LAKE MEAD NATIONAL RECREATION AREA
BOULDER CITY, NEVADA

PMIS No. 306375

DEMOLISH LAS VEGAS BAY LAUNCH RAMP RESTROOM AND LIFT STATION

PROJECT SPECIFICATIONS

NATIONAL PARK SERVICE

MARCH 23, 2026

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ATTACHMENT(S)

1. Park Map with Project Location
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DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Location: This project is located at Las Vegas Bay (LVB) in Lake Mead National Recreation Area, Clark County, Nevada.

1. LVB Launch Ramp Public Restroom (36°07'07.95"N, 114°51'58.26"W)

B. The work consists of the following: Work includes, but is not limited to, demolishing restroom; decommissioning lift station; and removing/abandoning utilities. Work also includes selective site demolition and restoring site.

1. Miscellaneous Preparation:
   - Install barricades/chain link fence to protect vegetation and visitors during performance of work.
   - Protect existing asphalt pavement and asphalt/concrete curbs.
   - Protect irrigation system and vegetation that are irrigated.
2. Selective Site Demolition:
   - Remove vegetation except those that are irrigated.
   - Remove and recycle approximately 536 sq ft of sidewalk.
   - Remove and recycle approximately 662 linear feet of handrails.
   - Remove and recycle four (4) bollards.
3. Demolish Restroom:
   - Demolish and recycle public restroom (approximately 26’-0” x 17’-4” x 8’-0” ceiling height).
4. Remove/Abandon Utilities In-Place:
   - Confirm all utilities (i.e. water, sewer, and electricity) are disconnected and terminated at the service mains before demolition begins.
   - Lift Station
     1. Empty and dispose of all water, sewage, sludge, and sediment from fiberglass wet well.
     2. Remove and dispose of the below-grade lift station.
   - Sewer Lines
     1. Remove and dispose vertical sewer lines and valve, including curb box.
     2. Clean and plug abandoned sewer lines with concrete or grout for a length of at least 1.5 times the pipe diameter at each end.
   - Water Lines
     1. Shut off water at corporation stop valve and/or isolation valve.
     2. Remove and dispose vertical water lines.
     3. Cap/plug water lines.
     4. Disinfect and test water lines.
   - Electricity

1. Power for LVB Picnic Area Restroom comes from LVB Launch Ramp Restroom.
2. After award/NTP contact NV Energy to deenergize and request relocation of existing meter from LVB Launch Ramp Restroom to LVB Picnic Area Restroom.
    a. Assessor's Parcel Number (APN): 15800002001.
    b. Service Address: None but provide meter number.
    c. Legal Owner's Contact Information:
        i. Lake Mead National Recreation Area, 601 Nevada Way, Boulder City, NV 89005.
    d. Meter Number: 007178855.
3. Remove and dispose of existing electrical service, except meter, at LVB Launch Ramp Restroom. Reuse existing meter at LVB Picnic Area Restroom.
4. Install and connect new electrical service at LVB Picnic Area Restroom. Install and connect new 100A panel inside utility chase at LVB Picnic Area Restroom.
5. If using existing underground pull box(es) and conduit, clean out conduit before splicing new electrical cable to existing electrical cable.
6. Maintain power to LVB Picnic Area Restroom during demolition of LVB Launch Ramp Restroom.

5. Restore Site
    - Fill all excavated areas with 95% compacted earth.
        1. Grade the demolition area to match surrounding landscape and ensure proper drainage.
    - Connect existing asphalt/concrete curbs with approximately 100 linear feet of new concrete curbs.

C. Additional Information and Instructions:
1. A daily log shall be prepared by the contractor representing the work that was performed that day.
    - The log shall describe the tasks performed that day and the contractor staff working.
    - Two or more representative photos of the tasks being performed that day shall be included in each daily log.
    - The submitted daily logs shall be in a PDF format. Emailing the CO/COR is acceptable.
    - The daily logs shall be sent to the CO/COR once a week. For every week working in the field, the daily log shall be sent to the CO/COR.
2. Submit documentation of legal disposal and/or recycling of construction debris and hazardous materials.
3. None are expected but obtain all necessary permits.
4. Asbestos-containing materials (ACM) are not anticipated.

D. Field Verification: The vendor shall field verify existing conditions affecting the work in this contract before ordering materials. The scheduling of field verification site visit(s) shall be coordinated with the Contracting Officer's Representative (COR).

E. Project will be under a single prime contract.

F. Capital Asset:

1. Facility (FMSS Location)
   - [17952] LV Wastewater System
   - [36083] LV Restroom Ramp 531
2. Asset Code / Facility Type
   - 5200 – Wastewater Systems
   - 5210 – Sanitary Sewer
   - 4100 Building
   - 4124 Comfort Station

G. Performance Period: 180 calendar days after Award.

1.2 GOVERNMENT-FURNISHED ITEMS (NOT APPLICABLE)

A. The Government may furnish products and materials for incorporation into the work.

1. The vendor will arrange and pay for delivery of government furnished items to the project site based on the vendor's approved project schedule.
2. After delivery, the government will inspect delivered items for damage. If items are damaged, defective, or missing, the government will arrange for replacement.
3. The vendor is responsible for receiving, unloading, and handling government furnished items at project site for use in the work.
4. The vendor is responsible for protecting government furnished items during storage, handling, and the work, including damage from exposure to the elements.
5. If government furnished items are damaged as a result of the vendor's operations, the vendor shall repair or replace the items in-kind.

B. Government-Furnished Items: The government will furnish the following products or materials for use on this contract:

1. None anticipated.

1.3 PUBLIC USE OF THE SITE

A. General: The project site will be closed to the public during onsite work.

1.4 VENDOR USE OF SITE

A. General: Vendor shall have full use of the site for installation operations during onsite work. Vendor's use of the site is limited only by the Government's right to perform work or to retain other vendors on portions of Project. Limit use of the site during onsite work to the

project area limits as outlined on the attached site map. Do not disturb portions of the site beyond the project area limits.

B. Park Entry: Vehicles associated with the vendor shall be waived entrance fee upon entering in a marked company. The entrance fee is waived only for the purpose of reporting directly to a specific work location. Any deviation for recreational purposes is subject to payment of required entrance fees.

C. Site Access: The vendor shall access the project site as outlined on the attached site map. Do not drive vehicles off road or access non-project areas without permission from the contracting officer or park superintendent.

D. Park Regulations: Ensure all personnel entering or working in the park are familiar with and obey all park regulations. Law enforcement rangers will intervene if they perceive any unsafe or unlawful activity.

E. Working Hours: Regular work hours and days shall be limited to daylight hours from 8:00 a.m. until 5:00 p.m. Monday through Friday, excluding federal holidays. Work outside regular hours and days requires approval from the contracting officer.

1. January 1, New Year's Day
    i. January 1 on Saturday, New Year's Day observed on Friday
    ii. January 1 on Sunday, New Year's Day observed on Monday
2. 3rd Monday in January, Martin Luther King, Jr Birthday
3. 3rd Monday in February, Washington's Birthday (Presidents' Day)
4. 4th Monday in May, Memorial Day
5. June 19, Juneteenth National Independence Day
    i. June 19 on Saturday, Independence Day observed on Friday
    ii. June 19 on Sunday, Independence Day observed on Monday
6. July 4, Independence Day
    i. July 4 on Saturday, Independence Day observed on Friday
    ii. July 4 on Sunday, Independence Day observed on Monday
7. 1st Monday in September, Labor Day
8. 2nd Monday in October, Columbus Day
9. November 11, Veterans Day
    i. November 11 on Saturday, Veterans Day observed on Friday
    ii. November 11 on Sunday, Veterans Day observed on Monday
10. 4th Thursday in November, Thanksgiving Day
11. December 25, Christmas Day
    i. December 25 on Saturday, Christmas observed on Friday
    ii. December 25 on Sunday, Christmas observed on Monday

F. No Smoking Policy: Smoking is prohibited inside or outside within 25 feet of any buildings in the park. This applies to existing buildings, buildings under installation, and buildings

under renovation. Discarding of tobacco products or debris anywhere other than into designated tobacco receptacles is considered littering and subject to fines.

G. Staging and Storage: Confine storage of equipment and materials to the staging / lay-down / storage areas as established by the COR.

H. Parking: The vendor shall park vehicles and heavy equipment in designated areas for vendor use or as established at the COR. Vehicles are not permitted within long-term or overnight parking along roads or in associated overlooks / pull-outs.

I. Driveways and Entrances: The vendor shall keep driveways and entrances serving the premises clear and available to the government, government employees, and emergency vehicles at all times.

J. Preservation of Natural Features: Prevent damage to natural surroundings. Restored damaged areas and replace damaged trees, vegetation, and grass at no expense to the government.

K. Refer also to Section 01 11 40 Work Restrictions and Section 01 50 00 Temporary Facilities & Controls.

1.5 REFERENCE DOCUMENTS / REPORTS

A. General: The following reference documents / reports are available upon request to supplement the information specified in the contract documents:
   1. N/A.

END OF SECTION 01 11 00

SECTION 01 11 40

WORK RESTRICTIONS

PART 1 – GENERAL

1.1 PARK REGULATIONS

A. General: The vendor must comply with the following rules and conditions:

1. Ensure personnel working in the park become familiar with and obey all park regulations, wear hard hats in designated areas, and do not enter any restricted areas unless required to do so and until cleared for such entry.

2. Ensure equipment is conspicuously marked for identification.

3. The vendor shall restrict employees / representatives to the work site and control travel directly to and from the work site.

4. Restore all traffic / parking / security signs and markings, including space numbers, designations, and lines, to their original form if such signs / markings are defaced or deleted during onsite work.

5. Control and provide security of vendor-owned equipment and materials at the work site. Report immediately missing / lost / stolen property to the park dispatch / law enforcement rangers at 702-293-8998 (non-emergency).

6. Vehicles associated with the vendor shall be waived the entrance fee upon entering in a marked company. Please note that the entrance fee is waived only for the purpose of reporting directly to a specific work location. Any deviation for recreational purposes is subject to payment of required entrance fees.

