, a lower percent of other crop seed is recommended.
- D. Copies of the seed lab test results, including purity and germination (viability) rate, must be forwarded to the BLM office prior to seed application. If seed does not meet the BLM and State and Federal standard for noxious weed seed content or other crop seed allowances, it would not be applied.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

#### **VEG-6: Disturbed Site Reclamation.**

1. In areas where the topsoil has been removed or more than 50% of native vegetation has been removed or killed by project activities the following action would be taken:
  - a. The sites must be recontoured to the original contour or a contour that blends with the surrounding landform, stockpiled topsoil evenly redistributed and the site re-vegetated.
  - b. Seedbed preparation such as disking, harrowing and/or firming operations would be conducted to reduce soil clods that are greater than 4-inches in diameter, and to provide a seedbed that is firm and friable.
  - c. Seed would be drilled with a drill that is capable of placing the specified seed at the specified rate, at a ½” – ¾” depth. The drill would have an 8-inch or less drill row spacing and be equipped with packer wheels to firm the soil over the drill row. If certain seeds cannot be drilled, they may be dispersed by broadcast.
  - d. Dragging chains behind the drill to cover seed is not an acceptable substitute. Seeding would be completed as soon as seedbed preparation is completed. Seeding would not occur in extremely windy conditions, or when the soil is frozen or wet.
  - e. Areas that cannot be drilled may be broadcast seeded. Hydroseeding is not acceptable. The specific seeding rate in these areas would be doubled. Broadcast seed would be raked, harrowed, or otherwise-covered by soil to a depth of ½”.
  - f. Fertilizer would be applied to all areas that receive seed. Fertilizing can be accomplished by applying a diammonium phosphate fertilizer (18-46-0) at a rate of 300 pounds per acre or spreading aged, weed free manure at 30 tons per acre.
  - g. After seeding has been completed, the application of mulch is required on the seeded areas to protect the seed and conserve soil moisture, which would aid in seedling germination and establishment. The seeded area would be mulched within 24-hours after seeding. The following types of mulch are recommended for 3:1 slopes or flatter:

- i. Certified Weed Free Straw Mulch: Applied evenly at a rate of 4,000 lbs. per acre over the seeded areas. Straw must be crimped in or sprayed with a Guara gum tackifier. Straw must not be either rye or barley and cannot contain cheat grass (*Bromus Tectorum* seed).
  - ii. Wood fiber hydromulch with guara gum tackifier: A standard rate of 2,000 lbs. per acre of hydromulch and 80 lbs. per acre of guara gum tackifier would be appropriate for most projects, unless otherwise specified on the project plans. The operator would spray apply the slurry of wood fiber mulch according to the manufacturer's specifications in a uniform manner over the designated seeded areas. Seed would not be incorporated and applied simultaneously with the hydromulch slurry.
- h. On slopes that are greater than 3:1, excelsior matting would be installed, instead of mulching, following the manufactures installation instructions.
2. In areas where more than 50% of the original native vegetation is still present and viable the same actions would be taken in these locations as above, except seed bed preparation would not take place.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VEG-7: Reclamation Standards.** A successful reclaimed site would be comparable to the pre-disturbed site as far as ecological processes are functioning within a normal range of variability and the native plant community meets the expected functional/ structural groups and composition. Performance expectations for the established vegetation would be based on an optimum ground cover of 40% for the native seed mixture suggested above (not including annuals) along with stabile soil conditions at natural background erosional rates. A fully reclaimed site with the conditions described above would be expected within five years from time of reclamation. If these standards are not reached within the five year period, the applicant would take the appropriate corrective action to fulfill these goals.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.6 NOXIOUS WEEDS AND INVASIVE SPECIES

In addition to the measures presented in Section 5.4, Wetlands, Floodplains, and Riparian Habitat and Section 5.5, Vegetation and Plant Communities, the following mitigation measures are recommended to minimize noxious weed impacts. Refer to Table 2-15 (Vegetation) for additional design features intended to reduce impacts from noxious weeds. Refer to Section 5.27, Monitoring for additional noxious weeds monitoring requirements.

**NOX-1: Weed Inventory.** All sites associated with the project that are expected to have soil disturbing activities would be inventoried for presence of noxious and invasive plant species prior to project installation. The BLM would be responsible for completing this inventory and OTR Corp. would be responsible for funding this inventory. Results of the weed inventory would be compiled into a report that would be supplied to the authorized officer. Noxious weeds include all species listed on the State of Colorado Noxious Weed List. Invasive but not noxious plant species include, but are not limited to: Russian thistle *Salsola tragus*, Kochia *Kochia scoparia* L., Elongated Mustard *Brassica elongate*, etc.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**NOX-2: Weed Treatment.** All initial inventoried noxious weeds would be treated prior to Notice To Proceed. Noxious weeds identified subsequently would be treated within the next growing season and continued throughout reclamation. Treatment of weed infestations identified during inventory and monitoring would utilize the “Herbicide Treatment Standard Operating Procedures and Guidelines” identified in the 2007 *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* p. 2-22 (BLM 2007a). Funding for inventory, monitoring, treatment, and orientation identified above would solely be the responsibility of OTR Corp.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**NOX-3: Equipment and Vehicle Washing.** All equipment and vehicles with potential accumulations of soil, grease or vegetative matter that is to be used in the project installation would be washed off site prior to entering project area. All equipment and vehicles used in areas where noxious weeds have been inventoried, would be washed prior to moving to areas that do not contain the identified species of noxious weeds (equipment may be washed at staging area under this scenario). A map of inventoried noxious weed infestations would be supplied by the BLM to primary contractor. Washing is to remove soil, grease or vegetative mater that may contain noxious or invasive weed seed. Verification that equipment has been cleaned properly would be conducted by an independent contractor who would send monthly reports to the BLM (contractor may not be person or entity tasked with cleaning equipment). Vehicles would include trucks and other highway and rail transport mechanisms.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**NOX-4: Orientation.** Primary contractor would be required to attend an orientation session on noxious weeds prior to project implementation. Orientation would be conducted by Fremont County and BLM weed managers.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

## 5.7 RANGE RESOURCES

**RANGE-1: Range Improvements.** Any fence or range improvements would be protected and kept in functioning condition by the applicant. Removal or modification of any fences, gates, etc. must be approved by the authorized officer. These improvements play a critical role in livestock containment during the authorized grazing periods.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.8 THREATENED, ENDANGERED, AND SENSITIVE SPECIES

Refer to Table 2-15 for additional design features intended to reduce impacts to avian wildlife. Refer to Section 5.2, Avian Wildlife and Habitat for additional mitigation measures relating to special status species.

