PARK NAME

CITY, STATE

SOLICITATION 1443N########

PROJECT TITLE

ALPHA PMIS (Project Management Information System)

**DESIGN-BUILD (DB) PROJECT SCOPE**

(DB Request for Proposal (RFP))

 

NATIONAL PARK SERVICE (NPS)

DENVER SERVICE CENTER (DSC)

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# Project Introduction

Remove RED italicized text from completed SOS Template.

Red italicized text provides instructions and guidance to complete the SOS.

Please review [Design-Build (DB) Considerations for Project Team (DSC Project Manager/Project Specialist (PM/PS) & Architect/Engineer (A/E) Teams)](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=7274460) guideline.

Park Acronym and PMIS Number:

Project Title: (Add PMIS Project Title.)

Project Drawing Number: (Obtain from [*Technical Information Center*](https://www.nps.gov/orgs/1804/dsctic.htm) (TIC).)

## 1.1 Scope

In accordance with terms and conditions of the Contract, the Design-Build (DB) Contractor shall perform the work of this Request for Proposal (RFP) for the National Park Service (NPS) as described below.

Architect-Engineer (A/E) Services required in this RFP shall be performed by licensed Architects and Engineers registered in State/Territory/Other. (This should be the State/Territory where the project is located and not the home State of the A/E.)

Complete this task order using requirements and criteria on the Denver Service Center (DSC) [Design-Build (DB) Workflows website](https://www.nps.gov/dscw/designbuild.htm).

* Predesign (PD) through Construction Documents (CD) design phase requirements with definitions plus forms, templates, samples and guidelines used for a typical project.
	+ [Division 1 Specifications Templates](https://www.nps.gov/dscw/publicforms.htm#div1): These templates represent standard information that may need clarification in addition to this DB RFP template on some projects.
* [Design Standards](https://www.nps.gov/dscw/dstandards.htm) are arranged by discipline and/or specialty.
* [DB Design Deliverables - Content and Format Requirements](https://www.nps.gov/dscw/del_designbuild.htm)
	+ Design phase submission requirements for:
		- Technical content
		- Submission format
* [Quality Assurance (QA) Guideline & Review Checklists](https://www.nps.gov/dscw/qaguideline.htm): Overview of the DSC QA process for reviewing design documents.

In case of conflict between this task order and the DSC DB Workflows website, this task order shall take precedence and shall be used in lieu of conflicting portions.

The A/E remains fully responsible for determining if the standards or provisions cited on the DSC DB Workflows website have been revised or updated. Any such conflicts between the website and the identified standard or provisions shall be brought to the attention of the Contracting Officer (CO).

## 1.2 NPS Project Management and Communication Software

Use to manage project communication and documentation until Final Completion. Include:

* Project directory
* Project correspondence
* Meeting agendas and minutes
* Contract modifications documentation and logs
* RFI (Request for Information) form and processing
* Task and issue management
* Photo documentation
* Baseline schedule, schedule updates and calendar management
* Submittal form and processing
* Drawing and specification document hosting, viewing, and updating
* Online document collaboration
* Reminder and tracking functions
* Archiving functions
* Notification of submittal and RFI statuses and current responsible party

## 1.3 Location

This project is located at      . (Provide detailed description of project location, Park areas, and state(s) included in the Park.)

## 1.4 Background

Provide narrative describing project background (i.e. how we got to this point) such as, “The water treatment for the North Forty district has been deteriorating and discharges from the treatment plant consistently exceed state standards.” The approved Schematic Design (SD) is a good source for background information.

## 1.5 Description

Provide brief description of proposed facilities and basic function.

## 1.6 Schedule

Design-Build (DB) Design Development (DD) Documents are tied to award of project and not Notice to Proceed. Coordinate with DSC Contracting Services Division to make sure SF1442 (Standard Form 1442 - Solicitation, Offer, and Award) and clause DS52.211 (Commencement, Prosecution, and Completion of the Work) both indicate work is to commence within 15 days after award. Consider 15 calendar day allowance when determining calendar day requirements for DB Design Development Documents since that is calendar days from award of contract.

Complete work in this RFP according to following schedule:

### DB Design Development (DD) Documents:

Submit DB Design Development Documents no later than     calendar days after award.

Complete NPS Review no later than     calendar days after submitting DB Design Development Documents.(Allow 15 calendar days for NPS reviews. Verify length of review period with Project Manager (PM). Some Parks and Regions require more than 15 days.)

### 100% Draft DB Construction Documents (CD):

Continue work on 100% Draft DB Construction Documents during DB Design Development Documents review. After receiving DB Design Development review comments, address and incorporate comments in 100% Draft DB Construction Documents.

Submit 100% Draft DB Construction Documents and responses to NPS Review form with responses to DB Design Development Documents no later than     calendar days after submitting DB Design Development Documents.

Complete NPS Review no later than     calendar days after receiving 100% Draft DB Construction Documents. (Allow 15 calendar days for NPS reviews. Verify length of review period with PM. Some Parks and Regions require more than 15 days.)

### 100% Complete DB Construction Documents (CD):

Submit 100% Complete DB Construction Documents and NPS Review form with responses to 100% Draft DB Construction Documents review comments no later than     calendar days after submitting 100% Draft DB Construction Documents.

Complete NPS review no later than     calendar days after receiving 100% Complete DB Construction Documents. (Allow 7 to 15 calendar days (15 if net construction is at least $6 million) for NPS reviews. Verify length of review period with PM. Some Regions require more time.)

### Complete Stamped and Signed DB Construction Documents (CD):

Submit Complete Stamped and Signed DB Construction Documents and NPS Review form with responses to 100% Complete DB Construction Documents review comments no later than     calendar days after receiving NPS review comments. (Allow minimum of 15 working days to address/incorporate NPS comments.)

### Construction:

Construction begins when Contracting Officer issues DB Start Work Notice.

Complete construction no later than     calendar days after award of contract.

### As-Constructed Drawings:

Complete As-Constructed Drawings no later than     calendar days after Substantial Completion. (Typically allow 21 calendar days to complete.)

Submit DB Design Development (DD) Documents, DB Construction Documents (CD), and As-Constructed Drawings to NPS Project Manager (PM).

## 1.7 NPS Contacts & Address:

**Contractual:**

Contracting Officer (CO): Name, Phone Number, and E-mail Address

Contract Specialist (CS): Name, Phone Number, and E-mail Address

**Technical:**

Project Manager (PM): Name, Phone Number, and E-mail Address

Project Specialist (PS): Name, Phone Number, and E-mail Address

Contracting Officer’s Representative (COR): Name, Phone Number, and E-mail Address

Alternate Contracting Officer’s Representative (COR): Name, Phone Number, and E-mail Address

**Address:**

National Park Service - Denver Service Center

12795 West Alameda Parkway

Post Office Box 25287

Denver, Colorado 80225

## 1.8 Data and Materials Provided by NPS

NPS will provide to DB Contractor the following data and materials. (Add as attachments in [Section 5](#_Attachments).)

* Project Program
* Basis of Design Report (BDR)
* Approved Schematic Design Preferred Alternative Documents
* NPS Project Sustainability Checklist

Above four items shall always be provided to DB Contractor. In addition, other items may be provided. Edit following sample list to specific needs of project. Add or delete as required. Coordinate with [*Section 5*](#_Attachments).

* Audio Visual Design Drawings
* Cultural Resource Reports (CLRs)
* Environmental Assessment (EA)
* Existing Drawings
* Existing Equipment Layout Plans
* Existing Site Map and Underground Utilities
* Finding of No Significant Impact (FONSI)
* Geotechnical Reports
* Hazmat Reports
* Historic Drawings
* Historic Photographs
* Historic Structure Reports (HSRs)
* Park Design Guidelines
* Snow Load Historical Data

# PROJECT Requirements

Research and resolve constructability issues included in the Constructability Checklist. Incorporate specific language to address these issues in appropriate paragraphs below.

## 2.1 General Requirements

### 2.1.1 Scope of Work and Project Summary/Requirements

The project will consist of the design and construction of
Provide a brief description of the project.

The project will include, but not be limited to:
Edit following sample list to specific requirements of project. Add or delete as required.

* Construct project
* Create and provide operations and maintenance manual.
* Design site, site utilities, building and foundation system.
* Life Cycle cost analysis
* Perform geotechnical analysis.
* Provide as-constructed drawings.
* Provide schedule of construction work.
* Provide survey.
* Review Schematic Design preferred alternative provided in the RFP package.
* Review site data.
* Secure work area and provide for continued access to the facility.
* Submit DB Design Development and DB Construction Documents for review and approval, as required.
* Submit list of required permits.
* Upon award, determine and provide design schedule of work.