7. Vehicles / Heavy Equipment:

   a. Rules of the Road: All vehicles and heavy equipment will comply with posted traffic regulations, including speed limits and double-yellow center lane markings. Vehicles and heavy equipment shall take every safe opportunity to use paved roadside pullouts in order to allow faster moving traffic to pass. Failure to comply with traffic regulations will result in a citation being issued to the driver.

   b. Vehicle Parking: Vehicles are not permitted within long-term or overnight parking along park roads or in associated overlooks / pullouts. Vehicles and heavy equipment will be permitted at designated parking areas only.

   c. Vehicle Exhaust: All vehicles will be properly maintained to ensure that the exhaust produced is within legal limits. Effects of excessive vehicle exhaust may be subject to enforcement of State and Federal laws regarding emissions as well as those regarding threatened and endangered species.

d. Spills: Vendor shall be responsible for any cleanup efforts required in accordance with 40 CFR and all applicable state environmental quality laws regarding disposal and cleanup of hazardous / industrial wastes. Vendor must immediately notify the Contracting Officer of spills.

e. Commercial Vehicle Safety Inspections: The vendor shall fully cooperate regarding safety inspections of commercial vehicles within the Park. Commercial vehicle safety inspections are conducted unannounced for employee and visitor safety. Vehicles are checked for safety and mechanical deficiencies and for compliance with current state and federal laws and regulations. Driver licenses and medical certificates are also checked.

f. DOT Compliance: All vehicles are to be compliant with all DOT requirements including but not limited to driver with appropriate license class, medical examiner card as appropriate with license class, carrying three (3) triangles or three (3) flares, mounted fire extinguisher, and valid DOT safety sticker.

g. Slow Vehicles: The vendor is to notify the Contracting Officer of slow vehicles that may cause traffic delays or extended traffic lines. Vehicles that are slow are requested to enter the Park AFTER 2:00 p.m. and exit the Park BEFORE sunset.

h. Oversized Vehicles: Oversized vehicles are defined as vehicles where the width of the vehicle or load exceeds one lane (i.e., beyond the center line of the paved road). Oversized vehicles must not exceed the clearances along the Park road corridor. Oversized vehicles will require an escort and drivers must avoid driving on the edges of the Park road. The Vendor is to notify the Contracting Officer of oversized vehicles, scheduled dates and estimated arrival times at the park entrance, and the identity of who is escorting the vehicle (e.g., police, vendor, etc.). Vehicles that are oversized are requested to enter the Park AFTER 2:00 p.m. and exit the Park BEFORE sunset.

i. Road Work: Vendor shall provide adequate traffic control, including flaggers on either side of any work performed on the road. Any workers on or near the road must wear highly visible, bright clothing. (See Section 01 50 00 for additional details).

j. Law Enforcement: Law enforcement rangers will intervene if they perceive any unsafe or unlawful activity. Vendor must immediately comply with any instructions issued by a park law enforcement ranger.

k. Road & Weight Restrictions: All vehicle load, weight and size limitations, as established by State law, apply to vehicles operated on the Park road (36 CFR § 4.11). No loads heavier than the current load rating for the historic Park bridge will be permitted.

8. Emergency Medical and Accident Reporting:

a. The vendor shall contact Park Dispatch for any medical emergency or traffic accident occurring within the Park.
Emergency number: Dial 911 as needed.

Park Dispatch: 702-293-8932 (emergency)

Park Dispatch is called so that the entrance station will be prepared should any emergency vehicles (e.g. ambulance) need to enter the Park and so that any available Emergency Medical Services personnel in the Park might respond until such time as the ambulance arrives.

b. The vendor is required to report ANY personal injury and / or property damage incident occurring within the park. This report must be made to a Law Enforcement Ranger at the first available opportunity before leaving the park:

Park Dispatch: 702-293-8998 (non-emergency)

1.2 RESOURCE PROTECTION

A. General: The park is committed protecting natural and cultural resources found within the park and adjacent lands. The vendor must comply with the following rules and conditions:

1. Invasive Species (i.e. Equipment Inspection): The introduction of non-native invasive species can threaten rare and endangered species or can create new populations of non-native species not traditionally found in the park. The vendor is required to inform personnel to thoroughly clean all vehicles, equipment, tools, supplies, and materials prior to packing / loading. The park requires, and will perform, inspections to ensure non-transport of non-native species PRIOR to arriving at the park entrance. Contact the Contracting Officer's Representative (COR) at least five (5) business days in advance of park entry to arrange for inspection(s) at the loading dock or point of origin.

2. Endangered Species (i.e. Desert Tortoise Training): Endangered species are protected by Federal law. Obey all park regulations. Drivers must obey all traffic laws and keep an eye out for animals on or alongside road. Contact park dispatch at 702-293-8998 immediately if animal is hit or injured or will not move off of the road. All vendor personnel working in Lake Mead National Recreation Area must have up-to-date Lake Mead Desert Tortoise Awareness Training. Prior to starting work, contact the Contracting Officer's Representative (COR) at least five (5) business days in advance to schedule the desert tortoise awareness training.

3. Archaeological Resources: Archaeological resources are physical evidence of past human activity, including evidences of the effects of that activity on the environment. Archaeological resources are found above and below ground and underwater. The vendor shall appoint an archaeological monitor during all ground-disturbing activities in archaeological sensitive areas. If the monitor discovers resources, the vendor shall stop work or relocate work to a non-sensitive area and contact the contracting officer immediately.

4. Mitigations:

a. Equipment used at the site shall be pressure cleaned and free of weeds, seed, debris, and mud to prevent the introduction and/or spread of exotic, invasive plants.

b. If cultural materials are encountered during construction activities, all work within 100ft must cease and contact the park's Cultural Resource Program Manager or Park Archeologist for further evaluation.
c. For any projects involving trenching or digging holes, provisions (generally in the form of ramps; with a slope < 45°) must be made every 20-50' to allow for the escape of animals that may fall into these recesses, and/or they must be covered in such a way as to prevent animals (vertebrates) from falling in them.
d. Migratory birds may seek respite within trees or on buildings. The Migratory Bird Treaty Act of 1918 prohibits the removal of all listed species or their parts (feathers, eggs, nests, etc.) from such property. However, in extreme circumstances, a federal permit might be obtained for the relocation of listed species (in some states a state permit is required in addition to a federal permit). Pursuant to the spirit of the treaty, it is not trivial to obtain a permit; the applicant must meet a certain criteria as outlined in Title 50, Code of Federal Regulations, 21.27, Special Purpose Permits.
e. 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.
f. In the event that human remains are discovered during maintenance activities, all work on the project must stop and the park archeologist contacted immediately. As required by law, the coroner will be notified first. All provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
g. Resource Management personnel shall be notified/consulted when these, or any other wildlife, must be disturbed or handled. They will be available to assist with moving/relocating snakes or any other wildlife, when necessary; and/or to make recommendations for relocating any disturbed animals.

5. Soundscape / Noise: The vendor shall minimize noise levels at the project site to protect the soundscape of the park. Perform noise-producing work in less sensitive hours of the day or week or as directed by the contracting officer.

END OF SECTION 01 11 40

SECTION 01 26 01

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section consists of administrative and procedural requirements for contract modifications.

1.2 DEFINITIONS AND ALLOWANCES

A. Home Office Overhead: Costs incurred in support of all of a contractor's projects and not attributable to a specific job. The cost for home office overhead is only allowed as a percentage of all direct work excluding profit. The following items represent allowable home office overhead costs identified in Part 31 of the Federal Acquisition Regulation (FAR):

1. Rent
2. Utilities
3. Furnishings
4. Office equipment
5. Executive and management staff not exclusively assigned to the project
6. Support, accounting, and administrative staff
7. Preparation of cost proposals, estimating, and schedule analyses connected with Modifications
8. Estimating and preconstruction services
9. Mortgage costs
10. Real estate and corporate taxes
11. Automobile maintenance and travel costs for home office personnel
12. Home office insurances i.e. structure, automotive, umbrella, flood, etc.
13. Depreciation of equipment and other assets
14. Home office supplies (paper, staples, etc.)
15. Legal services
16. Accounting and data processing
17. Professional fees/registration

B. General Conditions (Field Office Overhead): Management and administrative costs incurred on site for the designated project. Costs associated with preparation of modifications will not be allowed. Costs for these items are to be included only in the general conditions of the modification estimate. Only in the case of a contract time extension are additional general conditions included in modifications. The following items, if applicable, are considered allowable costs for calculating General Conditions:

1. Project Manager (PM), Assistant Project Manager
2. Superintendent, Assistant Superintendent
3. Quality Control, Safety Officer, Environmental Manager, etc.
4. Engineers

5. Travel, lodging, and per diem (as established by Federal Travel Regulations)
6. Scheduling
7. Field Office Trailers and associated temporary utilities
8. Field office supplies

    a. Mailing and couriers
    b. Reproduction costs
    c. Storage
    d. Phones
    e. Computers
    f. Copiers

9. Personal vehicles i.e. Superintendent Pickup trucks

C. General Requirements: Costs directly associated with the project and are necessary to perform the actual work of the modification. These costs shall be shown as direct costs in the estimate. The following items, if applicable, are considered allowable costs for calculating General Requirements:

1. Hoisting
2. Material handling
3. Temporary fencing
4. Port-a-lets
5. Trash removal, dumpsters
6. Barricades
7. Small tools
8. Safety supplies
9. Scaffolding
10. Daily cleaning
11. Traffic control
12. Temporary signage
13. Temporary heating and power

D. Personnel Costs: Costs included in the modification must only be for General Conditions staff and workers actually present and working on project site. Modification costs for salaried workers are only allowed within the structure of a 40-hour week and no overtime or holiday pay will be allowed.

1. Worker Hourly Rates are costs directly associated with the individual worker and consist of the following:

    a. Base Rate: The hourly rate paid directly to the worker
    b. Labor Burden: Employer payments of all applicable burdens; includes insurance and taxes the business must pay on behalf of the worker to government entities and educational forums, such as:

        1) Social Security
        2) Medicare
        3) Workers Compensation – Policy and company calculation to be made available.
        4) Federal Unemployment Tax Act (FUTA) - Cap Rate and percentage to be proportionally allocated over one year.

5) State Unemployment Tax Act (SUTA) - Cap Rate and percentage to be proportionally allocated over one year.
6) Union agreement costs - Other costs required under an enforceable collective bargaining agreement.

c. Fringe Benefits: Various non-wage compensations provided to employees such as:

1) Health Care Insurance Premiums
2) Cell Phone
3) Clothing
4) 401K and Pensions
5) Vehicle allowances
6) Gas allowance
7) Life insurance premiums
8) Disability insurance
9) Other Fringe Benefits required under an enforceable collective bargaining agreement

E. Bonuses or Deferred Compensation: No Bonus or Deferred Compensation will be allowed within any components of pricing including Home Office Overhead, General Conditions, General Requirements, Hourly Worker Rates, or the direct costs of work.

F. General Liability Insurance: An insurance policy that protects Contractor from claims resulting from bodily injury or property damage to a third party. Include as a separate line item within all modification proposals and provide a current insurance quote upon request.

G. Performance and Payment Bonds: A performance bond is a surety bond issued by an insurance company or bank to guarantee satisfactory completion of a project. The Payment Bond guarantees the Contractor will pay the labor and material costs incurred. Banks and Insurance companies charge a premium for individual project based on a sliding scale related to the size of the project. Include as a separate line item in modification proposals and provide current company bonding rates upon request.

H. Builder's Risk Insurance: Covers the contractor's loss due to fire, high winds, or other natural forces. Not reimbursed by the National Park Service (NPS) and shall not be included in modification proposals.

1.3 MODIFICATION PROPOSAL PRICING REQUIREMENTS

A. General:

1. Proposal be received in the format and within the time frame specified in the Request for Proposal (RFP) letter. Costs or delays resulting from failure of contractor to submit within the time frame specified will not be compensable.
2. Proposal shall be detailed with itemized lists of equipment, materials, labor, production rates, overhead, profit, and bond markup for each item. Labor costs must be itemized by craft and hourly rate, including Fringe Benefits and Labor Burden. If the costs of Fringe Benefits and Labor Burden are not itemized, it is assumed they are included in the hourly rate shown, or contractor is not requesting reimbursement. Contractor may

utilize the government provided Contractor Estimate Form, or their own form, provided that it contains the same information and level of detail as the Government's form.