**TES-1: Bat Disturbance.** Project activities throughout the canyon would begin no earlier than one hour after sunrise and conclude no later than one hour before sunset to minimize impacts to bat species, including Big free-tailed bat, fringed myotis, Townsend’s big-eared bat, and Yuma myotis.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.9 ATMOSPHERE, AIR RESOURCES, AND AIR QUALITY

No mitigation measures were identified. Refer to Table 2-15 for design features intended to reduce impacts to air quality.

## 5.10 WATER RESOURCES

Design features (Table 2-15) and mitigation for soil resources (Section 5.11) intended to reduce erosion would also reduce impacts to water resources. Refer to Section 5.27, Monitoring for additional water resources monitoring requirements.

**WATER-1: Stormwater Management Plan.** The State of Colorado Water Quality Control Division (WQCD) would have regulatory oversight over permit compliance and incorporation of Best Management Practices (BMPs). The Stormwater Management Plan (SWMP) include BMPs to prevent or control erosion and sedimentation, and guidance for the modification and maintenance of BMPs if necessary. These BMPs would include those listed by the EPA for construction site stormwater management and are applicable to the project; in addition, they would be used and installed in accordance with industry standards. If the BLM finds that the BMPs are not effective or otherwise not adequate, the BLM would coordinate with the permitting authority to remedy the situation. The SWMP would be reviewed and concurred by the BLM authorized officer prior to submittal to the WQCD.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**WATER-2: Off-road Activities on Wet Soil.** Off-road travel and off-road drilling activities would cease if 1 inch or more of liquid precipitation occurs over a 5-day period, or if 0.25 inch or more of liquid precipitation occurs during one day. Off-road travel and drilling activities would only resume when soils have frozen or dried below the plastic limit sufficiently to avoid creating ruts deeper than 2 inches, excessive vehicle tracking and compaction, or when approval is obtained from the BLM, landowner, or qualified designated environmental monitoring staff. (Also pertains to Aquatic Wildlife.)

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WATER-3: Spill Prevention, Control and Countermeasure Plan.** A formal Spill Prevention, Control and Countermeasure Plan (SPCC Plan) would be developed by OTR and implemented to address the prevention, control, and countermeasures appropriate to addressing spills of all fuels, lubricants, solvents, or other potential water quality contaminants stored or used in volumes of 55 gallons or more at the proposed Texas Creek staging area or at other locations where such materials are stored or used. The SPCC Plan must be approved by the authorized officer.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WATER-4: Project Activities in the Floodplain.** The temporary Construction Staging Area (CSA) at Texas Gulch near Texas Creek would be located in conformance to Fremont County floodplain regulations, outside the delineated FEMA floodplain and on land surfaces at higher elevations, away from the active alluvial fan/ephemeral drainage setting. If authorized by Fremont County and BLM, crew training activities and temporary project components at Texas Creek may occur within the floodplain.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**WATER-5: Assessment of Slope Stability.** Each anchor site would be assessed visually by a certified engineer for slope instability where applicable. The engineer inspecting the anchor sites would be trained and licensed in Civil/Geotechnical Engineering, and would be further trained to look for signs and evidence of slope instability. If areas of instability are identified, the area would be avoided or a special design would be implemented to avoid disturbance.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**WATER-6: Flood Events.** To the extent required by county floodplain regulations, county floodplain management staff would review anchor elevations and anchor transition frame details in order to confirm their ability to provide adequate clearance of display structures under a major flood event. To the extent required by county floodplain regulations, an emergency plan or action/contingency plan for high flood stage events would be developed and approved in writing by Fremont County and Chaffee County before starting construction.

**Responsible agency:** Implementation, Monitoring & Enforcement – other.

### 5.11 SOIL RESOURCES

Refer to Table 2-15 for design features intended to reduce impacts to soils and geology.

**SOIL-1: Erosion and Sedimentation.** Erosion and sedimentation, including the collection and disposal of excavated soil generated from drilling for anchor sites, would be properly addressed in the SWMP. Excavated soil would be collected and disposed of outside of the Project Area. (Also pertains to Aquatic Wildlife.)

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**SOIL-2: Topsoil Disturbance.** Topsoil disturbance would be properly addressed in the SWMP, including protection of topsoil from wind and water erosion, replacement of topsoil, and other applicable BMPs. (Also pertains to Aquatic Wildlife.)

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**SOIL-3: Erosion and Sedimentation.** As safety allows, rubber tired or tracked equipment would travel perpendicular to the slope to discourage the creation of flow pathways to the river. (Also pertains to Aquatic Wildlife.)

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**SOIL-4: Protection of Riparian and Wetland Soils.** Rubber mats would be used by heavy equipment when working in riparian and wetland areas.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

### 5.12 GEOLOGIC SUBSTRATE AND TERRAIN

Refer to Table 2-15 for design features intended to reduce impacts to soils and geology. Refer to Section 5.27, Monitoring for additional geologic hazard monitoring requirements. Mitigation measure WATER-5 is also applicable to Geologic Substrate and Terrain.