### 2.1.2 Definition of Contract Line Items

In general, explain what is included in each contract line item, limits or cut-off points where one item ends and another begins. If no item exists for a portion of the work, include costs in a related line item.

CONTRACT LINE ITEM 1 - DESIGN: This item consists of
Describe design requirements in brief.

CONTRACT LINE ITEM 2 - CONSTRUCTION:

(This item may be broken up into 2 or more Line Items depending on type of project. Different fund sources may dictate need for additional line items like Topography, Geotech, Hazmat etc.)

This item consists of

Describe what is included in this Contract Line Item.

CONTRACT LINE ITEM 3 - OPTION \_\_ (A, B, C, etc.) – \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ITEM TITLE):

This item consists of

(Clearly define scope of option item so if awarded and combined with base contract, there will be no conflicts or overlaps. If any portion of this work replaces work in base contract, describe and call for price to include credit or adjustment. If Option item includes design costs, add to description verbiage reminding Offeror to include costs. In setting timeframe for award of Option, consider design effort in total number of days available for award of Option.)

### 2.1.3 Progress Payments

**Design Phase -** Progress payments will be based on submission, review, and acceptance of design deliverables.

**Construction Phase -** Progress payments will be based on percentage of work completed on items listed in approved schedule of values.Actual construction completed and in place will form basis for payment. DB Contractor shall verify percent complete under direction of the Contracting Officer Representative unless Contracting Officer waives this requirement in a specific instance. DB Contractor shall make computations for payment based on Government’s verification of work completed and in place for periods which progress payments are requested.

DB Contractor shall furnish to Contracting Officer originals of field notes and other records relating to basis for payment. Contracting Officer shall use as necessary to determine final amount of progress payments. DB Contractor shall retain copies of material furnished to Contracting Officer.

### 2.1.4 Project Meetings

This meeting is more productive if held on site. It is generally easier to get Park participants to the meeting. Visiting the site after the meeting should be encouraged. Before scheduling this meeting, Performance and Payment bonds for construction portion of project must be submitted and approved. DB Contractor has 15 calendar days after award to commence with the work, so bonds must be submitted within this time frame to avoid delay to schedule established in [*section 1.6*](#_1.6_Schedule).

#### Design Meeting

After award of contract and acceptance of Performance and Payment bonds, Contracting Officer will arrange a design meeting with DB Contractor. Meeting agenda shall include the following as a minimum:

* Areas available for use by DB Contractor
* Access requirements of the Park
* Commissioning (review requirements in ASHRAE 0-2005 paragraphs 6 and 7)
* Design schedule
* Environmental and sustainability requirements
* Natural and Cultural Resource Protection
* Payments to DB Contractor
* Review and emphasize Park needs and design objectives.
* Modifications during design
* Schedule of Values
* Submittals during design

#### Preconstruction Meeting

Submit following Part 2 Project Requirement deliverables a minimum of one week prior to Preconstruction Meeting. (Edit following list to reflect project requirements.)

* Accident Prevention Program (APP)
* DB Contractor’s Commissioning Plan (CCxP)
* Evidence of liability insurance coverage and workman’s compensation for DB Contractor and Subcontractors
* Historic Preservation Treatment Program
* Letter designating your Project Superintendent
* List of required permits
* List of Subcontractors for project (same as proposal)
* Project Schedule with construction portion fully developed
* Quality Control Plan
* Schedule of Values
* Storm Water Pollution Prevention Plan (SWPPP) Submittal process
* Waste Management Plan
* Written statements from Subcontractors certifying compliance with applicable labor standard clauses

After 100% Complete DB Construction Documents are approved (or completed portions of DB Construction Documents necessary for fast tracking the project), and before start of construction, Contracting Officer will arrange on-site Preconstruction meeting with DB Contractor. Meeting agenda will include the following as a minimum:

* Accident reporting
* Construction schedule
* Correspondence procedures
* Jobsite safety
* Labor standards
* Lines of Authority
* Modifications
* NPS project management and communication software
* Park Rules and Regulations
* Payroll reports
* Progress Payments
* Resolution to comments provided by NPS on the Part 2 Project Requirements
* Roles and responsibilities
* Schedule of Values
* Submittal process

Edit following list for specific requirements of project. Add or delete as required. List any park specific concerns.

* Bridge, access road and site constraints.
* Medical emergency processes, availability, emergency numbers, and contacts.
* Park permits, burning construction waste, rules of the road, alcohol use, housekeeping, firearms, pets, natural and cultural resource concerns.
* Visitation and public relations.
* Traffic Control.
* Archeological Resources Protection Requirements
* Environmental and sustainability requirements for the Project, required tracking for sustainability (related submittals), and use of NPS Project Sustainability Checklist.
* Saturdays, Sundays, holidays and night work.

#### Progress Meetings

DB Contractor shall participate in weekly telephone conference calls with Contracting Officer and other project team members with updates to following meeting agenda items:

* Approval of minutes of previous meetings.
* Modifications
* Review of off-site fabrication and delivery.
* Requests for Information (RFI) and issues.
* Schedule update. (Provide updated CPM (Critical Path Method) schedule.)
* Status of Project Record Drawings and O&M (Operation & Maintenance) Manuals.
* Submittal status.
* Work in progress and projected.
* Other business relating to work.

### 2.1.5 Project Schedule

**General:** DB Contractor shall upload project schedule to NPS project management and communication software and provide 2 color copies after award and before design meeting. Schedule shall include detailed design phase with design deliverable submission dates, review periods, and summary construction schedule with important milestones included for both phases.

Fully develop construction portion of project schedule and submit to Contracting Officer on NPS project management and communication software before Preconstruction meeting. Update project schedule monthly throughout contract period until project substantial completion. Status date of each schedule update shall be 10 days before progress payment request date.

Construction work cannot begin until Government approval is obtained for either:

* Entire set of 100% Complete DB Construction Documents.
* Fast track construction: 100% Complete DB Construction Documents affecting work to be constructed.

**Purpose:** Project schedule ensures adequate planning, coordinating, scheduling, and reporting of DB Contractor’s design and construction activities. Project schedule will assist DB Contractor and Contracting Officer to monitor work progress, evaluate proposed changes, and process DB Contractor's monthly progress payment requests.

**Software:** Latest version of Microsoft Project, Primavera Project Planner, SureTrak, or approved equal.

**Schedule Development:** Project schedule shall cover entire contract period. Late finish date is same as contract’s established completion date.

DB Contractor shall use Critical Path Method (CPM) with limited use of lead or lag durations between schedule activities. DB Contractor's project schedule shall consist of procurement activities (including mobilization, submittal, and fabrication and delivery of key and long-lead procurement items) and construction activities.

DB Contractor's project schedule shall consist of, but not be limited to, the following for each activity:

* Identify activities and numbers numerically (maximum 5-digit). Number activities in increments of 10.
* Concisely describe work represented by activity (maximum 48 characters). Avoid using non-standard abbreviations. Limit work related to each activity to one work trade.
* Activity duration shall be in whole working days with maximum duration 15 work days each, unless otherwise approved by Contracting Officer, except for non-construction activities including mobilization, shop drawing and sample submittals, fabrication of materials, delivery of materials and equipment, and concrete curing.

DB Contractor shall ensure project schedule includes own work and Subcontractor work.

Project schedule shall show sequence and interdependence of activities required for complete performance of work and shall be cost and resource loaded. DB Contractor shall ensure work sequences are logical and project schedule shows a coordinated work plan. Proposed durations assigned to each activity shall be DB Contractor's best estimate of time required to complete activity, considering scope and resources planned. Resource loading of each activity shall list personnel by labor category and equipment type, and capacity proposed to complete activity in duration shown. Include permit requirements and constraints. Consider and include seasonal weather conditions in planning and scheduling of work influenced by high or low ambient temperatures and wind and/or precipitation, to ensure completion of work within contract time.

#### Project Schedule Updates

**Monthly updates:** Monthly updates of project schedule shall be an integral part and basic element of estimate upon which progress payments shall be made under this contract. If, in judgment of Contracting Officer, DB Contractor fails or refuses to provide schedule of values and complete schedule update or revision as specified hereinafter, DB Contractor shall be deemed to have not provided required information upon which progress payment may be made and shall be subject to retainage of a portion of the payment.