3. Requests for extensions of contract time as a result of change must be justified with a Time Impact Analysis (TIA). Refer to Section 01 32 16 "Construction Schedule", for time impact analysis requirements. TIA and associated costs shall be received with the proposal by the date shown within the Request for Proposal letter. Contractor's failure to submit within the specified time frame will be construed as the Contractor waiving right for additional time and no time extension will be allowed.
4. All supporting documentation used to justify the proposed modification will be made available to the Contracting Officer (CO) upon request.
5. Contractor shall review and approve all subcontractor/supplier pricing in detail for proper format, scope, production rates, and pricing prior to submission to NPS. All delay costs associated with not reviewing and approving subcontractor/supplier pricing will be borne by the Contractor.
6. All pricing and production rates within the estimate must be based on fair and reasonable pricing and cannot include built-in contingency.

B. Labor:

1. Contractor shall estimate cost of labor by itemizing each craft involved, indicating worker hourly rate (base rate + labor burden + fringe benefits) for each and itemizing hours required for each craft directly engaged in modification work. Any work proposed requiring overtime work or premium pay shall be itemized separately. Rates shall be in accordance with the Davis-Bacon Act as incorporated herein. Labor Burden may include payroll taxes, Social Security, unemployment insurances, workers compensation insurance, Federal Insurance Contributions Act (FICA), FUTA, and other direct costs resulting from Federal, State or local laws.
2. Itemize labor costs for equipment operators separate from equipment costs.
3. Labor cost for foremen shall only be costs for related work required for the modification.

C. Materials:

1. Estimated cost for materials shall include quotes from multiple sources. Material prices shall include applicable fees and credits, including but not limited to, sales tax, freight and delivery charges, and tax rebates.
2. No markup shall be applied to any material provided by NPS.

D. Equipment:

1. Equipment used for the project must be appropriately sized for work being performed.
2. Do not include costs for "miscellaneous tools and equipment", in your proposal for a replacement value of $500 or less. Costs shown in excess of $500 shall be broken out separately.
3. Regardless of ownership, rates to be used in determining equipment rental costs shall be the lowest cost from one of the following sources:

   a. United States (U.S.) Army Corps of Engineers, Ownership and Operating Expense Schedule (use latest edition and applicable region)
   b. Construction Blue Book

c. Local equipment rental rates, documented by actual invoice charges, or itemized vendor quotes.

4. Estimated equipment rates shall include operating costs of all fuel, oil, lubrication, supplies, small tools, necessary attachments, ground engaging components, tires and tracks, routine repairs and maintenance (cost of major repair and overhaul is not allowed per Federal Acquisition Regulation (FAR) 31.105(d)(2)), depreciation, storage, insurance, and all incidentals. Mobilization, if applicable, may be included for equipment solely used on the modification work but must be listed separately.
5. Estimate full rate for equipment only for duration that equipment will be utilized to accomplish work of the modification.
6. Standby unit rates used in accordance with paragraph 1.3, D, 2, above. If the U.S. Army Corp of Engineers is utilized then their standby rates prevail. If Bluebook or local equipment pricing is accepted, then 1/2 of equipment costs minus any operating costs, major repair and overhaul will be accepted.
7. If equipment is in standby mode due solely to a documented NPS delay, established standby rate shall apply from the first day of the delay.
8. Equipment not used and on job site for up to five consecutive days may be classified at standby rates, provided the equipment is or has been used solely to perform work on the modification and will be necessary to complete additional modification work. Equipment still on the jobsite but not in use after five consecutive days will not be considered in the modification pricing.
9. Requests for compensation for equipment stand by time must be justified, documented and itemized separately.
10. The estimated timeframe (daily, weekly, monthly) for use of the equipment must reflect the lowest cost to the Government.

E. Establishment and Application of Overhead and Profit Percentages:

1. Home Office Overhead and Profit (OH&P) shall be applied to direct costs only. Profit shall not be applied to overhead amounts; and overhead shall not be applied to profit. Home office overhead shall contain only allowable, allocable, and reasonable costs per the contract documents and FAR Part 31. Profit percentages are based on risk factors found in FAR Part 31which have been applied to the specific type of work included in this project. Negotiated rates shall not exceed the following percentages for OH&P for contractor self-performed work:

   Overhead……10%
   Profit……...10%

2. Total aggregate limit of markup (OH&P) for Contractor and Subcontractors on modification work shall not exceed 25%. The NPS will not be responsible for allocation of percentages between contractor and subcontractors at any tier.
3. If Contractors form a partnership, partnership may only receive home office overhead and profit in same amount as an individual Contractor (refer to paragraph 1.3,E,1 above). It is the responsibility of the partners to decide on division of revenue.
4. Combined Increases and Decreases: On proposals involving both increases and decreases in the Contract Price, overhead and profit mark-ups are required on net increases and deducted on net decreases.
5. At no time can profit be calculated on Overhead or itself, it must be calculated on direct costs of work only.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 012601

SECTION 01 27 00

DEFINITION OF CONTRACT PRICE ITEMS

PART 1 – GENERAL

1.1 LIST OF CONTRACT LINE ITEMS

A. Contract Price Item No. 10 – Demolish Las Vegas Bay Launch Ramp Restroom.

1. This price item consists of all necessary material, labor, and equipment required to demolish public restroom at Las Vegas Bay launch ramp. All demolished equipment and materials shall be transported and legally disposed/recycled off-site.
2. Payment(s) will be made monthly.

1.3 SCHEDULE OF VALUES (PRICE SCHEDULE)

A. Submit a schedule of values IAW Section 01 32 16 Construction Schedule.

Item No.	Schedule of Values DEMO LVB LAUCNH RAMP RESTROOM	Quantities	Unit	Unit Price	Total ($)
1	Mobilization	1	LS		
2	Selective Site Demolition (Material Cost)	1	LS		
3	Selective Site Demolition (Labor Cost)	1	LS		
4	Selective Site Demolition (Equipment Cost)	1	LS		
5	Demolish Restroom (Material Cost)	1	LS		
6	Demolish Restroom (Labor Cost)	1	LS		
7	Demolish Restroom (Equipment Cost)	1	LS		
8	Remove/Abandon Utilities (Material Cost)	1	LS		
9	Remove/Abandon Utilities (Labor Cost)	1	LS		
10	Remove/Abandon Utilities (Equipment Cost)	1	LS		
11	Restore Site (Material Cost)	1	LS		
12	Restore Site (Labor Cost)	1	LS		
13	Restore Site (Equipment Cost)	1	LS		
14	Demobilization	1	LS		
	TOTAL				

END OF SECTION 01 27 00

SECTION 01 31 00

PROJECT MANAGEMENT & COORDINATION

PART 1 – GENERAL

1.1 SUBMITTALS

A. Division 01 documents: The following items shall be submitted a minimum of one week prior to the Preconstruction Conference. Contracting Officer will notify Contractor of tentative date for the Pre-Construction Conference.

1. Letter designating Project Superintendent.
2. Project Schedule.
3. A comprehensive breakdown of the Schedule of Values.
4. Accident Prevention Plan.
5. A list of Subcontractors for this project.
6. Written statements from subcontractors certifying compliance with applicable labor standard clauses.
7. Satisfactory evidence of liability insurance coverage and workman's compensation for the Contactor and all subcontractors.

B. All items listed must be provided to the Contracting Officer before the Pre-Construction Conference is held. If all of these documents have not been received one week prior to the scheduled Pre-Construction Conference date, the conference will be cancelled, Notice to Proceed will not be issued, and the Contracting Officer will consider other contractual remedies. Work shall not commence until written Notice to Proceed has been issued

1.2 REQUESTS FOR INFORMATION (RFIs)

A. General: On discovery of the need for additional information or interpretation of the Contract Documents, the Contractor shall prepare and submit an RFI utilizing the form designated by the Contracting officer.

1. Contracting Officer will not respond to RFIs submitted by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner to avoid delays in the work.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. RFI number, numbered sequentially.
2. Date.
3. RFI subject.
4. Specification Section number and title and related paragraphs, as appropriate.
5. Drawing number and detail references, as appropriate.
6. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

7. Contractor's signature.
8. Requested date for response.
9. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    a. Include dimensions, thicknesses, and details of affected materials, assemblies, and attachments on attached sketches.

C. Contracting Officer's Action: Contracting Officer will review each RFI, determine action required, and respond. Contracting Officer will determine the critical nature of each RFI and issue a response accordingly.

1. The following are not considered to be RFIs and will receive no action:
    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Contracting Officer's action may include a request for additional information, in which case time for response will date from time of receipt of additional information.

3. Contracting Officer's action on RFIs may result in the need for a change to the Contract Time or the Contract Sum. All contract changes will be processed following the terms and conditions of the contract.

END OF SECTION 01 31 00

SECTION 01 32 16

PROJECT SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section consists of Project Schedule requirements including but not limited to the following:

1. Schedule of Values
2. Project Schedule Requirements.
3. Project Schedule Updates.

B. Purpose: The purpose of the Project Schedule is to ensure adequate planning, coordination, scheduling, and reporting during execution of the work by the Contractor. The Project Schedule will assist the Vendor and Contracting Officer in monitoring the progress of the work, evaluating proposed changes, and processing the Vendor's monthly progress payment.

1.2 SUBMITTALS

A. Schedule of Values: After contract award submit a schedule of dollar values based on the Contract Price Schedule.

B. Project Baseline Schedule: After contract award submit a baseline schedule, large enough to show entire schedule for entire project period.

C. Project Schedule Updates: Prior to the progress payment request date, submit estimates of the percent completion of each schedule activity and necessary supporting data.

1.3 COORDINATION

A. Coordinate Project Baseline Schedule with the Schedule of Values, payment requests, and other required schedules and reports.

PART 2 - PRODUCTS

2.1 SCHEDULE OF VALUES

A. Breakdown each lump-sum item into component work activities used in the schedule, for which progress payments may be requested. The work activities broken out within the schedule of values shall be integrated into and made a logical part of the demolition baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump-sum item. The Contracting Officer may request data to verify accuracy of

dollar values. Include mobilization, general condition costs, overhead and profit in the total dollar value of unit price items and in the component work activities for each lump-sum item. Do not include mobilization, general condition costs, overhead or profit as a separate item.

B. Do not break down unit price items. Use only the contract price for unit price items.

C. The total cost of all items shall equal the contract price. The Schedule of Values will form the basis for progress payments.

D. An acceptable Schedule of Values shall be agreed upon by the Vendor and Contracting Officer before the first progress payment is processed.

2.2 PROJECT SCHEDULE REQUIREMENTS

A. Project Baseline Schedule: Prepare Project Baseline Schedule using computerized scheduling software.

1. Project Baseline Schedule shall show submittal review, demolition start date, work activities / staff resources, activity durations, major milestones, inspection dates, closeout activities, and project end date.