**GEO-1: Patching of Anchor Holes in Bedrock.** Proper patching would include thoroughly preparing the rock pocket to be grouted, including removal of loose rock fragments or other debris to result in a clean, intact rock surface to promote proper, long-term bonding of the grout to the natural rock. This would minimize the potential for “jacking” the grout plug out of the ground over time as a result of seasonal freeze-thaw activity.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**GEO-2: Mineral Interests.** Prior to work being initiated in an area of the project, OTR would determine if active mining claims are present in any of the work areas, including any new claims not included in the BLM GIS referenced in Chapter 3.0. If work on active claims is required, OTR would contact the claimant to negotiate terms of any agreement required by the claimant regarding disturbance to the mineral resource (including removal or covering of native materials) and/or mining operations (including interference with access and noise), and reclamation of disturbed areas. OTR would determine if access or haulage impacts may occur to BLM mineral materials contract holders in the vicinity of the project. If impacts are possible, OTR would coordinate with the contract holders to avoid or minimize the impacts to the extent possible.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

### 5.13 ENVIRONMENTAL JUSTICE/PROTECTION OF CHILDREN

No mitigation measures were identified.

### 5.14 SOCIOECONOMICS, SOCIAL IMPACTS

No mitigation measures were identified.

### 5.15 PUBLIC HEALTH AND SAFETY

Refer to Table 2-15 for design features intended to reduce impacts to public health and safety.

**PHS-1: River Safety.** If the conditions at an active installation or removal site are deemed unsafe by Swiftwater Rescue Technicians Level 1 Certified (SRT-1s) or construction personnel, recreation users on the river would be restricted from entering construction areas to avoid potential injury until after the area has been deemed safe and passable. Protocols would be developed in the event management plan.

**Responsible agency:** Implementation, Monitoring & Enforcement – OTR Corp, BLM and other.

**PHS-2: Pedestrian Safety.** Pedestrian access would be restricted along US 50 in the vicinity of the panels during blossoming, exhibition, and removal of fabric panels.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**PHS-3: Communication Plan.** A communication plan would be created as part of the Event Management Plan. This communication plan would ensure that adequate facilities, equipment and procedures have been established for efficient communication between OTR Corp personnel, BLM, OTR Unified

Command, law enforcement and emergency response personnel throughout the term of the project. This plan would pay special attention to the blossoming, exhibition and fabric panel removal project phases.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**PHS -4: Digital Trunked Radios.** The communications needs of the project would not be fully detailed until after the completion of the communication plan. The general need for additional communication equipment has been identified as a project need and is recognized by OTR Corp. The need for additional Digital Trunked Radios to be used by law enforcement and emergency response personnel has been defined as one potential need. OTR Corp would be responsible for the funding of any additional communication facilities and equipment, such as Digital Trunked Radios, identified in the communication plan as necessary for efficient project communications.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**PHS-5: Ropes.** Only high visibility floating ropes would be utilized for all project activities that extend across the river. OTR Corp would recover all ropes, pieces of ropes, and cables from the river and project area.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**PHS-6: Debris.** OTR Corp would recover all project-related material, equipment, and debris from the river and project area site.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

## 5.16 TRANSPORTATION AND TRAFFIC

Refer to Table 2-15 for design features intended to reduce impacts to transportation and traffic. Refer to Section 5.27, Monitoring for additional traffic monitoring requirements.

**TRANS-1: School Bus Stops.** Safety precautions at school bus stops would be provided by OTR Corp or law enforcement personnel during the exhibition phase of Alternative 1d.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-2: U-turn Opportunity near Texas Creek.** A new legal, signed, and flagger controlled u-turn opportunity would be provided by OTR Corp within 1 mile west of the Texas Creek parking lot entry. The facility would be located in a three-lane section, with the center lane being used as a left turn lane. Vehicles seeking a legal u-turn would enter the center lane and turn left across eastbound traffic into a turnaround area. A traffic signal would manage queues in the left turn lane and any resulting queues for eastbound motorists to shorten the stacking distance in the center/left turn lane. This u-turn opportunity would be designed to reduce illegal u-turns on residential streets, other roads, and pullouts immediately west of Texas Creek. This measure, in conjunction with VMS, would provide motorists an opportunity to make u-turns after driving past the Texas Creek panels, and especially if the Texas Creek parking area entry is closed (Figure 5-1).

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**TRANS-3: Traffic Control Beyond the Project Corridor During the Peak Period of the Peak Day During Exhibition.** As to be developed in the Event Management Plan (EMP), temporary traffic control at the US 50/US 291, US 50/US 285, and US 50/SH 115 intersections would be provided by OTR Corp during the exhibition phase on Saturday and Sunday between 10 a.m. and 4 p.m. Temporary adjustments to traffic signals in Cañon City and Salida may be needed to increase through movement efficiency during each signal phase during the exhibition phase on Saturday and Sunday between 10 a.m. and 4 p.m. Revised signal timing plans for all signalized intersections in Cañon City and Salida would be provided for CDOT review prior to the exhibition period. If other traffic control measures are needed, they would be funded by OTR Corp and developed in the EMP. All traffic control measures would also be subject to CDOT permitting.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-4: Traffic Control.** A CDOT Method of Handling Traffic Plan would be required from OTR Corp.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