**Narrative:** Include in report:

* Brief description actual progress made during update period.
* Actual and potential delaying activities.
* Impediments to progress.
* Issues related to inclement weather.
* Progress toward established milestones.
* Project float.
* Brief description of work anticipated to be performed in next month.
* Identify minor revisions to schedule for evaluation and accepted or rejected.

As work progresses, indicate Actual Completion percentage for each activity. If schedule update shows late finish date after contract completion date, at a minimum, include the following in narrative with submission:

* Known delays.
* Actions taken to get back on schedule.
* Pending modifications.
* Impediments or constraints affecting progress.

**Progress Payments:** Update currently accepted construction schedule monthly. If DB Contractor fails to provide monthly updates or revisions to currently accepted construction schedule, a portion of monthly payment may be retained until updates/revisions made.

**Time Impact Analysis for Contract Modifications, Changes, Delays, and Contractor Requests Requirements:** When contract modifications or changes are initiated, delays are experienced, or DB Contractor revises project schedule, DB Contractor shall submit to Contracting Officer a written time impact analysis illustrating influence of each modification, change, delay, or DB Contractor’s request on the contract time.

* **Time Extensions:** Activity delays shall not automatically mean an extension of contract time is warranted or due to DB Contractor. It is possible that modification, change, or delay will not affect existing critical activities or cause non-critical activities to become critical. A modification, change, or delay may result in only absorbing a part of available total float that may exist within an activity chain of the project schedule, thereby not effecting the contract time. Time extensions will be granted according with terms of contract.
* **Float:** Float is not for exclusive use or benefit for NPS or DB Contractor. Extension of contract time is granted only to extent the equitable time adjustments to activity or activities affected by modification, change, or delay exceeds total (positive or zero) float available on a particular activity.

## 2.2 Design Requirements

### 2.2.1 DB Design Development (DD) Documents and DB Construction Documents (CD)

Prepare DB Design Development Documents and DB Construction Documents using English System of Weights and Measurements and according to DSC [Design Standards](https://www.nps.gov/dscw/dstandards.htm) and DSC Design Deliverables - Content and Format Requirements for [DB Design Development Documents](https://www.nps.gov/dscw/del_designdevelopdb.htm) and [DB Construction Documents](https://www.nps.gov/dscw/del_constructiondb.htm).

The A/E shall exclude Brand Name materials from specifications and utilize salient characteristics to the maximum extent practicable. When Brand Name is required to ensure quality of design, and the A/E suspects [based on market research] that suitable equal materials are likely available from other manufactures, the A/E shall identify the item as “Brand Name or Equal,” and include the salient physical, functional, or performance characteristics that will satisfy the design requirements in the specifications in the following format:

[Brand Name; Part Number; Etc.]
Brand Name or Equal Salient Characteristics that an equal must meet are delineated below:

Physical: (All physical characteristic that an equal must meet shall be included here).

Functional: (All functional characteristic that an equal must meet shall be included here).

Performance: (All functional characteristic that an equal must meet shall be included here).

If any of the above mentioned characteristic categories (physical, functional, or performance) are not applicable, “None” shall be used to denote that no salient characteristics apply to that specific brand name or equal description.

#### Deliverables

* Submit documents in native and PDF (Portable Document Format) file formats.
* PDF files shall be unlocked to allow printing and saving.
* See [DB Submittal Requirements, Design Deliverables](https://www.nps.gov/dscw/del_submitformatdb.htm).

The following deliverables are required (refer to [Section 1.6](#_1.6_Schedule) for schedule):

* Submit DB Design Development (DD) Documents for Review
	+ Draft DB Design Development Drawings
	+ Divisions 2 through 49 Outline Specifications
	+ Product File
	+ Statement of Structural Tests and Special Inspections
	+ Design Calculations
* Submit 100% Draft DB Construction Documents (CD) for Review
	+ 100% Draft DB Construction Drawings
	+ Divisions 2 through 49 Construction Specifications (Construction Specifications Institute (CSI) MasterFormat 04 Edition). A/E shall utilize and modify their own Divisions 2 through 49 Construction Specifications templates.
	+ Product File
	+ Statement of Structural Tests and Special Inspections
	+ Design Calculations
	+ Checklists for internal review of drawings, specifications, calculations, and cost estimates
		- Required documents for each submission are included and complete per contract requirements.
		- Required documents have been through a Quality Control (QC) review. NPS requires documentation and submittal of QC work performed.
	+ NPS Review form with responses to DB Design Development Documents review comments
* Submit 100% Complete DB Construction Documents (CD) for Final Approval
	+ 100% Complete DB Construction Drawings
	+ Divisions 2 through 49 Construction Specifications
	+ Product File
	+ Statement of Structural Tests and Special Inspections
	+ Design Calculations
	+ Checklists for internal review of drawings, specifications, calculations, and cost estimates
		- Required documents for each submission are included and complete per contract requirements.
		- Required documents have been through a Quality Control (QC) review. NPS requires documentation and submittal of QC work performed.
	+ NPS Review form with responses to 100% Draft DB Construction Documents review comments
* Submit Complete Stamped and Signed DB Construction Documents (CD)
	+ Upon final approval of 100% Complete DB Construction Documents, submit Complete Stamped and Signed DB Construction Documents per following table for NPS archiving and general use.
	+ The recipient of the files is TIC (Technical Information Center).
	+ Final Construction Drawings shall be printed from native CAD (Computer Aided Design)/BIM (Building Information Modeling) equivalent software (e.g. AutoCAD .dwg or Revit .rvt). Final Construction Drawings printed from secondary software (e.g. Adobe .pdf) are not acceptable as they often result in off-scale product.
	+ A/E team to stamp and sign cover sheet.

|  |  |
| --- | --- |
| COMPLETE STAMPED AND SIGNEDDB CONSTRUCTION DOCUMENTS (CD) | FILE FORMATS |
| DB Construction Drawings | PDF & CAD/BIM |
| Divisions 2 through 49 Construction Specifications | PDF & Microsoft Word |
| Product File | PDF |
| Statement of Structural Tests and Special Inspections  | PDF & Microsoft Word |
| Supplemental Design Reports (if applicable) | PDF |
| Design Calculations | PDF |
| Checklists for internal review of drawings, specifications, calculations, and cost estimates | PDF & Microsoft Excel |
| NPS Review form with responses to 100% Complete DB CD review comments | PDF & Microsoft Excel |

### 2.2.2 Environmental and Sustainability Requirements for Design

NPS established environmental and sustainability requirements for project. Notify Contracting Officer if conflicts arise between performance of work and environmental and sustainability requirements. NPS does not intend to limit alternative means of achieving these requirements.

For sustainability requirements for design, see Part 3 Performance Requirements and [NPS Project Sustainability Checklist](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=387018). Complete checklist by concisely explaining how each credit/requirement will be met.

## 2.3 Construction Requirements

### 2.3.1 Environmental and Sustainability Requirements

Specific sustainability requirements generated in design will dictate more stringent environmental requirements for this project. Refer to Part 3 Performance Requirements and NPS Project Sustainability Checklist. General requirements:

Delete paragraph below if project does not include a building.

**Indoor Air:** Follow recommended approach of SMACNA (Sheet Metal and Air Conditioning Contractor’s National Association) Indoor Air Quality (IAQ) Guidelines for Occupied Buildings, 2007. Conduct building flush-out prior to occupancy according to Federal requirements.

* **Site Disturbance:** Minimize construction limits of project to reduce impact on site.
* **Toxic Chemicals:** Avoid materials that can leach toxic chemicals into ground water. Do not allow toxic chemicals to enter sewers or storm drains or contaminate land or any body of water. Refer to NPS Project Sustainability Checklist for additional requirements.
* **Soil Erosion:** Protect against erosion and topsoil depletion according to Stormwater Pollution Prevention Plan (SWPPP).
* **Habitats:** Protect natural habitats and ecological systems on facility site as identified in Environmental Assessment (EA).

Edit as required per park and/or project requirements.

**Noise:** Minimize noise during construction. Operate power equipment according to local noise restrictions.

* **Waste Management:** Employ processes ensuring minimal waste output and in landfills. Recycling is a requirement of this project. Specific recycling goals were established in NPS Project Sustainability Checklist. Legally dispose materials unsuitable for recycling at public or private dumping areas outside the Park.

DB Contractor shall designate an on-site party (or parties) responsible for instructing workers and overseeing environmental and sustainability requirements of this project. Distribute copies of environmental and sustainability requirements to Job Site Foreman and each Subcontractor.