2. Establish procedures for updating Project Baseline Schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.

3. Contracting Officer may request an updated Project Schedule at any time to confirm progress of the work.

END OF SECTION 01 32 16

SECTION 01 32 33

PHOTO DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for:

1. Existing condition images
2. Periodic construction images

B. See Section 01 77 00 "Closeout Procedures" for a complete listing of closeout documents.

C. See Section 01 79 00 "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of National Park Service (NPS) personnel.

1.2 SUBMITTALS

A. Construction Images: Submit images electronically within [**seven**] <**Insert number**> days of taking the image. Include:

1. Date, time and number (sequentially number all images) in filename.
2. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
3. Submit digital images exactly as originally recorded in digital camera, without alteration, or modifications using image-editing software.

B. Closeout: Submit complete set of digital image electronic files as a Project Record Document**.** Submit on Digital Video Disc (DVD).

1. Provide index as separate file on Disc. List each image as a file name with number, date, and time. Include description and or vantage point image was taken.
2. Submit images that have the same aspect ratio as the sensor, un-cropped.

PART 2 - PRODUCTS

2.1 FORMAT REQUIREMENTS

A. Media: DVD-R Archival Gold

B. Media Labels: Archival DVD labeling markers, archival labels, or direct print.

C. Images: Provide sRGB (standard Red Green Blue) color images in JPEG (Joint Photographic Experts Group) format. Minimum sensor size of 8 megapixels, and at image resolution of not less than 1600 by 1200, and 300 dpi (dots per inch).

PART 3 - EXECUTION

3.1 CONSTRUCTION IMAGES

A. General: Take digital images using the maximum range of depth of field, in-focus, to clearly show the Work. No blurry or out-of-focus areas accepted.

1. Maintain index with each set of Construction images and identify the number, date, time, and description for each.
2. Maintain one set of images accessible in field office at Project site available for reference.

B. Existing Condition Images: Before starting onsite work take color digital images of Project site and surrounding properties, including existing items to remain during construction, from different vantage points.

1. Flag construction limits before recording construction images.
2. Take a minimum of four (4) separate images to show existing conditions adjacent to property before starting Work.
3. Take a minimum of four (4) separate images of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.

C. Periodic Construction Images: Take a minimum of eight (8) color, digital images weekly, with timing each month adjusted to coincide with cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last images were taken.

D. Additional Images: Contracting Officer may issue requests for additional images.

1. Three days advance, where feasible.
2. In emergency situations, take additional images within 24 hours of request.
3. Additional images include, but are not limited to:

    a. Immediate follow-up when on-site events result in construction damage or losses.
    b. Fabrication locations away from Project site.
    c. Substantial Completion of a major phase or component of Work.
    d. Extra record images at time of final acceptance.

END OF SECTION 01 32 33

SECTION 01 33 23

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 GENERAL SUBMITTAL PROCEDURES

A. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. CM-16 Transmittal Form: All submittals shall be transmitted using National Park Service form CM-16 form, attached to the end of this specification section. No action will be taken on a submittal item unless accompanied by the CM-16 transmittal form. Complete the general information at the top of the form.
   a. Provide all required information based on the submittal type
   b. Attach all related documents.
   c. Sign the CM-16 form in the contractor section at the bottom of the form.

2. Physical samples: Complete the CM-16 form as outlined above and deliver the physical sample to the CO (or designee) on site for processing. All comments and actions will be documented on the CM-16 form.

1.2 ACTION SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   a. N/A.

1.3 INFORMATIONAL SUBMITTALS

A. Documentation of legal disposal and/or recycle of construction debris and hazardous materials.

END OF SECTION 01 33 23

SECTION 01 35 23

SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. General: This section includes providing a safe environment for all personnel and visitors.

1.2 SUBMITTALS

A. Accident Prevention Plan: After contract award and before commencing work, submit for review an Accident Prevention Plan. The Contracting Officer will review the proposed Plan. If the plan requires any revisions or corrections, the Contractor shall resubmit the Plan within ten (10) days. No progress payments will be made until the Plan is accepted.

1.3 QUALITY ASSURANCE

A. In case of conflicts between Federal, State, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.

B. Qualifications of Employees:

1. All employees must be physically qualified and able to perform their assigned duties in a safe manner.

2. Do not allow employees to perform work whose ability or alertness is impaired because of prescription or illegal drug use, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.

3. Operators of vehicles, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be fully capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment.

1.4 ACCIDENT REPORTING

A. Reportable Accidents: A project reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, fires, and property damage by accident in excess of one hundred dollars ($100). Notify Contracting Officer immediately in the event of a reportable accident. Within seven (7) days of a reportable accident, fill out and forward to Contracting Officer an Accident/Property Damage Report (Form CM-22). Form may be obtained from the Contracting Officer.

PART 2 - PRODUCTS

2.1 ACCIDENT PREVENTION PLAN

A. The Plan shall be written to comply with OSHA and project requirements (a generic plan is not acceptable) including but not limited to the following:

1. Name of responsible supervisor to carry out the program.
2. Weekly and monthly safety meetings.
3. First aid procedures.
4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase.
5. Training, both initial and continuing.
6. Planning for possible emergency situations, such as floods, fires, cave-ins, slides, explosions, power outages, and wind storms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.

2.2 FIRST AID FACILITIES

A. Provide adequate facilities for the number of employees and the hazards associated with the types of ongoing construction work at the site.

2.3 PERSONNEL PROTECTIVE EQUIPMENT

A. Meet requirements of applicable ANSI standards.

PART 3 - EXECUTION

3.1 EMERGENCY INSTRUCTIONS

3.2 Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

3.3 FIRE AND LIFE SAFETY

A. Comply with the requirements of NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations).

B. Store hazardous materials in accordance with manufacturers and OSHA recommendations. Maintain readily available, on site, MSDS for each chemical.

1. Immediately report all spills of hazardous materials to the park.
2. Maintain a spill emergency response kit.

3.4 PROTECTIVE EQUIPMENT

A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair personal items, as appropriate, before issuing them to another individual.

B. Inspect and maintain other protective equipment and devices before use and on a periodic basis to ensure safe operation.

3.5 SAFETY MEETINGS

A. As a minimum, conduct weekly fifteen (15) minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the Contracting Officer within one (1) day after the meeting.

B. Conduct monthly safety meetings for all levels of supervision. Meetings shall be attended by all contractors and subcontractors performing work on the site. Notify the Contracting Officer of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the Accident Prevention Plan. The Contracting Officers Representative will attend the meeting and enter the results of the meetings into the daily log.

3.6 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

A. A hard hat area shall be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Contracting Officer.

B. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary personal protective equipment at all times. As a minimum, provide six (6) six hard hats for use by visitors.

3.7 TRAINING

A. First Aid: Provide adequate training to an adequate number of personnel to ensure prompt and efficient first aid.

B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION 01 35 2

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve vendor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit vendor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for vendor to provide quality-assurance and -control services required by Government or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

A. Installer/Applicator/Erector: Vendor or another entity engaged by vendor as an employee to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain installation activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

B. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of **five (5)** previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the

most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Contracting Officer for a decision before proceeding.

1.4 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

C. Permits, Licenses, and Certificates: For Government records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Mockups: NOT USED.

D. Laboratory Mockups: NOT USED.

1.6 QUALITY CONTROL

A. Government Responsibilities: Where quality-control services are indicated as Government responsibility, Government will engage a qualified testing agency to perform these services.

1. Contracting Officer will furnish vendor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to vendor.

B. Tests and inspections not explicitly assigned to Government are vendor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Vendor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as vendor's responsibility, engage a qualified testing agency to perform these quality-control services.

   a. Vendor shall not employ same entity engaged by Government, unless agreed to in writing by Contracting Officer.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as vendor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by vendor and not required by the Contract Documents are Vendor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Vendor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Contracting Officer and vendor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Contracting Officer and vendor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Vendor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of vendor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.7 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Vendor will engage a qualified testing agency or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of vendor, and as follows:

B. Special Tests and Inspections: Conducted by a qualified testing agency or special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying vendor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to vendor and to authorities having jurisdiction.

4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DOCUMENTATION

A. Maintain Quality Control Daily Reports. (Download from DSC Workflows website > Forms/Templates/Samples/Guidelines page > Construction Forms section.)

B. Quality Control Daily Reports shall not be substituted for other written reports required under clauses of contract, such as Disputes, Differing Site Conditions, or Changes.

C. Quality Control Daily Reports shall accurately portray all work and materials.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Vendor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 50 00

TEMPORARY FACILITIES & CONTROLS

PART 1 - GENERAL

1.1 TEMPORARY FACILITIES AND CONTROLS

A. General: The vendor is not allowed to set up temporary facilities and controls.

1. Temporary Utilities: The following utilities are available for use at the project site:

a. Electrical Power Service: Electrical power service is available from facilities at or near the project site for use on the contract without charge. Provide all connections and extensions of services in a safe manner in compliance with NEC, NEMA, and UL standards and regulations.

b. Water Service: Non-potable water service is available from facilities at or near the project site for use on the contract without charge. Provide all connections and extensions of services with proper backflow prevention devices in compliance with AWWA standards and local regulations.

c. Sanitary Facilities: Restrooms are available from facilities at or near the project site for use on the contract without charge.

2. Temporary Sheds of Field Offices: The construction of temporary sheds, field offices, or structures will not be allowed at the project site.

3. Site Enclosure Fence: For uncontrolled sites, the vendor shall construct an enclosure fence, barrier, or partition to prevent people and animals from entering the site except by gates / doors.

4. Traffic Controls: The vendor shall erect and maintain barricades, danger signals, and warning signs in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), 2009 edition. The vendor shall provide adequate traffic control, including flaggers or either side of any work performed in the road. Any workers on or near the road must wear highly visible, bright clothing.

END OF SECTION 01 50 00

SECTION 01 57 23

TEMPORARY STORM WATER POLLUTION PREVENTION

UNDER-AN-ACRE POLLUTION PREVENTION

PART 1 - GENERAL

1.1 SUMMARY

A. Federal Regulations for controlling discharges of pollutants (including chemicals, erodible material, and trash) from municipal separate storm sewer systems, construction sites, and industrial activities, were brought under the National Pollution Discharge Elimination System (NPDES) permit process by amendments to the Clean Water Act (CWA), and promulgation of federal stormwater regulations issued by the United States Environmental Protection Agency (USEPA). The USEPA uses amount of ground disturbance as a measure of a project potential to generate pollution from erosion. NPDES Phase I regulates discharges from construction sites that disturb 5 acres or more. NPDES Phase II regulations expand existing General Permit requirements under Phase I to include/regulated discharges from construction sites that disturb land equal to or greater than one (1) acre and less than 5 acres, known as Small Construction Activity. Construction disturbances 1 acre and above typically require a formal NPDES permit and a formal Stormwater Pollution Prevention Plan (SWPPP) must be submitted to Agency(ies) (i.e. Nevada Division of Environmental Protection (NDEP) and/or Arizona Department of Environmental Quality (ADEQ)) with Jurisdiction for review and approval.