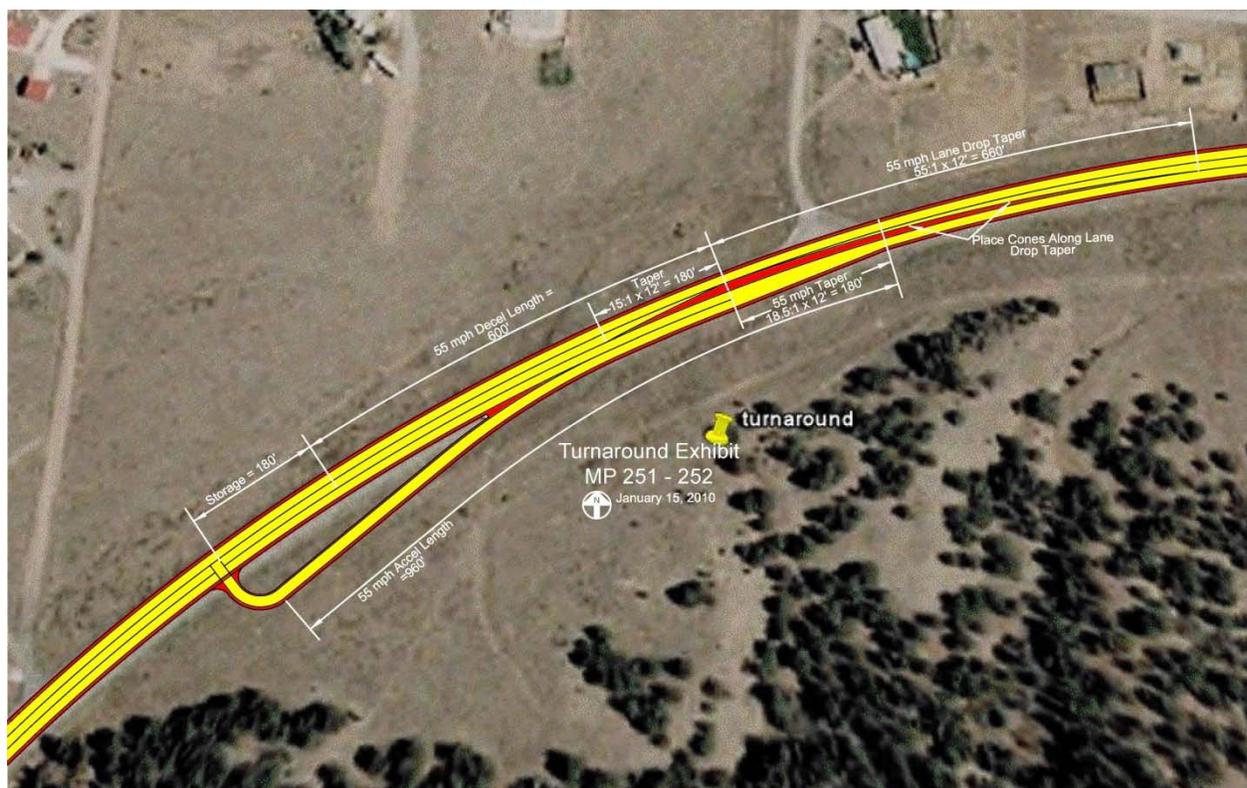


Figure 5-1. Turnaround Exhibit, MP 251-252

**TRANS-5: Adaptive Traffic Management.** Active management, policies, and protocol would be identified by the OTR Unified Command in the event management plan, based on possible differences between actual and planned vehicle travel, and would be in place to allow for immediate decision making and deployment of traffic management techniques. This flexibility would respond to the potential for error in the visitation estimates and modeling results inherent in a special event of this kind. Funding for these additional measures would be the responsibility of OTR Corp.

**Responsible agency:** Implementation – OTR Corp, Monitoring & Enforcement – BLM and other.

**TRANS-6: Transportation Demand Management.** A Transportation Demand Management (TDM) plan would be created by OTR Corp for the selected alternative and reviewed and approved by CDOT prior to the issuance of a Notice to Proceed. The TDM plan would include measures to apply to during the exhibition to shift anticipated peak period visitation to off-peak periods, and to increase carpooling (personal vehicle occupancy rates) and the use of vans, shuttles, and buses. TDM outreach efforts and associated campaigns would include sending targeted messages via traditional media (television, radio, newspapers, project website, etc.) and new social media (YouTube, Facebook, Twitter, and newer tools that emerge by 2014), with the goal of reducing peak period travel delays and enhancing visitor experience.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-7: Posted Minimum Speed in Panel Viewing Areas.** Signage providing speed maximums and minimums would be provided at OTR Corp expense in all panel viewing areas as approved by CDOT. Minimum speeds in panel areas would be no less than 35 mph.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-8: Private Roadways.** Signs would be provided by OTR Corp along US 50 at private access roads, private driveways, and county roads primarily serving private property. These signs would make it clear that these routes are for local and private access only, thereby discouraging their use by visitors for travel, stopping, parking, and turning around.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-9: Overweight and Oversized Vehicles.** Vehicles with overweight and/or oversized loads, and vehicles hauling hazardous materials would be restricted from the Project Area on Saturday and Sunday during the exhibition. Associated signage would be placed at OTR Corp expense at key locations to warn truckers of delays and to identify alternative routes for restricted vehicles.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-10: Closure of US 50.** Only one lane of US 50 would be allowed to be closed at a time at any one location. One lane must remain open at all times.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-11: Access to Roadways, Parking, AHRA Sites, and Pullouts.** Traffic control would be required to be provided by OTR Corp at each work zone to control access to and from adjacent roadways, driveways, parking areas, and turnouts. Formal AHRA recreation sites would remain open during all construction activities. Informal pullouts and roadside parking areas would be closed within the work zone.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-12: Vehicle Delay Time.** No more than 15 minutes delay time per vehicle would be allowed at each work zone at any one time.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – other.