Waste Management Plan: Prior to scheduled Preconstruction meeting, DB Contractor shall submit draft Waste Management Plan to Contracting Officer for approval. Develop and implement according to ASTM E1609 and as required in contract documents. Plan shall include, but not be limited to:

* List of recycling facilities, reuse facilities, municipal solid waste landfills, and other disposal area(s) to be used. Include name, location, and phone number.
* List of proposed materials to be reused or recycled.
* List of materials that cannot be recycled or reused with explanation or justification.
* Storage and collection methods of waste and recyclables, handling procedures, and means of keeping recyclables free of contamination.
* Describe means of transporting recyclable materials and estimate frequency of emptying bins.
* Identity person or persons responsible for ensuring project recycling goals are achieved.
* Revise and resubmit Plan per Contracting Officer. Approval of DB Contractor’s Plan does not relieve DB Contractor of complying with applicable environmental regulations.

Progress Documentation: Supplemental to Waste Management Plan, document solid waste disposal, diversion, and cost/revenue analysis, and submit completed worksheet monthly. See Project Waste Management Plan Worksheet Sample, included with Division 1 Specifications, and report totals to date for column headings.

Prior to commencement of work, schedule and conduct meeting with Contracting Officer. Discuss proposed Waste Management Plan and develop mutual understanding of details of environmental protection.

#### Minimize Construction Impacts

Implement following mitigation measures to minimize impacts of construction activities:

Edit individual sections as required:

**Soil Erosion:** Protect against erosion and topsoil depletion. SWPPP is required.

Consult with Park and edit as required for specific project needs.

**Exotic Vegetation and Noxious Weeds:** Prevent introduction and minimize spread of exotic vegetation and noxious weeds. Incorporate following procedures:

* Obtain fill, rock, or additional topsoil needed from a Government approved source.
* Use approved native seed and/or plants and revegetate areas disturbed by construction.

Edit as required for specific project needs. Some projects, such as interior renovation of a historic structure, may not require a Vegetation Salvage and Revegetation Plan.

**Vegetation Salvage and Revegetation Plan:** Required for this project. For revegetation efforts, use approved native species and/or native seed and incorporate Park policies regarding vegetation and site restoration. Consider use of native species, plant salvage potential, exotic vegetation and noxious weeds, and pedestrian barriers. Policy related to revegetation will be referenced in [NPS Management Policies 2006](https://www.nps.gov/subjects/policy/management-policies.htm) (Section 9.1.3.2).

Consult with Park and edit as required for specific project needs.

**Special Status Species:** To protect unknown or undiscovered threatened, endangered, or special status species, construction contract will include provisions for these discoveries. DB Contractor should contact Park for direction to evaluate special species at the site.

Consult with Park and edit as required for specific project needs.

**Visitor Experience:** Incorporate following mitigation measures into action alternatives to minimize impacts of construction activities on visitor experience:

**Air and Water Pollution Control:** Air quality impacts are expected to be temporary and localized. To minimize these impacts, take following actions:

Add unique and/or project specific requirements.

* To reduce tailpipe emissions, do not leave construction equipment idling longer than necessary for safety and mechanical reasons.
* To reduce construction dust, apply water to problem areas. Limit equipment to fenced project area to minimize soil disturbance and dust generation.
* Take necessary reasonable measures to reduce air and water pollution with material or equipment used during construction. Keep volatile wastes in covered containers.
* Storm Water Pollution Prevention Plan (SWPPP): Submit a SWPPP, according to applicable State Water Resources Control Board's (SWRCB) requirements, to Contracting Officer for approval. (See Technical Requirements.) Before starting construction, DB Contractor shall implement approved SWPPP.

Consult with Park on availability and need for an Archeological Monitor. Edit as required.

**Cultural Resources:** An Archeological Monitor will be present at work site. If archeological resources are discovered at project site while Archeological Monitor is absent, immediately stop work in vicinity of discovery and report discovery to Contracting Officer.

### 2.3.2 Schedule of Values

After contract award and before Design Meeting, submit schedule of dollar value based on Contract Price Schedule. Breakdown each lump-sum item into component parts of design deliverables or construction work for which progress payments may be requested. Total costs for component parts of work shall equal contract line item amount for that lump-sum item. Contracting Officer may request data to verify accuracy of dollar values. Include mobilization, general condition costs, overhead, and profit in total dollar value of unit price item and in component parts of work for each lump-sum item, as described below. Do not include mobilization, general condition costs, overhead, or profit as separate items.

Do not break down unit price items. Only use contract line item amount for unit price items.

Total cost of items shall equal contract sum. Schedule of Values will form basis for progress payments.

Before first progress payment is processed, DB Contractor and Contracting Officer shall agree on an acceptable Schedule of Values. A cost loaded project schedule is an acceptable substitute for a schedule of values in some cases.

### 2.3.3 Construction Support

Edit following as appropriate.

#### Staging Areas

Limit construction sites to smallest feasible area. Carefully control ground disturbance and site management to prevent undue damage to vegetation, soils, and archeological resources, and to minimize air, water, soil, and noise pollution.

Staging is limited in or near construction area for a construction office or trailer. Locate construction equipment and material storage in previously disturbed areas near construction site. Obtain Contracting Officer’s approval for staging area location for construction equipment. Once construction is complete, return staging areas to pre-construction conditions. Consult with Contracting Officer and develop standards and methods for determining standards.

**Structures:** Trailers, Storage, Field Offices, Staging Area and Sheds: Contracting Officer to approve location.

**DB Contractor's Field Office:** Structurally sound construction and weather tight. Location determined by NPS before issuing Start Work Notice.

**Storage Sheds:** If used, provide weather tight sheds or other covered facilities for materials subject to weather damage and remove temporary water, sewer, sanitary facilities and electric utilities upon project completion. Remove temporary utility connections.

DB Contractor may set up construction camp in remote Parks where campgrounds are made available by Park or Concessionaire. Consult with Park on need and availability. Edit as required.

#### Construction Camp

Establishment of a construction camp will not be permitted.

#### Construction Zones

Before construction activity, use construction barrier, plastic, or portable fencing, approved by Contracting Officer, to define construction zone, minimum area required for construction. Clearly state protection measures in construction specifications and instruct workers to avoid conducting activities beyond construction zone.

#### Protection of Public

Use fence, barricade, or other means to block immediate work area and prevent unauthorized entry. Erect and maintain fencing, barricades, lights, signals, and warning signs according to current version of Manual on Uniform Traffic Control Devices (MUTCD).

DB Contractor shall protect tree trunks and root systems of trees in, or adjacent to, work areas.

#### Special Construction Requirements

List park and project specific requirements (e.g. imposed work sequences). Coordinate with [*Section 2.3.8 Working Hour Restrictions*](#_2.3.8_Working_Hour) and [*Section 2.3.10 Access*](#_2.3.10_Access).

#### Parking of Construction Vehicles

Limit to existing roads in legally designated areas and within approved staging area(s).

### 2.3.4 Submittals During Construction

**Construction Submittals:** ***(***Determine required submittal and type. Action submittals require Government approval prior to construction. Informational submittals are either accepted or rejected. Design-Build (DB) contracts typically do not require Action submittals on materials but focus on major systems and finishes. Work with Project Team to decide required Action and Informational submittals. Complete **Submittal List with *Review Estimate Template****,* included with Division 1 Specifications. In the technical requirements, clearly indicate submittal type and provide specifics on requirements.)

#### Construction Submittal Types

**Action Submittals:** Written, graphic information, and physical samples that require Government’s responsive action.

* **Product Data:** Collect information in single submittal for each element of construction and type of product or equipment.
* **Shop Drawings:** Prepare project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of Contract Documents or standard printed data [**unless submittal of CAD (Computer Aided Design)/BIM (Building Information Modeling) Drawings is otherwise permitted**].
* **Samples:** Submit Samples of kind, color, pattern, and texture for reviewing characteristics with other elements and comparing between submittal and actual component as delivered and installed.
* **Construction Materials:** DB Contractor is encouraged to submit, for approval, products made of recycled or environmentally responsible material. NPS will make every effort to approve these materials.

**Informational Submittals:** Written information not requiring Government’s responsive action. Submittals may be rejected for not complying with requirements.

* Prepare and submit Informational Submittals required by individual Specification Sections.
* Informational submittals include, but are not limited to, Coordination Drawings LEED™ Submittals Product Data, Certificates, Test reports, Manufacturer’s instructions, Division 01 Management Plans, etc.