B. National Park Service (NPS) Standards and Guidelines require water quality be protected to ensure compliance with Organic Act. Contractor shall prepare an Under-An-Acre Pollution Prevention Plan (UPPP) for each project resulting in less than 1 acre of soil disturbance or not otherwise subject to requirements of NPDES program. (UPPP Guideline)

C. The work of this section consists of implementing measures to prevent discharges of pollutants, including temporary storm water pollution during construction activities, either through compliance with NPDES permit program, or in conformance with NPS guidance for UPPPs.

D. Work of this section consists of implementing measures to Temporary Storm Water Pollution during construction activities, either through compliance with NPDES permit program; or in conformance with NPS guidance for UPPPs.

1.2 DEFINITIONS

A. Definitions pertaining to sustainable development: As defined in ASTM E2114.

B. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade utility of the environment for aesthetic, cultural, or historical purposes.

C. National Pollution Discharge Elimination System (NPDES) Phase I: Regulates discharges from construction sites that disturb 5 acres or more.

D. NPDES Phase II: Regulations expand existing General Permit requirements under Phase I to include and regulate discharges from construction sites that disturb land equal to or greater than one (1) acre and less than 5 acres, known as Small Construction Activity.

E. Storm Water Pollution Prevention Plan (SWPPP): Developed and implemented stormwater management measures to protect surface water from pollutants during construction activities disturbing an acre or more in compliance with federal, state, and local requirements for permit approval under NPDES program.

F. UPPP: Developed and implemented pollution prevention plan (including stormwater management measures, if needed) to protect environment from pollutants on construction projects with less than one acre of disturbance in conformance with NPS guidelines.

1.3 SUBMITTALS

A. After contract award and before pre-construction conference, prepare and submit:
   1. A SWPPP showing SWPPP satisfies Federal and State NPDES permit requirements.
   2. A UPPP in conformance with NPS guidelines and adherence to applicable construction storm water management practices.

B. Inspection Schedule: Submit schedule for inspection and monitoring of pollution prevention measures.

C. Inspection Schedule: Submit schedule for inspection and monitoring of storm water pollution prevention measures.

D. Erosion Control Products: Submit manufacturer's product information and installation recommendations for silt fence, filter fabric, erosion control blanket, straw bales, and other materials proposed for use on this project.

1.4 QUALITY ASSURANCE

A. Contractor shall prepare and submit a plan to Contracting Officer (CO) for review and concurrence.

B. Orientation Meeting: Contractor shall arrange and conduct an Erosion and Sediment Control meeting/briefing to inform parties, scheduled to be on-site during project, of measures to be implemented for proper erosion and sediment control (may be included as part of Pre-Construction Meeting).

   1. Installation of silt fences, storm drain protection, and other forms of erosion and sediment control shall not begin until after this meeting has occurred.

C. Orientation Meeting: Contractor shall be responsible for arranging and conducting Pollution Prevention meeting/briefing to inform parties scheduled to be on-site during project of measures to be implemented for proper pollution prevention and control (may be included as part of Pre-Construction Meeting).

1. Installation of silt fences, storm drain protection, and other forms of pollution prevention controls shall not begin until after this meeting has occurred.

D. Pollution Prevention Manager: Contractor shall designate Pollution Prevention Manager who will be responsible for implementation, inspection, maintenance, and amendments to approved plan.

1. Pollution Prevention Manager shall be familiar with UPPP procedures and Best Management Practices (BMPs) and shall ensure emergency procedures and plan are updated as needed and available for inspection.

2. When changes in approved plan are required, Pollution Prevention Manager shall prepare and certify an amendment and submit to Contracting Officer for review and concurrence.

E. Pollution Prevention and Erosion Control Manager: Contractor shall designate Pollution Prevention and Erosion Control Manager responsible for implementation, inspection, maintenance, and amendments to approved plan.

1. Pollution Prevention and Erosion Control Manager shall be familiar with temporary storm water pollution prevention procedures and Best Management Practices and ensure emergency procedures and plan are updated as needed and available for inspection.

2. When changes in approved plan are required, Pollution Prevention and Erosion Control Manager shall prepare and certify an amendment and submit to Contracting Officer for review and concurrence.

PART 2 - PRODUCTS

2.1 UNDER-AN-ACRE POLLUTION PREVENTION PLAN

2.2 TEMPORARY STORM WATER POLLUTION PREVENTION PLAN

A. Provide SWPPP which satisfies Federal and State NPDES permit requirements and includes:

1. Site description.
2. Identification and contract information for Pollution Prevention and Erosion Control Manager.
3. Expected sequencing of operations and construction schedule.
4. Weather monitoring procedure.
5. Descriptions and details Best Management Practices for of pollution prevention and erosion controls, including dust control.
6. Pollution prevention and erosion control plans.
7. Controls for other potential onsite storm water pollutants.
8. Applicable specifications.
9. Maintenance and inspection procedures and forms.
10. Description of potential non-storm water discharges at site.
11. Notice of Intent (NOI) form.
12. Notice of Termination (NOT) form.
13. Contractor and Sub-contractor Certification forms.

14. Other record keeping forms and procedures.
15. Housekeeping Best Management Practices, including vehicle wash-down areas, protection of equipment storage and maintenance areas, and sweeping of roadways related to hauling activities.

B. Provide UPPP which conforms to NPS requirements (utilize UPPP template) and include:
1. Responsible Parties
2. General Information: Project Scope, Project Details, Site Information, and Spill Prevention
3. Standards and Constraints
4. Project Scheduling
5. Known Data on Soil and Fill
6. Activities with Potential to Generate Sediment
7. Activities and Materials with Potential to Pollute Storm Water
8. Management and Reporting BMPs
9. Waste Management BMPs
10. Non-Storm Water Pollution Control BMPs
11. Soil Stabilization BMPs
12. Sediment Control BMPs
13. Other Pollution Control BMPs
14. References
15. Preparer's Certification
16. Appendices: Contact Information, Pollution Prevention Control Map or Sheet(s), Standard Installation Specifications for each BMP, and Blank forms.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL PROTECTION

A. Protection of Natural Resources: Comply with applicable regulations and these specifications. Preserve natural resources within project boundaries and outside limits of work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by Contracting Officer.

B. Construction Zone: Arrange construction activities to minimize pollution (i.e., erosion, trash, etc.) to maximum practical extent.

1. Clearing, excavation, and grading shall be limited to those areas of project site necessary for construction. Minimize area exposed and unprotected.
2. Clearly mark and delineate limits of work activities.
3. Equipment shall not be allowed to operate outside limits of work or to disturb existing vegetation.
4. Excavation and grading shall be completed during dry season to maximum extent possible.
5. Material shall be stored away from locations where water is present to greatest extent practicable.

3.2 REGULATORY REQUIREMENTS

A. Permits: Contractor shall obtain required NPDES permits resulting in no impacts to scheduled work. Contractor shall account for possibility of significant lead time in scheduling and executing work.

1. Implement requirements of NPDES permit for erosion control due to storm water runoff during construction.
2. Implement good housekeeping practices, inspections and record keeping.
3. Prior to construction, Contractor and Subcontractors shall sign certifications (included in the plan) that they understand requirements of NPDES permit.
4. Subcontractors shall comply with requirements of NPDES under supervision of Contractor.
5. Accepted plan shall comply with terms and conditions of EPA permit.

B. Notice of Intent (NOI): Contractor shall file a Notice of Intent and formal SWPPP as required to the Agency(ies) with Jurisdiction.

C. Notice of Termination (NOT): After Substantial Completion of Work, file a Notice of Termination (NOT) with the Agency(ies) with Jurisdiction.

D. Contracting Officer Notification: Contractor shall notify Contracting Officer in writing and by telephone of these events:

1. Erosion and sediment control meeting/briefing.
2. Following installation of required sediment control structures.
3. Prior to removal of or modification to sediment control structures.
4. Prior to removal of sediment control structures.

3.3 TEMPORARY STORM WATER POLLUTION PREVENTION PLAN

3.4 UNDER-AN_ACRE POLLUTION PREVENTION PLAN

A. Review and Acceptance: Contractor and Contracting Officer will jointly review draft Plan and agree to needed revisions. Contractor shall incorporate revisions, sign, and submit final Plan to Contracting Officer. Final Plan will be the document enforced on the project.

1. Accepted Plan will describe and ensure implementation of practices to be used to reduce pollutants in storm water discharges.
2. Contractor shall maintain current copy of Plan and associated records and forms at jobsite throughout duration of project.
3. Plan shall be available for public inspection and inspection and use of Contracting Officer.
4. Approval of Contractor's Plan will not relieve Contractor of responsibility for compliance with applicable environmental regulations.

B. Implementation: Implement Plan as required throughout construction period and maintain erosion control elements in proper working order.

1. Do not perform clearing and grubbing or earthwork until Plan has been implemented.

C. SWPPP (including inspection forms) and data used to complete the NOI shall be provided to Contracting Officer after Substantial Completion of project.

3.5 SITE INSPECTIONS AND PLAN REVISIONS

A. Inspections: Contractor and Contracting Officer will perform a weekly inspection onsite.

1. Inspection shall include disturbed areas not completely stabilized, areas used for storage of materials, locations where vehicles enter or exit site, and other erosion and sediment controls included in the Plan.
2. Inspections shall be documented.
3. Inspection forms shall be retained onsite in Plan notebook throughout construction period.

B. Plan Revisions: It may be necessary to revise Plan during construction to make necessary improvements, revisions, or to respond to unforeseen conditions noted during construction or site inspections.

1. Plan shall specify mechanism whereby revisions may be proposed by Contractor or Contracting Officer.
2. Contractor and Contracting Officer will jointly review each revision to Plan before changes incorporated and implemented. Contractor will then provide revised copy of Plan to Contracting Officer.
3. Accepted modifications will be implemented within 7 calendar days following date of inspection when deficiencies or necessary corrections are first noted.

C. Negligence: Provide additional temporary erosion and pollution controls made necessary by Contractor's errors or negligence at no additional cost to Government.

3.6 HOUSEKEEPING AND SITE MANAGEMENT

A. Store materials onsite in conformance to Federal, state, local, and manufacturer's regulations and specifications. Use Best Management Practices to minimize risk of materials coming into contact with environmental conditions (i.e. water and wind) that could disperse them.

B. Manage solid waste in conformance to Federal, state, and local regulations. Best Management Practices should be used to minimize risk of materials coming into contact with environmental conditions (i.e. water and wind) that could disperse them.

C. Include a spill prevention and control plan with provisions placed in SWPPP.

D. Manage hazardous waste (including contaminated soil) in conformance to Federal, state, local and NPS regulations and guidelines.

3.7 EROSION CONTROL MEASURES

A. Erosion control measures shall consist of Best Management Practices for storm water discharges, including silt fencing, barrier protectors, straw bales, temporary soil retention blankets, excelsior drainage filters, sediment traps and berms.