**TRANS-13: Railroad Access.** OTR Corp would secure the right of railroad access for the BLM, all OTR Unified Command members, and monitoring staff for the life of the project.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

## 5.17 HAZARDOUS MATERIALS

**HAZARDOUS-1: Nontoxic Paints and Finishes.** Paints and finishes used by OTR Corp would be nontoxic to avoid leaching impacts to soil and water quality.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**HAZARDOUS-2: Spill Notification.** In the event of any release of hazardous materials, OTR Corp or its contractor would notify the Colorado State Patrol and Pueblo Interagency Dispatch Center immediately following discovery.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**HAZARDOUS-3: Materials/Waste Management Plan.** OTR Corp would prepare an overall management plan for hazardous substances, petroleum, oil, lubricants and wastes. The plan would address procedures for storage, transport, transfer, spill prevention, spill response, waste disposal, monitoring and any other aspect of the project that involves these types of materials or wastes. This plan would be tied to phases of work, to make it more applicable and usable. OTR Corp would be responsible for preparing and implementing the plan. The plan would be provided to BLM for review and acceptance prior to the applicable phase of work.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

## 5.18 WASTE (NONHAZARDOUS)

Mitigation measure HAZARDOUS-3 is also applicable to waste.

**NON-HAZARDOUS-1: Notification Requirements for Releases.** Any release of non-hazardous waste by OTR Corp or its contractors would be reported to the authorized officer and cleaned up and disposed of as directed.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.19 REALTY AUTHORIZATIONS AND LAND USE

**REALTY-1: 2920 Permit Required.** Prior to any OTR project related activities on Federal lands an approved 2920 Permit would be required by the BLM.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**REALTY-2: Notice to Proceed Required.** No project activities would be initiated by OTR Corp on Federal lands until a Notice to Proceed has been issued by the authorized officer. Several of the mitigation measures contained in this Chapter 5.0 would require OTR Corp to provide additional reports, plans or documentation prior to certain project activities commencing. In addition, certain mitigation measures require specific steps to be completed prior to commencing specific project activities. The issuance of separate Notice to Proceed which expressly authorizes limited or specific activities may be considered by the authorized officer.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**REALTY-3: Strict Liability Applied.** In accordance with 43 C.F.R. 2920.7(f)(1) OTR Corp would be held to standards of strict liability.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM.

**REALTY-4: Insurance Required.** In order to protect Federal property and economic interests, OTR Corp would be required to provide insurance for the life of the project naming the United States Department of the Interior – BLM as an additional insured party. Insurance requirements would be based upon the BLM’s Special Recreation Permit General Guidelines for Minimum Insurance Requirements under the High Risk category and with additional specific requirements defined in the 2920 Permit. The insurance provider would be required to provide the BLM with 30-day advanced notification prior to cancellation.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**REALTY-5: Texas Creek Staging Area Plan of Development Required.** A Plan of Development (POD) for the proposed Texas Creek Staging Area would be required from OTR Corp, to be approved by the BLM authorized officer, prior to any project activities occurring at this location. The specific requirements of the Plan of Development would be detailed in the 2920 Permit and would generally include all local building permits, engineered site plans for all facilities and improvements to be located at Texas Creek; access road design, temporary use areas, any associated rights-of-way needed for power or water, size description of all improvements, material and equipment storage sites, fencing description and location, list of any expected industrial waste and toxic substances. The POD would also include plans for removal of all structures and improvements and shall include a complete stabilization/reclamation plan for all OTR permitted and disturbed areas.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.20 RECREATION RESOURCES

Refer to Table 2-15 for design features intended to reduce impacts to recreation resources. Refer to Section 5.27, Monitoring for additional recreation resources monitoring requirements.

**REC-1: Closure of Informal Pullouts.** In the vicinity of a lane closure, only one informal pullout would be occupied by OTR Corp project vehicles at any given time during installation and removal, for a length of two days at a maximum. No OTR Corp project vehicles would occupy informal pullouts outside the vicinity of lane closures.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-2: River Spotters.** All river spotters would be Swiftwater Rescue Technicians Level 1 Certified (SRT-1s). Four SRT-1s, provided by OTR Corp, would be present at each active installation or removal location when recreational or commercial boating is occurring during the installation and removal of cables and fabric panels, blossoming, and fabric panel removal (de-blossoming). Boating safety zones would be designated by OTR Corp, in consultation with State Parks and river outfitters, along the river at each panel location to allow boats to eddy out and access the riverbank for safety purposes. SRT-1s would be equipped with both signage and public address system to notify oncoming boat traffic of potential construction activities. SRT-1s would notify the cable pulling operation foreman via radio regarding any relevant information about boat traffic. Two SRT-1s would be located at least 200 yards upstream; exact locations would be dependent on a locale that can support safe stopping of boaters if required. The first upstream SRT-1 would be located at the primary stopping point for boats. The

second upstream SRT-1 would be located at the secondary or “back-up” stopping point for boats. Two SRT-1s would be located downstream of the active installation location on opposite riverbanks. The purpose of the SRT-1s is to perform rescues or otherwise ensure boater safety.

