

SECTION 01 35 00
ENVIRONMENTAL PROTECTION AND SPECIAL CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes:
 - 1. Wildlife protection.
 - 2. Other environmental protection measures.

1.02 DEFINITIONS

- A. Contracting Officer: Includes the Government Contracting Officer (CO).

1.03 SUBMITTALS

- A. Spill Prevention and Response Plan: After Contract Award and before the Pre-Construction conference, submit for informational review, a Spill Prevention and Response Plan. The Contracting Officer will review the proposed Plan. If the plan requires any revisions or corrections, the Contractor shall resubmit the Plan within 10 days. No progress payments will be made until the Plan is accepted.

PART 2 PRODUCTS

2.01 SPILL PREVENTION AND RESPONSE PLAN

- A. The Plan shall be written to comply with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), other federal and local requirements, and Project requirements.

PART 3 EXECUTION

3.01 WILDLIFE PROTECTION REQUIREMENTS

- A. All areas to be disturbed shall have boundaries flagged by the Contractor before beginning the activity, and all disturbance and Project activities shall be confined to the flagged areas. Disturbance outside flagged areas is prohibited.
- B. All Project vehicles shall be driven at speeds within posted speed limits on existing roads and shall not exceed 20 mph within Project boundaries.

- C. Project personnel shall exercise caution when commuting to the Project area and obey speed limits to minimize any chance for the inadvertent injury or mortality of species encountered on roads leading to and from the Project Site.
- D. Light and heavy construction equipment will not be used within 0.5 mile from Mexican spotted owl nest/roost sites during the owl breeding season (March 1 to August 31); NPS will conduct surveys and specify zones prior to March 1st.
- E. The NPS will monitor incidental take resulting from the selected action and report the findings to the U.S. Fish and Wildlife Service (USFWS).
- F. Grand Canyon National Park's (Park) Parkwide Spill Response Plan will be used by Park employees and contractors to prevent potential poisoning of wildlife and soil and water contamination.
- G. Project Sites will be cleaned up at the end of each day the Work is being conducted (e.g., trash disposed of/secured appropriately and scrap materials picked up) to minimize the likelihood of California condors visiting the Site. Park wildlife program staff will conduct periodic spot checks to ensure adequate Project clean-up measures are being appropriately undertaken.
- H. Trash and recycling receptacles and all dumpsters will be wildlife-proof certified and will be tightly covered to avoid wildlife access.
- I. Wildlife will not be fed or approached.
- J. Project staff are to avoid any interaction with condors and to immediately contact Park wildlife program staff or Park dispatch if condors visit a Project Site.
- K. If condors visit a Project Site, Project activities will cease until the condors leave on their own or until techniques, such as hazing, are employed by permitted Park personnel that result in the condors leaving the area.
- L. Project staff shall comply with the Migratory Bird Treaty Act (16 United States Code 703). Any active bird nest shall be left in place and undisturbed until the young hatch and depart. Vegetation clearing shall be avoided to the greatest extent possible during the primary nesting season between April 1 – August 31. If vegetation clearing must occur within the primary nesting season, surveys for the active nests shall be conducted by a qualified biologist. Vegetation clearing within the primary nesting season shall only be allowed after the qualified biologist determines that no nests are present or they are inactive with approval from Contracting Officer. If a nest is found, construction activity and vegetation removal will not occur within a 0.5-mile radius of the nest until the birds have fledged.