B. Berms and excelsior drainage filters shall be used to form sediment traps and control run-on and run-off into other areas, including creeks, streams, marshes, access roads, well areas, and staging areas.

C. Erosion control measures shall be used to contain only direct precipitation in construction zone. Contained water shall be allowed to percolate into ground or drain slowly through drainage filter sediment traps.

D. Earthen sediment traps or holding ponds shall not be used unless accepted by Contracting Officer.

E. Reduce runoff velocity and direct surface runoff around and away from fuel containment, storage, and borrow areas.

F. Divert surface runoff around and away from cut and fill slopes.

G. Place drainage filters around catch basins to create sediment traps to control run-off from construction area.

H. Excess water used for dust control shall be contained within demolition areas by erosion control measures.

I. Contractor shall prevent deposition of materials onto paved areas. Contractor shall inspect paved areas for deposited materials weekly and remove materials immediately.

J. Furnish, install, maintain, and operate necessary control measures and other equipment necessary to prevent erosion as described in approved SWPPP.

K. Furnish, install, maintain, and operate necessary control measures and other equipment necessary to prevent erosion as described in approved UPPP.

L. Before work begins, sufficient equipment shall be available on site to assure operation and adequacy of erosion control system can be maintained.

3.8 MAINTENANCE OF TEMPORARY FACILITIES

A. Ensure erosion and sediment control structures remain effective throughout excavation and grading operations. Relocate structures as necessary.

B. Inspect control structures after each significant rainfall. Promptly repair breaches which occur.

C. Contractor shall remove entrapped sediment from behind excelsior drainage filter after each storm.

3.9 REPORTING

A. If a discharge occurs or if project receives written notice or order from regulatory agency, Contractor shall immediately notify Contracting Officer and shall file written report to Agency(ies) with Jurisdiction within 7 days of discharge event, notice, or order. Corrective measures shall be implemented immediately following discharge, notice, or order. The report to the Agency(ies) with Jurisdiction shall contain:

1. Date, time, location, nature of operation, and type of discharge, including cause or nature of notice or order.
2. Best Management Practices deployed before discharge event, or prior to receiving notice or order.
3. Date of deployment and type of Best Management Practices deployed after discharge event, or after receiving notice or order, including additional Best Management Practices installed or planned to reduce or prevent re-occurrence.
4. An implementation and maintenance schedule for affected Best Management Practices.

3.10 SEDIMENT DISPOSAL

A. Sediment excavated from temporary sediment control structures shall be disposed on site with general fill, or with topsoil. Sediment shall be allowed to dry out as required before reuse.

B. Contractor shall place sediment removed from traps and other structures where it will not enter a storm drain or watercourse and where it will not immediately reenter the basin.

3.11 REMOVAL OF TEMPORARY POLLUTION CONTROL MEASURES

3.12 REMOVAL OF TEMPORARY STORM WATER POLLUTION CONTROL MEASURES

A. Temporary control measures shall be removed with permission of Contracting Officer within 20 working days after final acceptance of project, and/or once grading is complete and slopes have stabilized.

END OF SECTION 01 57 23

SECTION 01 67 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and environmental requirements.

1.2 DEFINITIONS

A. Products: Items purchased for incorporating into Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number and other designation shown or listed in manufacturer's published product literature, current as of date of Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
3. Approved Equals: Product demonstrated and approved through submittal process, or where indicated as a product substitution, to have indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Definitions pertaining to sustainable development: As defined in ASTM E2114.

C. Biobased Materials: As defined in Farm Security and Rural Investment Act, for purposes of Federal procurement of biobased products, "biobased" means a "commercial or industrial product (other than food or feed) composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials." Biobased materials also include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by The Biomass Research and Development Act of 2000.

1. Biobased content: Amount of biobased carbon in material or product as a percentage of weight (mass) of total organic carbon in material or product.

D. Chain-of-Custody: Process whereby a product or material is maintained under physical possession or control during its entire life cycle.

E. Environmentally preferable products: Products and services with lesser or reduced effect on the environment in comparison to conventional products and services. Refer to Environmental

Protection Agency's (EPA) Final Guidance on Environmentally Preferable Purchasing for more information.

F. Stewardship: Responsible use and management of resources in support of sustainability.

G. Sustainability: Maintenance of ecosystem components and functions for future generations.

1. Recycled Content Materials: Products containing pre-consumer or post-consumer materials as all or part of their feedstock. Recycled content claim shall be consistent with International Organization for Standardization (ISO) 140001 Standard for the Use of Environmental Marketing Claims.
2. Rapidly Renewable Material: Material made from plants typically harvested within a ten-year cycle.
3. Regional Materials: Materials manufactured and extracted, harvested, or recovered within a radius of 500 miles from Project location.

1.3 SUBMITTALS

A. Record Submittals as specified in – Sustainable Design Close-Out Documentation, submit:

1. Affirmative Procurement Reporting Form. Submit on form in Appendix A of this Section, or similar form as approved by Contracting Officer (CO).
2. Submit environmental data in accordance with Table 1 of ASTM E2129 for these products:

a. Masonry
b. Finish Carpentry
c. Plastic Fabrications
d. Building Insulation
e. Roofing
f. Joint Sealers
g. Wood & Plastic Doors
h. Windows
i. Skylights
j. Glazed Curtain Wall
k. Gypsum Board
l. Tile
m. Acoustical Ceilings
n. Resilient Flooring
o. Carpet
p. Wall Coverings
q. Paints & Coatings
r. Toilet Compartments
s. Loading Dock Equipment
t. Office Equipment
u. Furnishings & Accessories
v. Renewable Energy Equipment
w. Elevators
x. Plumbing fixtures and equipment.
y. HVAC equipment
z. Lighting equipment

.Material Safety Data Sheets (MSDS): For each product required by OSHA to have a MSDS, submit an MSDS. MSDS shall be prepared within the previous five years. Include information for MSDS Sections 1 to 16 in accordance with ANSI Z400.1 and as follows:

a. Section 1: Chemical Product and Company Identification
b. Section 2: Composition/Information on Ingredients
c. Section 3: Hazards Identification
d. Section 4: First Aid Measures
e. Section 5: Fire Fighting Measures
f. Section 6: Accidental Release Measures
g. Section 7: Handling and Storage
h. Section 8: Exposure Controls/Person Protection
i. Section 9: Physical and Chemical Properties
j. Section 10: Stability and Reactivity Data
k. Section 11: Toxicological Information. Include data used to determine the hazards cited in Section 3. Identify acute data, carcinogenicity, reproductive effects, and target organ effects. Provide written description of the process used in evaluating chemical hazards relative to preparation of the MSDS.
l. Section 12: Ecological Information. Include data regarding environmental impacts during raw materials acquisition, manufacture, and use. Include data regarding environmental impacts in event of accidental release.
m. Section 13: Disposal Considerations. Include data regarding proper disposal of the chemical. Include information regarding recycling and reuse. Indicate whether or not product is considered to be "hazardous waste" according to United States EPA Hazardous Waste Regulations 40 CFR 261 (Code of Federal Regulations).
n. Section 14: Transportation Information. Identify hazard class for shipping.
o. Section 15: Regulatory Information. Identify federal, state, and local regulations applicable to the material.
p. Section 16: Other Information. Include additional information relative to recycled content, biobased content, and other information regarding environmental and health impacts. Identify the date MSDS was prepared.

4. Chain of Custody: Submit chain-of-custody documentation for sustainable forestry for these products:

a. Rough Carpentry
b. Finish Carpentry
c. Wood Doors
d. Windows
e. Wood Flooring
f. Furnishings & Accessories

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in undamaged condition; in manufacturer's original sealed container or other packaging system; complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with Contract Documents. Ensure products are undamaged and properly protected.
5. Obtain materials in biodegradable or recyclable/reusable packaging which uses minimum amount of packaging possible.

C. Storage:

1. Allow for inspection and measurement of quantity or counting of units.
2. Store materials in manner to not endanger Project structure.
3. Store products subject to damage by the elements, under cover in weather tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Store loose granular materials in well-drained area on solid surfaces to prevent mixing with foreign matter.

1.6 PACKAGING

A. Where Contractor has option to provide one of listed products or equal, preference shall be given to products with minimal packaging and easily recyclable packaging as defined in ASTM D5834.

B. Maximize use of source reduction and recycling procedures outlined in ASTM D5834.

C. Provide minimum 45 percent post-consumer recycled content and minimum 100 percent recovered fiber content of industrial paperboard in accordance with EPA’s Comprehensive Procurement Guidelines and ASTM D5663.

1.7 ENVIRONMENTALLY PREFERABLE PRODUCTS

A. Provide environmentally preferable products to greatest extent possible.

1. To greatest extent possible, provide products and materials with a lesser or reduced effect on the environment considering raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and/or disposal of the product.
2. Eliminate use of ozone depleting compounds during and after construction where alternative environmentally preferable products are available, consistent with either Montreal Protocol and Title VI or Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.
3. Use products meeting or exceeding EPA's recycled content recommendations for EPA-designated products. Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of total value of the materials in project.

1.8 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for product specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare written document containing appropriate terms and identification, ready for execution. Submit draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with Specifications, prepare written document using appropriate form properly executed.
3. Refer to Divisions 2 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products to comply with Contract Documents, undamaged and, unless otherwise indicated, new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types produced and used successfully in similar situations on other projects.
3. Government reserves right to limit selection to products with warranties not in conflict with requirements of Contract Documents.
4. Where products are accompanied by term "as selected," Contracting Officer will make selection.
5. Where products are accompanied by term "match sample," sample to be matched is Governments.
6. Descriptive, performance, and reference standard requirements in Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:

1. Product: Where Specifications name single product and manufacturer, provide named product that complies with requirements or approved equal.
2. Manufacturer/Source: Where Specifications name single manufacturer or source, provide product by named manufacturer or source that complies with requirements or approved equal.
3. Products: Where Specifications include list of names of both products and manufacturers, provide one of the products listed that complies with requirements or approved equal.
4. Manufacturers: Where Specifications include list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements or approved equal.
5. Available Products: Where Specifications include list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Products" Articles for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Products" Articles for consideration of an unnamed product.
7. Product Options: Where Specifications indicate sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide specified product, system, or approved equal.
8. Visual Matching Specification: Where Specifications require matching an established Sample, select product that complies with requirements and matches Architect's sample. Contracting Officers decision will be final on whether a proposed product matches.

    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

9. Visual Selection Specification: Where Specifications include phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

    a. Standard Range: Where Specifications include phrase "standard range of colors, patterns, textures" or similar phrase, Contracting Officer will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.

b. Full Range: Where Specifications include phrase "full range of colors, patterns, textures" or similar phrase, Contracting Officer will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 APPROVED EQUAL PRODUCTS

A. Conditions: Contracting Officer will consider Contractor's request when the following conditions are satisfied. If following conditions are not satisfied, Contracting Officer will return requests without action, except to record noncompliance with these requirements:

1. Evidence proposed product does not require revisions to Contract Documents, that it is consistent with Contract Documents and will produce indicated results and is compatible with other portions of Work.
2. Detailed comparison of significant qualities of proposed product with those named in Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION

3.1 PROTECTION AFTER INSTALLATION

A. Provide adequate coverings as necessary to protect installed materials from damage resulting from natural elements, traffic, and subsequent construction. Remove when no longer needed.