The number of required SRT-1s may be reduced by the BLM authorized officer if boating use levels are low and installation methods demonstrate a minimal level of safety concerns, as determined by Colorado Department of Parks and Outdoor Recreation.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-3: AHRA Sites.** All AHRA developed recreation sites, would remain open for recreational access during exhibition. Some of these sites are heavily used boating put-in and take-out points, so maintaining access would reduce impacts to boating, angling, and other recreational activities.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**REC-4: Trash Disposal and Sanitation at all Developed Recreation Sites.** Additional trash and sanitation disposal units, including bear proof trash cans and dumpsters, would be provided by OTR Corp at all developed recreation sites in the project area during the period that includes blossoming, exhibition, and fabric panel removal. Developed recreation sites include AHRA’s Salida East, Point Barr, Rincon, Vallie Bridge, Texas Creek, and Five Points; Maytag dispersed camping area; Texas Creek Travel Management Area; and any dispersed camping areas that may experience increased use. Additional trash and sanitation facilities may be identified in the event management plan.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-5: Project Employees Camping in the Project Area.** Project (OTR) employees would be prohibited from inhabiting developed or dispersed camping areas in the project area without prior approval from Colorado State Parks and the BLM authorized officer.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-6: Commercial Boat Rationing and Private Boat Permitting.** OTR Corp would be required to develop, with Colorado State Parks and BLM guidance and approval, both an OTR-related Private Boat Permit System and an OTR-related Commercial Boat Allocation system for blossoming, exhibition, and fabric panel removal. Temporary, event-only capacities (OTR Commercial Boat Rationing Plan and OTR Private Boat Permit System, plan specifics to be defined in the Event Management Plan) would be in place during blossoming, exhibition, and fabric panel removal (4-6 weeks total) to limit the number of boats on the river during the event. The commercial boat capacities and associated rationed boats would not count towards establishing rationed days for future years. Likewise, the private boat capacities and associated private boats would not count towards establishing a private boat permit system in future years.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-7: Installation during FIBArk.** No installation activities or closure of informal pullouts would occur upstream of Cotopaxi, including the County Line, Tunnel, and Vallie Bridge panel sites, during the FIBArk event.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-8: Hunting Access and Parking.** OTR Corp personnel would avoid use of parking areas utilized by CDOW bighorn sheep hunting license holders to ensure parking and access to preferred hunting sites in the project area during open bighorn sheep hunting season during all phases of the project. OTR Corp would work with CDOW and hunting license holders to determine which parking areas would be avoided.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**REC-9: Texas Creek Travel Management Area.** Access to the Texas Creek OHV area would not be restricted, including railroad crossings, as a result of project activities during any phase of the project. This would ensure access for trail use, camping, and other recreational uses.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.21 VISUAL/AESTHETIC RESOURCES

Mitigating measures were identified for all adverse contrasts that can be reduced. Refer to Table 2-15 for additional design features intended to reduce impacts to visual resources.

**VISUAL-1: Texas Creek Staging Area.** During installation and removal, equipment storage and contractor parking would be screened from US 50 and Arkansas River views through site layout and/or other screening methods. The warehouse/office building would be sited so that visibility from the Arkansas River and US 50 is reduced.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VISUAL-2: Exterior Treatment of Texas Creek Warehouse and other Temporary Buildings.** An exterior treatment plan would be provided by OTR Corp and approved by the BLM, State Parks, and Fremont County as part of local building permit approvals. The purpose of the exterior treatment plan would be to (a) minimize visual intrusion and contrast by blending with the landscape; (b) ensure colors and finishes do not create excessive glare; and (c) use colors and finishes that are consistent with local policies and ordinances. The plan would include a set of color brochures or chips for all paint or finishes proposed for each building and fencing. All facilities would use non-reflective and non-glare paints on exterior of project buildings, signage, and structures. Colors must be identified according to the BLM standard environmental colors or equivalent universal designation system.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**VISUAL-3: Nighttime Lighting.** Nighttime lighting would only be allowed for security and safety purposes at the Texas Creek staging area, or as approved by the authorized officer. Lighting mitigation would include the following measures:

- Nighttime lighting would be manually controlled and used only when the site is actively occupied, or be motion activated if needed for safety and security.
- Exterior lighting would be positioned to limit light spill beyond the facility or construction footprint.
- Light would be screened, shielded, and downcast, with no exposed bulbs.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**VISUAL-4: Restoration of Exposed Bedrock.** Prior to restoring exposed bedrock areas (per Table 2-15), OTR Corp would fill one test anchor point in each panel area for BLM inspection. If color contrasts are unacceptable in anchor locations or on rock faces scarified from equipment, OTR Corp would apply a custom colorant to the mortar mix to match the coloration of the surrounding bedrock.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## **5.22 WILD AND SCENIC RIVERS**

No mitigation measures were identified.

## **5.23 WILDERNESS AND SPECIAL MANAGEMENT AREAS**

No mitigation measures were identified.

## **5.24 SOUND RESOURCES AND NOISE**

Refer to Section 5.2, Avian Wildlife and Habitat for noise mitigation measures relating to avian impacts. Refer to Table 2-15 for design features intended to reduce impacts to sound resources.

## **5.25 HISTORIC PROPERTIES AND NATIVE AMERICAN RELIGIOUS CONCERNS**

Refer to Table 2-15 for design features intended to reduce impacts to historic properties. Refer to Section 5.27, Monitoring for additional cultural resource monitoring requirements.

A Programmatic Agreement (PA) developed by consulting parties in the Section 106 process addresses potential indirect and cumulative adverse effects, and lays out a process for any discoveries during the two-year period that is needed for pre-construction, construction of the display, the display period, and the removal period. (See Appendix H for the PA) A combination of fencing and an intense monitoring program would prevent possible indirect effects, and possible direct effects have been eliminated by project re-design. The PA also contains provisions for discoveries, and procedures to be followed in the event that ground-disturbing mitigation planned by other programs would occur either inside or outside of the APE. In the event that circumstances require adjustments to the PA stipulations, procedures for amendments are identified in the document.

BLM has consulted with three Ute tribes, as well as 13 Plains tribes. The tribes have not expressed any concerns regarding sacred sites. No design mitigation measures to address impacts, pursuant to National Historic Preservation Act and other relevant historic preservation laws and regulations, along with the American Indian Religious Freedom Act and Executive Order 13007 (entitled “Indian Sacred Sites”) are necessary.

## 5.26 PALEONTOLOGICAL RESOURCES

**PALEO-1: Vertebrate Fossil Discovery.** If any vertebrate fossils are discovered during operations, OTR Corp would immediately cease activities in the immediate vicinity and notify the BLM. A BLM-approved paleontologist, hired by OTR Corp, would evaluate or have evaluated such discoveries and would notify OTR Corp what action would be taken with respect to such discoveries.