- M. If using erosion netting, biodegradable matting with a large-diameter natural fiber shall be used to prevent entrapment of wildlife.
- N. Park wildlife biologists will train Contractor staff, at the preconstruction meeting, to avoid disturbance to any wildlife species (reptiles, migratory birds, raptors, and bats) found nesting, hibernating, estivating, or otherwise living in, or immediately nearby, work sites.
- O. Work involving trenching or digging holes, provisions (generally in the form of ramps, with a slope less than 45 degrees) must be made every 20 feet to 50 feet to allow for the escape of animals that may fall into these recesses, or they must be covered in such a way as to prevent animals (vertebrates) from falling into them.
- P. Before removing trees on the South Rim, the Park will conduct bat surveys to identify which bat species are present. To protect tree-roosting bat species, tree removal on the South Rim will occur only during the winter months (November through February). The Park will also perform bird surveys and limit tree the removal period to exclude the breeding bird season of April 1 through August 31.
- Q. If bats are encountered on buildings, Contractor shall cease all activity and contact the Contracting Officer for assistance and/or advice in removing them safely.
- R. Care shall be taken not to disturb any wildlife species (reptiles, migratory birds, raptors, or bats) found nesting, hibernating, estivating, or otherwise living in, or immediately nearby, worksites.
- S. Contracting Officer personnel shall be notified/consulted when any wildlife must be disturbed or handled. Wildlife Department will be available to assist with moving/relocating wildlife, when necessary; and/or to make recommendations for relocating any disturbed animals.
- T. All water shall be contained inside buildings or enclosed/covered tanks. No open standing water is permitted.
- U. Wildlife Department personnel shall be notified/consulted when any wildlife must be disturbed or handled. They will be available to assist with moving/relocating wildlife, when necessary; and/or to make recommendations for relocating any disturbed animals.

3.02 SOUNDSCAPES

- A. Not used.

3.03 VEGETATION AND SOIL MANAGEMENT

- A. Revegetation efforts will be coordinated with NPS Vegetation Management Program staff.
- B. All revegetation efforts will use site-adapted native seed and/or plants provided by the Vegetation Management Program.
- C. Disturbed areas will be mulched, or gravel applied, as appropriate, to limit invasion and spread of invasive nonnative plants to a depth of 3 inches to 6 inches, depending on level of disturbance, as directed by Vegetation Program staff.
- D. If erosion-control fencing is used, soil will be piled in front of the fence to avoid creating bare soil and potential for invasive plant species encroachment outside the Project area.
- E. Pruning necessary for the Project will adhere to the Park's pruning guidelines with the goal of retaining the health and integrity of trees and shrubs treated. Damage to trees or roots in or adjacent to Project Sites during construction will be avoided as much as possible and, if avoidance is not possible, root pruning guidelines provided by the Park's Vegetation Management Program will be followed.
- F. Prior to construction the NPS will perform an invasive plant survey within the Limits of Construction shown on the Drawings. The Contractor shall separate the removal of native plants from invasive plants and dispose of invasive plant material outside the limits of the Park. Invasive/non-native vegetation shall be treated and/or removed prior to construction activities. 60 days before the start of non-native vegetation treatment or removal actions, the Contractor will meet with the Contracting Officer (CO) and GRCA Vegetation Program Manager to discuss planned actions.
- G. Imported fill materials required for the Project will be obtained from a Park-approved source in adherence to Standard Operating Procedure 8213-007 Invasive Plant Free Forage and Construction Materials. In areas where ground disturbing activities are planned, all topsoil will be properly salvaged, stored, and redistributed. Topsoil is a term used for A (or A and part of B) horizons or the uppermost layer of soil capable of growing and supporting vegetation. Topsoil contains the essential microorganisms, nutrients, organic matter, and physical characteristics necessary to grow and sustain vegetation. Stripping, stockpiling, and reusing topsoil on construction projects is essential for proper revegetation of disturbed areas. To help guide topsoil management actions, the

contractor will access the USDA NRCA Web Soil Survey website (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>), delineate project areas, and produce customized soil reports specific to each project area where soil disturbance will occur. The USDA Web Soil Survey generated reports will include soil profile descriptions, soil mapping units, characteristics, topsoil depth, soil textures, rock content, soil depth, available water holding capacity, permeability rates, and drainage classes. 120 days before the start of topsoil management actions, the Contractor will meet with the Contracting Officer (CO) and GRCA Vegetation Program Manager to discuss the USDA NRCS Web Soil Survey reports and finalize topsoil management actions per project area.