#### Contractors Review

Review each submittal for coordination with other work of contract and compliance Contract Documents. Note corrections and field dimensions.

#### General Submittal Procedures

Prepare and submit submittals shown in Part 4.0 Technical Requirements. See individual technical sections for details on requirements for each.

Contracting Officer reserves the right to require submittals in addition to those identified in individual sections.

**Coordination:** Coordinate submittal preparation and processing with construction activity performance. Review for legibility, accuracy, completeness, and compliance with Contract Documents.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.
2. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

**Processing Time:** Allow enough time for submittal review and re-submittals. Contract time extensions will not be authorized if submittals are not transmitted with enough time to permit processing, including re-submittals.

1. **Action Submittals:** Allow 30 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
2. **Informational Submittals:** Allow 10 days for review of each submittal.

**Submittals:** Identify and incorporate information in each submittal file as follows:

1. **Transmittal Form** (CM-16): Utilize [NPS Transmittal Form](https://www.nps.gov/dscw/con_subreview21.htm) for all submittals. No action will be taken on a submittal item unless accompanied by this Transmittal Form.
2. **Physical samples:** Complete Transmittal Form and deliver physical sample to the Contracting Officer (or designee) on site for processing. All comments and actions will be documented on the Transmittal Form.

#### Contracting Officer's (CO) Review

**Action Submittals:** Contracting Officer will review each submittal, generate comments on corrections or modifications required, and indicate appropriate action on Transmittal Form in one of three ways:

1. **Approved:** Acceptable with no corrections required.
2. **Approved with Notations:** Minor corrections or clarifications required. Comments are clear and no further review required. DB Contractor shall address review comments when proceeding with work.
3. **Disapproved - Resubmit:** Rejected for not according with contract or requiring major corrections or clarifications. Contracting Officer will identify reasons for disapproval. DB Contractor shall revise and resubmit with changes clearly identified.

**Informational Submittals:** Contracting Officer will review submittals and accept or reject.

#### Submittal List

Use the **Submittal List with Review Estimate Template**, included with Division 1 Specifications, to provide overall summary of submittal requirements, not a comprehensive list. Technical requirements indicate type and specify submittal requirements. Contract terms and conditions apply regardless of indication on submittal list.

#### Use for Construction

Use only final submittals marked with **Approved** or **Approved with notations**. Ensure notations are incorporated and, at a minimum, keep one copy of final approved submittal on site during construction.

### 2.3.5 Construction Coordination

**Notification:** Contracting Officer provides necessary written notification and/or direction to DB Contractor. An on-site independent Construction Management Representative (CMR) coordinates DB Contractor’s construction efforts with Park Staff’s daily operations and transmits/receives correspondence between DSC and DB Contractor. CMR does not have authority to accept or reject work, authorize changes to contract terms and conditions, or obligate NPS for time or money.

### 2.3.6 Digital Images

Provide     (number of existing condition images required) existing condition images and     (number of construction progress images required) images per week documenting construction. Upload digital images to NPS project management and communication software and identify sets of images with date, location, title, description, and other information pertinent to subject captured in photos.

Capture digital images documenting construction progress and problems. For example, capture items that will be seen later. Post digital images of each work activity weekly or as directed by Contracting Officer.

### 2.3.7 Quality Control

#### General

DB Contractor is responsible for quality of work. Independent testing laboratory is responsible for testing. Inspect and test work as needed to ensure quality of materials, workmanship, construction, and finish, and to ensure functional performance is in compliance with applicable specifications and drawings.

DB Contractor accepts ultimate responsibility, liability and duty to control quality of services provided to the Government as stipulated in FAR Part 36.609-2. DB Contractor shall be responsible for professional quality, technical accuracy, and coordination of designs, drawings, specifications, and other services furnished by DB Contractor, their Employees, Agents, Assignees, and Subcontractors under the contract. DB Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its designs, drawings, specifications, and other services.

DB Contractor shall demonstrate existence of a Quality Control (QC) system used for work submitted to NPS. DB Contractor and Subcontractors shall use this QC system and, at a minimum, include:

* Coordination of drawings and specifications within each discipline and between disciplines.
* Verification that documents to be submitted are accurate and correct.
* Checklists for internal review of drawings, specifications, calculations, and cost estimates.
	+ Required documents for each submission are included and complete per contract requirements.
	+ Required documents have been through a QC review. NPS requires documentation and submittal of QC work performed.

Use [Accessibility Inspection Report (Contractor Quality Control (CQC) & Final)](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=6109253) to document compliance with Architectural Barriers Act (ABA) Accessibility Standards. As needed, inspect at various stages of construction ensuring finished product meets guidelines. Complete applicable sections of Accessibility Inspection Report and attach to [CMR & CQC Daily Report](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=362820) (Construction Management Representative (CMR) & Contractor Quality Control (CQC)) form *(download and complete using Adobe Acrobat)*.

CQC Supervisor will complete CQC Daily Reports.

Person performing tests will complete test reports.

Contracting Officer may designate test locations.

When deciding if Contractor's Quality Control (CQC) Supervisor is a full time position with no other duties or a position with collateral duties of Project Superintendent, consider:

Design and complexity of project.

Duration of project.

Location of project.

Characteristics of area construction labor market.

Cost and type of contract.

Amount and type of off-site fabrication.

#### Quality Control Staff

Select paragraph below for smaller projects, normally less than 1 million dollars, that are not complex and do not require extensive sampling and testing. Discuss with appropriate NPS personnel.

CQC Supervisor may also perform duties of Project Superintendent.

Select paragraph below for major projects, normally 1 million dollars and more, or for complex projects requiring extensive sampling and testing and off-site fabrication. Discuss with appropriate NPS personnel.

CQC Supervisor will not be assigned other duties.

CQC Supervisor, designated by DB Construction Contractor, shall be on project site whenever contract work is in progress.

DB Construction Contractor's job supervisory staff may assist CQC Supervisor supplement, as necessary, by adding certified testing technicians.

Testing Laboratory and Equipment:

* Employ certified independent laboratories to perform sampling and testing. Testing laboratory organization shall be certified for type of testing work.
* Calibrate measuring devices, laboratory equipment, and instruments at established intervals against certified standards according to National Bureau of Standards (NBS) requirements. Upon request, Government will make available measuring and testing devices for verification tests.

#### Submittals

**Quality Control Plan:** Prior to Preconstruction meeting, submit written CQC plan for approval.

If plan requires revisions or corrections, DB Construction Contractor shall resubmit plan within 10 days.

Government reserves right to require changes to the plan during contract period as necessary to obtain quality specified.

No change in the approved plan may be made without written concurrence by Contracting Officer.

The plan shall include:

* A list of personnel responsible for quality control and assigned duties. Include each person's qualifications.
* A copy of a letter of direction to CQC Supervisor outlining assigned duties.
* Names, qualifications, and descriptions of laboratories to perform sampling and testing, and samples of proposed report forms.
* Methods of performing, documenting, and enforcing quality control of work.
* Methods of monitoring and controlling environmental pollution and contamination as required by regulations and laws.

**Daily Reports:** Submit and include inspections and tests on first workday following date covered by report. Use [Daily Test Report Information Report Sheet](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=362827) and [CMR & CQC Daily Report](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=362820) forms.

**Test Reports:** Submit Daily Test Information Sheets with CQC Daily Reports.

Submit failing test results and proposed remedial actions within four hours of noted deficiency.

Submit three copies of complete test results no later than one calendar day after test performed.

If CQC plan and CQC Daily Reports are not submitted as specified, Contracting Officer may retain payments until a plan is accepted and implemented. Or Contracting Officer may retain payments for work completed on days with no CQC Daily Reports.

**Accessibility Inspection Report:** Submit Accessibility Inspection Report (CQC & Final) no later than three calendar days after inspection.

**Off-Site Inspection Reports:** Submit prior to shipment.

#### Execution

**Off-Site-Control:** Items fabricated or assembled off-site shall be inspected for quality control at the place of fabrication.

**On-Site Control:** Notify Contracting Officer at least 48 hours in advance of preparatory phase meeting.

Notify Contracting Officer at least 24 hours in advance of initial and follow-up phases.

#### Quality Control Phases

**Preparatory Phase:** Perform before beginning each feature of work.

Review control submittal requirements with personnel directly responsible for quality control work. At a minimum, CQC Supervisor and Foreman responsible for the feature of work shall attend.

Review applicable specifications sections and drawings related to the feature of work.