In the event vertebrate fossils are identified and an adverse affect is unavoidable, OTR Corp would hire a BLM-approved paleontologist to produce a treatment plan approved by the BLM authorized officer.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**PALEO-2: Fossil Recovery.** Any fossils recovered during the assessment of paleontological resources would be prepared in accordance with standard professional paleontological techniques by a BLM-approved paleontologist hired by OTR Corp. The fossils would be curated in a BLM-approved facility. A report on the findings and significance of the salvage program, including a list of the recovered fossils, would be prepared by a BLM-approved paleontologist, hired by OTR Corp, following completion of the program. A copy of this report would accompany the fossils, and a copy would be submitted to the BLM authorized officer.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**PALEO-3: Impacts to Fossils.** During installation and removal, OTR Corp would be responsible for any mitigation. Direct impacts to fossil resources would be mitigated as described in the Potential Fossil Yield Classification (PFYC) (Instruction Memorandum No. 2008-009 or its successor). If an area classified as Class 4 or Class 5, per BLM IM No. 2008-009, an assessment of possible impacts to bedrock units must be made. If the proposed action would not penetrate the protective cover, a pre-work survey or monitoring during the activity may not be necessary.

Class 4 formations are identified in the vicinity of the Fremont Road Information center and within the Colorado Group Formations at the Parkdale section.

Information about ground-disturbing activity in the Fremont Road Information area is insufficient to determine whether the Class 4 Morrison Formation would be penetrated during preparation for the event. The question also remains as to whether the project would include the Colorado Group Formations at the Parkdale section due to structural complexities within the formation. However, disturbance in either area has not been eliminated from the proposal, therefore, if ground disturbing activities are to take place in either section a pre-work survey would be conducted by a BLM approved Paleontologist that is hired by the OTR Corp, and based on the consultants' recommendations for further mitigation or locality avoidance, on-site monitoring may not be needed.

At the Fremont Road Information Center the surface owner may elect to waive these recommendations.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

## 5.27 MONITORING

**Bighorn Sheep Monitoring.** As set out in the CDOW Bighorn Sheep Mitigation Prospectus (Appendix G), three bighorn sheep monitoring sites would be established: one site in the eastern portion of the

Project Area, immediately west of Parkdale panel locations, that is planned to receive habitat treatment; a second site in the area east of Texas Creek where a second set of panels would be located; and a third site in a portion of the canyon where no fabric panels would be installed (Coaldale-Cotopaxi). Sites one and two would allow monitoring of sheep responses in impacted panel areas with and without initial habitat mitigation; site three would serve as a control area. CDOW would be responsible for that portion of the Prospectus entitled: Monitoring. OTR Corp would fund the bighorn sheep monitoring program.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**Bald Eagle Winter Monitoring.** OTR Corp would conduct monitoring of bald eagle winter roosts whenever project work activities would occur within ½ mile of known winter roosts to determine if they are active. While conducting this monitoring, OTR Corp would document numbers of eagles using these areas and time periods when eagle use is concentrated. This monitoring would occur a few days (*i.e.*, 2 to 7 days) before Project activities are scheduled to occur within ½ mile of known bald eagle winter roosts to determine whether or not the winter roost is active. If the monitoring indicates that the winter roost is active, OTR Corp would comply with the CDOW recommendations for spatial and temporal buffers for bald eagles, as identified above. For the purpose of this mitigation “known” winter roosts include those winter roosts documented to exist in the Project Area as of May 2011. All eagle monitoring would be conducted by a BLM approved qualified biologists at an appropriate distance, such that the monitoring does not disturb eagles.

**Responsible agency:** Implementation – OTR Corp Monitoring & Enforcement – BLM.

**Golden Eagle Nest Monitoring.** OTR Corp would conduct monitoring of all known golden eagle nest sites within 1 mile of any new ground disturbance areas associated with the OTR Project (*e.g.*, the 8 fabric panel areas and the Texas Creek Staging Area). When conducting this monitoring, OTR Corp would document the occupancy, productivity and success of the nests. Determining these parameters would require multiple visits spaced out sufficiently over the golden eagle nesting season: nests would require a minimum of 3 nest site visits and a maximum of 6-10 nest site visits per season to document occupancy, productivity and nest success. This monitoring would start in 2012 and continue until the end of the nesting season of the final project year. For the purpose of this mitigation “known” golden eagle nest sites include those nest sites documented to exist in the Project Area as of May 2011. All eagle monitoring would be conducted by BLM approved qualified biologists at an appropriate distance, such that the monitoring does not disturb eagles.

**Responsible agency:** Implementation – OTR Corp, Monitoring & Enforcement – BLM.

**Bird Mortality Monitoring.** OTR Corp would conduct monitoring for migratory bird mortality/injury for the entire period in the year of the exhibition when project infrastructure (cables, anchor frames, fabric panels, etc.) would be in place, approximately 7 months.

**Responsible agency:** Implementation – OTR Corp, Monitoring & Enforcement – BLM.

**Cable Mortality Monitoring.** OTR Corp would conduct monitoring of a statistically significant sample of the cables for the full time period when the cables are installed. Cable monitoring would begin when the first cable is installed and would increase progressively as more cables are added. The cable mortality monitoring would occur 3 times per week. OTR Corp would begin the monitoring surveys 30 minutes prior to sunrise and would complete all monitoring during daylight hours in favorable weather conditions. OTR Corp would adjust monitoring when inclement weather (*i.e.*, heavy rain, snow, fog, high winds, etc.) occurs. OTR Corp would monitor the first day after inclement weather passes. OTR Corp

would document any migratory birds found dead/injured with digital cameras and record location coordinates with GPS units. All cable-mortality monitoring would be conducted by BLM approved qualified biologists on foot and searching visually (including with binoculars).

**Responsible agency:** Implementation OTR Corp, Monitoring & Enforcement – BLM.

**Bird Mortality Monitoring.** OTR Corp would conduct beach-bird surveys (surveys along both sides of the Arkansas River to detect carcasses of dead birds that fell into the water and later washed ashore). The area surveyed during the beach bird surveys would be all 5.9 miles of the 8 fabric panels, plus additional area downstream from the 8 fabric panel areas (1 mile for all panel areas except Parkdale; where the downstream area would be 2 miles), for a total of about 15 miles of sample area. This sample area would be divided up into 100 yard segments and OTR would survey a statistically significant sample of these segments. These surveys would be conducted at least 2 times per week. Monitoring would be weighted so that areas immediately downstream of fabric panels are monitored more frequently. Monitoring would be scheduled for days after inclement weather.