- H. The Contractor will remove all topsoil prior to all other soil disturbing operations. The Contractor will remove the topsoil in one pass, will not mix topsoil with subsoil, and will not compact or drive upon topsoil during removal. Topsoil salvage depth by location may vary, but as a general rule a minimum of 3 inches to 5 inches of material shall be conserved in all cases, and additional topsoil may be salvageable in some locations.
- I. Live vegetation less than 3 feet in height and limbs less than 1 inch in diameter shall be incorporated as topsoil in the stockpiles. The Contractor will properly dispose or bury all topsoil contaminated with invasive non-native plant species as directed by the Contract Officer (CO) and GRCA Vegetation Program Manager.
- J. The salvaged topsoil will be stockpiled in windrowed piles along the outer edge of the limits of construction. If possible, the topsoil will be stockpiled in a disturbed area to minimize the impact to adjacent vegetation. If it is impractical to stockpile topsoil adjacent to the disturbed area or objectionable to the Contracting Officer (CO) and GRCA Vegetation Program Manager due to environmental or other concerns within an area, the contractor will remove the topsoil and stockpile at an approved location.
- K. Salvaged topsoil will be separated from the sub-soil and stockpiled in windrowed piles no higher than 3 feet, and no wider than 3 feet. The Contractor will identify removal areas and stockpiles so that topsoil may be replaced in the same locations. If salvaged topsoil must be stored longer than 3 weeks, topsoil stockpiles will be hydroseeded and hydromulched by the contractor with locally collected seed provided by the GRCA Vegetation Program.
- L. When reapplying topsoil, the Contractor will avoid mixing the topsoil with subsoil material. The Contractor will spread conserved topsoil to a depth of 4 inches or greater (if additional topsoil is available) over all disturbed soil areas. Topsoil will be spread using the lightest weight equipment applicable. If the Contracting Officer (CO) and GRCA Vegetation Program Manager

determine that topsoil is excessively compacted by the NPS or contractors' operations, the Contractor will scarify the topsoil to a depth of 8 inches to decompact and break the interface between particles. Under no circumstances should placed topsoil be allowed to remain without erosion protection.

- M. Prior to reapplying the topsoil, the Contractor will disk or scarify all disturbed areas to a depth of 6 inches in a direction perpendicular to the natural flow of water. Prior to topsoil placement, if the Contracting Officer (CO) and GRCA Vegetation Program Manager determines that subsoil is excessively compacted by the NPS or contractors' operations, the Contractor will scarify the subsoil to a depth of 24 inches to decompact and break the interface between particles.
- N. Equipment and supplies will be staged and stored in already disturbed areas on site as shown on Drawings and Limits of Construction and not create any new impacts to vegetation resources.
- O. Water will be applied for dust abatement at the following Project Sites:
 - 1. South Rim Wastewater Treatment Plant
 - 2. SR WWTP Access Road Improvement.

3.04 OTHER ENVIRONMENTAL PROTECTION MEASURES

- A. The Contractor shall be responsible for obtaining and complying with all permits necessary to complete the Work based on Contractor means and methods. Contractor shall pay all permit fees required and provide all materials, labor, and equipment necessary to comply with permit conditions and provisions at no additional expense to the government. Refer to Section 01 31 00, Project Management and Coordination.
- B. Contractor shall provide all storm water control, erosion control, dust control, air quality control, water quality control, and other pollution control measures necessary to comply with all federal, state, and municipal laws, codes, rules, regulations, and permits applicable to performance of the Work at no additional expense to the government. Contractor shall ensure all construction personnel are aware of all applicable requirements.
- C. Contractor shall develop and adhere to a Spill Prevention and Response Plan to ensure that fuel, oil, lubricants, and other hazardous material spills do not occur. If spills occur, cleanup shall be completed by the Contractor at no additional expense to the government.
 - 1. When gasoline, diesel fuel, antifreeze, hydraulic fluid or any other chemical contained within the vehicle is released to the pavement or ground, proper corrective, clean-up, and safety actions specified in the Spill Prevention and Response Plan must be immediately implemented.