Ensure copies of referenced standards, related to sampling, testing, and execution for the feature of work, are available on site.

Ensure provisions were made for field control testing.

Examine work area to ensure preliminary work completed.

Verify field dimensions and advise Contracting Officer of discrepancies with contract documents.

Ensure necessary equipment and materials are at project site and comply with approved shop drawings and submittals.

Document preparatory phase activities and discussions on CQC Daily Report.

**Initial Phase:** As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.

Review control testing procedures to ensure compliance with contract requirements.

Document initial phase activities and discussions on CQC Daily Report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

**Follow-Up Phase:** Inspect and test as work progresses to ensure compliance with contract requirements until completion of work.

**Additional Preparatory and Initial Phases:** May be required on the same feature of work for the following reasons:

* Quality of on-going work is unacceptable.
* Changes occurred in applicable quality control staff, on-site production supervision, or work crew.
* Work on a particular feature of work is resumed after a substantial period of inactivity.

#### Documentation

Maintain CQC Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports of quality control activities and tests.

CQC Daily Reports may not be substituted for other written reports required under clauses of the contract such as disputes, differing site conditions, or changes.

#### Enforcement

DB Construction Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by quality control staff or Contracting Officer.

### 2.3.8 Working Hour Restrictions

Edit following for specific requirements of project. Add or delete as required:

Limit work and deliveries to weekday hours of 7:00 AM to 5:00 PM unless otherwise approved by Contracting Officer. No work shall occur on National Park Service (NPS) holidays or weekends without prior approval.

### 2.3.9 Temporary Services

Available services may vary depending on location, Park, etc. Edit following for specific requirements of project. Add or delete as required:

Temporary materials may be new or used but must be adequate in capacity for required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

**Fire Protection Equipment:** Observe and enforce standards of fire prevention. No open fires allowed.

**Vehicles and Equipment:** Provide one fire extinguisher on each vehicle or piece of equipment. Extinguishers shall have a minimum UL (Underwriters Laboratory) rating of 2-A:10-B:C. A capable and qualified person shall be placed in charge of fire protection. Responsibilities shall include locating and maintaining fire protective equipment and establishing and maintaining safe torch cutting and welding procedures.

**Hazard Control:** Take necessary precautions to prevent fire during construction. Do not store flammable or combustible liquids in existing structures. Provide adequate ventilation during use of volatile or noxious substances.

**Spark Arresters:** Equip gasoline or diesel powered equipment, used in potential forest or grass fire locations, with spark arresters approved by U. S. Forest Service. Contracting Officer will issue written determinations of areas and periods of potential fire hazard. Locate internal combustion equipment so exhausts discharge well away from combustible materials. Locate service areas a minimum of 50 feet from buildings. Shut down equipment before refueling.

**Smoking and Tobacco Use:** Smoking within buildings or temporary storage sheds is prohibited. Tobacco use including vaping is prohibited.

**Welding:** Cutting by torch or welding shall be performed only when adequate fire protection is provided.

Edit following paragraphs as required for specific project needs. Consult with Park and edit as required.

**Electricity and Lighting:** Make arrangements with utility company for metered connection to existing utility and pay costs. Coordinate work with Contracting Officer. Temporary electrical work shall meet requirements of current version of NFPA 70 NEC Article 590 (National Fire Protection Association (NFPA), National Electrical Code (NEC)). When temporary connections are removed, restore existing utility services to original condition.

**Telephone:** DB Construction Contractor shall make arrangements with local telephone company and pay costs for job-site telephone service.

**Water:** DB Construction Contractor shall provide potable water and pay costs.

**Heating and Cooling:** Furnish temporary heating and cooling. Do not use permanent heating and cooling system without written authorization from Contracting Officer. When permanent heating and cooling system is approved for use as temporary heating and cooling, pay costs until final acceptance. Install new filters before final acceptance. Equipment warranties start on date of final acceptance.

**Sanitary Facilities:** Provide and maintain temporary toilet facilities according to State Health Department and NPS regulations. Provide separate accessible facilities for men and women with privacy locks. Enclosures shall be weatherproof, sight proof, and of sturdy construction. Completely remove sanitary facilities on completion of work.

### 2.3.10 Access

Edit to include unique Park or concession activities or constraints (limited access, seasonal shutdowns, park activities, etc.).

Coordinate construction efforts with Contracting Officer towards minimal impact to the work of NPS personnel and to the visiting public.

During construction of scheduled facilities, DB Contractor shall have continuous access to the site.

### 2.3.11 Preservation of Adjacent Features

Confine operations to work limits of project. Prevent damage to natural surroundings. Restore damaged areas outside work limits, repair or replace damaged trees and plants, at no additional expense to NPS.

Provide temporary barriers to protect existing trees, plants, and root zones that will remain in place. Do not remove, injure, or destroy trees or other plants without prior approval. Consult with Contracting Officer and remove roots and branches interfering with construction. To prevent damage, carefully supervise excavation, grading, backfilling, and other construction operations near trees and plants.

### 2.3.12 Existing Utilities

Minimize service disruptions. DB Construction Contractor shall coordinate with local utility companies. Arrange disruptions at least 48 hours in advance with NPS and get approval from Contracting Officer.

Construction procedures shall include preventing accidental disruptions to facilities outside project limits by investigating existing utilities and protection during construction. Accidental disruptions shall be remedied at no cost to NPS.

### 2.3.13 Hauling Restrictions

Comply with legal and local load restrictions.

### 2.3.14 Accident Prevention

**Accident Prevention Program:** Prior to Preconstruction Meeting, submit accident prevention program. Program must be accepted by NPS before work on site begins and shall comply with Occupational Safety and Health Administration (OSHA) and project requirements. Include:

* Name of responsible supervisor to carry out the program.
* Monthly safety meetings.
* First aid procedures.
* Outline of each phase of work, hazards associated with each phase, and methods proposed to ensure property protection and safety of the public, NPS staff, and DB Construction Contractor employees.
* Training
* Planning for possible emergency situations.
* Housekeeping and fire protection.

**Accident Reporting:** Report:

* Accidents defined as death.
* Occupational disease.
* Traumatic injury to DB Construction Contractor’s personnel, NPS employees, or the public.
* Property damage of accidents in excess of $100
* Fires within seven days.

Complete [DSC Contractor Accident/Property Damage Report](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=231291) (CM-22) and forward to Contracting Officer.

**Quality Assurance:** Ensure employees are physically qualified to perform assigned duties safely. Do not allow employees to work if their abilities are impaired. Operators of equipment shall be able to understand signs, signals and operating instructions, and capable of operating such equipment.

**Accident Prevention Products:** Provide:

* First aid facilities.
* Personnel protective equipment shall meet requirements of NIOSH and MSHA (National Institute for Occupational Safety and Health and Mine Safety and Health Administration).
* Emergency instructions including telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and park police. Place in conspicuous locations at work site.
* Adequate egress at all times according to Standard for Safeguarding Construction, Alteration, and Demolition Operations (NFPA 241).
* Hard hats for employees and for up to six visitors.
* Designate and post signs in hard hat areas.

**Training:** Provide training for first aid and hazardous material handling and storage.

### 2.3.15 Temporary Controls

**Housekeeping:** Keep project neat, orderly, and in safe conditions.

Edit to include weather related conditions unique to the Park which may affect construction.

Weather Protection: When inclement weather is expected, provide temporary protection for areas where roofing, siding, windows, doors, or other enclosing elements have been removed or have not been installed. Inspect protective coverings frequently to ensure proper function.

Edit for specific requirements of project. Add or delete as required:

Hurricane season begins June 1 and terminates November 30. If hurricane threatens area, secure and close Park at least 24 hours before anticipated storm landfall.

### 2.3.16 Field Engineering

DB Construction Contractor shall set initial construction stakes establishing lines, slopes, grades, reference points, base lines and bench marks, as required. DB Contractor shall execute work according to these stakes and perform additional staking necessary.

Preserve existing survey control used for this project. Controls destroyed by DB Construction Contractor shall be replaced at their expense.

### 2.3.17 Project Close-out

**Project Record Drawings**: Maintain one complete full-size set of contract drawings and one full-size set of vendor-supplied drawings. Clearly mark changes, deletions and additions, using NPS standards to show actual constructed conditions. Keep record drawings current. Certification of accuracy and completeness are required for monthly payment requisitions. On completion of total project, submit complete record drawings.