END OF SECTION 01 67 00

SECTION 01 73 01

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes procedural requirements for cutting and patching.

B. See Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

C. See Division 7 Section "Through-Penetration Firestop Systems" for patching fire-rated installation.

1.2 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures at least **10** days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
2. Changes to In-Place Installation: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
3. Products: List products to be used and firms or entities that will perform the Work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
7. Government Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

D. Visual Requirements: Do not cut and patch installation in a manner that results in visual evidence of cutting and patching. Do not cut and patch installation exposed on the exterior or in occupied spaces in a manner that would, in Contracting Officer's opinion, reduce the building's aesthetic qualities. Remove and replace installation that has been cut and patched in a visually unsatisfactory manner.

1.4 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place installation during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place installation to provide for installation of other components or performance of other installation, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place installation by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining installation. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after installation operations requiring cutting are complete.

C. Patching: Patch installation by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining installation in a manner that will eliminate evidence of patching and refinishing.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01 73 01

SECTION 01 73 40

EXECUTION

PART 1 - EXECUTION

1.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other installation indicated as existing are not guaranteed.

1. Before beginning work, investigate and verify the existence and location of systems, utilities, and other installation affecting the Work.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

1.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other installation, verify dimensions of other installation by field measurements before fabrication. Coordinate fabrication schedule with installation progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the vendor, submit a request for information to the Contracting Officer in accordance with Division 01 Specification 01 31 00 “Project Management and Coordination”.

1.3 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct installation operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

1.4 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
3. Vendor shall provide progress cleaning that minimizes sources of food, water, and harborage available to pests.

D. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

E. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

F. Limiting Exposures: Supervise installation operations to assure that no part of the installation completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the installation period.

G. Final Cleaning: At completion of Work, remove all remaining waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave Project clean and ready for occupancy.

1.5 CORRECTION OF THE WORK

A. Repair or remove and replace defective installation. Restore damaged substrates and finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during installation to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 73 40

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Solid Waste: Garbage, debris, sludge, or other discharged material (except hazardous waste) including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations.

D. Debris: Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure which exceeds 2.5 inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

E. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

F. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

G. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

H. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173, requires a Material Safety Data Sheet (MSDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal

meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261.

I. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

J. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.3 PERFORMANCE REQUIREMENTS

A. General: This project shall minimize the creation of construction, deconstruction, and demolition waste to protect and restore natural habitat and resources. Factors that contribute to waste such as over packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized. A Waste Management Plan shall be developed to ensure that existing site and building materials are reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.

B. Salvage / Recycle Requirements: Develop waste management plan that results in end-of-Project rates for salvage/recycling of 50 percent by weight of total waste generated by the Work. The following waste categories, at a minimum, shall be diverted from a landfill:

1. Land clearing debris
2. Clean dimensional wood, palettes
3. Plywood, OSB, and particle board
4. Concrete
5. Asphaltic concrete
6. Cardboard, paper, packaging, newsprint
7. Metals (from banding, stud trim, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze)
8. Gypsum drywall—unpainted
9. Non-hazardous paint and paint cans
10. Beverage containers: Aluminum, glass, and plastic containers
11. Insulation
12. Ceiling grid and tiles
13. Ductwork
14. Wiring
15. Other mixed construction and demolition waste as appropriate

C. If any waste materials encountered during the deconstruction/demolition or construction phase are found to contain lead, asbestos, PCBs, (such as fluorescent lamp ballasts), or other harmful substances, they are to be handled and removed in accordance with local, state, and federal laws and requirements concerning hazardous waste.

D. Existing items and material to be removed during the deconstruction/demolition phase shall be reused in the construction phase of the Project. Items that cannot be reused shall be recycled. Items considered for reuse must be in refurbishable condition and must meet the quality standards set forth in these specifications. The Contractor shall ensure that the quality of the item(s) in question will meet or exceed accepted industry or trade standards for first quality

commercial grade application. During construction, deconstruction, or demolition the Contracting Officer may designate other objects or materials for reuse.

E. Salvage/Recycle Requirements: Government goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible including, but not limited to, the following materials: carpet, doors, glass, linoleum, plumbing fixtures, PVC pipe, windows, and tiles.

1.4 SUBMITTALS

A. Waste Management Plan: After award of the contract and prior to the scheduled Pre-Construction Conference, the Contractor shall submit a draft Waste Management Plan to the Contracting Officer for approval. Submit one (1) electronic copy of plan. Revise and resubmit Plan as required by the Contracting Officer. Approval of the Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.

B. Progress Documentation: Supplemental to the Waste Management Plan, document solid waste disposal, diversion, and cost/revenue analysis and submit a completed worksheet on a monthly basis. Use Appendix A - Project Waste Management Plan Worksheet, and report totals to date for all column headings. Use Appendix B for solid waste volume to weight conversions.

C. Waste Reduction Calculations: Before request for Substantial Completion, submit three (3) copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

H. LEED™ Submittal: LEED™ letter template for Credit MR 2.1and 2.2, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.

I. Qualification Data: For Waste Management Coordinator and refrigerant recovery technician.

J. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

K. Progress payment requirements:

1. With each Application for payment, submit updated Project Waste Management Plan worksheet for solid waste disposal and diversion.
2. With each Application for Payment, submit manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material.

L. Closeout Submittals

1. With Closeout Submittals, submit a summary of the Project Waste Management Plan worksheet for solid waste disposal and diversion. Submit on form in Appendix A of this Section.

1.5 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements, that employs a LEED™-Accredited Professional, certified by the USGBC, as waste management coordinator. Waste management coordinator may also serve as LEED™ coordinator.

B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

D. Waste Management Meeting: Conduct separate meeting or cover in the Pre-Construction Conference and comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

PART 2 - PRODUCTS

2.1 WASTE MANAGEMENT PLAN

A. General: Develop plan consisting of waste identification and waste reduction work plan. Include separate sections in plan for demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Landfill tip fees/ton
2. If diverted, tip fee savings from landfill diversion
3. Costs of recycling, salvage, or reuse
4. Revenue from recycling, salvage, or reuse
5. Total cost or savings from diversion (Calculate by using tip fee savings and subtracting costs of recycling or adding revenue from recycling)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement waste management plan as approved by the Contracting Officer. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.

C. The Contractor shall establish contacts with local recycling and reuse companies to set up the lines of responsibility. Contractor shall be responsible for coordinating with these companies in terms of identifying materials, pickup schedules, and standard quality for recycled materials.

D. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

1. Distribute waste management plan to everyone concerned within three (3) days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

E. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

F. Separation facilities:

1. The Contractor shall designate and the Contracting Officer shall approve a specific area or areas to facilitate separation of materials for potential reuse, salvage, recycling, and return.
2. Waste and recycling bins are to be placed near each other, and close to the point of waste generation but out of the traffic pattern.
3. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid co-mingling of materials.
4. Bins shall be protected during non-working hours from off-site contamination.
5. The garbage dumpsters should be checked periodically to monitor recyclables being thrown away or if there are undocumented materials that could be recycled.

G. Materials handling procedures: Materials to be recycled shall be protected from contamination and shall be handled, stored, and transported in a manner that meets the requirements set by the designated facilities for acceptance. Establish a defined area for the operations of each trade, especially woodcutting so that off-cuts will be kept in one area and can be sorted by dimension for future reuse.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale and Donation: Not permitted on Project site.

C. Salvaged Items for Governments Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Government.
4. Transport items to storage area designated by Government.
5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Receivers and Processors: List below is provided for information only; available recycling receivers and processors include, but are not limited to, the following:

1. Republic Services,

C. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

   a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Governments property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

A. Asphaltic Concrete Paving: Grind asphalt to maximum 4-inch size.

B. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.

1. Crush asphaltic concrete paving and screen to comply with requirements in Division 31 Section "Earth Moving".

C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

1. Pulverize concrete to maximum 4-inch size.

D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

1. Pulverize masonry to maximum 4-inch size.
2. Clean and stack undamaged, whole masonry units on wood pallets.

E. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

F. Metals: Separate metals by type.

1. Structural Steel: Stack members according to size, type of member, and length.
2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

G. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

H. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

I. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

1. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.

J. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

K. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.

L. Plumbing Fixtures: Separate by type and size.

M. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

N. Lighting Fixtures: Separate lamps by type and protect from breakage.

O. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

P. Conduit: Reduce conduit to straight lengths and store by type and size.

Q. Electronic Products: Ensure that all non-usable electronic products are reused, donated, sold, or recycled using environmentally sound management practices at end of life.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Site-Clearing Wastes: Chip brush, branches, and trees at landfill facility.

C. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Burning: Burning of waste materials is allowed only at designated areas on Government property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.

D. Disposal: Transport waste materials off Governments property and legally dispose of them.

END OF SECTION 01 74 19

017419 - Appendix A

Project Waste Management Plan Worksheet

	A	B	C	D	E	F	G	H	I	J
Material	**Quantity Recycled (in tons)**	**Quantity Salvaged or Reused (in tons)**	**A + B = Total Quantity Diverted from Landfill**	**Quantity To Landfill (in tons)**	**C + D = Total Quantity Generated (in tons)**	**Tip Fee/Ton at Landfill**	**C x F = Tip Fee Savings resulting from Landfill Diversion**	**Cost of Recycling (R), Salvage (S), or Reuse (Re) (Specify R, S, or Re)**	**Revenue from Recycling, Salvage, or Reuse**	**G - H + I = Total Cost (-) or Savings (+) from Diversion**
Asphalt/Concrete										
Brick/Masonry/Tile										
Building Materials (doors, windows, fixtures, shingles, lumber, insulation, sheetgoods, etc.)										
Carpet										
Carpet Padding, Foam Only										
Cardboard										
Ceiling Tile										
Drywall										
Glass										
Scrap Metal Aluminum										
Copper										
Steel										
Unpainted Wood & Pallets										
Yard Trimmings, Brush, Trees, Stumps, etc.										
Garbage/Trash										
Other										
Column Totals										
	Total Quantity Recycled	**Total Quantity Reused or Salvaged**	**Total Quantity Diverted from Landfill**	**Total Quantity To Landfill**	**Total Quantity Generated**		**Tip Fee Savings from Diversion**	**Total Cost of Recycling, Salvage, or Reuse**	**Revenue from Recycling, Salvage, or Reuse**	**Total Cost (-) or Savings (+) from Diversion**

Percentage Diverted = _____ (C divided by E from Column Totals) Should meet specified diversion requirement.

STANDARD SOLID WASTE CONVERSIONS

The following sections provide conversions for solid waste and recyclable materials. Section 1 provides formulas to convert solid waste volume (cubic yards) into tons. Section 2 includes conversion factors to estimate the volume and weight of a number of solid waste and recyclable materials.