All vehicles with load rating of 2 tons or greater should carry, at minimum, enough absorbent materials to effectively immobilize the total volume of fluids contained within the vehicle. Repair oil leaks immediately on discovery. Do not use equipment that is leaking. Have oil pans and absorbent material in place prior to beginning repair work. Have the “on scene” capability of catching and absorbing leaks or spillages of petroleum products including antifreeze from breakdowns or repair actions with approved absorbent materials. Keep a supply of acceptable absorbent materials at the Job Site in the event of spills. Sand or soil are not approved absorbent materials. Use oil pans and absorbent materials to prevent leaks, spills and draining petroleum fluids from falling onto bare ground and paved surfaces during servicing of equipment. Dig up soils contaminated with such fluids, place in appropriate safety containers, and dispose of according to state and/or federal regulations.

2. Equipment found operating on the Project that has oil leaks will be shut down and subject to fines.

D. Equipment Washing and Inspections:

1. Vehicle and equipment washing is required to preclude entry of seeds, other plant materials (e.g., stems, rhizomes), and soil capable of non-native plant species establishment and spread. The Contractor will make arrangements for the Contracting Officer (CO) or GRCA Vegetation Program staff to inspect each vehicle and piece of equipment before entering the project area. All equipment shall be thoroughly pressure washed and cleaned outside of the Park Area before entering. Equipment leaving the park for any reason must be rewashed before returning to the Job Site.
2. The Contractor shall clean equipment that will be used off surfaced roadways, or approved roadways, prior to the equipment entering the Park Area. It is recommended that cleaning be accomplished by pressure washing, using water only. All equipment surfaces shall be cleaned, with special emphasis given to the undercarriage. This includes, but is not limited to: Wheel wells, bumpers, radiator grills, springs, shock absorbers, wire harnesses, skid plates, oil pans, axles, frame ledges, buckets, tracks, belly pans, etc. Cleaning shall also include all dirt and debris inside the cab, or operator area. A Shop-Vac or commercial car wash vacuum system may be used for operator compartments, provided the method used effectively removes all visible debris. Vehicle and equipment cleaning is for the purpose of removing seeds, other plant materials (e.g., stems, rhizomes) and soil accumulations to prevent the potential spread of non-native plants from outside the Park to locations inside the Park.
3. The Contractor will make arrangements for the Contracting Officer (CO) or GRCA Vegetation Program staff to inspect each vehicle and

piece of equipment before entering the project area. Cleaning shall be performed in a manner that will reasonably remove all visible soil, plant and other foreign material. All equipment that requires washing shall be inspected by government personnel, or contractors/partners assigned to this duty, to ensure compliance.

4. Equipment that requires washing is generally defined as track or rubber-tired machinery intended for use primarily off-road. Examples include backhoes, loaders, earthmovers, graders, rollers, bulldozers, water trucks, etc.; or four wheel drive or passenger vehicles that are driven in off road areas. Equipment may also be stationary, such as a material screening plant, conex storage containers, or a mobile office. The equipment is generally under the direct control of the Contractor or subcontractors, is likely to remain on the construction site for an extended period of time, and may contain adhered soil and seed from other Project Sites.
5. Equipment/vehicles that do not require washing are defined as those normally used for highway driving only and travel primarily on paved surfaces and well maintained service roads and parking areas. Examples include semi-tractor trailers, dump trucks, concrete trucks, pickup trucks, fuel trucks, service trucks, etc. These delivery and passenger vehicles are generally not under the direct control of the Contractor, have no earth-moving function, and do not remain on the Project Site. These vehicles have a low probability of carrying adhered soil and seed from other Projects. However, every vehicle and piece of equipment is subject to rejection from entering the Park if there are obvious signs (covered in mud, plant material adhered to it, etc.) that it could be transporting non-native species into the Park.
6. The Contractor shall make arrangements for the Contracting Officer to inspect each piece of equipment before entering the Project. Inspections typically occur outside of South Park Entrance in Tusayan. Contractor shall schedule inspections on the 3-week look ahead schedule. The Contracting Officer will maintain records of inspections. Equipment not passing initial inspection must be rewashed outside the Park at no additional expense to the government.
7. Equipment found operating on the Project that has not been inspected, will be shut down and subject to fines.

- E. Upon completion of work, leave area in a clean, natural looking condition as specified in Section 01 57 23, Temporary Stormwater Pollution Prevention, and Section 32 92 00, Turf and Grasses. Remove all signs of temporary construction and activities incidental to construction of required permanent work.

END OF SECTION