**As-Constructed Drawings:** Provide by updating approved DB Construction Drawing CAD (Computer Aided Design)/BIM (Building Information Modeling) software equivalent files with information provided on the record drawings, contract modifications, and other applicable shop drawings, sketches, and data. CAD/BIM files should comply with [CAD/BIM & Drafting Standards](https://www.nps.gov/dscw/ds-cad-bim-drafting.htm).

**Posted Operating Instructions:** Attach operating instructions to on or post adjacent to equipment. Include procedures for wiring diagrams, control diagrams, control sequence, start-up adjustment, operation, lubrication, shutdown, and safety precautions in case of equipment failure and other items of instruction recommended by manufacturer.

**Cleaning:** Before scheduling final inspection, remove tools, equipment, surplus materials, and rubbish. For surfaces damaged due to work of this contract, restore or refinish to original condition. Remove grease, dirt, stains, foreign materials, and labels from finished surfaces. Thoroughly clean building interiors. Remove construction debris from site. At time of final inspection, project shall be thoroughly clean and ready for use.

Before submitting request for final inspection, submit:

Edit for specific project requirements. Add or delete as required:

* Project Record Drawings and As-Constructed Drawings: As specified above.
* Guarantees and Bonds: As specified in Performance Requirements and Specifications.
* Spare Parts and Materials: As specified in Performance Requirements and Specifications
* Operation and Maintenance (O&M) Data: As specified below and in Performance Requirements and Specifications.
* Keys and Keying Schedule: Submit keys, including duplicates. Wire keys for each lock securely together. Tag and plainly mark with lock number, equipment identification, or panel or switch number. Indicate location such as building and room name or number.
* Operating Tools: As specified in individual sections.
* Special Tools: One set of special tools required to operate, adjust, dismantle, or repair equipment. Special tools are those not normally found in possession of mechanics or maintenance personnel.
* System Demonstration and Training: As specified below and in Performance Requirements and Specifications.
* Mechanical and Electrical Systems: Verify following in writing:
* Systems complete.
* Systems properly started and operational.
* Controls complete and operational. Sequences checked and function properly.
* Testing and Balancing Report: As required in technical specifications.
* Completed NPS Project Sustainability Checklist
* Commissioning (Cx)
* Final NPS Project Requirements
* Final Commissioning Plan
* Final Systems Manual
* Final Verified Test Reports
* Final Training Reports
* Final Commissioning Report
* LEED™ Documentation related to commissioning. Format as required by USGBC (United States Green Building Council) for submittal under referenced green building rating system.

**Operation and Maintenance (O&M) Data:** Prior to final inspection, provide one three-ringed binder with O&M data to Contracting Officer for review. Data shall include manufacturer's standard literature, equipment data sheets, vendor-furnished as-built drawings, custom written data not included in manufacturer’s standard literature, schedules, warranties, parts lists, test results, and Subcontractor list.

After NPS completes review, incorporate comments. Submit three final sets of O&M data to Contracting Officer.

**System Demonstration and Training:** Train designated personnel in adjusting, operating (include seasonal and emergency operations, if applicable), maintaining, and safety requirements of equipment and systems. Instructors shall be thoroughly trained in operating theory and practical O&M work for each type of equipment or system. Sequence of training shall follow approved outline of training guide, e.g. O&M Data. Specify training required in individual sections. If no duration listed, provide training of sufficient duration to adequately cover subjects.

Training plan as required by commissioning: For each training session, training plan shall include:

* Dates, start and finish times, and locations.
* Outline of information to be presented.
* Names and qualifications of presenters.
* List of texts and other materials required to support training.

Following paragraphs are optional. Edit as required.

Videotapes or digital recordings of demonstrations and training sessions:

Provide separate videotape or digital recording for each separate training session. For each videotape, provide original and one copy. Label each videotape or digital recording with date of demonstration or training and instructor's name. Provide index of content listing start and end time of each subject covered during training session. Sequence of training subjects shall follow sequence listed in approved training outline or as actually conducted.

Edit following paragraphs depending on type of project and extent of commissioning.

### 2.3.18 Substantial Completion and Final Inspection

Submit written certification to Contracting Officer indicating project, or designated portion of project, is substantially complete, and request final inspection. Upon receiving certification, Contracting Officer will proceed with inspection within 10 days or advise DB Construction Contractor of items preventing project from being designated as substantially complete.

When work is determined substantially complete, Contracting Officer will prepare a list of deficiencies (Punch List) for corrections before final acceptance and issue a Letter of Substantial Completion. If work is not determined substantially complete, Contracting Officer will notify DB Construction Contractor in writing. After completing work, DB Construction Contractor shall resubmit certification and request new final inspection.

Following final inspection, if work is determined substantially complete, Contracting Officer will prepare list of deficiencies for corrections before final acceptance and issue a Letter of Substantial Completion. DB Construction Contractor shall complete work described on list of deficiencies within 30 calendar days, as weather permits. If DB Construction Contractor fails to complete the work within this time frame, Contracting Officer may either replace or correct the work with an appropriate reduction in contract price or charge for re-inspection costs according to the contract’s Inspection of Construction clause.

**Acceptance of the work:** After deficiencies corrected, Contracting Officer will issue a Letter of Final Acceptance.

## 2.4 Sample & Template

* Project Waste Management Plan Worksheet Sample - included with Division 1 Specifications
* Submittal List with Review Estimate Template - included with Division 1 Specifications

# 3.0 Performance Requirements

## 3.1 Design Imperatives

Use in all stages of design and construction processes:

* Appropriate Design Solutions for Park Use and Maintenance Capabilities
	+ see definition on DSC Workflows [*Definitions A*](https://www.nps.gov/dscw/definitionsdc_a.htm) page
* Compliance Consistency Reviews
	+ see definition on DSC Workflows [*Definitions C*](https://www.nps.gov/dscw/definitionsdc_c.htm) page
* Constructability Strategies
	+ see definition on DSC Workflows [*Definitions C*](https://www.nps.gov/dscw/definitionsdc_c.htm) page
* [Integration of Facilities into the Park Environment](https://www.nps.gov/policy/mp/policies.html#_Toc157232993) (Management Policies 2006)
* Quality Control
	+ see definition on DSC Workflows [*Definitions Q*](https://www.nps.gov/dscw/definitionsdc_q.htm) page
* Risk Analysis
	+ see definition on DSC Workflows [*Definitions R*](https://www.nps.gov/dscw/definitionsdc_r.htm) page
* Scope and Budget Consistency Reviews
	+ see definition on DSC Workflows [*Definitions S*](https://www.nps.gov/dscw/definitionsdc_s.htm) page
* Sustainable Design Practices
	+ see definition on DSC Workflows [*Definitions S*](https://www.nps.gov/dscw/definitionsdc_s.htm) page
* Universal Design Principles
	+ see definition on DSC Workflows [*Definitions U*](https://www.nps.gov/dscw/definitionsdc_u.htm) page
* Value-Based Decision-Making Methodology
	+ see definition on DSC Workflows [*Definitions V*](https://www.nps.gov/dscw/definitionsdc_v.htm) page

## 3.2 Sustainability

Sustainability requirements for NPS projects are included in a variety of documents - Federally legislated requirements, Executive Orders (EOs), and Department of Interior (DOI) and NPS policies. NPS Project Sustainability Checklist template is used to identify project specific sustainability requirements and document continued compliance with those requirements. See DSC [Sustainability Standards](https://www.nps.gov/dscw/ds-sustainability.htm) for laws, regulations, policies, guidance, and background data.

Project shall meet Federal sustainability requirements as presented in NPS Project Sustainability Checklist.

Project shall incorporate sustainable design strategies to achieve at least a LEED™       minimum level rating. (There is no written DOI or NPS requirement stipulating formal certification of projects by LEED. A 2013 addendum to the 2008 DOI Sustainable Buildings Implementation Plan deleted the formal certification requirement (from LEED or similar) for projects valued greater than $2,000,000. NPS Management Policies 2006 require "All projects that include visitor centers or major visitor services facilities must incorporate LEED™ (Leadership in Energy and Environmental Design) standards to achieve a silver rating." Project managers should consult with Major Construction Division (MCD) for LEED requirements affecting projects presented to the Investment Review Board (IRB). LEED has many systems including: LEED NC (New Construction), LEED EB (Existing Building), LEED CI (Commercial Interiors), LEED CS (Core and Shell), LEED™ H (Home), and LEED ND (Neighborhood Development). Within each system, there are four certification levels. Select appropriate LEED System and Level. The lowest level is ***Certified***. Next higher level is Silver. After Silver is Gold followed by Platinum. LEED Gold and Platinum levels are encouraged where benefits, initial costs and life-cycle costs justify the investment. LEED Certification may not be applicable for significant historical buildings constrained by cultural resource or State Historical Preservation Officer requirements.) Delete if your project is a non-building project or does not have an applicable LEED standard or LEED does not apply to your project.)