**Exception:**

OTR Corp's ability to conduct monitoring on both sides of the river may be limited by accessibility. When it is not feasible to conduct monitoring on the highway side, OTR Corp would conduct monitoring on the railroad side of the river, by visually surveying the highway side of the river with spotting scopes and binoculars.

**Responsible agency:** Implementation – OTR Corp, Enforcement and Monitoring – BLM.

**Fabric Panel Monitoring.** During the Exhibition period, when the fabric panels are in place, OTR Corp would monitor the fabric daily for any evidence of migratory bird entanglement, cable strike, injury, or possible crippling loss. A BLM approved qualified biologists hired by OTR Corp would carry out this task and would follow a standard protocol approved by the authorized officer.

**Responsible agency:** Implementation – OTR Corp, Enforcement and Monitoring – BLM.

**Documentation of Bird Mortality.** OTR Corp would document all migratory bird carcasses according to FWS recommendations. If/when OTR Corp finds any injured migratory birds, migratory bird carcasses, eagle carcasses, and/or Federally listed bird carcasses, OTR Corp would follow FWS recommendations for providing notice to the FWS. OTR Corp would photo-document all migratory bird carcasses found using GPS coordinates to validate time of detection and carcass location. OTR Corp would mark each carcass location with a numbered, colored flag where carcass retrieval may be attempted but where scavengers may remove a carcass and the site needs to be revisited. Colored flags should be promptly removed after they have served their purpose. OTR Corp would attempt to determine the species for each bird killed. All migratory bird mortality monitoring results would be fully documented and reported to the FWS Colorado Ecological Services Field Office and the Region 6 Migratory Bird Management Office.

**Responsible agency:** Implementation – OTR Corp, Enforcement and Monitoring – BLM and others.

**Vegetation Monitoring.** A long term vegetation reclamation monitoring plan would be developed and implemented by OTR Corp. The monitoring plan would be approved by BLM prior to the issuance of a Notice to Proceed. Monitoring for reclamation success would, at a minimum, include vegetation composition, cover, and soil stabilization. The plan would include providing annual reports to the BLM authorized officer at the end of each growing season until the reclamation goals are achieved.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**Noxious Weeds.** Monitoring for new infestations of noxious and invasive plant species would occur during the spring and fall during the project installation and until reclamation goals have been achieved (see section 5.5 for mitigation related to reclamation). All inventory and monitoring for noxious and invasive plant species and treatments of identified infestations would be the responsibility of the BLM Royal Gorge Field Office. Funding for inventory, monitoring, treatment, and orientation identified above would solely be the responsibility of OTR Corp.

**Responsible agency:** Implementation Monitoring & Enforcement – BLM and other.

**Stormwater Management Plan Monitoring.** OTR Corp, as the Stormwater Construction Permittee, would be required to inspect and monitor compliance with the Stormwater Management Plan (SWMP) and would do so through the project director or a qualified stormwater consultant. The State of Colorado Water Quality Control Division (WQCD) would have regulatory oversight over permit compliance and BMPs.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**Geologic Hazards.** OTR Corp would have a qualified specialist conduct monitoring for direct impacts in high hazard geologic areas, due to OTR Corp activities that involve ground vibration or other similar effect that could affect formation stability. This monitoring would occur before, during and after the activity. The monitoring would take place in already identified areas that are considered high hazard for rockfalls and rockslides. Results of this monitoring would be communicated to the BLM authorized officer immediately, if there are any potential hazards. OTR Corp would be responsible for any geologic hazard damages resulting from construction activities.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.

**Traffic Monitoring.** As part of the Method of Handling Traffic Plan to be developed by OTR Corp, actual traffic volumes would be monitored during blossoming, exhibition, and fabric panel removal. The monitoring program would report actual traffic counts relative to the EIS modeling and effects analysis results. The OTR Unified Command operations center would have temporary travel demand monitors placed throughout the exhibit corridor to determine vehicle progression speeds and volume to capacity ratios for individual lanes. The OTR Unified Command operations center would be able to call out law enforcement and emergency response personnel to respond to identified problems and update VMS boards.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**Monitoring of AHRA sites.** Restrooms, parking lots, and other facilities at AHRA sites would be monitored by OTR Corp, State Parks, and BLM. OTR Corp would provide additional water, sanitation, and parking control if the level of visitor demand for these facilities exceeds capacities.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**Monitoring at Vallie Bridge.** The Vallie Bridge AHRA site would be monitored by OTR Corp, State Parks, and BLM during exhibition to maintain parking and access for recreational users at the site. Adequate parking would remain available for boating, angling, and other permitted uses at Vallie Bridge.

**Responsible agency:** Implementation, Monitoring & Enforcement – BLM and other.

**Monitoring of Dispersed Camping.** OTR Corp would provide funding for additional agency personnel as determined by BLM and permitting agencies to monitor dispersed camping on public lands during blossoming, exhibition, and fabric panel removal for compliance with applicable land use regulations.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM and other.

**Cultural and Historic Resources Monitoring.** As provided in the Programmatic Agreement between BLM, SHPO, the Advisory Council on Historic Preservation, and OTR Corp, OTR Corp would furnish a monitor with a BLM Cultural Resource Use Permit during the installation phase of construction near certain previously identified sites. Monitoring would be necessary at all times when ground-disturbing activities (such as anchor installments) occur, and when work within 100 feet of the historic property boundary would involve extensive use of the access routes. BLM would also conduct monitoring at its discretion.

**Responsible agency:** Implementation – OTR Corp; Monitoring & Enforcement – BLM.