1. To convert cubic yards to tons:

A: For un-compacted trash, to convert the units of cubic yards into tons, using the standard density of trash value of 250 pounds per cubic yard:

Using "X" cubic yards, multiply by 250 pounds per cubic yard, divide by 2000 pounds per ton, to obtain value in tons.

$$\text{"X" } \textit{cubic yards} \times 250 \frac{\textit{pounds}}{\textit{cubic yard}} \div \frac{1 \ \textit{ton}}{2000 \ \textit{pounds}} = _____ \textit{ tons}$$

This equals:

$$\text{"X" } \textit{cubic yards} \times 0.125 \frac{\textit{tons}}{\textit{cubic yard}} = _____ \textit{ tons}$$

In this case, 8 cubic yards = one ton.

B: To determine your own density value for un-compacted trash (instead of using the standard value of 250 pounds per cubic yard), using a 32 gallon trash can:

(1) Weigh the trash can both filled and empty (use a full 32 gallon trash can filled with trash roughly level to the top);
(2) Subtract the empty weight from the filled weight to get the weight of trash (filled weight – empty weight = weight of trash);
(3) Use the formula, using "Y" your weight of trash (pounds), divided by 0.15 cubic yards per 32 gallon trash can, to obtain your value in pounds per cubic yard; which equals:

$$\text{"Y" } \frac{\textit{pounds}}{\textit{32 gallon can}} / \frac{0.15 \ \textit{cubic yards}}{\text{32 gallon can}} = \frac{_____ \ \textit{pounds}}{\text{cubic yard}}$$

(4) Substitute this value for the 250 pounds per cubic yard value in Method A above.

This would be the more accurate measure of your park's specific waste.

C: For compacted trash, to convert cubic yards into tons:

To use a compaction ratio, multiply the appropriate ratio times the un-compacted trash weight in Formula A to obtain the compacted trash weight.

$$\text{"X" } \textit{cubic yards} \times \frac{3}{1} \text{ (compaction ratio)} \times 250 \frac{\textit{pounds}}{\textit{cubic yard}} \times \frac{1 \ \textit{ton}}{2000 \ \textit{pounds}} = _____ \textit{ tons}$$

Typical compaction ratios for trash:
3:1 (typical)

4:1 (higher-compaction vehicles)

If you or your hauler don't know the compacting ratio, the typical values for compacted trash are 500 to 1000 lbs./cubic yard, average 700 lbs./cubic yard. **Use 700 lbs. per cubic yard if you don't have more accurate records.**

For compacted trash, 0.4 is used instead of 0.125 in Formula A:

"X" *cubic yards* x 0.4 $\frac{\text{tons}}{\text{cubic yard}}$ = _____ *tons*

D: To convert container size to cubic yards for un-compacted waste:

If you don't have size and weight information on your specific containers, then these typical values can be used:

1 cubic yard = 202 gallons
32 gallon can = 0.15 cubic yards
60 gallon tote = 0.30 cubic yards
90 gallon tote = 0.45 cubic yards

2. EPA's Standard Volume-to-Weight Conversion Factors

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Waste (in pounds)
FOOD SCRAPS[A]	Food scraps, solid and liquid fats	55-gal drum	412
GLASS	Bottles[B]		
	Whole Bottles	1 yd^3	500-700
	A. Semicrushed Crushed	1 yd^3	1,000-1,800
	(mechanically)	1 yd^3	1,800-2,700
	Uncrushed to manually broken	55-gal drum	300
	Refillable Whole Bottles[C]		
	Refillable beer bottles	1 case = 24 bottles	10-14
	Refillable soft drink bottles	1 case = 24 bottles	12-22
	8 oz glass container	1 case = 24 bottles	12
LEAD-ACID BATTERIES	Car[D]	1 battery	39.4 lb
	Truck[E]	1 battery	53.3 lb lead and plastic
	Motorcycle[E]	1 battery	9.5 lb lead and plastic

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Waste (in pounds)
METALS	Aluminum Cans[F]		
	Whole	1 yd^3	50-75
	Compacted (manually)	1 yd^3	250-430
	Uncompacted	1 full grocery bag	1.5
		1 case = 24 cans	0.9
	Ferrous (tin coated steel cans) [G]		
	Whole	1 yd^3	150
	Flattened	1 yd^3	850
	Whole	1 case = 6 cans	22
	Major Appliances[E]		
	Air conditioners (room)	1 unit	64.2
	Dishwashers	1 unit	92
	Dryers (clothes)	1 unit	130
	Freezers	1 unit	193
	Microwave ovens	1 unit	50
	Refrigerators	1 unit	181.1
	Ranges	1 unit	267
	Washers (clothes)	1 unit	177
	Water heaters	1 unit	131
PAPER	Newspaper[F]		
	Uncompacted	1 yd^3	360-505
	Compacted/baled	1 yd^3	720-1,000
	12 in. stack	-	35
	Old Corrugated Containers[F]		
	Uncompacted	1 yd^3	50-150 (300)[1]
	Compacted	1 yd^3	300-500
	Baled	1 yd^3	700-1,100
	Computer Paper[F]		
	Uncompacted	1 yd^3	655
	Compacted/baled	1 yd^3	1,310
	1 case	2,800 sheets	42
	White Ledger[F]		
	Stacked (u/c)	1 yd^3	375-465/755-925
	Crumpled (u/c)	1 yd^3	110-205/325
	Ream of 20# bond; 8.5”x11”	1 ream = 500 sheets	5
	Ream of 20# bond; 8.5”x14”	1 ream = 500 sheets	6.4
	White ledger pads	1 case = 72 pads	38
	Tab Cards[F]		
	Uncompacted	1 yd^3	605
	Compacted/baled	1 yd^3	1,215-1,350
	Miscellaneous Paper		
	Yellow legal pads[F]	1 case = 72 pads	38
	Colored message pads[F]	1 carton = 144 pads	22
	Telephone directories[H]	1 yd^3	250
	Mixed Ledger/Office Paper[F]		
	Flat (u/c)	1 yd^3	380/755
	Crumpled (u/c)	1 yd^3	110-205/610

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Waste (in pounds)
PLASTIC[J]	PET (Soda Bottles)		
	Whole bottles (uncompacted)	1 yd^3	30-40
	Whole bottles (compacted)	1 yd^3	515
	Whole bottles (uncompacted)	gaylord	40-53
	Baled	30” x 62”	500-550
	Granulated	semiload	30,000
	Granulated	gaylord	700-750
	8 bottles (2 L size)	16 L	1
	HDPE (Dairy)		
	Whole (uncompacted)	1 yd^3	24
	Whole (compacted)	1 yd^3	270
	Baled	32” x 60”	400-500
	HDPE (Mixed)		
	Baled	32” x 60”	900
	Granulated	gaylord	800-1,000
	Granulated	semiload	42,000
	Other Plastic		
	Uncompacted	1 yd^3	50
	Compacted/baled	1 yd^3	400-700
	Mixed PET and HDPE (Dairy)		
	Whole	1 yd^3	32
	Film		
	Baled	semiload	50
	Baled	30” x 42” x 48”	400-700
TEXTILES[H]	Mixed Textiles	1 yd^3	175
TIRES	Car Tires		
	Whole tire[E]	1 tire	21
	Crumb rubber[K]	1 tire	12
	Truck Tires		
	Whole tire[E]	1 tire	70
	Crumb rubber[K]	1 tire	60
WOOD	Wood chips[L]	1 yd^3	725
	Pallets[F]	-	30-100 (40 avg)
YARD TRIMMINGS[F]	Grass Clippings		
	Uncompacted	1 yd^3	350-450
	Compacted	1 yd^3	550-1,500
	Leaves		
	Uncompacted	1 yd^3	200-250
	Compacted	1 yd^3	300-450
	Vacuumed	1 yd^3	350
FURNISHINGS[E]	Foam rubber mattress	1 mattress	55
MUNICIPAL SOLID WASTE[M]	Residential waste (uncompacted at curb)	1 yd^3	150-300
	Commercial-industrial waste (uncompacted)	1 yd^3	300-600
	MSW (compacted in truck)	1 yd^3	500-1,000
	MSW (landfill density)	1 yd^3	750-1,250

A. Information obtained from Washington State.
B. Draft National Recycling Coalition Measurement Standards and Reporting Guidelines presented to NRC membership. October 31, 1989.
C. Personal communication with a representative from Allwaste. November 6, 1995.
D. Battery Council International. 1995. 1994 National Recycling Rate Study.
E. U.S. EPA. 1995. Methodology for Characterization of Municipal Solid Waste in the United States: 1994 Update. EPA530-R-96-001. Washington, DC.
F. U.S. EPA. 1993. Business Guide for Reducing Solid Waste. EPA530-K-92-004. Washington, DC.
G. Personal communication with a representative from the Steel Recycling Institute. November 1, 1995.
H. Information obtained from Massachusetts State.
I. Information obtained from New Jersey and New York States.
J. Personal communication with a representative from the American Plastics Council. November 2, 1995.
K. Personal communication with a representative from the Scrap Tire Management Council. November 6, 1995.
L. Information obtained from Northeast Forest Products, Martin Mulch Company, and the Solid Waste Association of North America.
M. Solid Waste Association of North America, Manger of Landfill Operations Training and Certification Course. January 1989.
N. Information obtained from New Jersey and New York States.

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 CLOSEOUT SUBMITTALS

A. Submit the following before requesting final inspection:

1. Submit two (2) copies of product cut sheets, and manufacturer warranties, guarantees, workmanship bonds, final certifications, and similar documents.

2. Submit digital images of installation progress and final photographs recorded on CD-R or DVD-R or thumb drive with index and descriptions.

3. Deliver tools, spare parts, extra materials, and similar items to location designated by Contracting Officer. Label with manufacturer's name and model number where applicable.

4. Instruct NPS personnel in the basic operation, adjustment, and maintenance of products, equipment, and systems.

1.2 SUBSTANTIAL COMPLETION AND FINAL INSPECTION

A. When project, or designated portion of project, is substantially complete, request in writing a final inspection. Upon receipt of written request that project is substantially complete, the Contracting Officer will proceed with inspection within ten (10) days of receipt of request or will advise the vendor of items that prevent the project from being designated as substantially complete.

B. If, following final inspection, the work is determined to be substantially complete, Contracting Officer will prepare a Punch List to be corrected before final acceptance and issue a Letter of Substantial Completion. Vendor shall complete the work described on the Punch List within thirty (30) calendar days, as weather permits. If the vendor fails to complete the work within this time frame, the Contracting Officer may either replace or correct the work with an appropriate reduction in the contract price or charge for re-inspection costs in accordance with the Inspection of Installation clause of the contract.

C. If, following final inspection, the work is not determined to be substantially complete; Contracting Officer will notify vendor in writing. After completing work, vendor shall request a new final inspection. All re-inspection costs may be charged against the vendor in accordance with the Inspection of Installation clause of the contract.

1.3 FINAL ACCEPTANCE OF THE WORK

A. After all deficiencies have been corrected, a Letter of Final Acceptance will be issued.

END OF SECTION 01 77 00