Formal LEED™ Certification through USGBC will be required. (Include when required, otherwise delete.)

LEED Design Phase Review: (Applies only when formal LEED Certification is sought, otherwise delete.) At conclusion of Construction Documents phase, A/E Designer shall pay for and obtain a LEED **design phase review** using USGBC prescribed processes. USGBC identifies credits that are **design submittal** and eligible for review in the design phase review, at completion of construction documents. USGBC (or its assigned agent) will review design submittals and determine if each design related credit is **anticipated** or **denied**. Anticipated credits are complete for the design process and, if required construction related process is followed, USGBC will award at construction phase review. Denied credits will not be awarded. A/E Designer is responsible for obtaining an **anticipated** evaluation from USGBC for design submittal credits required to achieve indicated LEED certification level. For credits returned as denied, A/E must:

* Apply for and obtain an anticipated ruling for another credit of equal value

*- or -*

* Resubmit or appeal, at A/E’s expense, until USGBC identifies credit as anticipated.

LEED™ permits a project team to certify a project using a two phase application. At completion of design phase (construction documents), project team may pay part of certification fee and submit documentation to USGBC for planned design-related credits (designated by LEED as design submittal). USGBC will review documentation and rule on each credit as anticipated or denied. After construction is complete, project team must submit documentation for planned construction-related credits (designated as construction submittal) and verify design “has been executed per requirements in the construction phase…All applicant verified design phase credits that were designated as Anticipated and have not changed since the design phase review will be declared as Achieved.”

By submitting a design phase review in a Design-Bid-Build project, there is a more direct accountability for the A/E. Credits that A/E is responsible for can be evaluated when A/E is still under contract and able to make changes that may restore likelihood of LEED certification at desired level.

If this method is used, time must be provided in the schedule for USGBC to review credits and A/E to resolve disagreements with review results.

## 3.3 Integrated Design Principles

Employ integrated design principles using a collaborative, integrated design process that:

* Initiates and maintains an integrated project team in every stage of the project.
* Establishes performance goals for siting, energy, water, materials, and indoor environmental quality along with other comprehensive design goals.
* Ensures incorporation of these goals throughout design and lifecycle of building.

Considers every stage of a building’s lifecycle, including deconstruction. (Delete, if non-building project.)

## 3.4 Facility Performance

Work performed shall comply with applicable [laws, regulations, and NPS policies and guidelines](https://www.nps.gov/dscw/laws-policies.htm).

## 3.5 Elements and Products

Edit this section as appropriate, based on project requirements.

In addition to requirements specified in other chapters, provide products and elements that comply with:

* No Substitutions:
	+ Use only product specified (or one of the products).
* Elements Made Up of More Than One Product:
	+ Where an element is specified by performance criteria, project shall use construction either proven-in-use or proven-by-mock-up, unless otherwise indicated.
		- Proven-In-Use: Proven to comply by having actually been built to same or very similar design with same materials as specified and functioning as specified.
		- Proven-by-Mock-Up: Compliance reasonably predictable by having been tested in full-scale mock-up using same materials and design as specified and functioning as specified. Testing need not have been accomplished specifically for this project; when published listings of independent agencies include details of testing and results, citation of test by listing number is sufficient (submittal of test details is not required).
		- DB Contractor may choose to use elements proven-in-use or proven-by-mock-up, unless either option is indicated as specifically required.
		- Where test methods accompany performance requirements, test methods shall be used to test mock-up.
	+ Where a type of product is specified, without performance criteria specifically applicable to the element, project shall use the type of product specified.
	+ Where more than one type of product is specified, without performance criteria specifically applicable to the element, DB Contractor shall use one of the types of products specified.
	+ Where a type of product is specified, with applicable performance criteria, DB Contractor shall use either the type of product specified or another type of product that meets performance criteria as proven-in-use or proven-by-mock-up.
	+ Where more than one type of product is specified, with applicable performance criteria, DB Contractor shall use either one of the types of products specified or another type of product that meets the performance criteria as proven-in-use or proven-by-mock-up.
	+ Where neither type of product nor performance criteria are specified, DB Contractor shall use products that will perform well within specified life span of the building.
* Products:
	+ Where a product is specified only by a manufacturer name and model number/brand name, DB Contractor shall use only that model/brand product.
	+ Where the properties of a product are specified by description and/or with performance criteria, DB Contractor shall use products that comply with description and/or performance criteria.
	+ Where manufacturers are listed for a particular product, DB Contractor shall use a product made by one of those manufacturers that also complies with other requirements.
	+ Where actual brand name products are not identified by either Contracting Officer or DB Contractor, DB Contractor shall identify products to be used.
	+ Proposal:
		- DB Contractor shall identify:
			* One or more product types for each system, assembly, or element.
			* Brief descriptive or performance specifications for each product type.
		- NPS will identify at least one manufacturer that will be used for major manufactured products commonly purchased by brand name and other products so indicated.
	+ During DB Design Development or DB Construction Documents Submissions, DB Contractor shall:
		- Identify which product type will be used when more than one product type is identified for a particular system, assembly, or element.
		- Identify descriptive or performance specifications for each product type. Provide brief specifications for early submittals and complete specifications before completing construction documents.
		- Identify at least one manufacturer that will be used for each product type.
		- Provide manufacturer’s product literature on at least one actual brand name product meeting specifications for major manufactured products commonly purchased by brand name, and other products so indicated, and include performance data and sample warranty.
	+ During Construction, DB Contractor shall:
		- Identify actual brand name products used for every product, except commodity products specified by performance or description.
		- Provide test reports showing compliance where a product is specified by performance requirements with test methods and if so specified.
		- Provide manufacturer's product literature for each brand name product.
		- Provide manufacturer's certification that product used on project complies with contract documents.
	+ Before End of Closeout, DB Contractor shall:
		- Provide copies of manufacturer warranties that extend for more than one year after completion.

# Technical REQUIREMENTs

Technical requirements are comprised of UNIFORMAT II (a uniform classification of construction systems and assemblies) specifications with performance and quality requirements specific to the project. Incorporate NPS DSC [*Design Standards*](https://www.nps.gov/dscw/dstandards.htm).

To maximum extent possible, avoid or minimize using prescriptive specifications unless necessary for technical coordination with Parks, other physical plant systems, or integration into existing maintenance and repair procedures. Prescriptive specifications have the effect of moving design responsibility for specific building system from DB Contractor to the Government.

The end product should be a complete and well-coordinated set referencing requirements covered in Parts 1, 2, and 3 of the RFP. Organize requirements according to ASTM E1557 (proprietary systems such as Speclink or others are acceptable) as follows:

## A Substructure

A10 - Foundations

A20 - Basement Construction

## B Shell

B10 - Superstructure

B20 - Exterior Enclosure

B30 - Roofing

## C Interiors

C10 - Interior Construction

C20 - Stairs

C30 - Interior finishes

## D Facility Services

D10 - Conveying

D20 - Plumbing

D30 - HVAC (Heating, ventilation, & air conditioning)

D40 - Fire Protection

D50 - Electrical

## E Equipment and Furnishings

E10 - Equipment

E20 - Furnishings

## F Hazardous Waste Remediation

F10 - Special Construction

F20 - Selective Building Demolition

## G Site

G10 - Site Preparation

G20 - Site Improvements

G30 - Site Mechanical Utilities

G40 - Site Electrical Utilities

G90 - Other Site Construction

## H Process

H10 - Process Equipment

Use and edit UNIFORMAT II guide specifications to meet project requirements. (Construction Specifications Institute (CSI) Format is not acceptable.) Design and Construction submittal requirements are covered in Parts 1, 2, and 3 of the RFP. Edit and coordinate references found in technical requirements appropriately.

**Design-Build (DB) Part 4 Technical Requirements Sample**

[DB Part 4 Technical Requirements sample](https://www.nps.gov/dscw/loader.cfm?csModule=security/getfile&pageid=235497) shows typical performance specifications, should not be considered complete or comprehensive, and should not be used for production specifications.

Additional information: [National Institute of Standards and Technology](https://www.nist.gov/) (NIST)

# Attachments

Attach documents identified in [*Section 1.8 Data and Materials provided by NPS*](#_1.8_Data_and).